ANALYTICAL REPORT

Job Number: 280-116538-1

Job Description: Leidos RFP# 001088 - Ravenna AAP-66

For:
Leidos, Inc.
Picatinny Arsenal
356 Ninth Avenue
Suite 106
Dover, NJ 07801

Attention: Rita Schmon-Stasik



Approved for release.
Donna R Rydberg
Senior Project Manager
12/12/2018 6:27 PM

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12/12/2018
Revision: 1

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.

GC/MS Semi VOA

Qualifier	Qualifier Description
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
J	Estimated: The analyte was positively identified; the quantitation is an estimation

GC Semi VOA

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
M	Manual integrated compound.
Q	One or more quality control criteria failed.

HPLC/IC

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
Q	One or more quality control criteria failed.
M	Manual integrated compound.

LCMS

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
U	Undetected at the Limit of Detection.

Metals

Qualifier	Qualifier Description
U	Undetected at the Limit of Detection.
J	Estimated: The analyte was positively identified; the quantitation is an estimation
Q	One or more quality control criteria failed.

General Chemistry

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
U	Undetected at the Limit of Detection.
D	The reported value is from a dilution.
B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Leidos, Inc.

Project: Leidos RFP# 001088 - Ravenna AAP-66

Report Number: 280-116538-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

REVISED REPORT
The attached report was revised as the cyanide result for IDW sample (FWGIDW-181002-WW) was included in this -1 job instead with the other IDW data in the -2 job. The cyanide was removed from this report and added to the 280-116538-2 job. No other changes were made.

RECEIPT
The samples were received on 11/3/2018 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 0.5º C, 2.1º C, 2.6º C, 2.6º C, 3.6º C and 4.8º C.

VOLATILE ORGANIC COMPOUNDS (GC/MS)
Samples SCLmw-001-181001-GW (280-116538-1), SCLmw-003-181001-GW (280-116538-2) and FWGTB-181014-TB (280-116538-3) were analyzed for volatile organic compounds (GC/MS) in accordance with 8260B. The samples were analyzed on 11/15/2018.

The continuing calibration verification (CCV) associated with batch 280-437714 recovered above the upper control limit for Styrene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS
Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for Semivolatile organic compounds in accordance with SW-846 8270D. The samples were prepared on 11/05/2018 and analyzed on 11/14/2018 and 11/15/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUND (GC/MS SIM)
Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for Semivolatile Organic Compound (GC/MS SIM) in accordance with SW-846 8270D. The samples were prepared on 11/05/2018 and analyzed on 11/09/2018.

Fluoranthene and Phenanthrene were detected in method blank MB 280-436346/1-A at levels that were less than one half the LOQ; therefore, corrective action was deemed unnecessary. The values should be considered estimates, and have been flagged “J” in accordance with the DoD QSM.

Nitrobenzene-d5 failed the surrogate recovery criteria low for SCLmw-001-181001-GW (280-116538-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ORGANOCHLORINE PESTICIDES (GC)
Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for Organochlorine Pesticides (GC) in accordance with SW 846 8081B. The samples were prepared on 11/07/2018 and analyzed on 11/24/2018.

Toxaphene failed the recovery criteria high for LCS 280-436649/6-A. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2). The reagent lot number used was: T31E034.

The continuing calibration verification (CCV) associated with batch 280-438595 recovered above the upper control limit for several analytes on the front column. The back column was in control. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported from the back, in control, column.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for polychlorinated biphenyls (PCBs) in accordance with SW-846 8082A. The samples were prepared on 11/07/2018 and analyzed on 11/27/2018.

The following samples required a sulfuric acid clean-up, via EPA Method 3665A, to reduce matrix interferences: SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2). Acid Lot: 161554

The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2). The reagent lot number used was: T31E034.

The initial calibration verification (ICV) result for batch 280-438897 was above the upper control limits for surrogate DCB Decachlorobiphenyl and PCB-1248. This surrogate in the associated samples was in control. Sample results were non-detects, and have been reported as qualified data.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROGUANIDINE (HPLC)

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for Nitroguanidine (HPLC) in accordance with Method 8330 Modified. The samples were prepared on 11/16/2018 and analyzed on 11/19/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCHLORATE

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for Perchlorate in accordance with 6860. The samples were analyzed on 11/12/2018.

The ion ratio is outside of control (2.30-3.80) due to instrument drift caused. The target analytes are in control in the associated QC sample indicating positive identification despite the ion ratio failure. Associated samples are: SCLmw-001-181001-GW (280-116538-1), (CCV 280-437280/21), (CCV 280-437280/31), (CCVL 280-437280/22), (CCVL 280-437280/32), (DLCK 280-437280/12), (STD200 280-437280/7), (ICV 280-437280/11), (INF 280-437280/15) and (LCS 280-437280/14).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROAROMATICS AND NITRAMINES (HPLC)

Samples SCLmw-001-181001-GW (280-116538-1), SCLmw-003-181001-GW (280-116538-2) and DA1tw-001-181001-GW (280-116538-6) were analyzed for Nitroaromatics and Nitramines (HPLC) in accordance with 8330B. The samples were prepared on 11/06/2018 and analyzed on 11/09/2018.

The continuing calibration verification (CCV) associated with batch 280-436836 recovered above the upper control limit for Tetryl The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The method blank associated with preparation batch 280-436459 and analytical batch 280-436836 contained m-Nitrotoluene greater than one-half the reporting limit (RL) on the confirmation column, the primary column was non-detect. The samples were non-detect for this analyte. The sample results have been qualified and reported. The MB on the confirmation column also had a detection for RDX and 2,4,6-Trinitrophenol on the primary column less than half the RL, with the analyte non-detect on the confirmation column.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP)

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for Total Metals (ICP) in accordance with 6010C. The samples were prepared on 11/06/2018 and analyzed on 11/07/2018.

Sodium was detected in method blank MB 280-436445/1-A at a level that was less than one half the LOQ; therefore, corrective action was deemed unnecessary. The value should be considered an estimate, and has been flagged “J” in accordance with the DoD QSM.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS)

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for total metals (ICP/MS) in accordance with 6020A. The samples were prepared on 11/09/2018 and analyzed on 11/14/2018.

Zinc was detected in method blank MB 280-437002/1-A at a level that was less than one half the LOQ; therefore, corrective action was deemed unnecessary. The value should be considered an estimate, and has been flagged “J” in accordance with the DoD QSM.

The interference check standard solution (ICSA) associated with batch 280-437566 had results for one or more elements greater than the limit of detection (LOD). The initial ICSA result(1.5 ppb) was greater than the LOD for Manganese. The vendor acknowledges that these elements are trace impurities in the ICSA standard. These results are not indicative of a matrix interference.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for total mercury in accordance with 7470A. The samples were prepared and analyzed on 11/16/2018.

Mercury was detected in method blank MB 280-437885/1-A at a level that was less than one half the LOQ; therefore, corrective action was deemed unnecessary. The value should be considered an estimate, and has been flagged “J” in accordance with the DoD QSM.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 11/13/2018.

Alkalinity was detected in method blank MB 280-437553/5 at a level that was less than the LOQ; therefore, corrective action was deemed unnecessary. The value should be considered an estimate, and has been flagged “J” in accordance with the DoD QSM.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

NITROCELLULOSE

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for Nitrocellulose in accordance with 353.2 Nitrocellulose. The samples were prepared and analyzed on 11/15/2018.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CYANIDE, TOTAL

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for Cyanide, Total in accordance with 9012B.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SULFIDE

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for sulfide in accordance with EPA SW-846 Method 9034. The samples were prepared and analyzed on 11/07/2018.

Sulfide exceeded the RPD limit for the MSD of sample SCLmw-003-181001-GWMSD (280-116538-2) in batch 280-436735. The individual spike recoveries were in control. The associated LCS was in control and provides evidence that operating procedures were in control.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS, ION CHROMATOGRAPHY

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for Anions, Ion Chromatography in accordance with 9056A. The samples were analyzed on 11/03/2018.

Nitrite as N was detected in method blank MB 280-436181/6 at a level that was less than one half the LOQ; therefore, corrective action was deemed unnecessary. The value should be considered an estimate, and has been flagged “J” in accordance with the DoD QSM.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ANIONS (28 DAYS)

Samples SCLmw-001-181001-GW (280-116538-1) and SCLmw-003-181001-GW (280-116538-2) were analyzed for anions (28 days) in accordance with 9056A. The samples were analyzed on 11/03/2018.

Sample SCLmw-001-181001-GW (280-116538-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116538-1

Client Sample ID: SCLmw-001-181001-GW — Lab Sample ID: 280-116538-1

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.33	J	5.0	0.80	0.32	ug/L	1		8260B	Total/NA
Fluoranthene	0.012	J	0.12	0.014	0.0056	ug/L	1		8270D SIM	Total/NA
Phenanthrene	0.013	J	0.12	0.023	0.011	ug/L	1		8270D SIM	Total/NA
Perchlorate	0.023	J	0.050	0.010	0.0040	ug/L	1		6860	Total/NA
Aluminum	62	J	300	70	18	ug/L	1		6010C	Total/NA
Calcium	170000		1000	140	35	ug/L	1		6010C	Total/NA
Iron	90	J	100	85	22	ug/L	1		6010C	Total/NA
Magnesium	32000		500	40	11	ug/L	1		6010C	Total/NA
Potassium	4500		3000	940	240	ug/L	1		6010C	Total/NA
Sodium	24000		5000	350	120	ug/L	1		6010C	Total/NA
Antimony	16		6.0	1.0	0.40	ug/L	1		6020A	Total/NA
Arsenic	4.8	J	5.0	1.0	0.33	ug/L	1		6020A	Total/NA
Barium	110		3.0	0.95	0.29	ug/L	1		6020A	Total/NA
Beryllium	0.087	J	1.0	0.30	0.080	ug/L	1		6020A	Total/NA
Cadmium	0.34	J	1.0	1.0	0.27	ug/L	1		6020A	Total/NA
Cobalt	2.5		1.0	0.20	0.054	ug/L	1		6020A	Total/NA
Copper	1.7	J	2.0	1.8	0.56	ug/L	1		6020A	Total/NA
Lead	0.31	J	3.0	0.70	0.18	ug/L	1		6020A	Total/NA
Manganese	210		3.5	0.95	0.31	ug/L	1		6020A	Total/NA
Nickel	9.8		3.0	1.0	0.30	ug/L	1		6020A	Total/NA
Selenium	0.85	J	5.0	2.0	0.70	ug/L	1		6020A	Total/NA
Silver	0.18	J	5.0	0.10	0.033	ug/L	1		6020A	Total/NA
Zinc	4.8	J	20	8.0	2.0	ug/L	1		6020A	Total/NA
Mercury	0.063	J	0.20	0.080	0.027	ug/L	1		7470A	Total/NA
Cyanide, Total	0.0093	J	0.010	0.0050	0.0020	mg/L	1		9012B	Total/NA
Nitrate as N	0.13	J	0.50	0.10	0.042	mg/L	1		9056	Total/NA
Sulfate	230	D	25	2.5	1.2	mg/L	5		9056A	Total/NA
Alkalinity	370	B	5.0	5.0	1.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: SCLmw-003-181001-GW — Lab Sample ID: 280-116538-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.85	J	5.0	0.80	0.32	ug/L	1		8260B	Total/NA
Benzo[a]anthracene	0.024	J	0.11	0.013	0.0047	ug/L	1		8270D SIM	Total/NA
Benzo[a]pyrene	0.015	J	0.11	0.013	0.0077	ug/L	1		8270D SIM	Total/NA
Benzo[b]fluoranthene	0.032	J	0.11	0.013	0.0035	ug/L	1		8270D SIM	Total/NA
Benzo[k]fluoranthene	0.030	J	0.11	0.013	0.0070	ug/L	1		8270D SIM	Total/NA
Chrysene	0.053	J	0.11	0.013	0.0037	ug/L	1		8270D SIM	Total/NA
Indeno[1,2,3-cd]pyrene	0.022	J	0.11	0.045	0.0050	ug/L	1		8270D SIM	Total/NA
Phenanthrene	0.014	J	0.11	0.022	0.010	ug/L	1		8270D SIM	Total/NA
Aluminum	330		300	70	18	ug/L	1		6010C	Total/NA
Calcium	120000		1000	140	35	ug/L	1		6010C	Total/NA
Iron	610		100	85	22	ug/L	1		6010C	Total/NA
Magnesium	51000		500	40	11	ug/L	1		6010C	Total/NA
Potassium	5500		3000	940	240	ug/L	1		6010C	Total/NA
Sodium	26000		5000	350	120	ug/L	1		6010C	Total/NA
Antimony	1.4	J	6.0	1.0	0.40	ug/L	1		6020A	Total/NA
Arsenic	10		5.0	1.0	0.33	ug/L	1		6020A	Total/NA
Barium	41		3.0	0.95	0.29	ug/L	1		6020A	Total/NA
Chromium	0.86	J	10	1.8	0.50	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SCLmw-003-181001-GW (Continued) Lab Sample ID: 280-116538-2

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	6.6		1.0	0.20	0.054	ug/L	1		6020A	Total/NA
Copper	1.3	J	2.0	1.8	0.56	ug/L	1		6020A	Total/NA
Lead	0.61	J	3.0	0.70	0.18	ug/L	1		6020A	Total/NA
Manganese	250		3.5	0.95	0.31	ug/L	1		6020A	Total/NA
Nickel	14		3.0	1.0	0.30	ug/L	1		6020A	Total/NA
Selenium	0.90	J	5.0	2.0	0.70	ug/L	1		6020A	Total/NA
Thallium	0.096	J	1.0	0.20	0.050	ug/L	1		6020A	Total/NA
Zinc	3.8	J	20	8.0	2.0	ug/L	1		6020A	Total/NA
Mercury	0.067	J	0.20	0.080	0.027	ug/L	1		7470A	Total/NA
Cyanide, Total	0.0060	J	0.010	0.0050	0.0020	mg/L	1		9012B	Total/NA
Sulfate	190		5.0	0.50	0.23	mg/L	1		9056A	Total/NA
Alkalinity	340	B	5.0	5.0	1.1	mg/L	1		SM 2320B	Total/NA

Client Sample ID: FWGTB-181014-TB Lab Sample ID: 280-116538-3

No Detections.

Client Sample ID: DA1tw-001-181001-GW Lab Sample ID: 280-116538-6

No Detections.

This Detection Summary does not include radiochemical test results.

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:15	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		11/15/18 18:15	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		11/15/18 18:15	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		11/15/18 18:15	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		11/15/18 18:15	1
1,2-Dibromoethane	0.40	U	1.0	0.40	0.18	ug/L		11/15/18 18:15	1
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		11/15/18 18:15	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24	ug/L		11/15/18 18:15	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		11/15/18 18:15	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		11/15/18 18:15	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		11/15/18 18:15	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		11/15/18 18:15	1
Acetone	6.4	U M	10	6.4	1.9	ug/L		11/15/18 18:15	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:15	1
Bromobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:15	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		11/15/18 18:15	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:15	1
Bromoform	0.40	U	1.0	0.40	0.19	ug/L		11/15/18 18:15	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		11/15/18 18:15	1
Carbon disulfide	1.6	U	2.0	1.6	0.45	ug/L		11/15/18 18:15	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		11/15/18 18:15	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:15	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		11/15/18 18:15	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:15	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		11/15/18 18:15	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:15	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:15	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:15	1
Methylene Chloride	**0.33**	**J**	5.0	0.80	0.32	ug/L		11/15/18 18:15	1
Styrene	0.40	U Q	1.0	0.40	0.17	ug/L		11/15/18 18:15	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		11/15/18 18:15	1
Toluene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:15	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		11/15/18 18:15	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:15	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		11/15/18 18:15	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		11/15/18 18:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*11/15/18 18:15*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*11/15/18 18:15*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 119*		*11/15/18 18:15*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*11/15/18 18:15*	*1*

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:35	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		11/15/18 18:35	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		11/15/18 18:35	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		11/15/18 18:35	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		11/15/18 18:35	1
1,2-Dibromoethane	0.40	U	1.0	0.40	0.18	ug/L		11/15/18 18:35	1
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		11/15/18 18:35	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24	ug/L		11/15/18 18:35	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		11/15/18 18:35	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		11/15/18 18:35	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		11/15/18 18:35	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		11/15/18 18:35	1
Acetone	6.4	U M	10	6.4	1.9	ug/L		11/15/18 18:35	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:35	1
Bromobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:35	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		11/15/18 18:35	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:35	1
Bromoform	0.40	U	1.0	0.40	0.19	ug/L		11/15/18 18:35	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		11/15/18 18:35	1
Carbon disulfide	1.6	U	2.0	1.6	0.45	ug/L		11/15/18 18:35	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		11/15/18 18:35	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:35	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		11/15/18 18:35	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:35	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		11/15/18 18:35	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:35	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:35	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:35	1
Methylene Chloride	**0.85**	**J**	5.0	0.80	0.32	ug/L		11/15/18 18:35	1
Styrene	0.40	U Q	1.0	0.40	0.17	ug/L		11/15/18 18:35	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		11/15/18 18:35	1
Toluene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:35	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		11/15/18 18:35	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:35	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		11/15/18 18:35	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		11/15/18 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*11/15/18 18:35*	*1*
4-Bromofluorobenzene (Surr)	*107*		*85 - 114*		*11/15/18 18:35*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 119*		*11/15/18 18:35*	*1*
Toluene-d8 (Surr)	*101*		*89 - 112*		*11/15/18 18:35*	*1*

Client Sample ID: FWGTB-181014-TB **Lab Sample ID: 280-116538-3**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:56	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		11/15/18 18:56	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		11/15/18 18:56	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		11/15/18 18:56	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		11/15/18 18:56	1
1,2-Dibromoethane	0.40	U	1.0	0.40	0.18	ug/L		11/15/18 18:56	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: FWGTB-181014-TB **Lab Sample ID: 280-116538-3**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		11/15/18 18:56	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24	ug/L		11/15/18 18:56	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		11/15/18 18:56	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		11/15/18 18:56	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		11/15/18 18:56	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		11/15/18 18:56	1
Acetone	6.4	U	10	6.4	1.9	ug/L		11/15/18 18:56	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:56	1
Bromobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:56	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		11/15/18 18:56	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:56	1
Bromoform	0.40	U	1.0	0.40	0.19	ug/L		11/15/18 18:56	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		11/15/18 18:56	1
Carbon disulfide	1.6	U	2.0	1.6	0.45	ug/L		11/15/18 18:56	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		11/15/18 18:56	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:56	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		11/15/18 18:56	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:56	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		11/15/18 18:56	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:56	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:56	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:56	1
Methylene Chloride	0.80	U	5.0	0.80	0.32	ug/L		11/15/18 18:56	1
Styrene	0.40	U Q	1.0	0.40	0.17	ug/L		11/15/18 18:56	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		11/15/18 18:56	1
Toluene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 18:56	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		11/15/18 18:56	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 18:56	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		11/15/18 18:56	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		11/15/18 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*11/15/18 18:56*	*1*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*11/15/18 18:56*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 119*		*11/15/18 18:56*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*11/15/18 18:56*	*1*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.014	U Q	0.12	0.014	0.0069	ug/L		11/09/18 00:23	1
2-Methylnaphthalene	0.014	U Q	0.12	0.014	0.0070	ug/L		11/09/18 00:23	1
Acenaphthene	0.047	U M	0.12	0.047	0.0049	ug/L		11/09/18 00:23	1
Acenaphthylene	0.047	U	0.12	0.047	0.0059	ug/L		11/09/18 00:23	1
Anthracene	0.047	U M	0.12	0.047	0.0065	ug/L		11/09/18 00:23	1
Benzo[a]anthracene	0.014	U	0.12	0.014	0.0049	ug/L		11/09/18 00:23	1
Benzo[a]pyrene	0.014	U M	0.12	0.014	0.0080	ug/L		11/09/18 00:23	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Benzo[b]fluoranthene	0.014	U	0.12	0.014	0.0036	ug/L		11/09/18 00:23	1
Benzo[g,h,i]perylene	0.014	U	0.12	0.014	0.0072	ug/L		11/09/18 00:23	1
Benzo[k]fluoranthene	0.014	U	0.12	0.014	0.0073	ug/L		11/09/18 00:23	1
Chrysene	0.014	U	0.12	0.014	0.0038	ug/L		11/09/18 00:23	1
Dibenz(a,h)anthracene	0.014	U	0.12	0.014	0.0048	ug/L		11/09/18 00:23	1
Fluoranthene	**0.012**	**J**	0.12	0.014	0.0056	ug/L		11/09/18 00:23	1
Fluorene	0.047	U	0.12	0.047	0.0064	ug/L		11/09/18 00:23	1
Indeno[1,2,3-cd]pyrene	0.047	U	0.12	0.047	0.0052	ug/L		11/09/18 00:23	1
Naphthalene	0.014	U Q	0.12	0.014	0.0093	ug/L		11/09/18 00:23	1
Phenanthrene	**0.013**	**J**	0.12	0.023	0.011	ug/L		11/09/18 00:23	1
Pyrene	0.023	U	0.12	0.023	0.0071	ug/L		11/09/18 00:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*59*		*53 - 106*	*11/05/18 13:07*	*11/09/18 00:23*	*1*
Nitrobenzene-d5	*53*	*Q*	*55 - 111*	*11/05/18 13:07*	*11/09/18 00:23*	*1*
Terphenyl-d14	*69*		*58 - 132*	*11/05/18 13:07*	*11/09/18 00:23*	*1*

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.013	U	0.11	0.013	0.0066	ug/L		11/09/18 00:53	1
2-Methylnaphthalene	0.013	U	0.11	0.013	0.0067	ug/L		11/09/18 00:53	1
Acenaphthene	0.045	U M	0.11	0.045	0.0047	ug/L		11/09/18 00:53	1
Acenaphthylene	0.045	U	0.11	0.045	0.0057	ug/L		11/09/18 00:53	1
Anthracene	0.045	U M	0.11	0.045	0.0063	ug/L		11/09/18 00:53	1
Benzo[a]anthracene	**0.024**	**J**	0.11	0.013	0.0047	ug/L		11/09/18 00:53	1
Benzo[a]pyrene	**0.015**	**J**	0.11	0.013	0.0077	ug/L		11/09/18 00:53	1
Benzo[b]fluoranthene	**0.032**	**J**	0.11	0.013	0.0035	ug/L		11/09/18 00:53	1
Benzo[g,h,i]perylene	0.013	U M	0.11	0.013	0.0069	ug/L		11/09/18 00:53	1
Benzo[k]fluoranthene	**0.030**	**J**	0.11	0.013	0.0070	ug/L		11/09/18 00:53	1
Chrysene	**0.053**	**J**	0.11	0.013	0.0037	ug/L		11/09/18 00:53	1
Dibenz(a,h)anthracene	0.013	U M	0.11	0.013	0.0046	ug/L		11/09/18 00:53	1
Fluoranthene	0.013	U	0.11	0.013	0.0054	ug/L		11/09/18 00:53	1
Fluorene	0.045	U	0.11	0.045	0.0061	ug/L		11/09/18 00:53	1
Indeno[1,2,3-cd]pyrene	**0.022**	**J**	0.11	0.045	0.0050	ug/L		11/09/18 00:53	1
Naphthalene	0.013	U	0.11	0.013	0.0089	ug/L		11/09/18 00:53	1
Phenanthrene	**0.014**	**J**	0.11	0.022	0.010	ug/L		11/09/18 00:53	1
Pyrene	0.022	U	0.11	0.022	0.0068	ug/L		11/09/18 00:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*53 - 106*	*11/05/18 13:07*	*11/09/18 00:53*	*1*
Nitrobenzene-d5	*69*		*55 - 111*	*11/05/18 13:07*	*11/09/18 00:53*	*1*
Terphenyl-d14	*90*		*58 - 132*	*11/05/18 13:07*	*11/09/18 00:53*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.2	U	12	1.2	0.32	ug/L		11/15/18 01:34	1
1,2-Dichlorobenzene	0.58	U	12	0.58	0.27	ug/L		11/15/18 01:34	1
1,3-Dichlorobenzene	1.2	U	12	1.2	0.35	ug/L		11/15/18 01:34	1
1,4-Dichlorobenzene	1.2	U	12	1.2	0.37	ug/L		11/15/18 01:34	1
1,4-Dioxane	5.1	U	21	5.1	2.0	ug/L		11/15/18 01:34	1
2,4,5-Trichlorophenol	1.2	U	23	1.2	0.52	ug/L		11/15/18 01:34	1
2,4,6-Trichlorophenol	1.2	U	23	1.2	0.34	ug/L		11/15/18 01:34	1
2,4-Dichlorophenol	2.3	U	12	2.3	0.74	ug/L		11/15/18 01:34	1
2,4-Dimethylphenol	2.3	U	12	2.3	0.67	ug/L		11/15/18 01:34	1
2,4-Dinitrophenol	35	U	92	35	12	ug/L		11/15/18 01:34	1
2,4-Dinitrotoluene	5.1	U	23	5.1	1.9	ug/L		11/15/18 01:34	1
2,6-Dinitrotoluene	5.1	U	23	5.1	2.2	ug/L		11/15/18 01:34	1
2-Chloronaphthalene	1.2	U	12	1.2	0.30	ug/L		11/15/18 01:34	1
2-Chlorophenol	5.1	U	12	5.1	2.3	ug/L		11/15/18 01:34	1
2-Methylphenol	2.3	U	12	2.3	1.1	ug/L		11/15/18 01:34	1
2-Nitroaniline	5.1	U	58	5.1	2.0	ug/L		11/15/18 01:34	1
2-Nitrophenol	1.2	U	23	1.2	0.45	ug/L		11/15/18 01:34	1
3 & 4 Methylphenol	0.58	U	23	0.58	0.29	ug/L		11/15/18 01:34	1
3,3'-Dichlorobenzidine	5.1	U	58	5.1	2.3	ug/L		11/15/18 01:34	1
3-Nitroaniline	5.1	U	58	5.1	2.3	ug/L		11/15/18 01:34	1
4,6-Dinitro-2-methylphenol	10	U	92	10	4.6	ug/L		11/15/18 01:34	1
4-Bromophenyl phenyl ether	1.2	U	12	1.2	0.50	ug/L		11/15/18 01:34	1
4-Chloro-3-methylphenol	5.8	U	23	5.8	2.8	ug/L		11/15/18 01:34	1
4-Chloroaniline	5.1	U	29	5.1	2.5	ug/L		11/15/18 01:34	1
4-Chlorophenyl phenyl ether	5.1	U	12	5.1	1.9	ug/L		11/15/18 01:34	1
4-Nitroaniline	5.1	U	58	5.1	2.3	ug/L		11/15/18 01:34	1
4-Nitrophenol	4.6	U	58	4.6	1.4	ug/L		11/15/18 01:34	1
Benzoic acid	35	U	92	35	12	ug/L		11/15/18 01:34	1
Benzyl alcohol	0.58	U	29	0.58	0.27	ug/L		11/15/18 01:34	1
bis (2-chloroisopropyl) ether	1.2	U	12	1.2	0.32	ug/L		11/15/18 01:34	1
Bis(2-chloroethoxy)methane	2.3	U	12	2.3	1.1	ug/L		11/15/18 01:34	1
Bis(2-chloroethyl)ether	1.2	U	23	1.2	0.47	ug/L		11/15/18 01:34	1
Bis(2-ethylhexyl) phthalate	2.3	U	12	2.3	0.65	ug/L		11/15/18 01:34	1
Butyl benzyl phthalate	2.3	U	23	2.3	1.2	ug/L		11/15/18 01:34	1
Carbazole	1.2	U	12	1.2	0.50	ug/L		11/15/18 01:34	1
Dibenzofuran	1.2	U	12	1.2	0.34	ug/L		11/15/18 01:34	1
Diethyl phthalate	1.2	U	23	1.2	0.44	ug/L		11/15/18 01:34	1
Dimethyl phthalate	0.58	U	23	0.58	0.24	ug/L		11/15/18 01:34	1
Di-n-butyl phthalate	5.1	U	23	5.1	1.3	ug/L		11/15/18 01:34	1
Di-n-octyl phthalate	1.2	U	23	1.2	0.40	ug/L		11/15/18 01:34	1
Hexachlorobenzene	2.3	U	12	2.3	0.76	ug/L		11/15/18 01:34	1
Hexachlorobutadiene	12	U	35	12	3.8	ug/L		11/15/18 01:34	1
Hexachlorocyclopentadiene	35	U	58	35	12	ug/L		11/15/18 01:34	1
Hexachloroethane	5.1	U	12	5.1	2.4	ug/L		11/15/18 01:34	1
Isophorone	0.58	U	12	0.58	0.24	ug/L		11/15/18 01:34	1
Nitrobenzene	2.3	U	23	2.3	0.94	ug/L		11/15/18 01:34	1
N-Nitrosodi-n-propylamine	1.2	U	23	1.2	0.40	ug/L		11/15/18 01:34	1
N-Nitrosodiphenylamine	1.2	U	12	1.2	0.51	ug/L		11/15/18 01:34	1
Pentachlorophenol	69	U	92	69	23	ug/L		11/15/18 01:34	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Phenol	5.1	U	12	5.1	2.3	ug/L		11/15/18 01:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*89*		*43 - 140*	*11/05/18 12:30*	*11/15/18 01:34*	*1*
2-Fluorobiphenyl	*83*		*44 - 119*	*11/05/18 12:30*	*11/15/18 01:34*	*1*
2-Fluorophenol (Surr)	*91*		*19 - 119*	*11/05/18 12:30*	*11/15/18 01:34*	*1*
Nitrobenzene-d5 (Surr)	*91*		*44 - 120*	*11/05/18 12:30*	*11/15/18 01:34*	*1*
Phenol-d5 (Surr)	*92*		*10 - 115*	*11/05/18 12:30*	*11/15/18 01:34*	*1*
Terphenyl-d14 (Surr)	*95*		*50 - 134*	*11/05/18 12:30*	*11/15/18 01:34*	*1*

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.1	U	11	1.1	0.30	ug/L		11/14/18 21:42	1
1,2-Dichlorobenzene	0.53	U	11	0.53	0.24	ug/L		11/14/18 21:42	1
1,3-Dichlorobenzene	1.1	U	11	1.1	0.32	ug/L		11/14/18 21:42	1
1,4-Dichlorobenzene	1.1	U	11	1.1	0.34	ug/L		11/14/18 21:42	1
1,4-Dioxane	4.7	U	19	4.7	1.8	ug/L		11/14/18 21:42	1
2,4,5-Trichlorophenol	1.1	U	21	1.1	0.48	ug/L		11/14/18 21:42	1
2,4,6-Trichlorophenol	1.1	U	21	1.1	0.31	ug/L		11/14/18 21:42	1
2,4-Dichlorophenol	2.1	U	11	2.1	0.68	ug/L		11/14/18 21:42	1
2,4-Dimethylphenol	2.1	U	11	2.1	0.62	ug/L		11/14/18 21:42	1
2,4-Dinitrophenol	32	U	85	32	11	ug/L		11/14/18 21:42	1
2,4-Dinitrotoluene	4.7	U	21	4.7	1.8	ug/L		11/14/18 21:42	1
2,6-Dinitrotoluene	4.7	U	21	4.7	2.0	ug/L		11/14/18 21:42	1
2-Chloronaphthalene	1.1	U	11	1.1	0.28	ug/L		11/14/18 21:42	1
2-Chlorophenol	4.7	U	11	4.7	2.1	ug/L		11/14/18 21:42	1
2-Methylphenol	2.1	U	11	2.1	1.0	ug/L		11/14/18 21:42	1
2-Nitroaniline	4.7	U	53	4.7	1.8	ug/L		11/14/18 21:42	1
2-Nitrophenol	1.1	U	21	1.1	0.41	ug/L		11/14/18 21:42	1
3 & 4 Methylphenol	0.53	U	21	0.53	0.27	ug/L		11/14/18 21:42	1
3,3'-Dichlorobenzidine	4.7	U	53	4.7	2.1	ug/L		11/14/18 21:42	1
3-Nitroaniline	4.7	U	53	4.7	2.1	ug/L		11/14/18 21:42	1
4,6-Dinitro-2-methylphenol	9.3	U	85	9.3	4.2	ug/L		11/14/18 21:42	1
4-Bromophenyl phenyl ether	1.1	U	11	1.1	0.46	ug/L		11/14/18 21:42	1
4-Chloro-3-methylphenol	5.3	U	21	5.3	2.6	ug/L		11/14/18 21:42	1
4-Chloroaniline	4.7	U	27	4.7	2.3	ug/L		11/14/18 21:42	1
4-Chlorophenyl phenyl ether	4.7	U	11	4.7	1.8	ug/L		11/14/18 21:42	1
4-Nitroaniline	4.7	U	53	4.7	2.1	ug/L		11/14/18 21:42	1
4-Nitrophenol	4.2	U	53	4.2	1.3	ug/L		11/14/18 21:42	1
Benzoic acid	32	U	85	32	11	ug/L		11/14/18 21:42	1
Benzyl alcohol	0.53	U	27	0.53	0.24	ug/L		11/14/18 21:42	1
bis (2-chloroisopropyl) ether	1.1	U	11	1.1	0.30	ug/L		11/14/18 21:42	1
Bis(2-chloroethoxy)methane	2.1	U	11	2.1	1.0	ug/L		11/14/18 21:42	1
Bis(2-chloroethyl)ether	1.1	U	21	1.1	0.44	ug/L		11/14/18 21:42	1
Bis(2-ethylhexyl) phthalate	2.1	U	11	2.1	0.59	ug/L		11/14/18 21:42	1
Butyl benzyl phthalate	2.1	U	21	2.1	1.1	ug/L		11/14/18 21:42	1
Carbazole	1.1	U	11	1.1	0.46	ug/L		11/14/18 21:42	1
Dibenzofuran	1.1	U	11	1.1	0.31	ug/L		11/14/18 21:42	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Diethyl phthalate	1.1	U	21	1.1	0.40	ug/L		11/14/18 21:42	1
Dimethyl phthalate	0.53	U	21	0.53	0.22	ug/L		11/14/18 21:42	1
Di-n-butyl phthalate	4.7	U	21	4.7	1.2	ug/L		11/14/18 21:42	1
Di-n-octyl phthalate	1.1	U	21	1.1	0.37	ug/L		11/14/18 21:42	1
Hexachlorobenzene	2.1	U	11	2.1	0.70	ug/L		11/14/18 21:42	1
Hexachlorobutadiene	11	U	32	11	3.5	ug/L		11/14/18 21:42	1
Hexachlorocyclopentadiene	32	U	53	32	11	ug/L		11/14/18 21:42	1
Hexachloroethane	4.7	U	11	4.7	2.2	ug/L		11/14/18 21:42	1
Isophorone	0.53	U	11	0.53	0.22	ug/L		11/14/18 21:42	1
Nitrobenzene	2.1	U	21	2.1	0.86	ug/L		11/14/18 21:42	1
N-Nitrosodi-n-propylamine	1.1	U	21	1.1	0.37	ug/L		11/14/18 21:42	1
N-Nitrosodiphenylamine	1.1	U	11	1.1	0.47	ug/L		11/14/18 21:42	1
Pentachlorophenol	64	U	85	64	21	ug/L		11/14/18 21:42	1
Phenol	4.7	U	11	4.7	2.1	ug/L		11/14/18 21:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*84*		*43 - 140*	*11/05/18 12:30*	*11/14/18 21:42*	*1*
2-Fluorobiphenyl	*71*		*44 - 119*	*11/05/18 12:30*	*11/14/18 21:42*	*1*
2-Fluorophenol (Surr)	*77*		*19 - 119*	*11/05/18 12:30*	*11/14/18 21:42*	*1*
Nitrobenzene-d5 (Surr)	*77*		*44 - 120*	*11/05/18 12:30*	*11/14/18 21:42*	*1*
Phenol-d5 (Surr)	*80*		*10 - 115*	*11/05/18 12:30*	*11/14/18 21:42*	*1*
Terphenyl-d14 (Surr)	*97*		*50 - 134*	*11/05/18 12:30*	*11/14/18 21:42*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4,4'-DDD	0.022	U	0.055	0.022	0.0085	ug/L		11/24/18 02:38	1
4,4'-DDE	0.022	U	0.055	0.022	0.0083	ug/L		11/24/18 02:38	1
4,4'-DDT	0.055	U	0.055	0.055	0.016	ug/L		11/24/18 02:38	1
Aldrin	0.022	U	0.055	0.022	0.0065	ug/L		11/24/18 02:38	1
alpha-BHC	0.022	U	0.055	0.022	0.0059	ug/L		11/24/18 02:38	1
alpha-Chlordane	0.022	U	0.055	0.022	0.0059	ug/L		11/24/18 02:38	1
beta-BHC	0.022	U M	0.055	0.022	0.0096	ug/L		11/24/18 02:38	1
delta-BHC	0.022	U	0.055	0.022	0.0064	ug/L		11/24/18 02:38	1
Dieldrin	0.022	U	0.055	0.022	0.0070	ug/L		11/24/18 02:38	1
Endosulfan I	0.022	U	0.055	0.022	0.0064	ug/L		11/24/18 02:38	1
Endosulfan II	0.022	U	0.055	0.022	0.0077	ug/L		11/24/18 02:38	1
Endosulfan sulfate	0.022	U	0.055	0.022	0.0063	ug/L		11/24/18 02:38	1
Endrin	0.022	U	0.055	0.022	0.0087	ug/L		11/24/18 02:38	1
Endrin aldehyde	0.022	U	0.055	0.022	0.0097	ug/L		11/24/18 02:38	1
Endrin ketone	0.022	U	0.055	0.022	0.0077	ug/L		11/24/18 02:38	1
gamma-BHC (Lindane)	0.022	U	0.055	0.022	0.0076	ug/L		11/24/18 02:38	1
gamma-Chlordane	0.022	U	0.055	0.022	0.010	ug/L		11/24/18 02:38	1
Heptachlor	0.022	U M	0.055	0.022	0.0085	ug/L		11/24/18 02:38	1
Heptachlor epoxide	0.022	U	0.055	0.022	0.0083	ug/L		11/24/18 02:38	1
Methoxychlor	0.055	U	0.055	0.055	0.014	ug/L		11/24/18 02:38	1
Toxaphene	0.89	U Q	2.2	0.89	0.41	ug/L		11/24/18 02:38	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	91		34 - 122	11/07/18 10:54	11/24/18 02:38	1
Tetrachloro-m-xylene	83		44 - 124	11/07/18 10:54	11/24/18 02:38	1

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4,4'-DDD	0.022	U	0.054	0.022	0.0083	ug/L		11/24/18 02:55	1
4,4'-DDE	0.022	U	0.054	0.022	0.0081	ug/L		11/24/18 02:55	1
4,4'-DDT	0.054	U	0.054	0.054	0.016	ug/L		11/24/18 02:55	1
Aldrin	0.022	U	0.054	0.022	0.0064	ug/L		11/24/18 02:55	1
alpha-BHC	0.022	U	0.054	0.022	0.0057	ug/L		11/24/18 02:55	1
alpha-Chlordane	0.022	U	0.054	0.022	0.0057	ug/L		11/24/18 02:55	1
beta-BHC	0.022	U	0.054	0.022	0.0094	ug/L		11/24/18 02:55	1
delta-BHC	0.022	U	0.054	0.022	0.0063	ug/L		11/24/18 02:55	1
Dieldrin	0.022	U	0.054	0.022	0.0068	ug/L		11/24/18 02:55	1
Endosulfan I	0.022	U	0.054	0.022	0.0063	ug/L		11/24/18 02:55	1
Endosulfan II	0.022	U	0.054	0.022	0.0076	ug/L		11/24/18 02:55	1
Endosulfan sulfate	0.022	U	0.054	0.022	0.0062	ug/L		11/24/18 02:55	1
Endrin	0.022	U	0.054	0.022	0.0086	ug/L		11/24/18 02:55	1
Endrin aldehyde	0.022	U	0.054	0.022	0.0095	ug/L		11/24/18 02:55	1
Endrin ketone	0.022	U	0.054	0.022	0.0076	ug/L		11/24/18 02:55	1
gamma-BHC (Lindane)	0.022	U	0.054	0.022	0.0075	ug/L		11/24/18 02:55	1
gamma-Chlordane	0.022	U	0.054	0.022	0.0099	ug/L		11/24/18 02:55	1
Heptachlor	0.022	U	0.054	0.022	0.0083	ug/L		11/24/18 02:55	1
Heptachlor epoxide	0.022	U	0.054	0.022	0.0081	ug/L		11/24/18 02:55	1
Methoxychlor	0.054	U	0.054	0.054	0.014	ug/L		11/24/18 02:55	1
Toxaphene	0.87	U Q	2.2	0.87	0.40	ug/L		11/24/18 02:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	89		34 - 122	11/07/18 10:54	11/24/18 02:55	1
Tetrachloro-m-xylene	82		44 - 124	11/07/18 10:54	11/24/18 02:55	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
PCB-1016	0.44	U M	1.1	0.44	0.14	ug/L		11/27/18 18:24	1
PCB-1221	0.28	U M	1.1	0.28	0.24	ug/L		11/27/18 18:24	1
PCB-1232	0.66	U M	1.1	0.66	0.18	ug/L		11/27/18 18:24	1
PCB-1242	0.33	U M	1.1	0.33	0.12	ug/L		11/27/18 18:24	1
PCB-1248	0.33	U Q M	1.1	0.33	0.10	ug/L		11/27/18 18:24	1
PCB-1254	0.28	U M	1.1	0.28	0.13	ug/L		11/27/18 18:24	1
PCB-1260	0.44	U M	1.1	0.44	0.18	ug/L		11/27/18 18:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		25 - 120	11/07/18 10:54	11/27/18 18:24	1
DCB Decachlorobiphenyl	96	Q	30 - 136	11/07/18 10:54	11/27/18 18:24	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
PCB-1016	0.43	U M	1.1	0.43	0.13	ug/L		11/27/18 18:45	1
PCB-1221	0.27	U M	1.1	0.27	0.23	ug/L		11/27/18 18:45	1
PCB-1232	0.65	U M	1.1	0.65	0.18	ug/L		11/27/18 18:45	1
PCB-1242	0.32	U M	1.1	0.32	0.11	ug/L		11/27/18 18:45	1
PCB-1248	0.32	U Q M	1.1	0.32	0.099	ug/L		11/27/18 18:45	1
PCB-1254	0.27	U M	1.1	0.27	0.12	ug/L		11/27/18 18:45	1
PCB-1260	0.43	U M	1.1	0.43	0.17	ug/L		11/27/18 18:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*25 - 120*	*11/07/18 10:54*	*11/27/18 18:45*	*1*
DCB Decachlorobiphenyl	*97*	*Q*	*30 - 136*	*11/07/18 10:54*	*11/27/18 18:45*	*1*

Method: 8330 Modified - Nitroguanidine (HPLC)

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitroguanidine	6.0	U	20	6.0	2.4	ug/L		11/19/18 18:09	1

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitroguanidine	6.0	U	20	6.0	2.4	ug/L		11/19/18 18:59	1

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.49	U	1.2	0.49	0.24	ug/L		11/09/18 05:14	1
1,3-Dinitrobenzene	0.24	U	0.49	0.24	0.11	ug/L		11/09/18 05:14	1
2,4,6-Trinitrotoluene	0.24	U	0.49	0.24	0.088	ug/L		11/09/18 05:14	1
2,4-Dinitrotoluene	0.24	U	0.49	0.24	0.10	ug/L		11/09/18 05:14	1
2,6-Dinitrotoluene	0.24	U	0.24	0.24	0.079	ug/L		11/09/18 05:14	1
2-Amino-4,6-dinitrotoluene	0.15	U	0.24	0.15	0.062	ug/L		11/09/18 05:14	1
2-Nitrotoluene	0.24	U	0.49	0.24	0.10	ug/L		11/09/18 05:14	1
3-Nitrotoluene	0.24	U	0.49	0.24	0.10	ug/L		11/09/18 05:14	1
4-Amino-2,6-dinitrotoluene	0.15	U	0.24	0.15	0.070	ug/L		11/09/18 05:14	1
4-Nitrotoluene	0.49	U	1.2	0.49	0.24	ug/L		11/09/18 05:14	1
HMX	0.24	U	0.49	0.24	0.11	ug/L		11/09/18 05:14	1
Nitrobenzene	0.24	U	0.49	0.24	0.11	ug/L		11/09/18 05:14	1
Nitroglycerin	2.4	U	3.7	2.4	1.1	ug/L		11/09/18 05:14	1
PETN	1.5	U	2.4	1.5	0.51	ug/L		11/09/18 05:14	1
RDX	0.15	U	0.24	0.15	0.064	ug/L		11/09/18 05:14	1
Tetryl	0.24	U Q	0.29	0.24	0.097	ug/L		11/09/18 05:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*101*		*83 - 119*	*11/06/18 12:18*	*11/09/18 05:14*	*1*

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.43	U	1.1	0.43	0.21	ug/L		11/09/18 05:36	1
1,3-Dinitrobenzene	0.21	U	0.43	0.21	0.095	ug/L		11/09/18 05:36	1
2,4,6-Trinitrotoluene	0.21	U	0.43	0.21	0.078	ug/L		11/09/18 05:36	1
2,4-Dinitrotoluene	0.21	U	0.43	0.21	0.090	ug/L		11/09/18 05:36	1
2,6-Dinitrotoluene	0.21	U	0.21	0.21	0.069	ug/L		11/09/18 05:36	1
2-Amino-4,6-dinitrotoluene	0.13	U	0.21	0.13	0.054	ug/L		11/09/18 05:36	1
2-Nitrotoluene	0.21	U	0.43	0.21	0.092	ug/L		11/09/18 05:36	1
3-Nitrotoluene	0.21	U	0.43	0.21	0.089	ug/L		11/09/18 05:36	1
4-Amino-2,6-dinitrotoluene	0.13	U	0.21	0.13	0.062	ug/L		11/09/18 05:36	1
4-Nitrotoluene	0.43	U	1.1	0.43	0.21	ug/L		11/09/18 05:36	1
HMX	0.21	U	0.43	0.21	0.094	ug/L		11/09/18 05:36	1
Nitrobenzene	0.21	U	0.43	0.21	0.098	ug/L		11/09/18 05:36	1
Nitroglycerin	2.1	U	3.2	2.1	0.99	ug/L		11/09/18 05:36	1
PETN	1.3	U	2.1	1.3	0.45	ug/L		11/09/18 05:36	1
RDX	0.13	U	0.21	0.13	0.056	ug/L		11/09/18 05:36	1
Tetryl	0.21	U Q	0.26	0.21	0.085	ug/L		11/09/18 05:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*102*		*83 - 119*	*11/06/18 12:18*	*11/09/18 05:36*	*1*

Client Sample ID: DA1tw-001-181001-GW **Lab Sample ID: 280-116538-6**
Date Collected: 11/01/18 15:50 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.43	U M	1.1	0.43	0.22	ug/L		11/09/18 05:59	1
1,3-Dinitrobenzene	0.22	U	0.43	0.22	0.096	ug/L		11/09/18 05:59	1
2,4,6-Trinitrotoluene	0.22	U M	0.43	0.22	0.079	ug/L		11/09/18 05:59	1
2,4-Dinitrotoluene	0.22	U	0.43	0.22	0.091	ug/L		11/09/18 05:59	1
2,6-Dinitrotoluene	0.22	U	0.22	0.22	0.070	ug/L		11/09/18 05:59	1
2-Amino-4,6-dinitrotoluene	0.13	U	0.22	0.13	0.055	ug/L		11/09/18 05:59	1
2-Nitrotoluene	0.22	U	0.43	0.22	0.093	ug/L		11/09/18 05:59	1
3-Nitrotoluene	0.22	U	0.43	0.22	0.091	ug/L		11/09/18 05:59	1
4-Amino-2,6-dinitrotoluene	0.13	U	0.22	0.13	0.063	ug/L		11/09/18 05:59	1
4-Nitrotoluene	0.43	U	1.1	0.43	0.22	ug/L		11/09/18 05:59	1
HMX	0.22	U	0.43	0.22	0.095	ug/L		11/09/18 05:59	1
Nitrobenzene	0.22	U	0.43	0.22	0.099	ug/L		11/09/18 05:59	1
Nitroglycerin	2.2	U	3.3	2.2	1.0	ug/L		11/09/18 05:59	1
PETN	1.3	U	2.2	1.3	0.45	ug/L		11/09/18 05:59	1
RDX	0.13	U	0.22	0.13	0.057	ug/L		11/09/18 05:59	1
Tetryl	0.22	U Q	0.26	0.22	0.086	ug/L		11/09/18 05:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*99*		*83 - 119*	*11/06/18 12:18*	*11/09/18 05:59*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Perchlorate	**0.023**	**J**	0.050	0.010	0.0040	ug/L		11/12/18 16:18	1

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Perchlorate	0.010	U M	0.050	0.010	0.0040	ug/L		11/12/18 16:23	1

Method: 6010C - Metals (ICP)

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	**62**	**J**	300	70	18	ug/L		11/07/18 15:49	1
Calcium	**170000**		1000	140	35	ug/L		11/07/18 05:34	1
Iron	**90**	**J**	100	85	22	ug/L		11/07/18 15:49	1
Magnesium	**32000**		500	40	11	ug/L		11/07/18 05:34	1
Potassium	**4500**		3000	940	240	ug/L		11/07/18 05:34	1
Sodium	**24000**		5000	350	120	ug/L		11/07/18 05:34	1
Phosphorus	50	U	3000	50	14	ug/L		11/07/18 05:34	1

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	**330**		300	70	18	ug/L		11/07/18 15:52	1
Calcium	**120000**		1000	140	35	ug/L		11/07/18 05:36	1
Iron	**610**		100	85	22	ug/L		11/07/18 15:52	1
Magnesium	**51000**		500	40	11	ug/L		11/07/18 05:36	1
Potassium	**5500**		3000	940	240	ug/L		11/07/18 05:36	1
Sodium	**26000**		5000	350	120	ug/L		11/07/18 05:36	1
Phosphorus	50	U	3000	50	14	ug/L		11/07/18 05:36	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	**16**		6.0	1.0	0.40	ug/L		11/14/18 03:19	1
Arsenic	**4.8**	**J**	5.0	1.0	0.33	ug/L		11/14/18 03:19	1
Barium	**110**		3.0	0.95	0.29	ug/L		11/14/18 03:19	1
Beryllium	**0.087**	**J**	1.0	0.30	0.080	ug/L		11/14/18 03:19	1
Cadmium	**0.34**	**J**	1.0	1.0	0.27	ug/L		11/14/18 03:19	1
Chromium	1.8	U	10	1.8	0.50	ug/L		11/14/18 03:19	1
Cobalt	**2.5**		1.0	0.20	0.054	ug/L		11/14/18 03:19	1
Copper	**1.7**	**J**	2.0	1.8	0.56	ug/L		11/14/18 03:19	1
Lead	**0.31**	**J**	3.0	0.70	0.18	ug/L		11/14/18 03:19	1
Manganese	**210**		3.5	0.95	0.31	ug/L		11/14/18 16:43	1
Nickel	**9.8**		3.0	1.0	0.30	ug/L		11/14/18 03:19	1
Selenium	**0.85**	**J**	5.0	2.0	0.70	ug/L		11/14/18 03:19	1
Silver	**0.18**	**J**	5.0	0.10	0.033	ug/L		11/14/18 03:19	1
Thallium	0.20	U	1.0	0.20	0.050	ug/L		11/14/18 03:19	1
Vanadium	2.0	U	6.0	2.0	0.50	ug/L		11/14/18 03:19	1
Zinc	**4.8**	**J**	20	8.0	2.0	ug/L		11/14/18 03:19	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	**1.4**	**J**	6.0	1.0	0.40	ug/L		11/14/18 03:23	1
Arsenic	**10**		5.0	1.0	0.33	ug/L		11/14/18 03:23	1
Barium	**41**		3.0	0.95	0.29	ug/L		11/14/18 03:23	1
Beryllium	0.30	U	1.0	0.30	0.080	ug/L		11/14/18 03:23	1
Cadmium	1.0	U	1.0	1.0	0.27	ug/L		11/14/18 03:23	1
Chromium	**0.86**	**J**	10	1.8	0.50	ug/L		11/14/18 03:23	1
Cobalt	**6.6**		1.0	0.20	0.054	ug/L		11/14/18 03:23	1
Copper	**1.3**	**J**	2.0	1.8	0.56	ug/L		11/14/18 03:23	1
Lead	**0.61**	**J**	3.0	0.70	0.18	ug/L		11/14/18 03:23	1
Manganese	**250**		3.5	0.95	0.31	ug/L		11/14/18 16:01	1
Nickel	**14**		3.0	1.0	0.30	ug/L		11/14/18 03:23	1
Selenium	**0.90**	**J**	5.0	2.0	0.70	ug/L		11/14/18 03:23	1
Silver	0.10	U	5.0	0.10	0.033	ug/L		11/14/18 03:23	1
Thallium	**0.096**	**J**	1.0	0.20	0.050	ug/L		11/14/18 03:23	1
Vanadium	2.0	U	6.0	2.0	0.50	ug/L		11/14/18 03:23	1
Zinc	**3.8**	**J**	20	8.0	2.0	ug/L		11/14/18 03:23	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	**0.063**	**J**	0.20	0.080	0.027	ug/L		11/16/18 21:02	1

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	**0.067**	**J**	0.20	0.080	0.027	ug/L		11/16/18 21:04	1

General Chemistry

Client Sample ID: SCLmw-001-181001-GW **Lab Sample ID: 280-116538-1**
Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrocellulose	1000	U	2000	1000	480	ug/L		11/15/18 13:49	1
Cyanide, Total	**0.0093**	**J**	0.010	0.0050	0.0020	mg/L		11/15/18 18:42	1
Sulfide	1.9	U	4.0	1.9	0.79	mg/L		11/07/18 20:06	1
Nitrate as N	**0.13**	**J**	0.50	0.10	0.042	mg/L		11/03/18 12:49	1
Nitrite as N	0.10	U	0.50	0.10	0.049	mg/L		11/03/18 12:49	1
Sulfate	**230**	**D**	25	2.5	1.2	mg/L		11/03/18 16:53	5
Alkalinity	**370**	**B**	5.0	5.0	1.1	mg/L		11/13/18 20:03	1

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrocellulose	1000	U	2000	1000	480	ug/L		11/15/18 13:51	1

General Chemistry (Continued)

Client Sample ID: SCLmw-003-181001-GW **Lab Sample ID: 280-116538-2**
Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Analyte	Result	Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	**0.0060**	**J**	0.010	0.0050	0.0020	mg/L		11/15/18 18:44	1
Sulfide	1.9	U J1	4.0	1.9	0.79	mg/L		11/07/18 20:06	1
Nitrate as N	0.10	U	0.50	0.10	0.042	mg/L		11/03/18 13:59	1
Nitrite as N	0.10	U	0.50	0.10	0.049	mg/L		11/03/18 13:59	1
Sulfate	**190**		5.0	0.50	0.23	mg/L		11/03/18 13:59	1
Alkalinity	**340**	**B**	5.0	5.0	1.1	mg/L		11/13/18 20:11	1

Default Detection Limits

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116538-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	LOQ	DL	Units	Method
1,1,1-Trichloroethane	1.0	0.16	ug/L	8260B
1,1,2,2-Tetrachloroethane	1.0	0.21	ug/L	8260B
1,1,2-Trichloroethane	1.0	0.27	ug/L	8260B
1,1-Dichloroethane	1.0	0.22	ug/L	8260B
1,1-Dichloroethene	1.0	0.23	ug/L	8260B
1,2-Dibromoethane	1.0	0.18	ug/L	8260B
1,2-Dichloroethane	1.0	0.13	ug/L	8260B
1,2-Dichloroethene, Total	1.0	0.24	ug/L	8260B
1,2-Dichloropropane	1.0	0.18	ug/L	8260B
2-Butanone (MEK)	6.0	2.0	ug/L	8260B
2-Hexanone	5.0	1.7	ug/L	8260B
4-Methyl-2-pentanone (MIBK)	5.0	0.98	ug/L	8260B
Acetone	10	1.9	ug/L	8260B
Benzene	1.0	0.16	ug/L	8260B
Bromobenzene	1.0	0.17	ug/L	8260B
Bromochloromethane	1.0	0.10	ug/L	8260B
Bromodichloromethane	1.0	0.17	ug/L	8260B
Bromoform	1.0	0.19	ug/L	8260B
Bromomethane	2.0	0.21	ug/L	8260B
Carbon disulfide	2.0	0.45	ug/L	8260B
Carbon tetrachloride	2.0	0.19	ug/L	8260B
Chlorobenzene	1.0	0.17	ug/L	8260B
Chloroethane	2.0	0.41	ug/L	8260B
Chloroform	1.0	0.16	ug/L	8260B
Chloromethane	2.0	0.30	ug/L	8260B
cis-1,3-Dichloropropene	1.0	0.16	ug/L	8260B
Dibromochloromethane	1.0	0.17	ug/L	8260B
Ethylbenzene	1.0	0.16	ug/L	8260B
Methylene Chloride	5.0	0.32	ug/L	8260B
Styrene	1.0	0.17	ug/L	8260B
Tetrachloroethene	1.0	0.20	ug/L	8260B
Toluene	1.0	0.17	ug/L	8260B
trans-1,3-Dichloropropene	1.0	0.19	ug/L	8260B
Trichloroethene	1.0	0.16	ug/L	8260B
Vinyl chloride	1.5	0.10	ug/L	8260B
Xylenes, Total	1.0	0.19	ug/L	8260B

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Prep: 3510C

Analyte	LOQ	DL	Units	Method
1-Methylnaphthalene	0.10	0.0059	ug/L	8270D SIM
2-Methylnaphthalene	0.10	0.0060	ug/L	8270D SIM
Acenaphthene	0.10	0.0042	ug/L	8270D SIM
Acenaphthylene	0.10	0.0051	ug/L	8270D SIM
Anthracene	0.10	0.0056	ug/L	8270D SIM
Benzo[a]anthracene	0.10	0.0042	ug/L	8270D SIM
Benzo[a]pyrene	0.10	0.0069	ug/L	8270D SIM
Benzo[b]fluoranthene	0.10	0.0031	ug/L	8270D SIM
Benzo[g,h,i]perylene	0.10	0.0062	ug/L	8270D SIM
Benzo[k]fluoranthene	0.10	0.0063	ug/L	8270D SIM
Chrysene	0.10	0.0033	ug/L	8270D SIM

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Prep: 3510C

Analyte	LOQ	DL	Units	Method
Dibenz(a,h)anthracene	0.10	0.0041	ug/L	8270D SIM
Fluoranthene	0.10	0.0048	ug/L	8270D SIM
Fluorene	0.10	0.0055	ug/L	8270D SIM
Indeno[1,2,3-cd]pyrene	0.10	0.0045	ug/L	8270D SIM
Naphthalene	0.10	0.0080	ug/L	8270D SIM
Phenanthrene	0.10	0.0093	ug/L	8270D SIM
Pyrene	0.10	0.0061	ug/L	8270D SIM

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Prep: 3520C

Analyte	LOQ	DL	Units	Method
1,2,4-Trichlorobenzene	10	0.28	ug/L	8270D
1,2-Dichlorobenzene	10	0.23	ug/L	8270D
1,3-Dichlorobenzene	10	0.30	ug/L	8270D
1,4-Dichlorobenzene	10	0.32	ug/L	8270D
1,4-Dioxane	18	1.7	ug/L	8270D
2,4,5-Trichlorophenol	20	0.45	ug/L	8270D
2,4,6-Trichlorophenol	20	0.29	ug/L	8270D
2,4-Dichlorophenol	10	0.64	ug/L	8270D
2,4-Dimethylphenol	10	0.58	ug/L	8270D
2,4-Dinitrophenol	80	10	ug/L	8270D
2,4-Dinitrotoluene	20	1.7	ug/L	8270D
2,6-Dinitrotoluene	20	1.9	ug/L	8270D
2-Chloronaphthalene	10	0.26	ug/L	8270D
2-Chlorophenol	10	2.0	ug/L	8270D
2-Methylphenol	10	0.98	ug/L	8270D
2-Nitroaniline	50	1.7	ug/L	8270D
2-Nitrophenol	20	0.39	ug/L	8270D
3 & 4 Methylphenol	20	0.25	ug/L	8270D
3,3'-Dichlorobenzidine	50	2.0	ug/L	8270D
3-Nitroaniline	50	2.0	ug/L	8270D
4,6-Dinitro-2-methylphenol	80	4.0	ug/L	8270D
4-Bromophenyl phenyl ether	10	0.43	ug/L	8270D
4-Chloro-3-methylphenol	20	2.4	ug/L	8270D
4-Chloroaniline	25	2.1	ug/L	8270D
4-Chlorophenyl phenyl ether	10	1.7	ug/L	8270D
4-Nitroaniline	50	2.0	ug/L	8270D
4-Nitrophenol	50	1.2	ug/L	8270D
Benzoic acid	80	10	ug/L	8270D
Benzyl alcohol	25	0.23	ug/L	8270D
bis (2-chloroisopropyl) ether	10	0.28	ug/L	8270D
Bis(2-chloroethoxy)methane	10	0.97	ug/L	8270D
Bis(2-chloroethyl)ether	20	0.41	ug/L	8270D
Bis(2-ethylhexyl) phthalate	10	0.56	ug/L	8270D
Butyl benzyl phthalate	20	1.0	ug/L	8270D
Carbazole	10	0.43	ug/L	8270D
Dibenzofuran	10	0.29	ug/L	8270D
Diethyl phthalate	20	0.38	ug/L	8270D
Dimethyl phthalate	20	0.21	ug/L	8270D
Di-n-butyl phthalate	20	1.2	ug/L	8270D

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Prep: 3520C

Analyte	LOQ	DL	Units	Method
Di-n-octyl phthalate	20	0.35	ug/L	8270D
Hexachlorobenzene	10	0.66	ug/L	8270D
Hexachlorobutadiene	30	3.3	ug/L	8270D
Hexachlorocyclopentadiene	50	10	ug/L	8270D
Hexachloroethane	10	2.1	ug/L	8270D
Isophorone	10	0.21	ug/L	8270D
Nitrobenzene	20	0.81	ug/L	8270D
N-Nitrosodi-n-propylamine	20	0.35	ug/L	8270D
N-Nitrosodiphenylamine	10	0.44	ug/L	8270D
Pentachlorophenol	80	20	ug/L	8270D
Phenol	10	2.0	ug/L	8270D

Method: 8081B - Organochlorine Pesticides (GC)

Prep: 3510C

Analyte	LOQ	DL	Units	Method
4,4'-DDD	0.050	0.0077	ug/L	8081B
4,4'-DDE	0.050	0.0075	ug/L	8081B
4,4'-DDT	0.050	0.015	ug/L	8081B
Aldrin	0.050	0.0059	ug/L	8081B
alpha-BHC	0.050	0.0053	ug/L	8081B
alpha-Chlordane	0.050	0.0053	ug/L	8081B
beta-BHC	0.050	0.0087	ug/L	8081B
delta-BHC	0.050	0.0058	ug/L	8081B
Dieldrin	0.050	0.0063	ug/L	8081B
Endosulfan I	0.050	0.0058	ug/L	8081B
Endosulfan II	0.050	0.0070	ug/L	8081B
Endosulfan sulfate	0.050	0.0057	ug/L	8081B
Endrin	0.050	0.0079	ug/L	8081B
Endrin aldehyde	0.050	0.0088	ug/L	8081B
Endrin ketone	0.050	0.0070	ug/L	8081B
gamma-BHC (Lindane)	0.050	0.0069	ug/L	8081B
gamma-Chlordane	0.050	0.0091	ug/L	8081B
Heptachlor	0.050	0.0077	ug/L	8081B
Heptachlor epoxide	0.050	0.0075	ug/L	8081B
Methoxychlor	0.050	0.013	ug/L	8081B
Toxaphene	2.0	0.37	ug/L	8081B

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Prep: 3510C

Analyte	LOQ	DL	Units	Method
PCB-1016	1.0	0.12	ug/L	8082A
PCB-1221	1.0	0.21	ug/L	8082A
PCB-1232	1.0	0.17	ug/L	8082A
PCB-1242	1.0	0.10	ug/L	8082A
PCB-1248	1.0	0.092	ug/L	8082A
PCB-1254	1.0	0.11	ug/L	8082A
PCB-1260	1.0	0.16	ug/L	8082A

Method: 8330 Modified - Nitroguanidine (HPLC)

Default Detection Limits

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116538-1

Method: 8330 Modified - Nitroguanidine (HPLC)

Prep: Filtration

Analyte	LOQ	DL	Units	Method
Nitroguanidine	20	2.4	ug/L	8330 Modified

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Prep: 3535

Analyte	LOQ	DL	Units	Method
1,3,5-Trinitrobenzene	1.0	0.20	ug/L	8330B
1,3-Dinitrobenzene	0.40	0.089	ug/L	8330B
2,4,6-Trinitrotoluene	0.40	0.072	ug/L	8330B
2,4-Dinitrotoluene	0.40	0.084	ug/L	8330B
2,6-Dinitrotoluene	0.20	0.065	ug/L	8330B
2-Amino-4,6-dinitrotoluene	0.20	0.051	ug/L	8330B
2-Nitrotoluene	0.40	0.086	ug/L	8330B
3-Nitrotoluene	0.40	0.083	ug/L	8330B
4-Amino-2,6-dinitrotoluene	0.20	0.058	ug/L	8330B
4-Nitrotoluene	1.0	0.20	ug/L	8330B
HMX	0.40	0.088	ug/L	8330B
Nitrobenzene	0.40	0.091	ug/L	8330B
Nitroglycerin	3.0	0.92	ug/L	8330B
PETN	2.0	0.42	ug/L	8330B
RDX	0.20	0.052	ug/L	8330B
Tetryl	0.24	0.079	ug/L	8330B

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	LOQ	DL	Units	Method
Perchlorate	0.050	0.0040	ug/L	6860

Method: 6010C - Metals (ICP)

Prep: 3010A

Analyte	LOQ	DL	Units	Method
Aluminum	300	18	ug/L	6010C
Calcium	1000	35	ug/L	6010C
Iron	100	22	ug/L	6010C
Magnesium	500	11	ug/L	6010C
Phosphorus	3000	14	ug/L	6010C
Potassium	3000	240	ug/L	6010C
Sodium	5000	120	ug/L	6010C

Method: 6020A - Metals (ICP/MS)

Prep: 3020A

Analyte	LOQ	DL	Units	Method
Antimony	6.0	0.40	ug/L	6020A
Arsenic	5.0	0.33	ug/L	6020A
Barium	3.0	0.29	ug/L	6020A
Beryllium	1.0	0.080	ug/L	6020A
Cadmium	1.0	0.27	ug/L	6020A
Chromium	10	0.50	ug/L	6020A
Cobalt	1.0	0.054	ug/L	6020A
Copper	2.0	0.56	ug/L	6020A

Default Detection Limits

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116538-1

Method: 6020A - Metals (ICP/MS) (Continued)

Prep: 3020A

Analyte	LOQ	DL	Units	Method
Lead	3.0	0.18	ug/L	6020A
Manganese	3.5	0.31	ug/L	6020A
Nickel	3.0	0.30	ug/L	6020A
Selenium	5.0	0.70	ug/L	6020A
Silver	5.0	0.033	ug/L	6020A
Thallium	1.0	0.050	ug/L	6020A
Vanadium	6.0	0.50	ug/L	6020A
Zinc	20	2.0	ug/L	6020A

Method: 7470A - Mercury (CVAA)

Prep: 7470A

Analyte	LOQ	DL	Units	Method
Mercury	0.20	0.027	ug/L	7470A

General Chemistry

Analyte	LOQ	DL	Units	Method
Nitrate as N	0.50	0.042	mg/L	9056
Nitrite as N	0.50	0.049	mg/L	9056
Sulfate	5.0	0.23	mg/L	9056A
Alkalinity	5.0	1.1	mg/L	SM 2320B

General Chemistry

Prep: 353 (NCell-Hyd)

Analyte	LOQ	DL	Units	Method
Nitrocellulose	2000	480	ug/L	353.2

General Chemistry

Prep: 9012B

Analyte	LOQ	DL	Units	Method
Cyanide, Total	0.010	0.0020	mg/L	9012B

General Chemistry

Prep: 9030B

Analyte	LOQ	DL	Units	Method
Sulfide	4.0	0.79	mg/L	9034

Surrogate Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116538-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(81-118)	(85-114)	(80-119)	(89-112)
280-116538-1	SCLmw-001-181001-GW	100	97	98	98
280-116538-2	SCLmw-003-181001-GW	103	107	102	101
280-116538-3	FWGTB-181014-TB	106	102	96	97
LCS 280-437714/5	Lab Control Sample	98	97	98	102
MB 280-437714/4	Method Blank	95	98	100	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(43-140)	(44-119)	(19-119)	(44-120)	(10-115)	(50-134)
280-116538-1	SCLmw-001-181001-GW	89	83	91	91	92	95
280-116538-2	SCLmw-003-181001-GW	84	71	77	77	80	97
LCS 280-436342/2-A	Lab Control Sample	96	92	100	99	94	86
MB 280-436342/1-A	Method Blank	85	86	98	99	102	99

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHL
Lab Sample ID	Client Sample ID	(53-106)	(55-111)	(58-132)
280-116538-1	SCLmw-001-181001-GW	59	53 Q	69
280-116538-2	SCLmw-003-181001-GW	80	69	90
LCS 280-436346/2-A	Lab Control Sample	76	68	86
MB 280-436346/1-A	Method Blank	80	70	78

Surrogate Legend

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5
TPHL = Terphenyl-d14

Surrogate Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116538-1

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		DCBP2	TCX2
Lab Sample ID	Client Sample ID	(34-122)	(44-124)
280-116538-1	SCLmw-001-181001-GW	91	83
280-116538-2	SCLmw-003-181001-GW	89	82
LCS 280-436649/2-A	Lab Control Sample	90	84
LCS 280-436649/6-A	Lab Control Sample	97	77
LCSD 280-436649/3-A	Lab Control Sample Dup	86	78
MB 280-436649/1-A	Method Blank	84	84

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCBP2
Lab Sample ID	Client Sample ID	(25-120)	(30-136)
280-116538-1	SCLmw-001-181001-GW	88	96 Q
280-116538-2	SCLmw-003-181001-GW	86	97 Q
LCS 280-436649/4-A	Lab Control Sample	82	100
LCSD 280-436649/5-A	Lab Control Sample Dup	87	106
MB 280-436649/1-A	Method Blank	90	88

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		12DNB1
Lab Sample ID	Client Sample ID	(83-119)
280-116538-1	SCLmw-001-181001-GW	101
280-116538-2	SCLmw-003-181001-GW	102
280-116538-6	DA1tw-001-181001-GW	99
LCS 280-436459/2-A	Lab Control Sample	102
MB 280-436459/1-A	Method Blank	103

Surrogate Legend

12DNB = 1,2-Dinitrobenzene

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-437714/4
Matrix: Water
Analysis Batch: 437714

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 11:11	1
1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21	ug/L		11/15/18 11:11	1
1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27	ug/L		11/15/18 11:11	1
1,1-Dichloroethane	0.80	U	1.0	0.80	0.22	ug/L		11/15/18 11:11	1
1,1-Dichloroethene	0.80	U	1.0	0.80	0.23	ug/L		11/15/18 11:11	1
1,2-Dibromoethane	0.40	U	1.0	0.40	0.18	ug/L		11/15/18 11:11	1
1,2-Dichloroethane	0.40	U	1.0	0.40	0.13	ug/L		11/15/18 11:11	1
1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24	ug/L		11/15/18 11:11	1
1,2-Dichloropropane	0.40	U	1.0	0.40	0.18	ug/L		11/15/18 11:11	1
2-Butanone (MEK)	4.0	U	6.0	4.0	2.0	ug/L		11/15/18 11:11	1
2-Hexanone	4.0	U	5.0	4.0	1.7	ug/L		11/15/18 11:11	1
4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98	ug/L		11/15/18 11:11	1
Acetone	6.4	U	10	6.4	1.9	ug/L		11/15/18 11:11	1
Benzene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 11:11	1
Bromobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 11:11	1
Bromochloromethane	0.20	U	1.0	0.20	0.10	ug/L		11/15/18 11:11	1
Bromodichloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 11:11	1
Bromoform	0.40	U	1.0	0.40	0.19	ug/L		11/15/18 11:11	1
Bromomethane	0.80	U	2.0	0.80	0.21	ug/L		11/15/18 11:11	1
Carbon disulfide	1.6	U	2.0	1.6	0.45	ug/L		11/15/18 11:11	1
Carbon tetrachloride	0.40	U	2.0	0.40	0.19	ug/L		11/15/18 11:11	1
Chlorobenzene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 11:11	1
Chloroethane	1.6	U	2.0	1.6	0.41	ug/L		11/15/18 11:11	1
Chloroform	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 11:11	1
Chloromethane	0.80	U	2.0	0.80	0.30	ug/L		11/15/18 11:11	1
cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 11:11	1
Dibromochloromethane	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 11:11	1
Ethylbenzene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 11:11	1
Methylene Chloride	0.80	U M	5.0	0.80	0.32	ug/L		11/15/18 11:11	1
Styrene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 11:11	1
Tetrachloroethene	0.40	U	1.0	0.40	0.20	ug/L		11/15/18 11:11	1
Toluene	0.40	U	1.0	0.40	0.17	ug/L		11/15/18 11:11	1
trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19	ug/L		11/15/18 11:11	1
Trichloroethene	0.40	U	1.0	0.40	0.16	ug/L		11/15/18 11:11	1
Vinyl chloride	0.20	U	1.5	0.20	0.10	ug/L		11/15/18 11:11	1
Xylenes, Total	0.80	U	1.0	0.80	0.19	ug/L		11/15/18 11:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*		*11/15/18 11:11*	*1*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*		*11/15/18 11:11*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*11/15/18 11:11*	*1*
Toluene-d8 (Surr)	*102*		*89 - 112*		*11/15/18 11:11*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-437714/5
Matrix: Water
Analysis Batch: 437714

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	4.73		ug/L		95	74 - 131
1,1,2,2-Tetrachloroethane	5.00	4.93		ug/L		99	71 - 121
1,1,2-Trichloroethane	5.00	5.25		ug/L		105	80 - 119
1,1-Dichloroethane	5.00	4.82		ug/L		96	77 - 125
1,1-Dichloroethene	5.00	4.29		ug/L		86	71 - 131
1,2-Dibromoethane	5.00	5.14		ug/L		103	77 - 121
1,2-Dichloroethane	5.00	4.97		ug/L		99	73 - 128
1,2-Dichloropropane	5.00	5.24		ug/L		105	78 - 122
2-Butanone (MEK)	20.0	19.9		ug/L		100	56 - 143
2-Hexanone	20.0	19.9		ug/L		100	57 - 139
4-Methyl-2-pentanone (MIBK)	20.0	19.9		ug/L		99	67 - 130
Acetone	20.0	16.0		ug/L		80	39 - 160
Benzene	5.00	4.81		ug/L		96	79 - 120
Bromobenzene	5.00	5.05		ug/L		101	80 - 120
Bromochloromethane	5.00	4.92		ug/L		98	78 - 123
Bromodichloromethane	5.00	4.95		ug/L		99	79 - 125
Bromoform	5.00	5.06		ug/L		101	66 - 130
Bromomethane	5.00	4.45		ug/L		89	53 - 141
Carbon disulfide	5.00	4.23		ug/L		85	64 - 133
Carbon tetrachloride	5.00	4.61		ug/L		92	72 - 136
Chlorobenzene	5.00	4.93		ug/L		99	82 - 118
Chloroethane	5.00	4.66		ug/L		93	60 - 138
Chloroform	5.00	4.83		ug/L		97	79 - 124
Chloromethane	5.00	4.21		ug/L		84	50 - 139
cis-1,3-Dichloropropene	5.00	5.38		ug/L		108	75 - 124
Dibromochloromethane	5.00	5.17		ug/L		103	74 - 126
Ethylbenzene	5.00	5.34		ug/L		107	79 - 121
Methylene Chloride	5.00	4.20	J	ug/L		84	74 - 124
Styrene	5.00	5.28		ug/L		106	78 - 123
Tetrachloroethene	5.00	4.74		ug/L		95	74 - 129
Toluene	5.00	4.92		ug/L		98	80 - 121
trans-1,3-Dichloropropene	5.00	4.94		ug/L		99	73 - 127
Trichloroethene	5.00	4.71		ug/L		94	79 - 123
Vinyl chloride	5.00	4.46		ug/L		89	58 - 137
Xylenes, Total	10.0	10.4		ug/L		104	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*81 - 118*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
Toluene-d8 (Surr)	*102*		*89 - 112*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-436342/1-A
Matrix: Water
Analysis Batch: 437601

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436342

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	1.0	U	10	1.0	0.28	ug/L		11/14/18 17:21	1
1,2-Dichlorobenzene	0.50	U	10	0.50	0.23	ug/L		11/14/18 17:21	1
1,3-Dichlorobenzene	1.0	U	10	1.0	0.30	ug/L		11/14/18 17:21	1
1,4-Dichlorobenzene	1.0	U	10	1.0	0.32	ug/L		11/14/18 17:21	1
1,4-Dioxane	4.4	U	18	4.4	1.7	ug/L		11/14/18 17:21	1
2,4,5-Trichlorophenol	1.0	U	20	1.0	0.45	ug/L		11/14/18 17:21	1
2,4,6-Trichlorophenol	1.0	U	20	1.0	0.29	ug/L		11/14/18 17:21	1
2,4-Dichlorophenol	2.0	U	10	2.0	0.64	ug/L		11/14/18 17:21	1
2,4-Dimethylphenol	2.0	U	10	2.0	0.58	ug/L		11/14/18 17:21	1
2,4-Dinitrophenol	30	U	80	30	10	ug/L		11/14/18 17:21	1
2,4-Dinitrotoluene	4.4	U	20	4.4	1.7	ug/L		11/14/18 17:21	1
2,6-Dinitrotoluene	4.4	U	20	4.4	1.9	ug/L		11/14/18 17:21	1
2-Chloronaphthalene	1.0	U	10	1.0	0.26	ug/L		11/14/18 17:21	1
2-Chlorophenol	4.4	U	10	4.4	2.0	ug/L		11/14/18 17:21	1
2-Methylphenol	2.0	U	10	2.0	0.98	ug/L		11/14/18 17:21	1
2-Nitroaniline	4.4	U	50	4.4	1.7	ug/L		11/14/18 17:21	1
2-Nitrophenol	1.0	U	20	1.0	0.39	ug/L		11/14/18 17:21	1
3 & 4 Methylphenol	0.50	U	20	0.50	0.25	ug/L		11/14/18 17:21	1
3,3'-Dichlorobenzidine	4.4	U	50	4.4	2.0	ug/L		11/14/18 17:21	1
3-Nitroaniline	4.4	U	50	4.4	2.0	ug/L		11/14/18 17:21	1
4,6-Dinitro-2-methylphenol	8.8	U	80	8.8	4.0	ug/L		11/14/18 17:21	1
4-Bromophenyl phenyl ether	1.0	U	10	1.0	0.43	ug/L		11/14/18 17:21	1
4-Chloro-3-methylphenol	5.0	U	20	5.0	2.4	ug/L		11/14/18 17:21	1
4-Chloroaniline	4.4	U	25	4.4	2.1	ug/L		11/14/18 17:21	1
4-Chlorophenyl phenyl ether	4.4	U	10	4.4	1.7	ug/L		11/14/18 17:21	1
4-Nitroaniline	4.4	U	50	4.4	2.0	ug/L		11/14/18 17:21	1
4-Nitrophenol	4.0	U	50	4.0	1.2	ug/L		11/14/18 17:21	1
Benzoic acid	30	U	80	30	10	ug/L		11/14/18 17:21	1
Benzyl alcohol	0.50	U	25	0.50	0.23	ug/L		11/14/18 17:21	1
bis (2-chloroisopropyl) ether	1.0	U	10	1.0	0.28	ug/L		11/14/18 17:21	1
Bis(2-chloroethoxy)methane	2.0	U	10	2.0	0.97	ug/L		11/14/18 17:21	1
Bis(2-chloroethyl)ether	1.0	U	20	1.0	0.41	ug/L		11/14/18 17:21	1
Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56	ug/L		11/14/18 17:21	1
Butyl benzyl phthalate	2.0	U	20	2.0	1.0	ug/L		11/14/18 17:21	1
Carbazole	1.0	U	10	1.0	0.43	ug/L		11/14/18 17:21	1
Dibenzofuran	1.0	U	10	1.0	0.29	ug/L		11/14/18 17:21	1
Diethyl phthalate	1.0	U	20	1.0	0.38	ug/L		11/14/18 17:21	1
Dimethyl phthalate	0.50	U	20	0.50	0.21	ug/L		11/14/18 17:21	1
Di-n-butyl phthalate	4.4	U	20	4.4	1.2	ug/L		11/14/18 17:21	1
Di-n-octyl phthalate	1.0	U	20	1.0	0.35	ug/L		11/14/18 17:21	1
Hexachlorobenzene	2.0	U	10	2.0	0.66	ug/L		11/14/18 17:21	1
Hexachlorobutadiene	10	U	30	10	3.3	ug/L		11/14/18 17:21	1
Hexachlorocyclopentadiene	30	U	50	30	10	ug/L		11/14/18 17:21	1
Hexachloroethane	4.4	U	10	4.4	2.1	ug/L		11/14/18 17:21	1
Isophorone	0.50	U	10	0.50	0.21	ug/L		11/14/18 17:21	1
Nitrobenzene	2.0	U	20	2.0	0.81	ug/L		11/14/18 17:21	1
N-Nitrosodi-n-propylamine	1.0	U	20	1.0	0.35	ug/L		11/14/18 17:21	1
N-Nitrosodiphenylamine	1.0	U	10	1.0	0.44	ug/L		11/14/18 17:21	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-436342/1-A
Matrix: Water
Analysis Batch: 437601

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436342

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Pentachlorophenol	60	U	80	60	20	ug/L		11/14/18 17:21	1
Phenol	4.4	U	10	4.4	2.0	ug/L		11/14/18 17:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*85*		*43 - 140*	*11/05/18 12:30*	*11/14/18 17:21*	*1*
2-Fluorobiphenyl	*86*		*44 - 119*	*11/05/18 12:30*	*11/14/18 17:21*	*1*
2-Fluorophenol (Surr)	*98*		*19 - 119*	*11/05/18 12:30*	*11/14/18 17:21*	*1*
Nitrobenzene-d5 (Surr)	*99*		*44 - 120*	*11/05/18 12:30*	*11/14/18 17:21*	*1*
Phenol-d5 (Surr)	*102*		*10 - 115*	*11/05/18 12:30*	*11/14/18 17:21*	*1*
Terphenyl-d14 (Surr)	*99*		*50 - 134*	*11/05/18 12:30*	*11/14/18 17:21*	*1*

Lab Sample ID: LCS 280-436342/2-A
Matrix: Water
Analysis Batch: 437601

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	80.0	62.3		ug/L		78	29 - 116
1,2-Dichlorobenzene	80.0	60.5		ug/L		76	32 - 111
1,3-Dichlorobenzene	80.0	58.3		ug/L		73	28 - 110
1,4-Dichlorobenzene	80.0	59.3		ug/L		74	29 - 112
1,4-Dioxane	80.0	71.6		ug/L		89	47 - 120
2,4,5-Trichlorophenol	80.0	75.0		ug/L		94	53 - 123
2,4,6-Trichlorophenol	80.0	78.5		ug/L		98	50 - 125
2,4-Dichlorophenol	80.0	72.5		ug/L		91	47 - 121
2,4-Dimethylphenol	80.0	68.7		ug/L		86	31 - 124
2,4-Dinitrophenol	160	140		ug/L		87	23 - 143
2,4-Dinitrotoluene	80.0	78.1		ug/L		98	57 - 128
2,6-Dinitrotoluene	80.0	75.7		ug/L		95	57 - 124
2-Chloronaphthalene	80.0	71.6		ug/L		89	40 - 116
2-Chlorophenol	80.0	76.4		ug/L		96	38 - 117
2-Methylphenol	80.0	77.5		ug/L		97	30 - 117
2-Nitroaniline	80.0	78.8		ug/L		99	55 - 127
2-Nitrophenol	80.0	77.3		ug/L		97	47 - 123
3 & 4 Methylphenol	80.0	75.9		ug/L		95	29 - 110
3,3'-Dichlorobenzidine	160	139		ug/L		87	27 - 129
3-Nitroaniline	80.0	65.5		ug/L		82	41 - 128
4-Bromophenyl phenyl ether	80.0	74.5		ug/L		93	55 - 124
4-Chloro-3-methylphenol	80.0	74.7		ug/L		93	52 - 119
4-Chloroaniline	80.0	65.4		ug/L		82	33 - 117
4-Chlorophenyl phenyl ether	80.0	72.0		ug/L		90	53 - 121
4-Nitroaniline	80.0	73.5		ug/L		92	70 - 120
4-Nitrophenol	160	135		ug/L		84	59 - 129
Benzoic acid	80.0	49.6	J	ug/L		62	41 - 120
Benzyl alcohol	80.0	79.7		ug/L		100	31 - 112
bis (2-chloroisopropyl) ether	80.0	93.1		ug/L		116	37 - 130
Bis(2-chloroethoxy)methane	80.0	79.1		ug/L		99	48 - 120
Bis(2-chloroethyl)ether	80.0	87.8		ug/L		110	43 - 118
Bis(2-ethylhexyl) phthalate	80.0	68.0		ug/L		85	55 - 135

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-436342/2-A
Matrix: Water
Analysis Batch: 437601

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436342

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Butyl benzyl phthalate	80.0	73.6		ug/L		92	53 - 134
Carbazole	80.0	76.9		ug/L		96	60 - 122
Dibenzofuran	80.0	72.2		ug/L		90	53 - 118
Diethyl phthalate	80.0	74.2		ug/L		93	56 - 125
Dimethyl phthalate	80.0	74.7		ug/L		93	45 - 127
Di-n-butyl phthalate	80.0	75.9		ug/L		95	59 - 127
Di-n-octyl phthalate	80.0	66.8		ug/L		83	51 - 140
Hexachlorobenzene	80.0	75.6		ug/L		94	53 - 125
Hexachlorobutadiene	80.0	55.6		ug/L		69	22 - 124
Hexachloroethane	80.0	54.7		ug/L		68	21 - 115
Isophorone	80.0	77.2		ug/L		97	42 - 124
Nitrobenzene	80.0	78.5		ug/L		98	45 - 121
N-Nitrosodi-n-propylamine	80.0	78.1		ug/L		98	49 - 119
N-Nitrosodiphenylamine	80.0	76.2		ug/L		95	51 - 123
Pentachlorophenol	160	147		ug/L		92	35 - 138
Phenol	80.0	71.3		ug/L		89	61 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*96*		*43 - 140*
2-Fluorobiphenyl	*92*		*44 - 119*
2-Fluorophenol (Surr)	*100*		*19 - 119*
Nitrobenzene-d5 (Surr)	*99*		*44 - 120*
Phenol-d5 (Surr)	*94*		*10 - 115*
Terphenyl-d14 (Surr)	*86*		*50 - 134*

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 280-436346/1-A
Matrix: Water
Analysis Batch: 436903

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436346

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1-Methylnaphthalene	0.012	U	0.10	0.012	0.0059	ug/L		11/08/18 16:59	1
2-Methylnaphthalene	0.012	U	0.10	0.012	0.0060	ug/L		11/08/18 16:59	1
Acenaphthene	0.040	U	0.10	0.040	0.0042	ug/L		11/08/18 16:59	1
Acenaphthylene	0.040	U	0.10	0.040	0.0051	ug/L		11/08/18 16:59	1
Anthracene	0.040	U M	0.10	0.040	0.0056	ug/L		11/08/18 16:59	1
Benzo[a]anthracene	0.012	U	0.10	0.012	0.0042	ug/L		11/08/18 16:59	1
Benzo[a]pyrene	0.012	U M	0.10	0.012	0.0069	ug/L		11/08/18 16:59	1
Benzo[b]fluoranthene	0.012	U	0.10	0.012	0.0031	ug/L		11/08/18 16:59	1
Benzo[g,h,i]perylene	0.012	U	0.10	0.012	0.0062	ug/L		11/08/18 16:59	1
Benzo[k]fluoranthene	0.012	U	0.10	0.012	0.0063	ug/L		11/08/18 16:59	1
Chrysene	0.012	U	0.10	0.012	0.0033	ug/L		11/08/18 16:59	1
Dibenz(a,h)anthracene	0.012	U	0.10	0.012	0.0041	ug/L		11/08/18 16:59	1
Fluoranthene	0.0120	J	0.10	0.012	0.0048	ug/L		11/08/18 16:59	1
Fluorene	0.040	U	0.10	0.040	0.0055	ug/L		11/08/18 16:59	1
Indeno[1,2,3-cd]pyrene	0.040	U	0.10	0.040	0.0045	ug/L		11/08/18 16:59	1
Naphthalene	0.012	U	0.10	0.012	0.0080	ug/L		11/08/18 16:59	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 280-436346/1-A
Matrix: Water
Analysis Batch: 436903

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436346

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Phenanthrene	0.0158	J	0.10	0.020	0.0093	ug/L		11/08/18 16:59	1
Pyrene	0.020	U	0.10	0.020	0.0061	ug/L		11/08/18 16:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*53 - 106*	*11/05/18 13:07*	*11/08/18 16:59*	*1*
Nitrobenzene-d5	*70*		*55 - 111*	*11/05/18 13:07*	*11/08/18 16:59*	*1*
Terphenyl-d14	*78*		*58 - 132*	*11/05/18 13:07*	*11/08/18 16:59*	*1*

Lab Sample ID: LCS 280-436346/2-A
Matrix: Water
Analysis Batch: 436903

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436346

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1-Methylnaphthalene	0.900	0.701		ug/L		78	41 - 115
2-Methylnaphthalene	0.900	0.661		ug/L		73	39 - 114
Acenaphthene	0.900	0.660		ug/L		73	48 - 114
Acenaphthylene	0.900	0.547		ug/L		61	35 - 121
Anthracene	0.900	0.747	M	ug/L		83	53 - 119
Benzo[a]anthracene	0.900	0.800		ug/L		89	59 - 120
Benzo[a]pyrene	0.900	0.656		ug/L		73	53 - 120
Benzo[b]fluoranthene	0.900	0.715		ug/L		79	53 - 126
Benzo[g,h,i]perylene	0.900	0.576		ug/L		64	44 - 128
Benzo[k]fluoranthene	0.900	0.728		ug/L		81	54 - 125
Chrysene	0.900	0.864		ug/L		96	57 - 120
Dibenz(a,h)anthracene	0.900	0.532		ug/L		59	44 - 131
Fluoranthene	0.900	0.794		ug/L		88	58 - 120
Fluorene	0.900	0.700		ug/L		78	50 - 118
Indeno[1,2,3-cd]pyrene	0.900	0.547		ug/L		61	48 - 130
Naphthalene	0.900	0.682		ug/L		76	43 - 114
Phenanthrene	0.900	0.826	M	ug/L		92	53 - 115
Pyrene	0.900	0.878		ug/L		98	53 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*76*		*53 - 106*
Nitrobenzene-d5	*68*		*55 - 111*
Terphenyl-d14	*86*		*58 - 132*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 280-436649/1-A
Matrix: Water
Analysis Batch: 438595

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436649

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
4,4'-DDD	0.020	U	0.050	0.020	0.0077	ug/L		11/24/18 00:00	1
4,4'-DDE	0.020	U	0.050	0.020	0.0075	ug/L		11/24/18 00:00	1
4,4'-DDT	0.050	U	0.050	0.050	0.015	ug/L		11/24/18 00:00	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 280-436649/1-A
Matrix: Water
Analysis Batch: 438595

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436649

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aldrin	0.020	U	0.050	0.020	0.0059	ug/L		11/24/18 00:00	1
alpha-BHC	0.020	U	0.050	0.020	0.0053	ug/L		11/24/18 00:00	1
alpha-Chlordane	0.020	U	0.050	0.020	0.0053	ug/L		11/24/18 00:00	1
beta-BHC	0.020	U	0.050	0.020	0.0087	ug/L		11/24/18 00:00	1
delta-BHC	0.020	U	0.050	0.020	0.0058	ug/L		11/24/18 00:00	1
Dieldrin	0.020	U	0.050	0.020	0.0063	ug/L		11/24/18 00:00	1
Endosulfan I	0.020	U	0.050	0.020	0.0058	ug/L		11/24/18 00:00	1
Endosulfan II	0.020	U	0.050	0.020	0.0070	ug/L		11/24/18 00:00	1
Endosulfan sulfate	0.020	U	0.050	0.020	0.0057	ug/L		11/24/18 00:00	1
Endrin	0.020	U	0.050	0.020	0.0079	ug/L		11/24/18 00:00	1
Endrin aldehyde	0.020	U	0.050	0.020	0.0088	ug/L		11/24/18 00:00	1
Endrin ketone	0.020	U	0.050	0.020	0.0070	ug/L		11/24/18 00:00	1
gamma-BHC (Lindane)	0.020	U	0.050	0.020	0.0069	ug/L		11/24/18 00:00	1
gamma-Chlordane	0.020	U	0.050	0.020	0.0091	ug/L		11/24/18 00:00	1
Heptachlor	0.020	U	0.050	0.020	0.0077	ug/L		11/24/18 00:00	1
Heptachlor epoxide	0.020	U	0.050	0.020	0.0075	ug/L		11/24/18 00:00	1
Methoxychlor	0.050	U	0.050	0.050	0.013	ug/L		11/24/18 00:00	1
Toxaphene	0.80	U M	2.0	0.80	0.37	ug/L		11/24/18 00:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*84*		*34 - 122*	*11/07/18 10:54*	*11/24/18 00:00*	*1*
Tetrachloro-m-xylene	*84*		*44 - 124*	*11/07/18 10:54*	*11/24/18 00:00*	*1*

Lab Sample ID: LCS 280-436649/2-A
Matrix: Water
Analysis Batch: 438595

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436649

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.500	0.456		ug/L		91	56 - 143
4,4'-DDE	0.500	0.435		ug/L		87	57 - 135
4,4'-DDT	0.500	0.498		ug/L		100	51 - 143
Aldrin	0.500	0.439		ug/L		88	45 - 134
alpha-BHC	0.500	0.374		ug/L		75	54 - 138
alpha-Chlordane	0.500	0.448		ug/L		90	60 - 129
beta-BHC	0.500	0.420		ug/L		84	56 - 136
delta-BHC	0.500	0.431		ug/L		86	52 - 142
Dieldrin	0.500	0.473		ug/L		95	60 - 136
Endosulfan I	0.500	0.436		ug/L		87	62 - 126
Endosulfan II	0.500	0.417		ug/L		83	52 - 135
Endosulfan sulfate	0.500	0.470		ug/L		94	62 - 133
Endrin	0.500	0.498		ug/L		100	60 - 138
Endrin aldehyde	0.500	0.387		ug/L		77	51 - 132
Endrin ketone	0.500	0.459		ug/L		92	58 - 134
gamma-BHC (Lindane)	0.500	0.430		ug/L		86	59 - 134
gamma-Chlordane	0.500	0.447		ug/L		89	56 - 136
Heptachlor	0.500	0.429		ug/L		86	54 - 130
Heptachlor epoxide	0.500	0.459		ug/L		92	61 - 133
Methoxychlor	0.500	0.529		ug/L		106	54 - 145

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	90		34 - 122
Tetrachloro-m-xylene	84		44 - 124

Lab Sample ID: LCS 280-436649/6-A **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 438595 **Prep Batch: 436649**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Toxaphene			2.00	3.01	Q	ug/L		150	33 - 134		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	97		34 - 122
Tetrachloro-m-xylene	77		44 - 124

Lab Sample ID: LCSD 280-436649/3-A **Client Sample ID: Lab Control Sample Dup**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 438595 **Prep Batch: 436649**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD			0.500	0.425		ug/L		85	56 - 143	7	30
4,4'-DDE			0.500	0.408		ug/L		82	57 - 135	6	30
4,4'-DDT			0.500	0.462		ug/L		92	51 - 143	7	30
Aldrin			0.500	0.418		ug/L		84	45 - 134	5	30
alpha-BHC			0.500	0.359		ug/L		72	54 - 138	4	30
alpha-Chlordane			0.500	0.422		ug/L		84	60 - 129	6	30
beta-BHC			0.500	0.408		ug/L		82	56 - 136	3	30
delta-BHC			0.500	0.418		ug/L		84	52 - 142	3	30
Dieldrin			0.500	0.445		ug/L		89	60 - 136	6	30
Endosulfan I			0.500	0.409		ug/L		82	62 - 126	6	30
Endosulfan II			0.500	0.392		ug/L		78	52 - 135	6	30
Endosulfan sulfate			0.500	0.438		ug/L		88	62 - 133	7	30
Endrin			0.500	0.469		ug/L		94	60 - 138	6	30
Endrin aldehyde			0.500	0.365		ug/L		73	51 - 132	6	30
Endrin ketone			0.500	0.425		ug/L		85	58 - 134	8	30
gamma-BHC (Lindane)			0.500	0.416		ug/L		83	59 - 134	3	30
gamma-Chlordane			0.500	0.423		ug/L		85	56 - 136	6	30
Heptachlor			0.500	0.422		ug/L		84	54 - 130	2	30
Heptachlor epoxide			0.500	0.434		ug/L		87	61 - 133	6	30
Methoxychlor			0.500	0.483		ug/L		97	54 - 145	9	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl	86		34 - 122
Tetrachloro-m-xylene	78		44 - 124

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 280-436649/1-A **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 438897 **Prep Batch: 436649**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
PCB-1016	0.40	U M	1.0	0.40	0.12	ug/L		11/27/18 17:21	1
PCB-1221	0.25	U M	1.0	0.25	0.21	ug/L		11/27/18 17:21	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 280-436649/1-A
Matrix: Water
Analysis Batch: 438897

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436649

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
PCB-1232	0.60	U M	1.0	0.60	0.17	ug/L		11/27/18 17:21	1
PCB-1242	0.30	U M	1.0	0.30	0.10	ug/L		11/27/18 17:21	1
PCB-1248	0.30	U M	1.0	0.30	0.092	ug/L		11/27/18 17:21	1
PCB-1254	0.25	U M	1.0	0.25	0.11	ug/L		11/27/18 17:21	1
PCB-1260	0.40	U M	1.0	0.40	0.16	ug/L		11/27/18 17:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*90*		*25 - 120*	*11/07/18 10:54*	*11/27/18 17:21*	*1*
DCB Decachlorobiphenyl	*88*		*30 - 136*	*11/07/18 10:54*	*11/27/18 17:21*	*1*

Lab Sample ID: LCS 280-436649/4-A
Matrix: Water
Analysis Batch: 438897

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436649

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			2.00	1.82		ug/L		91	46 - 129		
PCB-1260			2.00	1.99		ug/L		99	45 - 134		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*82*		*25 - 120*
DCB Decachlorobiphenyl	*100*		*30 - 136*

Lab Sample ID: LCSD 280-436649/5-A
Matrix: Water
Analysis Batch: 438897

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 436649

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016			2.00	1.89		ug/L		95	46 - 129	4	30
PCB-1260			2.00	2.10		ug/L		105	45 - 134	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*87*		*25 - 120*
DCB Decachlorobiphenyl	*106*		*30 - 136*

Method: 8330 Modified - Nitroguanidine (HPLC)

Lab Sample ID: MB 320-259714/1-A
Matrix: Water
Analysis Batch: 260209

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 259714

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitroguanidine	6.0	U	20	6.0	2.4	ug/L		11/19/18 17:36	1

Method: 8330 Modified - Nitroguanidine (HPLC) (Continued)

Lab Sample ID: LCS 320-259714/2-A
Matrix: Water
Analysis Batch: 260209

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259714

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitroguanidine	250	256	M	ug/L		102	73 - 117

Lab Sample ID: 280-116538-1 MS
Matrix: Water
Analysis Batch: 260209

Client Sample ID: SCLmw-001-181001-GW
Prep Type: Total/NA
Prep Batch: 259714

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitroguanidine	6.0	U	250	253	M	ug/L		101	73 - 117

Lab Sample ID: 280-116538-1 MSD
Matrix: Water
Analysis Batch: 260209

Client Sample ID: SCLmw-001-181001-GW
Prep Type: Total/NA
Prep Batch: 259714

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitroguanidine	6.0	U	250	248	M	ug/L		99	73 - 117	2	15

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 280-436459/1-A
Matrix: Water
Analysis Batch: 436836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436459

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	0.40	U	1.0	0.40	0.20	ug/L		11/08/18 23:29	1
1,3-Dinitrobenzene	0.20	U	0.40	0.20	0.089	ug/L		11/08/18 23:29	1
2,4,6-Trinitrotoluene	0.20	U	0.40	0.20	0.072	ug/L		11/08/18 23:29	1
2,4-Dinitrotoluene	0.20	U	0.40	0.20	0.084	ug/L		11/08/18 23:29	1
2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.065	ug/L		11/08/18 23:29	1
2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.051	ug/L		11/08/18 23:29	1
2-Nitrotoluene	0.20	U	0.40	0.20	0.086	ug/L		11/08/18 23:29	1
3-Nitrotoluene	0.20	U	0.40	0.20	0.083	ug/L		11/08/18 23:29	1
4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.058	ug/L		11/08/18 23:29	1
4-Nitrotoluene	0.40	U	1.0	0.40	0.20	ug/L		11/08/18 23:29	1
HMX	0.20	U	0.40	0.20	0.088	ug/L		11/08/18 23:29	1
Nitrobenzene	0.20	U	0.40	0.20	0.091	ug/L		11/08/18 23:29	1
Nitroglycerin	2.0	U	3.0	2.0	0.92	ug/L		11/08/18 23:29	1
PETN	1.2	U	2.0	1.2	0.42	ug/L		11/08/18 23:29	1
RDX	0.12	U	0.20	0.12	0.052	ug/L		11/08/18 23:29	1
Tetryl	0.20	U	0.24	0.20	0.079	ug/L		11/08/18 23:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dinitrobenzene	*103*		*83 - 119*	*11/06/18 12:18*	*11/08/18 23:29*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC) (Continued)

Lab Sample ID: LCS 280-436459/2-A
Matrix: Water
Analysis Batch: 436836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436459

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	2.00	2.09		ug/L		105	73 - 125
1,3-Dinitrobenzene	2.00	2.03		ug/L		101	78 - 120
2,4,6-Trinitrotoluene	2.00	1.91		ug/L		96	71 - 123
2,4-Dinitrotoluene	2.00	1.93		ug/L		96	78 - 120
2,6-Dinitrotoluene	2.00	1.92		ug/L		96	77 - 127
2-Amino-4,6-dinitrotoluene	2.00	1.87		ug/L		93	79 - 120
2-Nitrotoluene	2.00	1.75		ug/L		87	70 - 127
3-Nitrotoluene	2.00	1.85		ug/L		92	73 - 125
4-Amino-2,6-dinitrotoluene	2.00	1.73		ug/L		86	76 - 125
4-Nitrotoluene	2.00	1.87		ug/L		93	71 - 127
HMX	2.00	2.02		ug/L		101	65 - 135
Nitrobenzene	2.00	1.93		ug/L		96	65 - 134
Nitroglycerin	20.0	20.0		ug/L		100	74 - 127
PETN	20.0	19.4		ug/L		97	73 - 127
RDX	2.00	2.03		ug/L		101	68 - 130
Tetryl	2.00	2.05		ug/L		102	64 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dinitrobenzene	*102*		*83 - 119*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Lab Sample ID: MB 280-437280/13
Matrix: Water
Analysis Batch: 437280

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Perchlorate	0.010	U M	0.050	0.010	0.0040	ug/L		11/12/18 14:58	1

Lab Sample ID: DLCK 280-437280/12
Matrix: Water
Analysis Batch: 437280

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.0500	0.0509		ug/L		102	70 - 130

Lab Sample ID: LCS 280-437280/14
Matrix: Water
Analysis Batch: 437280

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.0500	0.0551	M	ug/L		110	84 - 119

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS (Continued)

Lab Sample ID: INF 280-437280/15
Matrix: Water
Analysis Batch: 437280

Client Sample ID: Lab Control Sample

Analyte	Spike Added	INF Result	INF Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.0500	0.0567	M	ug/L		113	70 - 130

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-436445/1-A
Matrix: Water
Analysis Batch: 436619

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436445

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Calcium	140	U	1000	140	35	ug/L		11/07/18 04:46	1
Magnesium	40	U	500	40	11	ug/L		11/07/18 04:46	1
Potassium	940	U	3000	940	240	ug/L		11/07/18 04:46	1
Sodium	129	J	5000	350	120	ug/L		11/07/18 04:46	1
Phosphorus	50	U	3000	50	14	ug/L		11/07/18 04:46	1

Lab Sample ID: MB 280-436445/1-A
Matrix: Water
Analysis Batch: 436768

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436445

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Aluminum	70	U	300	70	18	ug/L		11/07/18 15:02	1
Iron	85	U	100	85	22	ug/L		11/07/18 15:02	1

Lab Sample ID: LCS 280-436445/2-A
Matrix: Water
Analysis Batch: 436619

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436445

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	49000		ug/L		98	87 - 113
Magnesium	50000	48900		ug/L		98	85 - 113
Potassium	50000	50700		ug/L		101	86 - 114
Sodium	50000	50200		ug/L		100	87 - 115
Phosphorus	10000	11000		ug/L		110	88 - 113

Lab Sample ID: LCS 280-436445/2-A
Matrix: Water
Analysis Batch: 436768

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436445

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	2000	2010		ug/L		100	86 - 115
Iron	1000	940		ug/L		94	87 - 115

Lab Sample ID: LCSD 280-436445/3-A
Matrix: Water
Analysis Batch: 436619

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 436445

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	50000	49000		ug/L		98	87 - 113	0	20
Magnesium	50000	49100		ug/L		98	85 - 113	0	20

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCSD 280-436445/3-A
Matrix: Water
Analysis Batch: 436619

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 436445

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	50000	50800		ug/L		102	86 - 114	0	20
Sodium	50000	50200		ug/L		100	87 - 115	0	20
Phosphorus	10000	11000		ug/L		110	88 - 113	0	20

Lab Sample ID: LCSD 280-436445/3-A
Matrix: Water
Analysis Batch: 436768

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 436445

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	2000	2050		ug/L		103	86 - 115	2	20
Iron	1000	956		ug/L		96	87 - 115	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-437002/1-A
Matrix: Water
Analysis Batch: 437566

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437002

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Antimony	1.0	U	6.0	1.0	0.40	ug/L		11/14/18 01:21	1
Arsenic	1.0	U	5.0	1.0	0.33	ug/L		11/14/18 01:21	1
Barium	0.95	U	3.0	0.95	0.29	ug/L		11/14/18 01:21	1
Beryllium	0.30	U	1.0	0.30	0.080	ug/L		11/14/18 01:21	1
Cadmium	1.0	U	1.0	1.0	0.27	ug/L		11/14/18 01:21	1
Chromium	1.8	U	10	1.8	0.50	ug/L		11/14/18 01:21	1
Cobalt	0.20	U	1.0	0.20	0.054	ug/L		11/14/18 01:21	1
Copper	1.8	U	2.0	1.8	0.56	ug/L		11/14/18 01:21	1
Lead	0.70	U	3.0	0.70	0.18	ug/L		11/14/18 01:21	1
Manganese	0.95	U Q	3.5	0.95	0.31	ug/L		11/14/18 01:21	1
Nickel	1.0	U	3.0	1.0	0.30	ug/L		11/14/18 01:21	1
Selenium	2.0	U	5.0	2.0	0.70	ug/L		11/14/18 01:21	1
Silver	0.10	U	5.0	0.10	0.033	ug/L		11/14/18 01:21	1
Thallium	0.20	U	1.0	0.20	0.050	ug/L		11/14/18 01:21	1
Vanadium	2.0	U	6.0	2.0	0.50	ug/L		11/14/18 01:21	1
Zinc	2.43	J	20	8.0	2.0	ug/L		11/14/18 01:21	1

Lab Sample ID: LCS 280-437002/2-A
Matrix: Water
Analysis Batch: 437566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437002

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	40.0	37.4		ug/L		94	85 - 117
Arsenic	40.0	36.7		ug/L		92	84 - 116
Barium	40.0	40.0		ug/L		100	86 - 114
Beryllium	40.0	39.8		ug/L		100	83 - 121
Cadmium	40.0	37.7		ug/L		94	87 - 115
Chromium	40.0	38.3		ug/L		96	85 - 116
Cobalt	40.0	38.5		ug/L		96	86 - 115
Copper	40.0	39.2		ug/L		98	85 - 118

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-437002/2-A
Matrix: Water
Analysis Batch: 437566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437002

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	40.0	40.3		ug/L		101	88 - 115
Manganese	40.0	38.6	Q	ug/L		97	87 - 115
Nickel	40.0	38.9		ug/L		97	85 - 117
Selenium	40.0	35.5		ug/L		89	80 - 120
Silver	40.0	38.6		ug/L		97	85 - 116
Thallium	40.0	39.9		ug/L		100	82 - 116
Vanadium	40.0	37.9		ug/L		95	86 - 115
Zinc	40.0	40.9		ug/L		102	83 - 119

Lab Sample ID: LCSD 280-437002/3-A
Matrix: Water
Analysis Batch: 437566

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 437002

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	40.0	38.0		ug/L		95	85 - 117	2	20
Arsenic	40.0	37.2		ug/L		93	84 - 116	1	20
Barium	40.0	40.2		ug/L		101	86 - 114	1	20
Beryllium	40.0	38.1		ug/L		95	83 - 121	4	20
Cadmium	40.0	37.3		ug/L		93	87 - 115	1	20
Chromium	40.0	37.8		ug/L		94	85 - 116	1	20
Cobalt	40.0	38.2		ug/L		96	86 - 115	1	20
Copper	40.0	39.2		ug/L		98	85 - 118	0	20
Lead	40.0	40.6		ug/L		102	88 - 115	1	20
Manganese	40.0	39.9	Q	ug/L		100	87 - 115	3	20
Nickel	40.0	37.7		ug/L		94	85 - 117	3	20
Selenium	40.0	38.0		ug/L		95	80 - 120	7	20
Silver	40.0	39.1		ug/L		98	85 - 116	1	20
Thallium	40.0	40.2		ug/L		100	82 - 116	1	20
Vanadium	40.0	36.2		ug/L		90	86 - 115	5	20
Zinc	40.0	43.7		ug/L		109	83 - 119	7	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-437885/1-A
Matrix: Water
Analysis Batch: 438129

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437885

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Mercury	0.0317	J	0.20	0.080	0.027	ug/L		11/16/18 20:33	1

Lab Sample ID: LCS 280-437885/2-A
Matrix: Water
Analysis Batch: 438129

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437885

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.49		ug/L		110	82 - 119

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 280-437885/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 438129 — **Prep Batch: 437885**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	5.00	5.49		ug/L		110	82 - 119	0	20

Method: 353.2 - Nitrocellulose

Lab Sample ID: MB 320-261007/1-B — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 259445 — **Prep Batch: 261014**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrocellulose	1000	U	2000	1000	480	ug/L		11/15/18 13:37	1

Lab Sample ID: LCS 320-261007/2-B — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 259445 — **Prep Batch: 261014**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrocellulose	5060	3570		ug/L		70	26 - 144

Method: 9012B - Cyanide, Total and/or Amenable

Lab Sample ID: MB 280-437763/5-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 437833 — **Prep Batch: 437763**

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Cyanide, Total	0.0050	U	0.010	0.0050	0.0020	mg/L		11/15/18 18:00	1

Lab Sample ID: HLCS 280-437763/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 437833 — **Prep Batch: 437763**

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.350	0.342		mg/L		98	90 - 110

Lab Sample ID: LCS 280-437763/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 437833 — **Prep Batch: 437763**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.102		mg/L		102	83 - 116

Lab Sample ID: LCSD 280-437763/4-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 437833 — **Prep Batch: 437763**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.100	0.0973		mg/L		97	83 - 116	4	20

Method: 9012B - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: LLCS 280-437763/2-A
Matrix: Water
Analysis Batch: 437833

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437763

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.0970		mg/L		97	44 - 167

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 280-436723/1-A
Matrix: Water
Analysis Batch: 436735

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 436723

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfide	1.9	U	4.0	1.9	0.79	mg/L		11/07/18 20:06	1

Lab Sample ID: LCS 280-436723/3-A
Matrix: Water
Analysis Batch: 436735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 436723

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	22.3	16.0		mg/L		72	50 - 106

Lab Sample ID: 280-116538-2 MS
Matrix: Water
Analysis Batch: 436735

Client Sample ID: SCLmw-003-181001-GW
Prep Type: Total/NA
Prep Batch: 436723

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	1.9	U J1	22.3	19.8		mg/L		89	50 - 106

Lab Sample ID: 280-116538-2 MSD
Matrix: Water
Analysis Batch: 436735

Client Sample ID: SCLmw-003-181001-GW
Prep Type: Total/NA
Prep Batch: 436723

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	1.9	U J1	22.3	13.6	J1	mg/L		61	50 - 106	37	20

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 280-436181/6
Matrix: Water
Analysis Batch: 436181

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Nitrate as N	0.10	U	0.50	0.10	0.042	mg/L		11/03/18 12:07	1
Nitrite as N	0.0961	J	0.50	0.10	0.049	mg/L		11/03/18 12:07	1

Lab Sample ID: LCS 280-436181/4
Matrix: Water
Analysis Batch: 436181

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	4.96		mg/L		99	88 - 111
Nitrite as N	5.00	5.06		mg/L		101	87 - 111

Lab Sample ID: LCSD 280-436181/5 **Client Sample ID: Lab Control Sample Dup**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 436181

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N			5.00	4.97		mg/L		99	88 - 111	0	10
Nitrite as N			5.00	5.13		mg/L		103	87 - 111	1	10

Lab Sample ID: MRL 280-436181/3 **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 436181

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			0.200	0.241	J	mg/L		120	50 - 150		
Nitrite as N			0.200	0.234	J	mg/L		117	50 - 150		

Lab Sample ID: 280-116538-1 MS **Client Sample ID: SCLmw-001-181001-GW**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 436181

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	0.13	J	5.00	5.03		mg/L		98	88 - 111		
Nitrite as N	0.10	U	5.00	4.55		mg/L		91	87 - 111		

Lab Sample ID: 280-116538-1 MSD **Client Sample ID: SCLmw-001-181001-GW**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 436181

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.13	J	5.00	5.12		mg/L		100	88 - 111	2	10
Nitrite as N	0.10	U	5.00	4.60		mg/L		92	87 - 111	1	10

Lab Sample ID: 280-116538-1 DU **Client Sample ID: SCLmw-001-181001-GW**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 436181

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Nitrate as N	0.13	J		0.132	J	mg/L				0.05	10
Nitrite as N	0.10	U		0.10	U	mg/L				NC	10

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 280-436182/6 **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 436182

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Sulfate	0.50	U	5.0	0.50	0.23	mg/L		11/03/18 12:07	1

Lab Sample ID: LCS 280-436182/4 **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 436182

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			100	102		mg/L		102	87 - 112		

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 280-436182/5
Matrix: Water
Analysis Batch: 436182

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate			100	102		mg/L		102	87 - 112	0	10

Lab Sample ID: MRL 280-436182/3
Matrix: Water
Analysis Batch: 436182

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate			2.50	1.98	J	mg/L		79	50 - 150		

Lab Sample ID: 280-116538-1 MS
Matrix: Water
Analysis Batch: 436182

Client Sample ID: SCLmw-001-181001-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfate	230	D	125	358	D	mg/L		103	87 - 112		

Lab Sample ID: 280-116538-1 MSD
Matrix: Water
Analysis Batch: 436182

Client Sample ID: SCLmw-001-181001-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	230	D	125	358	D	mg/L		103	87 - 112	0	10

Lab Sample ID: 280-116538-1 DU
Matrix: Water
Analysis Batch: 436182

Client Sample ID: SCLmw-001-181001-GW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	230	D	224	D	mg/L		2	10

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-437553/5
Matrix: Water
Analysis Batch: 437553

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	LOD	DL	Unit	D	Analyzed	Dil Fac
Alkalinity	3.21	J	5.0	5.0	1.1	mg/L		11/13/18 19:03	1

Lab Sample ID: LCS 280-437553/4
Matrix: Water
Analysis Batch: 437553

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity			200	198		mg/L		99	90 - 110		

QC Association Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116538-1

GC/MS VOA

Analysis Batch: 437714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	8260B	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	8260B	
280-116538-3	FWGTB-181014-TB	Total/NA	Water	8260B	
MB 280-437714/4	Method Blank	Total/NA	Water	8260B	
LCS 280-437714/5	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 436342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	3520C	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	3520C	
MB 280-436342/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-436342/2-A	Lab Control Sample	Total/NA	Water	3520C	

Prep Batch: 436346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	3510C	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	3510C	
MB 280-436346/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-436346/2-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 436903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	8270D SIM	436346
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	8270D SIM	436346
MB 280-436346/1-A	Method Blank	Total/NA	Water	8270D SIM	436346
LCS 280-436346/2-A	Lab Control Sample	Total/NA	Water	8270D SIM	436346

Analysis Batch: 437601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	8270D	436342
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	8270D	436342
MB 280-436342/1-A	Method Blank	Total/NA	Water	8270D	436342
LCS 280-436342/2-A	Lab Control Sample	Total/NA	Water	8270D	436342

GC Semi VOA

Prep Batch: 436649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	3510C	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	3510C	
MB 280-436649/1-A	Method Blank	Total/NA	Water	3510C	
LCS 280-436649/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-436649/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 280-436649/6-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 280-436649/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 280-436649/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

GC Semi VOA (Continued)

Analysis Batch: 438595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	8081B	436649
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	8081B	436649
MB 280-436649/1-A	Method Blank	Total/NA	Water	8081B	436649
LCS 280-436649/2-A	Lab Control Sample	Total/NA	Water	8081B	436649
LCS 280-436649/6-A	Lab Control Sample	Total/NA	Water	8081B	436649
LCSD 280-436649/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	436649

Analysis Batch: 438897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	8082A	436649
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	8082A	436649
MB 280-436649/1-A	Method Blank	Total/NA	Water	8082A	436649
LCS 280-436649/4-A	Lab Control Sample	Total/NA	Water	8082A	436649
LCSD 280-436649/5-A	Lab Control Sample Dup	Total/NA	Water	8082A	436649

HPLC/IC

Prep Batch: 259714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	Filtration	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	Filtration	
MB 320-259714/1-A	Method Blank	Total/NA	Water	Filtration	
LCS 320-259714/2-A	Lab Control Sample	Total/NA	Water	Filtration	
280-116538-1 MS	SCLmw-001-181001-GW	Total/NA	Water	Filtration	
280-116538-1 MSD	SCLmw-001-181001-GW	Total/NA	Water	Filtration	

Analysis Batch: 260209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	8330 Modified	259714
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	8330 Modified	259714
MB 320-259714/1-A	Method Blank	Total/NA	Water	8330 Modified	259714
LCS 320-259714/2-A	Lab Control Sample	Total/NA	Water	8330 Modified	259714
280-116538-1 MS	SCLmw-001-181001-GW	Total/NA	Water	8330 Modified	259714
280-116538-1 MSD	SCLmw-001-181001-GW	Total/NA	Water	8330 Modified	259714

Prep Batch: 436459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	3535	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	3535	
280-116538-6	DA1tw-001-181001-GW	Total/NA	Water	3535	
MB 280-436459/1-A	Method Blank	Total/NA	Water	3535	
LCS 280-436459/2-A	Lab Control Sample	Total/NA	Water	3535	

Analysis Batch: 436836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	8330B	436459
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	8330B	436459
280-116538-6	DA1tw-001-181001-GW	Total/NA	Water	8330B	436459
MB 280-436459/1-A	Method Blank	Total/NA	Water	8330B	436459
LCS 280-436459/2-A	Lab Control Sample	Total/NA	Water	8330B	436459

QC Association Summary

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116538-1

LCMS

Analysis Batch: 437280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	6860	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	6860	
MB 280-437280/13	Method Blank	Total/NA	Water	6860	
DLCK 280-437280/12	Lab Control Sample	Total/NA	Water	6860	
INF 280-437280/15	Lab Control Sample		Water	6860	
LCS 280-437280/14	Lab Control Sample	Total/NA	Water	6860	

Metals

Prep Batch: 436445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	3010A	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	3010A	
MB 280-436445/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-436445/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 280-436445/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Analysis Batch: 436619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	6010C	436445
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	6010C	436445
MB 280-436445/1-A	Method Blank	Total/NA	Water	6010C	436445
LCS 280-436445/2-A	Lab Control Sample	Total/NA	Water	6010C	436445
LCSD 280-436445/3-A	Lab Control Sample Dup	Total/NA	Water	6010C	436445

Analysis Batch: 436768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	6010C	436445
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	6010C	436445
MB 280-436445/1-A	Method Blank	Total/NA	Water	6010C	436445
LCS 280-436445/2-A	Lab Control Sample	Total/NA	Water	6010C	436445
LCSD 280-436445/3-A	Lab Control Sample Dup	Total/NA	Water	6010C	436445

Prep Batch: 437002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	3020A	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	3020A	
MB 280-437002/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-437002/2-A	Lab Control Sample	Total/NA	Water	3020A	
LCSD 280-437002/3-A	Lab Control Sample Dup	Total/NA	Water	3020A	

Analysis Batch: 437566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	6020A	437002
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	6020A	437002
MB 280-437002/1-A	Method Blank	Total/NA	Water	6020A	437002
LCS 280-437002/2-A	Lab Control Sample	Total/NA	Water	6020A	437002
LCSD 280-437002/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	437002

Metals (Continued)

Analysis Batch: 437702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	6020A	437002
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	6020A	437002

Prep Batch: 437885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	7470A	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	7470A	
MB 280-437885/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-437885/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-437885/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	

Analysis Batch: 438129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	7470A	437885
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	7470A	437885
MB 280-437885/1-A	Method Blank	Total/NA	Water	7470A	437885
LCS 280-437885/2-A	Lab Control Sample	Total/NA	Water	7470A	437885
LCSD 280-437885/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	437885

General Chemistry

Analysis Batch: 259445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	353.2	261014
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	353.2	261014
MB 320-261007/1-B	Method Blank	Total/NA	Water	353.2	261014
LCS 320-261007/2-B	Lab Control Sample	Total/NA	Water	353.2	261014

Pre Prep Batch: 261007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	353.2 (NCell)	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	353.2 (NCell)	
MB 320-261007/1-B	Method Blank	Total/NA	Water	353.2 (NCell)	
LCS 320-261007/2-B	Lab Control Sample	Total/NA	Water	353.2 (NCell)	

Prep Batch: 261014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	353 (NCell-Hyd)	261007
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	353 (NCell-Hyd)	261007
MB 320-261007/1-B	Method Blank	Total/NA	Water	353 (NCell-Hyd)	261007
LCS 320-261007/2-B	Lab Control Sample	Total/NA	Water	353 (NCell-Hyd)	261007

Analysis Batch: 436181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	9056	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	9056	
MB 280-436181/6	Method Blank	Total/NA	Water	9056	
LCS 280-436181/4	Lab Control Sample	Total/NA	Water	9056	
LCSD 280-436181/5	Lab Control Sample Dup	Total/NA	Water	9056	
MRL 280-436181/3	Lab Control Sample	Total/NA	Water	9056	

General Chemistry (Continued)

Analysis Batch: 436181 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1 MS	SCLmw-001-181001-GW	Total/NA	Water	9056	
280-116538-1 MSD	SCLmw-001-181001-GW	Total/NA	Water	9056	
280-116538-1 DU	SCLmw-001-181001-GW	Total/NA	Water	9056	

Analysis Batch: 436182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	9056A	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	9056A	
MB 280-436182/6	Method Blank	Total/NA	Water	9056A	
LCS 280-436182/4	Lab Control Sample	Total/NA	Water	9056A	
LCSD 280-436182/5	Lab Control Sample Dup	Total/NA	Water	9056A	
MRL 280-436182/3	Lab Control Sample	Total/NA	Water	9056A	
280-116538-1 MS	SCLmw-001-181001-GW	Total/NA	Water	9056A	
280-116538-1 MSD	SCLmw-001-181001-GW	Total/NA	Water	9056A	
280-116538-1 DU	SCLmw-001-181001-GW	Total/NA	Water	9056A	

Prep Batch: 436723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	9030B	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	9030B	
MB 280-436723/1-A	Method Blank	Total/NA	Water	9030B	
LCS 280-436723/3-A	Lab Control Sample	Total/NA	Water	9030B	
280-116538-2 MS	SCLmw-003-181001-GW	Total/NA	Water	9030B	
280-116538-2 MSD	SCLmw-003-181001-GW	Total/NA	Water	9030B	

Analysis Batch: 436735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	9034	436723
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	9034	436723
MB 280-436723/1-A	Method Blank	Total/NA	Water	9034	436723
LCS 280-436723/3-A	Lab Control Sample	Total/NA	Water	9034	436723
280-116538-2 MS	SCLmw-003-181001-GW	Total/NA	Water	9034	436723
280-116538-2 MSD	SCLmw-003-181001-GW	Total/NA	Water	9034	436723

Analysis Batch: 437553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	SM 2320B	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	SM 2320B	
MB 280-437553/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-437553/4	Lab Control Sample	Total/NA	Water	SM 2320B	

Prep Batch: 437763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	9012B	
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	9012B	
MB 280-437763/5-A	Method Blank	Total/NA	Water	9012B	
HLCS 280-437763/1-A	Lab Control Sample	Total/NA	Water	9012B	
LCS 280-437763/3-A	Lab Control Sample	Total/NA	Water	9012B	
LCSD 280-437763/4-A	Lab Control Sample Dup	Total/NA	Water	9012B	
LLCS 280-437763/2-A	Lab Control Sample	Total/NA	Water	9012B	

General Chemistry (Continued)

Analysis Batch: 437833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-116538-1	SCLmw-001-181001-GW	Total/NA	Water	9012B	437763
280-116538-2	SCLmw-003-181001-GW	Total/NA	Water	9012B	437763
MB 280-437763/5-A	Method Blank	Total/NA	Water	9012B	437763
HLCS 280-437763/1-A	Lab Control Sample	Total/NA	Water	9012B	437763
LCS 280-437763/3-A	Lab Control Sample	Total/NA	Water	9012B	437763
LCSD 280-437763/4-A	Lab Control Sample Dup	Total/NA	Water	9012B	437763
LLCS 280-437763/2-A	Lab Control Sample	Total/NA	Water	9012B	437763

Client Sample ID: SCLmw-001-181001-GW — Lab Sample ID: 280-116538-1

Date Collected: 11/02/18 10:45 **Matrix: Water**
Date Received: 11/03/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	437714	11/15/18 18:15	JLS	TAL DEN
Total/NA	Prep	3520C			865.2 mL	1 mL	436342	11/05/18 12:30	JZ	TAL DEN
Total/NA	Analysis	8270D		1			437601	11/15/18 01:34	DCK	TAL DEN
Total/NA	Prep	3510C			214.5 mL	1 mL	436346	11/05/18 13:07	KJS	TAL DEN
Total/NA	Analysis	8270D SIM		1			436903	11/09/18 00:23	MKW	TAL DEN
Total/NA	Prep	3510C			903.8 mL	10 mL	436649	11/07/18 10:54	KJS	TAL DEN
Total/NA	Analysis	8081B		1			438595	11/24/18 02:38	TEM	TAL DEN
Total/NA	Prep	3510C			903.8 mL	10 mL	436649	11/07/18 10:54	KJS	TAL DEN
Total/NA	Analysis	8082A		1			438897	11/27/18 18:24	BJP	TAL DEN
Total/NA	Prep	Filtration			10 mL	10 mL	259714	11/16/18 13:33	TJA	TAL SAC
Total/NA	Analysis	8330 Modified		1			260209	11/19/18 18:09	AMAO	TAL SAC
Total/NA	Prep	3535			409.7 mL	5 mL	436459	11/06/18 12:18	CBB	TAL DEN
Total/NA	Analysis	8330B		1	1 mL	1.0 mL	436836	11/09/18 05:14	HKF	TAL DEN
Total/NA	Analysis	6860		1			437280	11/12/18 16:18	TMC	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	436445	11/06/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436619	11/07/18 05:34	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	436445	11/06/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436768	11/07/18 15:49	CRR	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	437002	11/09/18 17:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			437566	11/14/18 03:19	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	437002	11/09/18 17:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			437702	11/14/18 16:43	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	437885	11/16/18 12:45	THP	TAL DEN
Total/NA	Analysis	7470A		1			438129	11/16/18 21:02	CML	TAL DEN
Total/NA	Pre Prep	353.2 (NCell)			100 mL	50 mL	261007	11/08/18 09:00	TCS	TAL SAC
Total/NA	Prep	353 (NCell-Hyd)			50 mL	40 mL	261014	11/15/18 09:00	TCS	TAL SAC
Total/NA	Analysis	353.2		1			259445	11/15/18 13:49	TCS	TAL SAC
Total/NA	Prep	9012B			50 mL	50 mL	437763	11/15/18 11:37	RK	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	437833	11/15/18 18:42	RK	TAL DEN
Total/NA	Prep	9030B			50 mL	50 mL	436723	11/07/18 17:19	EC	TAL DEN
Total/NA	Analysis	9034		1			436735	11/07/18 20:06	EC	TAL DEN
Total/NA	Analysis	9056		1	5 mL	5 mL	436181	11/03/18 12:49	A1D	TAL DEN
Total/NA	Analysis	9056A		5	5 mL	5 mL	436182	11/03/18 16:53	A1D	TAL DEN
Total/NA	Analysis	SM 2320B		1			437553	11/13/18 20:03	SGB	TAL DEN

Client Sample ID: SCLmw-003-181001-GW — Lab Sample ID: 280-116538-2

Date Collected: 11/02/18 11:10 **Matrix: Water**
Date Received: 11/03/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	437714	11/15/18 18:35	JLS	TAL DEN
Total/NA	Prep	3520C			942.2 mL	1 mL	436342	11/05/18 12:30	JZ	TAL DEN
Total/NA	Analysis	8270D		1			437601	11/14/18 21:42	DCK	TAL DEN

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116538-1

Client Sample ID: SCLmw-003-181001-GW

Lab Sample ID: 280-116538-2

Date Collected: 11/02/18 11:10

Matrix: Water

Date Received: 11/03/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			223.8 mL	1 mL	436346	11/05/18 13:07	KJS	TAL DEN
Total/NA	Analysis	8270D SIM		1			436903	11/09/18 00:53	MKW	TAL DEN
Total/NA	Prep	3510C			923.7 mL	10 mL	436649	11/07/18 10:54	KJS	TAL DEN
Total/NA	Analysis	8081B		1			438595	11/24/18 02:55	TEM	TAL DEN
Total/NA	Prep	3510C			923.7 mL	10 mL	436649	11/07/18 10:54	KJS	TAL DEN
Total/NA	Analysis	8082A		1			438897	11/27/18 18:45	BJP	TAL DEN
Total/NA	Prep	Filtration			10 mL	10 mL	259714	11/16/18 13:33	TJA	TAL SAC
Total/NA	Analysis	8330 Modified		1			260209	11/19/18 18:59	AMAO	TAL SAC
Total/NA	Prep	3535			466 mL	5 mL	436459	11/06/18 12:18	CBB	TAL DEN
Total/NA	Analysis	8330B		1	1 mL	1.0 mL	436836	11/09/18 05:36	HKF	TAL DEN
Total/NA	Analysis	6860		1			437280	11/12/18 16:23	TMC	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	436445	11/06/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436619	11/07/18 05:36	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	436445	11/06/18 16:00	DAL	TAL DEN
Total/NA	Analysis	6010C		1			436768	11/07/18 15:52	CRR	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	437002	11/09/18 17:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			437566	11/14/18 03:23	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	437002	11/09/18 17:00	DAL	TAL DEN
Total/NA	Analysis	6020A		1			437702	11/14/18 16:01	LMT	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	437885	11/16/18 12:45	THP	TAL DEN
Total/NA	Analysis	7470A		1			438129	11/16/18 21:04	CML	TAL DEN
Total/NA	Pre Prep	353.2 (NCell)			100 mL	50 mL	261007	11/08/18 09:00	TCS	TAL SAC
Total/NA	Prep	353 (NCell-Hyd)			50 mL	40 mL	261014	11/15/18 09:00	TCS	TAL SAC
Total/NA	Analysis	353.2		1			259445	11/15/18 13:51	TCS	TAL SAC
Total/NA	Prep	9012B			50 mL	50 mL	437763	11/15/18 11:37	RK	TAL DEN
Total/NA	Analysis	9012B		1	50 mL	50 mL	437833	11/15/18 18:44	RK	TAL DEN
Total/NA	Prep	9030B			50 mL	50 mL	436723	11/07/18 17:19	EC	TAL DEN
Total/NA	Analysis	9034		1			436735	11/07/18 20:06	EC	TAL DEN
Total/NA	Analysis	9056		1	5 mL	5 mL	436181	11/03/18 13:59	A1D	TAL DEN
Total/NA	Analysis	9056A		1	5 mL	5 mL	436182	11/03/18 13:59	A1D	TAL DEN
Total/NA	Analysis	SM 2320B		1			437553	11/13/18 20:11	SGB	TAL DEN

Client Sample ID: FWGTB-181014-TB

Lab Sample ID: 280-116538-3

Date Collected: 11/02/18 10:45

Matrix: Water

Date Received: 11/03/18 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	437714	11/15/18 18:56	JLS	TAL DEN

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

TestAmerica Job ID: 280-116538-1

Client Sample ID: DA1tw-001-181001-GW
Date Collected: 11/01/18 15:50
Date Received: 11/03/18 09:00

Lab Sample ID: 280-116538-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			460.3 mL	5 mL	436459	11/06/18 12:18	CBB	TAL DEN
Total/NA	Analysis	8330B		1	1 mL	1.0 mL	436836	11/09/18 05:59	HKF	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Leidos, Inc. TestAmerica Job ID: 280-116538-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3020A	Water	Thallium

Laboratory: TestAmerica Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska (UST)	State Program	10	17-020	01-20-21
ANAB	DoD ELAP		L2468	01-20-21
Arizona	State Program	9	AZ0708	08-11-19
Arkansas DEQ	State Program	6	88-0691	06-17-19
California	State Program	9	2897	01-31-19
Colorado	State Program	8	CA00044	08-31-19
Connecticut	State Program	1	PH-0691	06-30-19
Florida	NELAP	4	E87570	06-30-19
Georgia	State Program	4	N/A	01-28-19
Hawaii	State Program	9	N/A	01-29-19
Illinois	NELAP	5	200060	03-17-19
Kansas	NELAP	7	E-10375	11-30-18
Louisiana	NELAP	6	30612	06-30-19
Maine	State Program	1	CA0004	04-14-20
Michigan	State Program	5	9947	01-31-20
Nevada	State Program	9	CA00044	07-31-19
New Hampshire	NELAP	1	2997	04-18-19
New Jersey	NELAP	2	CA005	06-30-19
New York	NELAP	2	11666	03-31-19
Oregon	NELAP	10	4040	01-29-19
Pennsylvania	NELAP	3	68-01272	03-31-19
Texas	NELAP	6	T104704399	05-31-19
US Fish & Wildlife	Federal		LE148388-0	07-31-19
USDA	Federal		P330-18-00239	01-17-21
USEPA UCMR	Federal	1	CA00044	12-31-20
Utah	NELAP	8	CA00044	02-28-19
Vermont	State Program	1	VT-4040	04-30-19
Virginia	NELAP	3	460278	03-14-19
Washington	State Program	10	C581	05-05-19
West Virginia (DW)	State Program	3	9930C	12-31-18
Wyoming	State Program	8	8TMS-L	01-28-19

Method Summary

Client: Leidos, Inc. TestAmerica Job ID: 280-116538-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270D SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL DEN
8081B	Organochlorine Pesticides (GC)	SW846	TAL DEN
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL DEN
8330 Modified	Nitroguanidine (HPLC)	SW846	TAL SAC
8330B	Nitroaromatics and Nitramines (HPLC)	EPA	TAL DEN
6860	Perchlorate by IC/MS or IC/MS/MS	EPA	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
353.2	Nitrocellulose	EPA	TAL SAC
9012B	Cyanide, Total and/or Amenable	EPA	TAL DEN
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL DEN
9056	Anions, Ion Chromatography	SW846	TAL DEN
9056A	Anions, Ion Chromatography	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
3010A	Preparation, Total Metals	SW846	TAL DEN
3020A	Preparation, Total Metals	SW846	TAL DEN
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL DEN
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL DEN
353 (NCell-Hyd)	Nitrocellulose Sample Preparation (Hydrolysis)	MCAWW	TAL SAC
353.2 (NCell)	Nitrocellulose Sample Preparation	MCAWW	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL DEN
5030B	Purge and Trap	SW846	TAL DEN
7470A	Preparation, Mercury	SW846	TAL DEN
9012B	Cyanide, Total and/or Amenable, Distillation	SW846	TAL DEN
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	TAL DEN
Filtration	Sample Filtration	None	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Leidos, Inc.
TestAmerica Job ID: 280-116538-1
Project/Site: Leidos RFP# 001088 - Ravenna AAP-66

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-116538-1	SCLmw-001-181001-GW	Water	11/02/18 10:45	11/03/18 09:00
280-116538-2	SCLmw-003-181001-GW	Water	11/02/18 11:10	11/03/18 09:00
280-116538-3	FWGTB-181014-TB	Water	11/02/18 10:45	11/03/18 09:00
280-116538-6	DA1tw-001-181001-GW	Water	11/01/18 15:50	11/03/18 09:00

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: VMS_G Analysis Batch Number: 435406

Lab Sample ID: STD005 280-435406/10 IC Client Sample ID:

Date Analyzed: 10/29/18 20:00 Lab File ID: G0942.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane	6.25	Assign Peak	newcomer	10/29/18 21:18
Isobutyl alcohol		Invalid Compound ID	newcomer	10/29/18 23:08
sec-Butyl Alcohol		Invalid Compound ID	newcomer	10/29/18 21:18
t-Butyl alcohol		Invalid Compound ID	newcomer	10/29/18 21:18
Naphthalene	13.49	Assign Peak	newcomer	10/29/18 21:21

Lab Sample ID: STD01 280-435406/11 IC Client Sample ID:

Date Analyzed: 10/29/18 20:20 Lab File ID: G0943.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
sec-Butyl Alcohol	5.55	Assign Peak	newcomer	10/29/18 21:24
Tetrahydrofuran	5.77	Assign Peak	newcomer	10/29/18 21:24
Isobutyl alcohol	5.99	Assign Peak	newcomer	10/29/18 21:24
1,4-Dioxane	7.04	Assign Peak	newcomer	10/30/18 01:27
1,2-Dibromo-3-Chloropropane	12.33	Assign Peak	newcomer	10/29/18 21:25

Lab Sample ID: STD02 280-435406/12 IC Client Sample ID:

Date Analyzed: 10/29/18 20:40 Lab File ID: G0944.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
sec-Butyl Alcohol	5.55	Assign Peak	newcomer	10/29/18 21:26
Isobutyl alcohol	5.99	Assign Peak	newcomer	10/29/18 21:26

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: VMS_G Analysis Batch Number: 435406

Lab Sample ID: STD05 280-435406/13 IC Client Sample ID:

Date Analyzed: 10/29/18 21:01 Lab File ID: G0945.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
sec-Butyl Alcohol	5.55	Assign Peak	newcomer	10/29/18 21:31
Isobutyl alcohol	5.99	Split Peak	newcomer	10/29/18 21:31

Lab Sample ID: ICIS 280-435406/14 Client Sample ID:

Date Analyzed: 10/29/18 21:21 Lab File ID: G0946.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
sec-Butyl Alcohol	5.55	Assign Peak	newcomer	10/29/18 22:15

Lab Sample ID: STD25 280-435406/15 IC Client Sample ID:

Date Analyzed: 10/29/18 21:42 Lab File ID: G0947.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
sec-Butyl Alcohol	5.54	Peak assignment corrected	newcomer	10/29/18 22:16

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: VMS_G Analysis Batch Number: 437714

Lab Sample ID: MB 280-437714/4 Client Sample ID:

Date Analyzed: 11/15/18 11:11 Lab File ID: G1774.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride		Invalid Compound ID	seifertj	11/16/18 09:24

Lab Sample ID: 280-116538-1 Client Sample ID: SCLmw-001-181001-GW

Date Analyzed: 11/15/18 18:15 Lab File ID: G1795.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	seifertj	11/16/18 12:30

Lab Sample ID: 280-116538-2 Client Sample ID: SCLmw-003-181001-GW

Date Analyzed: 11/15/18 18:35 Lab File ID: G1796.D GC Column: DB-624 v1 ID: 32(um)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	seifertj	11/16/18 12:30

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SMS_K Analysis Batch Number: 437249

Lab Sample ID: STD004 280-437249/5 IC Client Sample ID:

Date Analyzed: 11/12/18 15:25 Lab File ID: K27518.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.30	Wrong peak	kiekeld	11/13/18 10:26

Lab Sample ID: STD010 280-437249/6 IC Client Sample ID:

Date Analyzed: 11/12/18 15:54 Lab File ID: K27519.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.32	Wrong peak	kiekeld	11/13/18 10:28

Lab Sample ID: STD020 280-437249/7 IC Client Sample ID:

Date Analyzed: 11/12/18 16:23 Lab File ID: K27520.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.33	Wrong peak	kiekeld	11/13/18 10:29

Lab Sample ID: STD050 280-437249/8 IC Client Sample ID:

Date Analyzed: 11/12/18 16:52 Lab File ID: K27521.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Benzoic acid	5.36	Wrong peak	kiekeld	11/13/18 10:30

Lab Sample ID: ICV 280-437249/13 Client Sample ID:

Date Analyzed: 11/12/18 19:17 Lab File ID: K27526.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Caprolactam	5.98	Wrong peak	kiekeld	11/13/18 10:41

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SMS_F Analysis Batch Number: 436730

Lab Sample ID: STD0001 280-436730/4 IC Client Sample ID:

Date Analyzed: 11/07/18 21:34 Lab File ID: F4565.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene-d5 (Surr)	5.17	Peak assignment corrected	wickhamm	11/08/18 17:21
2-Fluorobiphenyl	6.94	Peak assignment corrected	wickhamm	11/08/18 17:21
Terphenyl-d14 (Surr)	11.06	Peak assignment corrected	wickhamm	11/08/18 17:22
Indeno[1,2,3-cd]pyrene	20.20	Baseline	wickhamm	11/08/18 17:22
Dibenz(a,h)anthracene	20.30	Baseline	wickhamm	11/08/18 17:22

Lab Sample ID: STD0002 280-436730/5 IC Client Sample ID:

Date Analyzed: 11/07/18 22:02 Lab File ID: F4566.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene-d5 (Surr)	5.17	Peak assignment corrected	wickhamm	11/08/18 17:23
Benzo[b]fluoranthene	16.00	Incomplete Integration	wickhamm	11/08/18 17:23

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SMS_F Analysis Batch Number: 436903

Lab Sample ID: MB 280-436346/1-A Client Sample ID:

Date Analyzed: 11/08/18 16:59 Lab File ID: F4555.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Anthracene		Invalid Compound ID	wickhamm	11/09/18 19:22
Benzo[a]pyrene		Invalid Compound ID	wickhamm	11/09/18 19:22

Lab Sample ID: LCS 280-436346/2-A Client Sample ID:

Date Analyzed: 11/08/18 17:28 Lab File ID: F4556.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Phenanthrene	9.13	Baseline	wickhamm	11/09/18 19:22
Anthracene	9.18	Baseline	wickhamm	11/09/18 19:23

Lab Sample ID: 280-116538-1 Client Sample ID: SCLmw-001-181001-GW

Date Analyzed: 11/09/18 00:23 Lab File ID: F4570.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acenaphthene		Invalid Compound ID	wickhamm	11/09/18 19:29
Anthracene		Invalid Compound ID	wickhamm	11/09/18 19:29
Benzo[a]pyrene		Invalid Compound ID	wickhamm	11/09/18 19:29

Lab Sample ID: 280-116538-2 Client Sample ID: SCLmw-003-181001-GW

Date Analyzed: 11/09/18 00:53 Lab File ID: F4571.D GC Column: Rxi-5Sil MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acenaphthene		Invalid Compound ID	wickhamm	11/09/18 19:30
Anthracene		Invalid Compound ID	wickhamm	11/09/18 19:30
Benzo[g,h,i]perylene		Invalid Compound ID	wickhamm	11/09/18 19:30
Dibenz(a,h)anthracene		Invalid Compound ID	wickhamm	11/09/18 19:30

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

Lab Sample ID: STD6 280-433303/16 IC Client Sample ID:

Date Analyzed: 10/13/18 16:10 Lab File ID: 011F1901.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.78	Baseline Smoothing	mooret	10/14/18 21:36
Toxaphene Peak 2	7.14	Baseline Smoothing	mooret	10/14/18 21:36
Toxaphene Peak 3	7.28	Baseline Smoothing	mooret	10/14/18 21:36
Toxaphene Peak 4	7.80	Baseline Smoothing	mooret	10/14/18 21:36
Toxaphene Peak 5	8.09	Baseline Smoothing	mooret	10/14/18 21:36

Lab Sample ID: STD4 280-433303/18 IC Client Sample ID:

Date Analyzed: 10/13/18 16:45 Lab File ID: 013F2101.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.25	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 2	6.85	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 3	7.53	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 4	7.89	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 5	8.20	Baseline Smoothing	mooret	10/14/18 21:37

Lab Sample ID: STD4 280-433303/18 IC Client Sample ID:

Date Analyzed: 10/13/18 16:45 Lab File ID: 013F2101.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.78	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 2	7.15	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 3	7.29	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 4	7.80	Baseline Smoothing	mooret	10/14/18 21:37
Toxaphene Peak 5	8.10	Baseline Smoothing	mooret	10/14/18 21:37

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

Lab Sample ID: STD3 280-433303/19 IC Client Sample ID:

Date Analyzed: 10/13/18 17:03 Lab File ID: 014F2201.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.24	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 2	6.85	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 3	7.53	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 4	7.89	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 5	8.20	Baseline Smoothing	mooret	10/14/18 21:33

Lab Sample ID: STD2 280-433303/20 IC Client Sample ID:

Date Analyzed: 10/13/18 17:20 Lab File ID: 015F2301.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.24	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 2	6.85	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 3	7.53	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 4	7.89	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 5	8.20	Baseline Smoothing	mooret	10/14/18 21:33

Lab Sample ID: STD2 280-433303/20 IC Client Sample ID:

Date Analyzed: 10/13/18 17:20 Lab File ID: 015F2301.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.78	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 2	7.14	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 3	7.28	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 4	7.80	Baseline Smoothing	mooret	10/14/18 21:33
Toxaphene Peak 5	8.10	Baseline Smoothing	mooret	10/14/18 21:33

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

Lab Sample ID: STD1 280-433303/21 IC Client Sample ID:

Date Analyzed: 10/13/18 17:37 Lab File ID: 016F2401.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.25	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 2	6.85	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 3	7.53	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 4	7.89	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 5	8.20	Baseline Smoothing	mooret	10/14/18 21:34

Lab Sample ID: STD1 280-433303/21 IC Client Sample ID:

Date Analyzed: 10/13/18 17:37 Lab File ID: 016F2401.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.78	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 2	7.14	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 3	7.28	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 4	7.80	Baseline Smoothing	mooret	10/14/18 21:34
Toxaphene Peak 5	8.10	Baseline Smoothing	mooret	10/14/18 21:34

Lab Sample ID: STD2 280-433303/31 IC Client Sample ID:

Date Analyzed: 10/13/18 20:32 Lab File ID: 026F3401.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Heptachlor epoxide	5.93	Incomplete Integration	mooret	10/14/18 09:17

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 433303

Lab Sample ID: ICV 280-433303/34 Client Sample ID:

Date Analyzed: 10/13/18 21:24 Lab File ID: 029F3701.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene		Unspecified		
Toxaphene Peak 1	6.23	Unspecified	mooret	10/14/18 21:42
Toxaphene Peak 2	6.85	Baseline Smoothing	mooret	10/14/18 21:40
Toxaphene Peak 3	7.52	Unspecified	mooret	10/14/18 21:42
Toxaphene Peak 4	7.89	Baseline Smoothing	mooret	10/14/18 21:40
Toxaphene Peak 5	8.20	Baseline Smoothing	mooret	10/14/18 21:40

Lab Sample ID: ICV 280-433303/34 Client Sample ID:

Date Analyzed: 10/13/18 21:24 Lab File ID: 029F3701.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene		Unspecified		
Toxaphene Peak 1	5.77	Baseline Smoothing	mooret	10/14/18 21:40
Toxaphene Peak 2	7.14	Baseline Smoothing	mooret	10/14/18 21:40
Toxaphene Peak 3	7.28	Baseline Smoothing	mooret	10/14/18 21:40
Toxaphene Peak 4	7.78	Unspecified	mooret	10/14/18 21:43
Toxaphene Peak 5	8.09	Baseline Smoothing	mooret	10/14/18 21:40

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 438595

Lab Sample ID: CCV 280-438595/24 Client Sample ID:

Date Analyzed: 11/23/18 23:07 Lab File ID: 11230024.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	6.22	Baseline Smoothing	mooret	11/25/18 19:19
Toxaphene Peak 2	6.82	Baseline Smoothing	mooret	11/25/18 19:19
Toxaphene Peak 3	7.49	Baseline Smoothing	mooret	11/25/18 19:19
Toxaphene Peak 4	7.85	Baseline Smoothing	mooret	11/25/18 19:19
Toxaphene Peak 5	8.17	Baseline Smoothing	mooret	11/25/18 19:19

Lab Sample ID: MB 280-436649/1-A Client Sample ID:

Date Analyzed: 11/24/18 00:00 Lab File ID: 11230027.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene		Unspecified		
Toxaphene Peak 1		Invalid Compound ID	mooret	11/25/18 19:21
Toxaphene Peak 2		Invalid Compound ID	mooret	11/25/18 19:21
Toxaphene Peak 3		Invalid Compound ID	mooret	11/25/18 19:21
Toxaphene Peak 4		Invalid Compound ID	mooret	11/25/18 19:21
Toxaphene Peak 5		Invalid Compound ID	mooret	11/25/18 19:21

Lab Sample ID: MB 280-436649/1-A Client Sample ID:

Date Analyzed: 11/24/18 00:00 Lab File ID: 11230027.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene		Unspecified		
Toxaphene Peak 1		Unspecified		
Toxaphene Peak 2		Unspecified		
Toxaphene Peak 3		Unspecified		
Toxaphene Peak 4		Unspecified		
Toxaphene Peak 5		Unspecified		

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 438595

Lab Sample ID: 280-116538-1 Client Sample ID: SCLmw-001-181001-GW

Date Analyzed: 11/24/18 02:38 Lab File ID: 11230036.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
beta-BHC		Invalid Compound ID	mooret	11/25/18 19:27
Heptachlor		Invalid Compound ID	mooret	11/25/18 19:27

Lab Sample ID: 280-116538-1 Client Sample ID: SCLmw-001-181001-GW

Date Analyzed: 11/24/18 02:38 Lab File ID: 11230036.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
beta-BHC		Unspecified		
Heptachlor		Unspecified		

Lab Sample ID: LCS 280-436649/6-A Client Sample ID:

Date Analyzed: 11/24/18 03:30 Lab File ID: 11230039.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 2	6.82	Baseline Smoothing	mooret	11/25/18 19:29
Toxaphene Peak 3	7.49	Baseline Smoothing	mooret	11/25/18 19:29
Toxaphene Peak 4	7.86	Baseline Smoothing	mooret	11/25/18 19:29
Toxaphene Peak 5	8.18	Baseline Smoothing	mooret	11/25/18 19:29

PESTICIDES MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Analysis Batch Number: 438595

Lab Sample ID: LCS 280-436649/6-A Client Sample ID:

Date Analyzed: 11/24/18 03:30 Lab File ID: 11230039.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.72	Baseline Smoothing	mooret	11/25/18 19:29
Toxaphene Peak 2	7.08	Baseline Smoothing	mooret	11/25/18 19:29
Toxaphene Peak 3	7.22	Baseline Smoothing	mooret	11/25/18 19:29
Toxaphene Peak 4	7.73	Baseline Smoothing	mooret	11/25/18 19:29
Toxaphene Peak 5	8.03	Baseline Smoothing	mooret	11/25/18 19:29

Lab Sample ID: CCV 280-438595/41 Client Sample ID:

Date Analyzed: 11/24/18 04:06 Lab File ID: 11230041.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toxaphene Peak 1	5.73	Baseline Smoothing	mooret	11/25/18 19:30
Toxaphene Peak 2	7.08	Baseline Smoothing	mooret	11/25/18 19:30
Toxaphene Peak 3	7.22	Baseline Smoothing	mooret	11/25/18 19:30
Toxaphene Peak 4	7.74	Baseline Smoothing	mooret	11/25/18 19:30
Toxaphene Peak 5	8.03	Baseline Smoothing	mooret	11/25/18 19:30

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

Lab Sample ID: STDL61248 280-438388/5 Client Sample ID:

Date Analyzed: 11/21/18 10:09 Lab File ID: 11211805.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 4	5.51	Shouldering	patadiab	11/21/18 11:04

Lab Sample ID: STDL51248 280-438388/6 Client Sample ID:

Date Analyzed: 11/21/18 10:30 Lab File ID: 11211806.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1248 Peak 4	5.51	Split Peak	mooret	11/21/18 15:16

Lab Sample ID: STDL52154 280-438388/13 Client Sample ID:

Date Analyzed: 11/21/18 12:58 Lab File ID: 11211813.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 2	5.51	Split Peak	mooret	11/21/18 15:10

Lab Sample ID: STDL42154 280-438388/14 Client Sample ID:

Date Analyzed: 11/21/18 13:19 Lab File ID: 11211814.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 2	5.51	Split Peak	mooret	11/21/18 15:11

Lab Sample ID: STDL32154 280-438388/15 Client Sample ID:

Date Analyzed: 11/21/18 13:41 Lab File ID: 11211815.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 2	5.51	Split Peak	mooret	11/21/18 15:11

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

Lab Sample ID: STDL12154 280-438388/17 Client Sample ID:

Date Analyzed: 11/21/18 14:23 Lab File ID: 11211817.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 2	5.51	Split Peak	mooret	11/21/18 15:12

Lab Sample ID: STDL51660 280-438388/20 Client Sample ID:

Date Analyzed: 11/21/18 15:27 Lab File ID: 11211820.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 2	3.67	Baseline Smoothing	patadiab	11/23/18 10:03
PCB-1016 Peak 3	4.12	Baseline Smoothing	patadiab	11/23/18 10:03
PCB-1016 Peak 4	4.27	Baseline Smoothing	patadiab	11/23/18 10:03
PCB-1016 Peak 5	4.50	Baseline Smoothing	patadiab	11/23/18 10:03

Lab Sample ID: STDL73262 280-438388/25 Client Sample ID:

Date Analyzed: 11/21/18 17:13 Lab File ID: 11211825.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 5	4.73	Baseline Smoothing	patadiab	11/23/18 10:17
PCB-1262 Peak 1	6.25	Baseline Smoothing	patadiab	11/23/18 10:17
PCB-1262 Peak 2	7.16	Baseline Smoothing	patadiab	11/23/18 10:17
PCB-1262 Peak 3	7.49	Baseline Smoothing	patadiab	11/23/18 10:17
PCB-1262 Peak 4	7.93	Baseline Smoothing	patadiab	11/23/18 10:17
PCB-1262 Peak 5	8.32	Baseline Smoothing	patadiab	11/23/18 10:17

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

Lab Sample ID: STDL73262 280-438388/25 Client Sample ID:

Date Analyzed: 11/21/18 17:13 Lab File ID: 11211825.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 1	3.28	Baseline Smoothing	patadiab	11/23/18 10:18
PCB-1232 Peak 2	3.67	Baseline Smoothing	patadiab	11/23/18 10:18
PCB-1232 Peak 3	4.12	Baseline Smoothing	patadiab	11/23/18 10:18
PCB-1232 Peak 4	4.27	Baseline Smoothing	patadiab	11/23/18 10:18
PCB-1232 Peak 5	4.93	Baseline Smoothing	patadiab	11/23/18 10:18
PCB-1262 Peak 1	6.65	Baseline Smoothing	patadiab	11/23/18 10:18

Lab Sample ID: STDL63262 280-438388/26 Client Sample ID:

Date Analyzed: 11/21/18 17:34 Lab File ID: 11211826.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 5	4.73	Baseline Smoothing	patadiab	11/23/18 10:20
PCB-1262 Peak 1	6.25	Baseline Smoothing	patadiab	11/23/18 10:20
PCB-1262 Peak 2	7.16	Baseline Smoothing	patadiab	11/23/18 10:20
PCB-1262 Peak 3	7.49	Baseline Smoothing	patadiab	11/23/18 10:20
PCB-1262 Peak 4	7.93	Baseline Smoothing	patadiab	11/23/18 10:20
PCB-1262 Peak 5	8.32	Baseline Smoothing	patadiab	11/23/18 10:20

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

Lab Sample ID: STDL53262 280-438388/27 Client Sample ID:

Date Analyzed: 11/21/18 17:55 Lab File ID: 11211827.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1232 Peak 3	4.12	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1232 Peak 4	4.26	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1232 Peak 5	4.73	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1262 Peak 1	6.25	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1262 Peak 2	7.15	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1262 Peak 3	7.49	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1262 Peak 4	7.93	Baseline Smoothing	patadiab	11/23/18 10:21
PCB-1262 Peak 5	8.32	Baseline Smoothing	patadiab	11/23/18 10:21

Lab Sample ID: ICV 280-438388/40 Client Sample ID:

Date Analyzed: 11/21/18 22:30 Lab File ID: 11211840.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1	5.18	Baseline Smoothing	patadiab	11/23/18 10:39
PCB-1254 Peak 2	5.51	Baseline Smoothing	patadiab	11/23/18 10:39
PCB-1254 Peak 3	5.85	Baseline Smoothing	patadiab	11/23/18 10:39
PCB-1254 Peak 4	6.62	Baseline Smoothing	patadiab	11/23/18 10:39
PCB-1254 Peak 5	6.99	Baseline Smoothing	patadiab	11/23/18 10:39

Lab Sample ID: ICV 280-438388/41 Client Sample ID:

Date Analyzed: 11/21/18 22:51 Lab File ID: 11211841.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016 Peak 2	3.67	Baseline Smoothing	patadiab	11/23/18 10:41
PCB-1016 Peak 3	4.12	Baseline Smoothing	patadiab	11/23/18 10:41
PCB-1016 Peak 4	4.27	Baseline Smoothing	patadiab	11/23/18 10:41
PCB-1016 Peak 5	4.50	Baseline Smoothing	patadiab	11/23/18 10:41

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438388

Lab Sample ID: ICV 280-438388/43 Client Sample ID:

Date Analyzed: 11/21/18 23:34 Lab File ID: 11211843.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1242 Peak 4	5.24	Peak not integrated	patadiab	11/23/18 11:08
PCB-1242 Peak 5	5.26	Peak not integrated	patadiab	11/23/18 11:08

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: MB 280-436649/1-A Client Sample ID:

Date Analyzed: 11/27/18 17:21 Lab File ID: 11271810.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1016 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1016 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1016 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1016 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1221 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1221 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1221 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1232 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1232 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1232 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1232 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1232 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1242 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1242 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1242 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1242 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1242 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1248 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1248 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1248 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1248 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1248 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:39

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: MB 280-436649/1-A Client Sample ID:

Date Analyzed: 11/27/18 17:21 Lab File ID: 11271810.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1254 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1254 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1254 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1254 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1260 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1260 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1260 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1260 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:39
PCB-1260 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:39

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: MB 280-436649/1-A Client Sample ID:

Date Analyzed: 11/27/18 17:21 Lab File ID: 11271810.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Unspecified		
PCB-1016 Peak 2		Unspecified		
PCB-1016 Peak 3		Unspecified		
PCB-1016 Peak 4		Unspecified		
PCB-1016 Peak 5		Unspecified		
PCB-1221 Peak 1		Unspecified		
PCB-1221 Peak 2		Unspecified		
PCB-1221 Peak 3		Unspecified		
PCB-1232 Peak 1		Unspecified		
PCB-1232 Peak 2		Unspecified		
PCB-1232 Peak 3		Unspecified		
PCB-1232 Peak 4		Unspecified		
PCB-1232 Peak 5		Unspecified		
PCB-1242 Peak 1		Unspecified		
PCB-1242 Peak 2		Unspecified		
PCB-1242 Peak 3		Unspecified		
PCB-1242 Peak 4		Unspecified		
PCB-1242 Peak 5		Unspecified		
PCB-1248 Peak 1		Unspecified		
PCB-1248 Peak 2		Unspecified		
PCB-1248 Peak 3		Unspecified		
PCB-1248 Peak 4		Unspecified		
PCB-1248 Peak 5		Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: MB 280-436649/1-A Client Sample ID:

Date Analyzed: 11/27/18 17:21 Lab File ID: 11271810.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Unspecified		
PCB-1254 Peak 2		Unspecified		
PCB-1254 Peak 3		Unspecified		
PCB-1254 Peak 4		Unspecified		
PCB-1254 Peak 5		Unspecified		
PCB-1260 Peak 1		Unspecified		
PCB-1260 Peak 2		Unspecified		
PCB-1260 Peak 3		Unspecified		
PCB-1260 Peak 4		Unspecified		
PCB-1260 Peak 5		Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: 280-116538-1 Client Sample ID: SCLmw-001-181001-GW

Date Analyzed: 11/27/18 18:24 Lab File ID: 11271813.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1016 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1016 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1016 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1016 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1221 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1221 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1221 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1232 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1232 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1232 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1232 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1232 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1242 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1242 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1242 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1242 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1242 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1248 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1248 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1248 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1248 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1248 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:40

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: 280-116538-1 Client Sample ID: SCLmw-001-181001-GW

Date Analyzed: 11/27/18 18:24 Lab File ID: 11271813.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1254 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1254 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1254 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1254 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1260 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1260 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1260 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1260 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:40
PCB-1260 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:40

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: 280-116538-1 Client Sample ID: SCLmw-001-181001-GW

Date Analyzed: 11/27/18 18:24 Lab File ID: 11271813.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Unspecified		
PCB-1016 Peak 2		Unspecified		
PCB-1016 Peak 3		Unspecified		
PCB-1016 Peak 4		Unspecified		
PCB-1016 Peak 5		Unspecified		
PCB-1221 Peak 1		Unspecified		
PCB-1221 Peak 2		Unspecified		
PCB-1221 Peak 3		Unspecified		
PCB-1232 Peak 1		Unspecified		
PCB-1232 Peak 2		Unspecified		
PCB-1232 Peak 3		Unspecified		
PCB-1232 Peak 4		Unspecified		
PCB-1232 Peak 5		Unspecified		
PCB-1242 Peak 1		Unspecified		
PCB-1242 Peak 2		Unspecified		
PCB-1242 Peak 3		Unspecified		
PCB-1242 Peak 4		Unspecified		
PCB-1242 Peak 5		Unspecified		
PCB-1248 Peak 1		Unspecified		
PCB-1248 Peak 2		Unspecified		
PCB-1248 Peak 3		Unspecified		
PCB-1248 Peak 4		Unspecified		
PCB-1248 Peak 5		Unspecified		

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PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: 280-116538-1 Client Sample ID: SCLmw-001-181001-GW

Date Analyzed: 11/27/18 18:24 Lab File ID: 11271813.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Unspecified		
PCB-1254 Peak 2		Unspecified		
PCB-1254 Peak 3		Unspecified		
PCB-1254 Peak 4		Unspecified		
PCB-1254 Peak 5		Unspecified		
PCB-1260 Peak 1		Unspecified		
PCB-1260 Peak 2		Unspecified		
PCB-1260 Peak 3		Unspecified		
PCB-1260 Peak 4		Unspecified		
PCB-1260 Peak 5		Unspecified		

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: 280-116538-2 Client Sample ID: SCLmw-003-181001-GW

Date Analyzed: 11/27/18 18:45 Lab File ID: 11271814.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1016 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1016 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1016 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1016 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1221 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1221 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1221 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1232 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1232 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1232 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1232 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1232 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1242 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1242 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1242 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1242 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1242 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1248 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1248 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1248 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1248 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1248 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:41

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: 280-116538-2 Client Sample ID: SCLmw-003-181001-GW

Date Analyzed: 11/27/18 18:45 Lab File ID: 11271814.D GC Column: CLP1 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1254 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1254 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1254 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1254 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1260 Peak 1		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1260 Peak 2		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1260 Peak 3		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1260 Peak 4		Invalid Compound ID	patadiab	11/29/18 17:41
PCB-1260 Peak 5		Invalid Compound ID	patadiab	11/29/18 17:41

PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: 280-116538-2 Client Sample ID: SCLmw-003-181001-GW

Date Analyzed: 11/27/18 18:45 Lab File ID: 11271814.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1016		Unspecified		
PCB-1221		Unspecified		
PCB-1232		Unspecified		
PCB-1242		Unspecified		
PCB-1248		Unspecified		
PCB-1254		Unspecified		
PCB-1260		Unspecified		
PCB-1016 Peak 1		Unspecified		
PCB-1016 Peak 2		Unspecified		
PCB-1016 Peak 3		Unspecified		
PCB-1016 Peak 4		Unspecified		
PCB-1016 Peak 5		Unspecified		
PCB-1221 Peak 1		Unspecified		
PCB-1221 Peak 2		Unspecified		
PCB-1221 Peak 3		Unspecified		
PCB-1232 Peak 1		Unspecified		
PCB-1232 Peak 2		Unspecified		
PCB-1232 Peak 3		Unspecified		
PCB-1232 Peak 4		Unspecified		
PCB-1232 Peak 5		Unspecified		
PCB-1242 Peak 1		Unspecified		
PCB-1242 Peak 2		Unspecified		
PCB-1242 Peak 3		Unspecified		
PCB-1242 Peak 4		Unspecified		
PCB-1242 Peak 5		Unspecified		
PCB-1248 Peak 1		Unspecified		
PCB-1248 Peak 2		Unspecified		
PCB-1248 Peak 3		Unspecified		
PCB-1248 Peak 4		Unspecified		
PCB-1248 Peak 5		Unspecified		

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PCBS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Analysis Batch Number: 438897

Lab Sample ID: 280-116538-2 Client Sample ID: SCLmw-003-181001-GW

Date Analyzed: 11/27/18 18:45 Lab File ID: 11271814.D GC Column: CLP2 ID: 0.32(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PCB-1254 Peak 1		Unspecified		
PCB-1254 Peak 2		Unspecified		
PCB-1254 Peak 3		Unspecified		
PCB-1254 Peak 4		Unspecified		
PCB-1254 Peak 5		Unspecified		
PCB-1260 Peak 1		Unspecified		
PCB-1260 Peak 2		Unspecified		
PCB-1260 Peak 3		Unspecified		
PCB-1260 Peak 4		Unspecified		
PCB-1260 Peak 5		Unspecified		

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: CHHPLC_X3 Analysis Batch Number: 436836

Lab Sample ID: CCV 280-436836/43 Client Sample ID:

Date Analyzed: 11/09/18 03:19 Lab File ID: 11080043.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HMX	6.65	Baseline Smoothing	fiedlerh	11/09/18 12:02
RDX	7.77	Baseline Smoothing	fiedlerh	11/09/18 12:02

Lab Sample ID: 280-116538-6 Client Sample ID: DA1tw-001-181001-GW

Date Analyzed: 11/09/18 05:59 Lab File ID: 11080051.D GC Column: UltraCarb5uOD ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3,5-Trinitrobenzene		Invalid Compound ID	fiedlerh	11/09/18 12:04
2,4,6-Trinitrotoluene		Invalid Compound ID	fiedlerh	11/09/18 12:04

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 437280

Lab Sample ID: STD020 280-437280/4 IC Client Sample ID:

Date Analyzed: 11/12/18 14:10 Lab File ID: IC818K12002.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.64	Baseline	coopert	11/13/18 09:00

Lab Sample ID: STD050 280-437280/5 IC Client Sample ID:

Date Analyzed: 11/12/18 14:15 Lab File ID: IC818K12003.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.64	Baseline	coopert	11/13/18 08:55

Lab Sample ID: STD100 280-437280/6 IC Client Sample ID:

Date Analyzed: 11/12/18 14:20 Lab File ID: IC818K12004.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.54	Baseline	coopert	11/13/18 08:55

Lab Sample ID: STD200 280-437280/7 ICI Client Sample ID:

Date Analyzed: 11/12/18 14:25 Lab File ID: IC818K12005.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.55	Baseline	coopert	11/13/18 08:56

Lab Sample ID: STD500 280-437280/8 IC Client Sample ID:

Date Analyzed: 11/12/18 14:30 Lab File ID: IC818K12006.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.59	Baseline	coopert	11/13/18 08:56
Perchlorate	2.61	Baseline	coopert	11/13/18 08:57

6860

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 437280

Lab Sample ID: STD1000 280-437280/9 IC Client Sample ID:

Date Analyzed: 11/12/18 14:35 Lab File ID: IC818K12007.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.54	Baseline	coopert	11/13/18 08:57
Perchlorate	2.61	Baseline	coopert	11/13/18 08:57

Lab Sample ID: ICB 280-437280/10 Client Sample ID:

Date Analyzed: 11/12/18 14:41 Lab File ID: IC818K12008.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate		Invalid Compound ID	coopert	11/13/18 09:01

Lab Sample ID: ICV 280-437280/11 Client Sample ID:

Date Analyzed: 11/12/18 14:46 Lab File ID: IC818K12009.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	2.60	Baseline	coopert	11/13/18 09:02

Lab Sample ID: MB 280-437280/13 Client Sample ID:

Date Analyzed: 11/12/18 14:58 Lab File ID: IC818K12011.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate		Invalid Compound ID	coopert	11/13/18 09:03

Lab Sample ID: LCS 280-437280/14 Client Sample ID:

Date Analyzed: 11/12/18 15:04 Lab File ID: IC818K12012.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	2.64	Baseline	coopert	11/13/18 09:03

6860

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 437280

Lab Sample ID: INF 280-437280/15 Client Sample ID:

Date Analyzed: 11/12/18 15:09 Lab File ID: IC818K12013.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	2.59	Baseline	coopert	11/13/18 09:03

Lab Sample ID: CCVL 280-437280/22 Client Sample ID:

Date Analyzed: 11/12/18 15:46 Lab File ID: IC818K12020.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	2.57	Baseline	coopert	11/13/18 09:06

Lab Sample ID: CCB 280-437280/23 Client Sample ID:

Date Analyzed: 11/12/18 15:52 Lab File ID: IC818K12021.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate		Invalid Compound ID	coopert	11/13/18 09:06

Lab Sample ID: 280-116538-1 Client Sample ID:

Date Analyzed: 11/12/18 16:18 Lab File ID: IC818K12026.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.61	Baseline	coopert	11/13/18 09:08

Lab Sample ID: 280-116538-2 Client Sample ID:

Date Analyzed: 11/12/18 16:23 Lab File ID: IC818K12027.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.58	Baseline	coopert	11/13/18 09:08
Perchlorate		Invalid Compound ID	coopert	11/13/18 09:08

6860

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 437280

Lab Sample ID: CCB 280-437280/33 Client Sample ID:

Date Analyzed: 11/12/18 16:49 Lab File ID: IC818K12031.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate		Invalid Compound ID	coopert	11/13/18 09:09

6860

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 258267

Lab Sample ID: STD2 320-258267/4 IC Client Sample ID:

Date Analyzed: 11/09/18 17:17 Lab File ID: IA000004.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroguanidine	4.26	Baseline Smoothing	ortizam	11/09/18 17:39

Lab Sample ID: STD4 320-258267/6 IC Client Sample ID:

Date Analyzed: 11/09/18 17:51 Lab File ID: IA000006.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroguanidine	4.26	Baseline Smoothing	ortizam	11/09/18 18:13

Lab Sample ID: STD5 320-258267/7 IC Client Sample ID:

Date Analyzed: 11/09/18 18:08 Lab File ID: IA000007.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroguanidine	4.26	Baseline Smoothing	ortizam	11/09/18 18:47

Lab Sample ID: LODV 320-258267/12 Client Sample ID:

Date Analyzed: 11/09/18 20:55 Lab File ID: IA000013.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroguanidine	4.26	Baseline Smoothing	ortizam	11/10/18 09:08

8330 Modified

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 260209

Lab Sample ID: LCS 320-259714/2-A Client Sample ID:

Date Analyzed: 11/19/18 17:52 Lab File ID: S000006.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroguanidine	4.22	Baseline Smoothing	ortizam	11/19/18 18:36

Lab Sample ID: 280-116538-1 MS Client Sample ID: SCLmw-001-181001-GW MS

Date Analyzed: 11/19/18 18:26 Lab File ID: S000008.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroguanidine	4.22	Baseline Smoothing	ortizam	11/20/18 09:39

Lab Sample ID: 280-116538-1 MSD Client Sample ID: SCLmw-001-181001-GW MSD

Date Analyzed: 11/19/18 18:42 Lab File ID: S000009.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroguanidine	4.22	Baseline Smoothing	ortizam	11/20/18 10:07

Lab Sample ID: CCV 320-260209/11 Client Sample ID:

Date Analyzed: 11/19/18 19:16 Lab File ID: S000011.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroguanidine	4.22	Baseline Smoothing	ortizam	11/20/18 09:40

8330 Modified

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
6860-IS-Spike_00078	03/07/19	06/15/18	Di Water, Lot HPLC water 190020	100 mL	6860-ISStock2_00021	2 mL	Perchlorate-18O	0.0204 ug/mL
.6860-ISStock2_00021	03/07/19	03/07/18	H2O, Lot 126536	50 mL	6860-ISStock1_00013	0.5 mL	Perchlorate-18O	1.02 ug/mL
..6860-ISStock1_00013	02/27/24	Cambridge, Lot SDDG-013			(Purchased Reagent)		Perchlorate-18O	102 ug/mL
6860CalStockW_00103	10/04/19	10/08/18	H2O, Lot 193092	100 mL	6860CalStock3_00026	1 mL	Perchlorate	0.001 ug/mL
.6860CalStock3_00026	10/04/19	10/08/18	H2O, Lot 193092	10 mL	6860CalStock2_00021	0.1 mL	Perchlorate	0.1 ug/mL
..6860CalStock2_00021	10/04/19	10/08/18	H2O, Lot 193092	10 mL	6860StockClO4_00014	0.1 mL	Perchlorate	10 ug/mL
...6860StockClO4_00014	07/25/20	Accustandard, Lot 216095148			(Purchased Reagent)		Perchlorate	1000 ug/mL
6860ICVStockW_00041	01/23/19	06/01/18	H2O, Lot 190019	50 mL	6860ICVStock3_00031	0.5 mL	Perchlorate	0.001 ug/mL
.6860ICVStock3_00031	01/23/19	01/23/18	H2O, Lot 184455	10 mL	6860ICVStock2_00021	0.1 mL	Perchlorate	0.1 ug/mL
..6860ICVStock2_00021	01/23/19	01/23/18	H2O, Lot 185488	10 mL	6860ICVStock1_00009	0.1 mL	Perchlorate	10 ug/mL
...6860ICVStock1_00009	03/24/19	Absolute Standards, Lot 032416			(Purchased Reagent)		Perchlorate	1000 ug/mL
6860LCS_00018	01/23/19	09/13/18	HPLC water, Lot 184455	50 mL	6860ICVStock3_00031	2.5 mL	Perchlorate	5 ug/L
.6860ICVStock3_00031	01/23/19	01/23/18	H2O, Lot 184455	10 mL	6860ICVStock2_00021	0.1 mL	Perchlorate	0.1 ug/mL
..6860ICVStock2_00021	01/23/19	01/23/18	H2O, Lot 185488	10 mL	6860ICVStock1_00009	0.1 mL	Perchlorate	10 ug/mL
...6860ICVStock1_00009	03/24/19	Absolute Standards, Lot 032416			(Purchased Reagent)		Perchlorate	1000 ug/mL
8081 LCS_00450	11/07/18	11/01/18	P&T Methanol, Lot MethanolP&T_00216	50 mL	8081HCBPrim_00001	0.5 mL	Hexachlorobenzene	0.5 ug/mL
					8081LCSPrim_00041	0.5 mL	4,4'-DDD	0.5 ug/mL
							4,4'-DDE	0.5 ug/mL
							4,4'-DDT	0.5 ug/mL
							Aldrin	0.5 ug/mL
							alpha-BHC	0.5 ug/mL
							alpha-Chlordane	0.5 ug/mL
							beta-BHC	0.5 ug/mL
							delta-BHC	0.5 ug/mL
							Dieldrin	0.5 ug/mL
							Endosulfan I	0.5 ug/mL
							Endosulfan II	0.5 ug/mL
							Endosulfan sulfate	0.5 ug/mL
							Endrin	0.5 ug/mL
							Endrin aldehyde	0.5 ug/mL
							Endrin ketone	0.5 ug/mL
							gamma-BHC (Lindane)	0.5 ug/mL
							gamma-Chlordane	0.5 ug/mL
							Heptachlor	0.5 ug/mL
							Heptachlor epoxide	0.5 ug/mL
							Methoxychlor	0.5 ug/mL
.8081HCBPrim_00001	06/14/19	06/14/18	Hexane, Lot Hexane Cycl 00050	10 mL	8081HCBStkSS_00036	0.5 mL	Hexachlorobenzene	50 ug/mL
..8081HCBStkSS_00036	06/14/19	Ultra Scientific, Lot CR-5129			(Purchased Reagent)		Hexachlorobenzene	1000 ug/mL
.8081LCSPrim_00041	01/30/19	07/30/18	Hexane, Lot Hexane_Cycl_00051	10 mL	8081ABResPS_00028	0.25 mL	4,4'-DDD	50 ug/mL
							4,4'-DDE	50 ug/mL
							4,4'-DDT	50 ug/mL
							Aldrin	50 ug/mL
							alpha-BHC	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							alpha-Chlordane	50 ug/mL
							beta-BHC	50 ug/mL
							delta-BHC	50 ug/mL
							Dieldrin	50 ug/mL
							Endosulfan I	50 ug/mL
							Endosulfan II	50 ug/mL
							Endosulfan sulfate	50 ug/mL
							Endrin	50 ug/mL
							Endrin aldehyde	50 ug/mL
							Endrin ketone	50 ug/mL
							gamma-BHC (Lindane)	50 ug/mL
							gamma-Chlordane	50 ug/mL
							Heptachlor	50 ug/mL
							Heptachlor epoxide	50 ug/mL
							Methoxychlor	50 ug/mL
..8081ABResPS_00028	04/30/22		Restek, Lot A0108399		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
8081/82 Surr_00105	03/25/19	09/25/18	ACETONE, Lot Acetone_00232	1000 mL	AR_SURR_RES_00084	1 mL	DCB Decachlorobiphenyl	0.2 ug/mL
							Tetrachloro-m-xylene	0.2 ug/mL
.AR_SURR_RES_00084	11/30/23		RESTEK, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081_EvalBPEM_00013	02/27/19	08/27/18	Hexane, Lot 173156	100 mL	8081EvalBStk2_00020	20 uL	4,4'-DDT	0.04 ug/mL
							Endrin	0.04 ug/mL
.8081EvalBStk2_00020	02/27/19		AccuStandard, Inc, Lot 217101288		(Purchased Reagent)		4,4'-DDT	200 ug/mL
							Endrin	200 ug/mL
8081_IS_00008	12/02/18	06/02/18	Hexane, Lot 189035	500 mL	BNB stock_00014	1 mL	1-Bromo-2-nitrobenzene	2 ug/mL
.BNB stock_00014	08/31/20		Restek, Lot A0127264		(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
8081ABICVL3_00035	02/28/19	10/13/18	Hexane, Lot 190112	100 mL	8081ABICVStk_00034	2.5 mL	4,4'-DDD	25 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,4'-DDE	25 ng/mL
							4,4'-DDT	25 ng/mL
							Aldrin	25 ng/mL
							alpha-BHC	25 ng/mL
							alpha-Chlordane	25 ng/mL
							beta-BHC	25 ng/mL
							delta-BHC	25 ng/mL
							Dieldrin	25 ng/mL
							Endosulfan I	25 ng/mL
							Endosulfan II	25 ng/mL
							Endosulfan sulfate	25 ng/mL
							Endrin	25 ng/mL
							Endrin aldehyde	25 ng/mL
							Endrin ketone	25 ng/mL
							gamma-BHC (Lindane)	25 ng/mL
							gamma-Chlordane	25 ng/mL
							Heptachlor	25 ng/mL
							Heptachlor epoxide	25 ng/mL
							Methoxychlor	25 ng/mL
							DCB Decachlorobiphenyl	25 ng/mL
							Tetrachloro-m-xylene	25 ng/mL
.8081ABICVStk_00034	02/28/19	10/13/18	Hexane, Lot 190112	50 mL	8081ABResSS_00012	0.025 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					AR_SURR_RES_00093	0.25 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResSS_00012	02/28/19		Restek, Lot A0108854		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..AR_SURR_RES_00093	04/13/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL1_00025	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	0.4 mL	4,4'-DDD	4 ng/mL
							4,4'-DDE	4 ng/mL
							4,4'-DDT	4 ng/mL
							Aldrin	4 ng/mL
							alpha-BHC	4 ng/mL
							alpha-Chlordane	4 ng/mL
							beta-BHC	4 ng/mL
							delta-BHC	4 ng/mL
							Dieldrin	4 ng/mL
							Endosulfan I	4 ng/mL
							Endosulfan II	4 ng/mL
							Endosulfan sulfate	4 ng/mL
							Endrin	4 ng/mL
							Endrin aldehyde	4 ng/mL
							Endrin ketone	4 ng/mL
							gamma-BHC (Lindane)	4 ng/mL
							gamma-Chlordane	4 ng/mL
							Heptachlor	4 ng/mL
							Heptachlor epoxide	4 ng/mL
							Methoxychlor	4 ng/mL
							Hexachlorobenzene	4 ng/mL
							DCB Decachlorobiphenyl	4 ng/mL
							Tetrachloro-m-xylene	4 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18		Accustandard, Inc., Lot 216101286		(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18		RESTEK, Lot A0121594		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL2_00025	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	1 mL	4,4'-DDD	10 ng/mL
							4,4'-DDE	10 ng/mL
							4,4'-DDT	10 ng/mL
							Aldrin	10 ng/mL
							alpha-BHC	10 ng/mL
							alpha-Chlordane	10 ng/mL
							beta-BHC	10 ng/mL
							delta-BHC	10 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dieldrin	10 ng/mL
							Endosulfan I	10 ng/mL
							Endosulfan II	10 ng/mL
							Endosulfan sulfate	10 ng/mL
							Endrin	10 ng/mL
							Endrin aldehyde	10 ng/mL
							Endrin ketone	10 ng/mL
							gamma-BHC (Lindane)	10 ng/mL
							gamma-Chlordane	10 ng/mL
							Heptachlor	10 ng/mL
							Heptachlor epoxide	10 ng/mL
							Methoxychlor	10 ng/mL
							Hexachlorobenzene	10 ng/mL
							DCB Decachlorobiphenyl	10 ng/mL
							Tetrachloro-m-xylene	10 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18	Accustandard, Inc., Lot 216101286			(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18	RESTEK, Lot A0121594			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL3_00028	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	2.5 mL	4,4'-DDD	25 ng/mL
							4,4'-DDE	25 ng/mL
							4,4'-DDT	25 ng/mL
							Aldrin	25 ng/mL
							alpha-BHC	25 ng/mL
							alpha-Chlordane	25 ng/mL
							beta-BHC	25 ng/mL
							delta-BHC	25 ng/mL
							Dieldrin	25 ng/mL
							Endosulfan I	25 ng/mL
							Endosulfan II	25 ng/mL
							Endosulfan sulfate	25 ng/mL
							Endrin	25 ng/mL
							Endrin aldehyde	25 ng/mL
							Endrin ketone	25 ng/mL
							gamma-BHC (Lindane)	25 ng/mL
							gamma-Chlordane	25 ng/mL
							Heptachlor	25 ng/mL
							Heptachlor epoxide	25 ng/mL
							Methoxychlor	25 ng/mL
							Hexachlorobenzene	25 ng/mL
							DCB Decachlorobiphenyl	25 ng/mL
							Tetrachloro-m-xylene	25 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18		Accustandard, Inc., Lot 216101286		(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18		RESTEK, Lot A0121594		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL4_00031	12/20/18	06/20/18	Hexane, Lot 192742	500 mL	8081ABCalStk_00033	25 mL	4,4'-DDD	50 ng/mL
							4,4'-DDE	50 ng/mL
							4,4'-DDT	50 ng/mL
							Aldrin	50 ng/mL
							alpha-BHC	50 ng/mL
							alpha-Chlordane	50 ng/mL
							beta-BHC	50 ng/mL
							delta-BHC	50 ng/mL
							Dieldrin	50 ng/mL
							Endosulfan I	50 ng/mL
							Endosulfan II	50 ng/mL
							Endosulfan sulfate	50 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endrin	50 ng/mL
							Endrin aldehyde	50 ng/mL
							Endrin ketone	50 ng/mL
							gamma-BHC (Lindane)	50 ng/mL
							gamma-Chlordane	50 ng/mL
							Heptachlor	50 ng/mL
							Heptachlor epoxide	50 ng/mL
							Methoxychlor	50 ng/mL
							Hexachlorobenzene	50 ng/mL
							DCB Decachlorobiphenyl	50 ng/mL
							Tetrachloro-m-xylene	50 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18	Accustandard, Inc., Lot 216101286			(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18	RESTEK, Lot A0121594			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL5_00026	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	7.5 mL	4,4'-DDD	75 ng/mL
							4,4'-DDE	75 ng/mL
							4,4'-DDT	75 ng/mL
							Aldrin	75 ng/mL
							alpha-BHC	75 ng/mL
							alpha-Chlordane	75 ng/mL
							beta-BHC	75 ng/mL
							delta-BHC	75 ng/mL
							Dieldrin	75 ng/mL
							Endosulfan I	75 ng/mL
							Endosulfan II	75 ng/mL
							Endosulfan sulfate	75 ng/mL
							Endrin	75 ng/mL
							Endrin aldehyde	75 ng/mL
							Endrin ketone	75 ng/mL
							gamma-BHC (Lindane)	75 ng/mL
							gamma-Chlordane	75 ng/mL
							Heptachlor	75 ng/mL
							Heptachlor epoxide	75 ng/mL
							Methoxychlor	75 ng/mL
							Hexachlorobenzene	75 ng/mL
							DCB Decachlorobiphenyl	75 ng/mL
							Tetrachloro-m-xylene	75 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18		Accustandard, Inc., Lot 216101286		(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18		RESTEK, Lot A0121594		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081IcalL6_00025	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABCalStk_00033	10 mL	4,4'-DDD	100 ng/mL
							4,4'-DDE	100 ng/mL
							4,4'-DDT	100 ng/mL
							Aldrin	100 ng/mL
							alpha-BHC	100 ng/mL
							alpha-Chlordane	100 ng/mL
							beta-BHC	100 ng/mL
							delta-BHC	100 ng/mL
							Dieldrin	100 ng/mL
							Endosulfan I	100 ng/mL
							Endosulfan II	100 ng/mL
							Endosulfan sulfate	100 ng/mL
							Endrin	100 ng/mL
							Endrin aldehyde	100 ng/mL
							Endrin ketone	100 ng/mL
							gamma-BHC (Lindane)	100 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							gamma-Chlordane	100 ng/mL
							Heptachlor	100 ng/mL
							Heptachlor epoxide	100 ng/mL
							Methoxychlor	100 ng/mL
							Hexachlorobenzene	100 ng/mL
							DCB Decachlorobiphenyl	100 ng/mL
							Tetrachloro-m-xylene	100 ng/mL
.8081ABCalStk_00033	12/20/18	06/20/18	Hexane, Lot 192742	100 mL	8081ABResPS_00026	0.05 mL	4,4'-DDD	1000 ng/mL
							4,4'-DDE	1000 ng/mL
							4,4'-DDT	1000 ng/mL
							Aldrin	1000 ng/mL
							alpha-BHC	1000 ng/mL
							alpha-Chlordane	1000 ng/mL
							beta-BHC	1000 ng/mL
							delta-BHC	1000 ng/mL
							Dieldrin	1000 ng/mL
							Endosulfan I	1000 ng/mL
							Endosulfan II	1000 ng/mL
							Endosulfan sulfate	1000 ng/mL
							Endrin	1000 ng/mL
							Endrin aldehyde	1000 ng/mL
							Endrin ketone	1000 ng/mL
							gamma-BHC (Lindane)	1000 ng/mL
							gamma-Chlordane	1000 ng/mL
							Heptachlor	1000 ng/mL
							Heptachlor epoxide	1000 ng/mL
							Methoxychlor	1000 ng/mL
					8081HCBStkPS_00021	1 mL	Hexachlorobenzene	1000 ng/mL
					AR_SURR_RES_00073	0.5 mL	DCB Decachlorobiphenyl	1000 ng/mL
							Tetrachloro-m-xylene	1000 ng/mL
..8081ABResPS_00026	12/20/18		Restek, Lot A0129369		(Purchased Reagent)		4,4'-DDD	2000 ug/mL
							4,4'-DDE	2000 ug/mL
							4,4'-DDT	2000 ug/mL
							Aldrin	2000 ug/mL
							alpha-BHC	2000 ug/mL
							alpha-Chlordane	2000 ug/mL
							beta-BHC	2000 ug/mL
							delta-BHC	2000 ug/mL
							Dieldrin	2000 ug/mL
							Endosulfan I	2000 ug/mL
							Endosulfan II	2000 ug/mL
							Endosulfan sulfate	2000 ug/mL
							Endrin	2000 ug/mL
							Endrin aldehyde	2000 ug/mL
							Endrin ketone	2000 ug/mL
							gamma-BHC (Lindane)	2000 ug/mL
							gamma-Chlordane	2000 ug/mL
							Heptachlor	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Heptachlor epoxide	2000 ug/mL
							Methoxychlor	2000 ug/mL
..8081HCBStkPS_00021	12/20/18	Accustandard, Inc., Lot 216101286			(Purchased Reagent)		Hexachlorobenzene	100 ug/mL
..AR_SURR_RES_00073	12/20/18	RESTEK, Lot A0121594			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
8081Toxaphene_00031	11/13/18	05/16/18	ACETONE, Lot Acetone 000196	500 mL	8081 ToxStock_00018	1 mL	Toxaphene	2 ug/mL
.8081 ToxStock_00018	01/30/25	AccuStandard, Lot 215011420			(Purchased Reagent)		Toxaphene	1000 ug/mL
8081TOXCCVL4_00014	11/12/18	05/12/18	Hexane, Lot 189045	250 mL	8081ToxPS_00034	0.1 mL	Toxaphene Peak 1	2000 ng/mL
							Toxaphene Peak 2	2000 ng/mL
							Toxaphene Peak 3	2000 ng/mL
							Toxaphene Peak 4	2000 ng/mL
							Toxaphene Peak 5	2000 ng/mL
.8081ToxPS_00034	03/31/21	Restek, Lot A0123422			(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081TOXCCVL4_00015	05/12/19	11/12/18	Hexane, Lot 189045	250 mL	8081ToxPS_00039	0.1 mL	Toxaphene	2000 ng/mL
.8081ToxPS_00039	05/12/19	Restek, Lot A0128388			(Purchased Reagent)		Toxaphene	5000 ug/mL
8081ToxICVL3_00013	03/19/19	09/19/18	Hexane, Lot 190112	100 mL	8081ToxSS_00020	0.1 mL	Toxaphene	1000 ng/mL
.8081ToxSS_00020	03/19/19	Accustandard, Inc., Lot 217071319			(Purchased Reagent)		Toxaphene	1000 ug/mL
8081ToxL1_00020	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.004 mL	Toxaphene Peak 1	200 ng/mL
							Toxaphene Peak 2	200 ng/mL
							Toxaphene Peak 3	200 ng/mL
							Toxaphene Peak 4	200 ng/mL
							Toxaphene Peak 5	200 ng/mL
.8081ToxPS_00034	03/31/21	Restek, Lot A0123422			(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081ToxL2_00021	11/12/18	05/12/18	Hexane, Lot 175756	100 mL	8081ToxPS_00034	0.01 mL	Toxaphene Peak 1	500 ng/mL
							Toxaphene Peak 2	500 ng/mL
							Toxaphene Peak 3	500 ng/mL
							Toxaphene Peak 4	500 ng/mL
							Toxaphene Peak 5	500 ng/mL
.8081ToxPS_00034	03/31/21	Restek, Lot A0123422			(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081ToxL3_00020	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.02 mL	Toxaphene Peak 1	1000 ng/mL
							Toxaphene Peak 2	1000 ng/mL
							Toxaphene Peak 3	1000 ng/mL
							Toxaphene Peak 4	1000 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Toxaphene Peak 5	1000 ng/mL
.8081ToxPS_00034	03/31/21		Restek, Lot A0123422		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081ToxL5_00021	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.1 mL	Toxaphene Peak 1	5000 ng/mL
							Toxaphene Peak 2	5000 ng/mL
							Toxaphene Peak 3	5000 ng/mL
							Toxaphene Peak 4	5000 ng/mL
							Toxaphene Peak 5	5000 ng/mL
.8081ToxPS_00034	03/31/21		Restek, Lot A0123422		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8081ToxL6_00023	11/12/18	05/12/18	Hexane, Lot 189045	100 mL	8081ToxPS_00034	0.2 mL	Toxaphene Peak 1	10000 ng/mL
							Toxaphene Peak 2	10000 ng/mL
							Toxaphene Peak 3	10000 ng/mL
							Toxaphene Peak 4	10000 ng/mL
							Toxaphene Peak 5	10000 ng/mL
.8081ToxPS_00034	03/31/21		Restek, Lot A0123422		(Purchased Reagent)		Toxaphene Peak 1	5000 ug/mL
							Toxaphene Peak 2	5000 ug/mL
							Toxaphene Peak 3	5000 ug/mL
							Toxaphene Peak 4	5000 ug/mL
							Toxaphene Peak 5	5000 ug/mL
8082 LCS_00049	12/11/18	07/11/18	ACETONE, Lot Acetone_00221	500 mL	8082LCSSTOCK_00034	1 mL	PCB-1016	2 ug/mL
							PCB-1260	2 ug/mL
.8082LCSSTOCK_00034	07/11/19		RESTEK, Lot A0116282		(Purchased Reagent)		PCB-1016	1000 ug/mL
							PCB-1260	1000 ug/mL
8270_LCS_Main_00055	05/31/19	10/01/18	P&T Methanol, Lot MethanolP&T_00214	500 mL	571995_00044	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00049	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00050	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00051	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00052	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00053	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00055	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					571995_00056	5 mL	1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Methylphenol	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	80 ug/mL
							Hexadecane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							n-Decane	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							n-Octadecane	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					MS-569731_00095	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					MS-569731_00096	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					MS-569731_00097	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					MS-569731_00100	5 mL	Benzoic acid	80 ug/mL
							Indene	80 ug/mL
					OP-572556_00003	5 mL	Hexachlorocyclopentadiene	160 ug/mL
					OP-572556_00006	5 mL	Hexachlorocyclopentadiene	160 ug/mL
.571995_00044	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00049	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00050	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00051	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00052	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00053	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00055	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.571995_00056	10/01/19		Restek, Lot A0140111		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-569731_00095	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.MS-569731_00096	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.MS-569731_00097	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.MS-569731_00100	05/31/19		Restek, Lot A0132744		(Purchased Reagent)		Benzoic acid	2000 ug/mL
							Indene	2000 ug/mL
.OP-572556_00003	10/01/19		Restek, Lot A0127376		(Purchased Reagent)		Hexachlorocyclopentadiene	4000 ug/mL
.OP-572556_00006	10/01/19		Restek, Lot A0127376		(Purchased Reagent)		Hexachlorocyclopentadiene	4000 ug/mL
8270_LCS_Supp_00309	11/07/18	10/31/18	P&T Methanol, Lot MethanolP&T_00216	50 mL	OP-569732_00004	2 mL	Atrazine	80 ug/mL
							Benzaldehyde	80 ug/mL
							Caprolactam	80 ug/mL
					OP-CustBenz_00022	2 mL	3,3'-Dichlorobenzidine	160 ug/mL
							Benzidine	160 ug/mL
.OP-569732_00004	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Benzaldehyde	2000 ug/mL
							Caprolactam	2000 ug/mL
.OP-CustBenz_00022	10/31/19		Restek, Lot A0139914		(Purchased Reagent)		3,3'-Dichlorobenzidine	4000 ug/mL
							Benzidine	4000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
8270BO-SIMLCS_00031	09/30/19	10/11/18	P&T Methanol, Lot MethanolP&T_00215	250 mL	571995_00043	225 uL	1,1'-Biphenyl	0.9 ug/mL
							1,2,4,5-Tetrachlorobenzene	0.9 ug/mL
							1,2,4-Trichlorobenzene	0.9 ug/mL
							1,2-Dichlorobenzene	0.9 ug/mL
							1,2-Diphenylhydrazine	0.909877 ug/mL
							1,3-Dichlorobenzene	0.9 ug/mL
							1,3-Dinitrobenzene	0.9 ug/mL
							1,4-Dichlorobenzene	0.9 ug/mL
							1,4-Dioxane	0.9 ug/mL
							1-Methylnaphthalene	0.9 ug/mL
							2,3,4,6-Tetrachlorophenol	0.9 ug/mL
							2,4,5-Trichlorophenol	0.9 ug/mL
							2,4,6-Trichlorophenol	0.9 ug/mL
							2,4-Dichlorophenol	0.9 ug/mL
							2,4-Dimethylphenol	0.9 ug/mL
							2,4-Dinitrophenol	1.8 ug/mL
							2,4-Dinitrotoluene	0.9 ug/mL
							2,6-Dichlorophenol	0.9 ug/mL
							2,6-Dinitrotoluene	0.9 ug/mL
							2-Chloronaphthalene	0.9 ug/mL
							2-Chlorophenol	0.9 ug/mL
							2-Methylnaphthalene	0.9 ug/mL
							2-Methylphenol	0.9 ug/mL
							2-Nitroaniline	0.9 ug/mL
							2-Nitrophenol	0.9 ug/mL
							3 & 4 Methylphenol	0.9 ug/mL
							3-Methylphenol	0.9 ug/mL
							3-Nitroaniline	0.9 ug/mL
							4,6-Dinitro-2-methylphenol	1.8 ug/mL
							4-Bromophenyl phenyl ether	0.9 ug/mL
							4-Chloro-3-methylphenol	0.9 ug/mL
							4-Chloroaniline	0.9 ug/mL
							4-Chlorophenyl phenyl ether	0.9 ug/mL
							4-Methylphenol	0.9 ug/mL
							4-Nitroaniline	0.9 ug/mL
							4-Nitrophenol	1.8 ug/mL
							Acenaphthene	0.9 ug/mL
							Acenaphthylene	0.9 ug/mL
							Acetophenone	0.9 ug/mL
							Aniline	0.9 ug/mL
							Anthracene	0.9 ug/mL
							Azobenzene	0.9 ug/mL
							Benzo[a]anthracene	0.9 ug/mL
							Benzo[a]pyrene	0.9 ug/mL
							Benzo[b]fluoranthene	0.9 ug/mL
							Benzo[g,h,i]perylene	0.9 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	0.9 ug/mL
							Benzyl alcohol	0.9 ug/mL
							bis (2-chloroisopropyl) ether	0.9 ug/mL
							Bis(2-chloroethoxy)methane	0.9 ug/mL
							Bis(2-chloroethyl)ether	0.9 ug/mL
							Bis(2-ethylhexyl) phthalate	0.9 ug/mL
							Butyl benzyl phthalate	0.9 ug/mL
							Carbazole	0.9 ug/mL
							Chrysene	0.9 ug/mL
							Di-n-butyl phthalate	0.9 ug/mL
							Di-n-octyl phthalate	0.9 ug/mL
							Dibenz(a,h)anthracene	0.9 ug/mL
							Dibenzofuran	0.9 ug/mL
							Diethyl phthalate	0.9 ug/mL
							Dimethyl phthalate	0.9 ug/mL
							Diphenylamine	0.765 ug/mL
							Fluoranthene	0.9 ug/mL
							Fluorene	0.9 ug/mL
							Hexachlorobenzene	0.9 ug/mL
							Hexachlorobutadiene	0.9 ug/mL
							Hexachlorocyclopentadiene	0.9 ug/mL
							Hexachloroethane	0.9 ug/mL
							Hexadecane	0.9 ug/mL
							Indeno[1,2,3-cd]pyrene	0.9 ug/mL
							Isophorone	0.9 ug/mL
							n-Decane	0.9 ug/mL
							N-Nitrosodi-n-propylamine	0.9 ug/mL
							N-Nitrosodimethylamine	0.9 ug/mL
							N-Nitrosodiphenylamine	0.9 ug/mL
							n-Octadecane	0.9 ug/mL
							Naphthalene	0.9 ug/mL
							Nitrobenzene	0.9 ug/mL
							Pentachlorophenol	1.8 ug/mL
							Phenanthrene	0.9 ug/mL
							Phenol	0.9 ug/mL
							Pyrene	0.9 ug/mL
							Pyridine	1.8 ug/mL
.571995_00043	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Methylphenol	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Hexadecane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							n-Decane	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							n-Octadecane	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
8270Surrogate_00128	07/09/19	10/17/18	ACETONE, Lot Acetone_00232	1000 mL	8270SurStkHL_00282	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	100 ug/mL
					8270SurStkHL_00283	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	100 ug/mL
					8270SurStkHL_00289	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Terphenyl-d14	100 ug/mL
					8270SurStkHL_00290	5 mL	2,4,6 - Tribromophenol	100 ug/mL
							2,4,6-Tribromophenol (Surr)	100 ug/mL
							2-Fluorobiphenyl	100 ug/mL
							2-Fluorophenol (Surr)	100 ug/mL
							Nitrobenzene-d5	100 ug/mL
							Phenol-d5 (Surr)	100 ug/mL
							Phenol-d6	100 ug/mL
							Terphenyl-d14	100 ug/mL
.8270SurStkHL_00282	10/17/19		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.8270SurStkHL_00283	10/17/19		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.8270SurStkHL_00289	10/17/19		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
.8270SurStkHL_00290	12/31/22		Restek, Lot A0133251		(Purchased Reagent)		2,4,6 - Tribromophenol	5000 ug/mL
							2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Phenol-d6	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
8330 LCS_00078	04/30/18	02/08/18	Acetonitrile, Lot ACN_00209	100 mL	8330 LCSMix2_00102	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetryl	10 ug/mL
					8330_NG_Stk_00061	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00062	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00069	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00070	1 mL	PETN	100 ug/mL
					8330LCSMix1_00097	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL
							RDX	10 ug/mL
.8330 LCSMix2_00102	02/08/19		Restek, Lot A0122699		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00061	02/08/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00062	02/08/19		Restek, Lot A0128695		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00069	02/08/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00070	02/08/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00097	02/08/19		Restek, Lot A0122924		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
8330 LCS_00082	09/07/19	09/07/18	Acetonitrile, Lot ACN_00215	100 mL	8330 LCSMix2_00104	1 mL	2,6-Dinitrotoluene	10 ug/mL
							2-Amino-4,6-dinitrotoluene	10 ug/mL
							2-Nitrotoluene	10 ug/mL
							3-Nitrotoluene	10 ug/mL
							4-Amino-2,6-dinitrotoluene	10 ug/mL
							4-Nitrotoluene	10 ug/mL
							Tetryl	10 ug/mL
					8330_NG_Stk_00067	1 mL	Nitroglycerin	100 ug/mL
					8330_NG_Stk_00068	1 mL	Nitroglycerin	100 ug/mL
					8330_PETN_Stk_00067	1 mL	PETN	100 ug/mL
					8330_PETN_Stk_00068	1 mL	PETN	100 ug/mL
					8330LCSMix1_00105	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							2,4,6-Trinitrotoluene	10 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							RDX	10 ug/mL
					PicricARestek_00080	1 mL	2,4,6-Trinitrophenol	10 ug/mL
.8330 LCSMix2_00104	09/07/19		Restek, Lot A0122699		(Purchased Reagent)		2,6-Dinitrotoluene	1000 ug/mL
							2-Amino-4,6-dinitrotoluene	1000 ug/mL
							2-Nitrotoluene	1000 ug/mL
							3-Nitrotoluene	1000 ug/mL
							4-Amino-2,6-dinitrotoluene	1000 ug/mL
							4-Nitrotoluene	1000 ug/mL
							Tetryl	1000 ug/mL
.8330_NG_Stk_00067	09/07/19		Restek, Lot A0129124		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_NG_Stk_00068	09/07/19		Restek, Lot A0129124		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00067	09/07/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330_PETN_Stk_00068	09/07/19		Restek, Lot A0127970		(Purchased Reagent)		PETN	5000 ug/mL
.8330LCSMix1_00105	09/07/19		Restek, Lot A0128688		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							2,4,6-Trinitrotoluene	1000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							RDX	1000 ug/mL
.PicricARestek_00080	09/07/19		Restek, Lot A0105913		(Purchased Reagent)		2,4,6-Trinitrophenol	1000 ug/mL
8330IntermStk_00055	07/14/18	05/02/18	Acetonitrile, Lot 184115	10 mL	8330ICALStock_00026	1 mL	1,3,5-Trinitrobenzene	10 ug/mL
							1,3-Dinitrobenzene	10.01 ug/mL
							2,4,6-Trinitrotoluene	10.04 ug/mL
							2,4-Dinitrotoluene	10.02 ug/mL
							2,6-Dinitrotoluene	10.03 ug/mL
							2-Amino-4,6-dinitrotoluene	10.03 ug/mL
							2-Nitrotoluene	10.03 ug/mL
							3-Nitrotoluene	10.04 ug/mL
							4-Amino-2,6-dinitrotoluene	10.03 ug/mL
							4-Nitrotoluene	10.04 ug/mL
							HMX	10 ug/mL
							Nitrobenzene	10.02 ug/mL
							RDX	10 ug/mL
							Tetryl	10 ug/mL
							1,2-Dinitrobenzene	10 ug/mL
					8330PAStkPS_00054	1 mL	2,4,6-Trinitrophenol	10 ug/mL
					NG_00002	1 mL	Nitroglycerin	100 ug/mL
					PETN_00002	1 mL	PETN	100 ug/mL
.8330ICALStock_00026	07/14/18	07/14/17	Acetonitrile, Lot ACN_00178	10 mL	8330 Stock_TS_00009	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100.1 ug/mL
							2,4,6-Trinitrotoluene	100.4 ug/mL
							2,4-Dinitrotoluene	100.2 ug/mL
							2,6-Dinitrotoluene	100.3 ug/mL
							2-Amino-4,6-dinitrotoluene	100.3 ug/mL
							2-Nitrotoluene	100.3 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Nitrotoluene	100.4 ug/mL
							4-Amino-2,6-dinitrotoluene	100.3 ug/mL
							4-Nitrotoluene	100.4 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100.2 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00161	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00009	04/30/20	Ultra Scientific, Lot CR-1002			(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1001 ug/mL
							2,4,6-Trinitrotoluene	1004 ug/mL
							2,4-Dinitrotoluene	1002 ug/mL
							2,6-Dinitrotoluene	1003 ug/mL
							2-Amino-4,6-dinitrotoluene	1003 ug/mL
							2-Nitrotoluene	1003 ug/mL
							3-Nitrotoluene	1004 ug/mL
							4-Amino-2,6-dinitrotoluene	1003 ug/mL
							4-Nitrotoluene	1004 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1002 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00161	08/15/24	AccuStandard, Lot 214081391			(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330PAStkPS_00054	07/19/19	AccuStandard, Lot 216061376-01			(Purchased Reagent)		2,4,6-Trinitrophenol	100 ug/mL
.NG__00002	07/14/18	07/14/17	Acetonitrile, Lot 0000130057	5 mL	8330_NG_Stk_00049	1 mL	Nitroglycerin	1000 ug/mL
..8330_NG_Stk_00049	01/01/20	Restek, Lot A0124122			(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.PETN_00002	07/14/18	07/14/17	Acetonitrile, Lot 0000130057	5 mL	8330_PETN_Stk_00052	1 mL	PETN	1000 mL
..8330_PETN_Stk_00052	01/01/20	Restek, Lot A0124124			(Purchased Reagent)		PETN	5000 ug/mL
8330IntermStk_00056	01/16/19	07/16/18	Acetonitrile, Lot 194301	5 mL	8330_NG_Stk_00051	200 uL	Nitroglycerin	200 ug/mL
					8330_PETN_Stk_00053	200 uL	PETN	200 ug/mL
					8330ICALStock_00028	1 mL	1,3,5-Trinitrobenzene	20 ug/mL
							1,3-Dinitrobenzene	20.02 ug/mL
							2,4,6-Trinitrotoluene	20.08 ug/mL
							2,4-Dinitrotoluene	20.04 ug/mL
							2,6-Dinitrotoluene	20.06 ug/mL
							2-Amino-4,6-dinitrotoluene	20.06 ug/mL
							2-Nitrotoluene	20.06 ug/mL
							3-Nitrotoluene	20.08 ug/mL
							4-Amino-2,6-dinitrotoluene	20.06 ug/mL
							4-Nitrotoluene	20.08 ug/mL
							HMX	20 ug/mL
							Nitrobenzene	20.04 ug/mL
							RDX	20 ug/mL
							Tetryl	20 ug/mL
							1,2-Dinitrobenzene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.8330_NG_Stk_00051	01/01/20		Restek, Lot A0124122		(Purchased Reagent)		Nitroglycerin	5000 ug/mL
.8330_PETN_Stk_00053	01/01/20		Restek, Lot A0124124		(Purchased Reagent)		PETN	5000 ug/mL
.8330ICALStock_00028	07/16/19	07/16/18	Acetonitrile, Lot ACN_194301	10 mL	8330 Stock_TS_00011	1 mL	1,3,5-Trinitrobenzene	100 ug/mL
							1,3-Dinitrobenzene	100.1 ug/mL
							2,4,6-Trinitrotoluene	100.4 ug/mL
							2,4-Dinitrotoluene	100.2 ug/mL
							2,6-Dinitrotoluene	100.3 ug/mL
							2-Amino-4,6-dinitrotoluene	100.3 ug/mL
							2-Nitrotoluene	100.3 ug/mL
							3-Nitrotoluene	100.4 ug/mL
							4-Amino-2,6-dinitrotoluene	100.3 ug/mL
							4-Nitrotoluene	100.4 ug/mL
							HMX	100 ug/mL
							Nitrobenzene	100.2 ug/mL
							RDX	100 ug/mL
							Tetryl	100 ug/mL
					8330SurrStock_00162	1 mL	1,2-Dinitrobenzene	100 ug/mL
..8330 Stock_TS_00011	04/30/20		Ultra Scientific, Lot CR-1002		(Purchased Reagent)		1,3,5-Trinitrobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1001 ug/mL
							2,4,6-Trinitrotoluene	1004 ug/mL
							2,4-Dinitrotoluene	1002 ug/mL
							2,6-Dinitrotoluene	1003 ug/mL
							2-Amino-4,6-dinitrotoluene	1003 ug/mL
							2-Nitrotoluene	1003 ug/mL
							3-Nitrotoluene	1004 ug/mL
							4-Amino-2,6-dinitrotoluene	1003 ug/mL
							4-Nitrotoluene	1004 ug/mL
							HMX	1000 ug/mL
							Nitrobenzene	1002 ug/mL
							RDX	1000 ug/mL
							Tetryl	1000 ug/mL
..8330SurrStock_00162	08/15/24		AccuStandard, Lot 214081391		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
8330Surrogate_00098	03/01/19	03/01/18	Acetonitrile, Lot ACN_00210	500 mL	8330SurrStkSS_00123	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00124	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00125	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00126	1 mL	1,2-Dinitrobenzene	10 ug/mL
					8330SurrStkSS_00127	1 mL	1,2-Dinitrobenzene	10 ug/mL
.8330SurrStkSS_00123	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00124	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00125	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00126	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
.8330SurrStkSS_00127	03/01/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
8330Surrogate_00100	03/07/19	09/07/18	Acetonitrile, Lot ACN_00215	500 mL	8330SurrStkSS_00130	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00131	1 mL	1,2-Dinitrobenzene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00132	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00133	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
					8330SurrStkSS_00141	1 mL	1,2-Dinitrobenzene	10 ug/mL
							1,2-Dinitrobenzene (Surr)	10 ug/mL
.8330SurrStkSS_00130	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00131	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00132	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00133	09/07/19		Restek, Lot A0124792		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
.8330SurrStkSS_00141	09/07/19		Restek, Lot A0131413		(Purchased Reagent)		1,2-Dinitrobenzene	1000 ug/mL
							1,2-Dinitrobenzene (Surr)	1000 ug/mL
Alk daily lcs_00785	11/20/18	11/13/18	Di Water, Lot na	1000 mL	Alk stk std_00014	4 mL	Alkalinity	200 mg/L
.Alk stk std_00014	04/30/19		Fischer, Lot 172632		(Purchased Reagent)		Alkalinity	50 g/L
AR_1248_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1248_RESss_00010	25 uL	PCB-1248	250 ng/mL
.AR_1248_RESss_00010	06/06/19		RESTEK, Lot A0124143		(Purchased Reagent)		PCB-1248	1000 ug/mL
AR_1248_L1_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	0.25 mL	PCB-1248 Peak 1	0.025 ug/mL
							PCB-1248 Peak 2	0.025 ug/mL
							PCB-1248 Peak 3	0.025 ug/mL
							PCB-1248 Peak 4	0.025 ug/mL
							PCB-1248 Peak 5	0.025 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L2_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	0.5 mL	PCB-1248 Peak 1	0.05 ug/mL
							PCB-1248 Peak 2	0.05 ug/mL
							PCB-1248 Peak 3	0.05 ug/mL
							PCB-1248 Peak 4	0.05 ug/mL
							PCB-1248 Peak 5	0.05 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L3_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	1 mL	PCB-1248 Peak 1	0.1 ug/mL
							PCB-1248 Peak 2	0.1 ug/mL
							PCB-1248 Peak 3	0.1 ug/mL
							PCB-1248 Peak 4	0.1 ug/mL
							PCB-1248 Peak 5	0.1 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L4_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	2.5 mL	PCB-1248 Peak 1	0.25 ug/mL
							PCB-1248 Peak 2	0.25 ug/mL
							PCB-1248 Peak 3	0.25 ug/mL
							PCB-1248 Peak 4	0.25 ug/mL
							PCB-1248 Peak 5	0.25 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L5_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	5 mL	PCB-1248 Peak 1	0.5 ug/mL
							PCB-1248 Peak 2	0.5 ug/mL
							PCB-1248 Peak 3	0.5 ug/mL
							PCB-1248 Peak 4	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1248 Peak 5	0.5 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L6_00019	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_1248_L7_00017	7.5 mL	PCB-1248 Peak 1	0.75 ug/mL
							PCB-1248 Peak 2	0.75 ug/mL
							PCB-1248 Peak 3	0.75 ug/mL
							PCB-1248 Peak 4	0.75 ug/mL
							PCB-1248 Peak 5	0.75 ug/mL
.AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
..AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1248_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_1248_RES_00012	100 uL	PCB-1248 Peak 1	1 ug/mL
							PCB-1248 Peak 2	1 ug/mL
							PCB-1248 Peak 3	1 ug/mL
							PCB-1248 Peak 4	1 ug/mL
							PCB-1248 Peak 5	1 ug/mL
.AR_1248_RES_00012	04/22/19		RESTEK, Lot A0130978		(Purchased Reagent)		PCB-1248 Peak 1	1000 ug/mL
							PCB-1248 Peak 2	1000 ug/mL
							PCB-1248 Peak 3	1000 ug/mL
							PCB-1248 Peak 4	1000 ug/mL
							PCB-1248 Peak 5	1000 ug/mL
AR_1660_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1660_RESss_00010	25 uL	PCB-1016	250 ng/mL
							PCB-1260	250 ng/mL
					AR_SURR_RES_00090	6.25 uL	DCB Decachlorobiphenyl	12.5 ng/mL
							Tetrachloro-m-xylene	12.5 ng/mL
.AR_1660_RESss_00010	06/06/19		RESTEK, Lot A0114674		(Purchased Reagent)		PCB-1016	1000 ug/mL
							PCB-1260	1000 ug/mL
.AR_SURR_RES_00090	06/06/19		RESTEK, Lot A0130424		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L1_00031	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	0.25 mL	PCB-1016 Peak 1	0.025 ug/mL
							PCB-1016 Peak 2	0.025 ug/mL
							PCB-1016 Peak 3	0.025 ug/mL
							PCB-1016 Peak 4	0.025 ug/mL
							PCB-1016 Peak 5	0.025 ug/mL
							PCB-1260 Peak 1	0.025 ug/mL
							PCB-1260 Peak 2	0.025 ug/mL
							PCB-1260 Peak 3	0.025 ug/mL
							PCB-1260 Peak 4	0.025 ug/mL
							PCB-1260 Peak 5	0.025 ug/mL
							DCB Decachlorobiphenyl	0.00125 ug/mL
							Tetrachloro-m-xylene	0.00125 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L2_00030	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	0.5 mL	PCB-1016 Peak 1	0.05 ug/mL
							PCB-1016 Peak 2	0.05 ug/mL
							PCB-1016 Peak 3	0.05 ug/mL
							PCB-1016 Peak 4	0.05 ug/mL
							PCB-1016 Peak 5	0.05 ug/mL
							PCB-1260 Peak 1	0.05 ug/mL
							PCB-1260 Peak 2	0.05 ug/mL
							PCB-1260 Peak 3	0.05 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 4	0.05 ug/mL
							PCB-1260 Peak 5	0.05 ug/mL
							DCB Decachlorobiphenyl	0.0025 ug/mL
							Tetrachloro-m-xylene	0.0025 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L3_00031	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	1 mL	PCB-1016 Peak 1	0.1 ug/mL
							PCB-1016 Peak 2	0.1 ug/mL
							PCB-1016 Peak 3	0.1 ug/mL
							PCB-1016 Peak 4	0.1 ug/mL
							PCB-1016 Peak 5	0.1 ug/mL
							PCB-1260 Peak 1	0.1 ug/mL
							PCB-1260 Peak 2	0.1 ug/mL
							PCB-1260 Peak 3	0.1 ug/mL
							PCB-1260 Peak 4	0.1 ug/mL
							PCB-1260 Peak 5	0.1 ug/mL
							DCB Decachlorobiphenyl	0.005 ug/mL
							Tetrachloro-m-xylene	0.005 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L4_00068	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	2.5 mL	PCB-1016 Peak 1	0.25 ug/mL
							PCB-1016 Peak 2	0.25 ug/mL
							PCB-1016 Peak 3	0.25 ug/mL
							PCB-1016 Peak 4	0.25 ug/mL
							PCB-1016 Peak 5	0.25 ug/mL
							PCB-1260 Peak 1	0.25 ug/mL
							PCB-1260 Peak 2	0.25 ug/mL
							PCB-1260 Peak 3	0.25 ug/mL
							PCB-1260 Peak 4	0.25 ug/mL
							PCB-1260 Peak 5	0.25 ug/mL
							DCB Decachlorobiphenyl	0.0125 ug/mL
							Tetrachloro-m-xylene	0.0125 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19	RESTEK, Lot A0136320			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L5_00066	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	25 mL	AR_1660_L7_00026	12.5 mL	PCB-1016 Peak 1	0.5 ug/mL
							PCB-1016 Peak 2	0.5 ug/mL
							PCB-1016 Peak 3	0.5 ug/mL
							PCB-1016 Peak 4	0.5 ug/mL
							PCB-1016 Peak 5	0.5 ug/mL
							PCB-1260 Peak 1	0.5 ug/mL
							PCB-1260 Peak 2	0.5 ug/mL
							PCB-1260 Peak 3	0.5 ug/mL
							PCB-1260 Peak 4	0.5 ug/mL
							PCB-1260 Peak 5	0.5 ug/mL
							DCB Decachlorobiphenyl	0.025 ug/mL
							Tetrachloro-m-xylene	0.025 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19	RESTEK, Lot A0134815			(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19	RESTEK, Lot A0136320			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
AR_1660_L5_00066	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	25 mL	AR_1660_L7_00026	12.5 mL	PCB-1016	0.5 ug/mL
							PCB-1260	0.5 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016	1 ug/mL
							PCB-1260	1 ug/mL
..AR_1660_RES_00001	04/22/19	RESTEK, Lot A0134815			(Purchased Reagent)		PCB-1016	1000 ug/mL
							PCB-1260	1000 ug/mL
AR_1660_L6_00033	04/22/19	10/22/18	hexane, Lot Hexane_Cycl_00052	10 mL	AR_1660_L7_00026	7.5 mL	PCB-1016 Peak 1	0.75 ug/mL
							PCB-1016 Peak 2	0.75 ug/mL
							PCB-1016 Peak 3	0.75 ug/mL
							PCB-1016 Peak 4	0.75 ug/mL
							PCB-1016 Peak 5	0.75 ug/mL
							PCB-1260 Peak 1	0.75 ug/mL
							PCB-1260 Peak 2	0.75 ug/mL
							PCB-1260 Peak 3	0.75 ug/mL
							PCB-1260 Peak 4	0.75 ug/mL
							PCB-1260 Peak 5	0.75 ug/mL
							DCB Decachlorobiphenyl	0.0375 ug/mL
							Tetrachloro-m-xylene	0.0375 ug/mL
.AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
..AR_1660_RES_00001	04/22/19	RESTEK, Lot A0134815			(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
..AR_SURR_RES_00094	04/22/19	RESTEK, Lot A0136320			(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_1660_L7_00026	04/22/19	10/22/18	Hexane, Lot Hexane_cycl_00052	100 mL	AR_1660_RES_00001	100 uL	PCB-1016 Peak 1	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1016 Peak 2	1 ug/mL
							PCB-1016 Peak 3	1 ug/mL
							PCB-1016 Peak 4	1 ug/mL
							PCB-1016 Peak 5	1 ug/mL
							PCB-1260 Peak 1	1 ug/mL
							PCB-1260 Peak 2	1 ug/mL
							PCB-1260 Peak 3	1 ug/mL
							PCB-1260 Peak 4	1 ug/mL
							PCB-1260 Peak 5	1 ug/mL
					AR_SURR_RES_00094	25 uL	DCB Decachlorobiphenyl	0.05 ug/mL
							Tetrachloro-m-xylene	0.05 ug/mL
.AR_1660_RES_00001	04/22/19		RESTEK, Lot A0134815		(Purchased Reagent)		PCB-1016 Peak 1	1000 ug/mL
							PCB-1016 Peak 2	1000 ug/mL
							PCB-1016 Peak 3	1000 ug/mL
							PCB-1016 Peak 4	1000 ug/mL
							PCB-1016 Peak 5	1000 ug/mL
							PCB-1260 Peak 1	1000 ug/mL
							PCB-1260 Peak 2	1000 ug/mL
							PCB-1260 Peak 3	1000 ug/mL
							PCB-1260 Peak 4	1000 ug/mL
							PCB-1260 Peak 5	1000 ug/mL
.AR_SURR_RES_00094	04/22/19		RESTEK, Lot A0136320		(Purchased Reagent)		DCB Decachlorobiphenyl	200 ug/mL
							Tetrachloro-m-xylene	200 ug/mL
AR_2154_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1221_RESss_00010	25 uL	PCB-1221	250 ng/mL
					AR_1254_RESss_00010	25 uL	PCB-1254	250 ng/mL
.AR_1221_RESss_00010	06/06/19		RESTEK, Lot A0117382		(Purchased Reagent)		PCB-1221	1000 ug/mL
.AR_1254_RESss_00010	06/06/19		RESTEK, Lot A0105373		(Purchased Reagent)		PCB-1254	1000 ug/mL
AR_2154_L1_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	0.25 mL	PCB-1221 Peak 1	0.025 ug/mL
							PCB-1221 Peak 2	0.025 ug/mL
							PCB-1221 Peak 3	0.025 ug/mL
							PCB-1254 Peak 1	0.025 ug/mL
							PCB-1254 Peak 2	0.025 ug/mL
							PCB-1254 Peak 3	0.025 ug/mL
							PCB-1254 Peak 4	0.025 ug/mL
							PCB-1254 Peak 5	0.025 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L2_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	0.5 mL	PCB-1221 Peak 1	0.05 ug/mL
							PCB-1221 Peak 2	0.05 ug/mL
							PCB-1221 Peak 3	0.05 ug/mL
							PCB-1254 Peak 1	0.05 ug/mL
							PCB-1254 Peak 2	0.05 ug/mL
							PCB-1254 Peak 3	0.05 ug/mL
							PCB-1254 Peak 4	0.05 ug/mL
							PCB-1254 Peak 5	0.05 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L3_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	1 mL	PCB-1221 Peak 1	0.1 ug/mL
							PCB-1221 Peak 2	0.1 ug/mL
							PCB-1221 Peak 3	0.1 ug/mL
							PCB-1254 Peak 1	0.1 ug/mL
							PCB-1254 Peak 2	0.1 ug/mL
							PCB-1254 Peak 3	0.1 ug/mL
							PCB-1254 Peak 4	0.1 ug/mL
							PCB-1254 Peak 5	0.1 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L4_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	2.5 mL	PCB-1221 Peak 1	0.25 ug/mL
							PCB-1221 Peak 2	0.25 ug/mL
							PCB-1221 Peak 3	0.25 ug/mL
							PCB-1254 Peak 1	0.25 ug/mL
							PCB-1254 Peak 2	0.25 ug/mL
							PCB-1254 Peak 3	0.25 ug/mL
							PCB-1254 Peak 4	0.25 ug/mL
							PCB-1254 Peak 5	0.25 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L5_00022	04/22/19	10/23/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	5 mL	PCB-1221 Peak 1	0.5 ug/mL
							PCB-1221 Peak 2	0.5 ug/mL
							PCB-1221 Peak 3	0.5 ug/mL
							PCB-1254 Peak 1	0.5 ug/mL
							PCB-1254 Peak 2	0.5 ug/mL
							PCB-1254 Peak 3	0.5 ug/mL
							PCB-1254 Peak 4	0.5 ug/mL
							PCB-1254 Peak 5	0.5 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L6_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_2154_L7_00020	7.5 mL	PCB-1221 Peak 1	0.75 ug/mL
							PCB-1221 Peak 2	0.75 ug/mL
							PCB-1221 Peak 3	0.75 ug/mL
							PCB-1254 Peak 1	0.75 ug/mL
							PCB-1254 Peak 2	0.75 ug/mL
							PCB-1254 Peak 3	0.75 ug/mL
							PCB-1254 Peak 4	0.75 ug/mL
							PCB-1254 Peak 5	0.75 ug/mL
.AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL
							PCB-1254 Peak 5	1 ug/mL
..AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_2154_L7_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_2154_RES_00001	100 uL	PCB-1221 Peak 1	1 ug/mL
							PCB-1221 Peak 2	1 ug/mL
							PCB-1221 Peak 3	1 ug/mL
							PCB-1254 Peak 1	1 ug/mL
							PCB-1254 Peak 2	1 ug/mL
							PCB-1254 Peak 3	1 ug/mL
							PCB-1254 Peak 4	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1254 Peak 5	1 ug/mL
.AR_2154_RES_00001	04/22/19		RESTEK, Lot A0131802		(Purchased Reagent)		PCB-1221 Peak 1	1000 ug/mL
							PCB-1221 Peak 2	1000 ug/mL
							PCB-1221 Peak 3	1000 ug/mL
							PCB-1254 Peak 1	1000 ug/mL
							PCB-1254 Peak 2	1000 ug/mL
							PCB-1254 Peak 3	1000 ug/mL
							PCB-1254 Peak 4	1000 ug/mL
							PCB-1254 Peak 5	1000 ug/mL
AR_3262_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1232_RESss_00010	25 uL	PCB-1232	250 ng/mL
.AR_1232_RESss_00010	06/06/19		RESTEK, Lot A095877		(Purchased Reagent)		PCB-1232	1000 ug/mL
AR_3262_L1_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	0.25 mL	PCB-1232 Peak 1	0.025 ug/mL
							PCB-1232 Peak 2	0.025 ug/mL
							PCB-1232 Peak 3	0.025 ug/mL
							PCB-1232 Peak 4	0.025 ug/mL
							PCB-1232 Peak 5	0.025 ug/mL
							PCB-1262 Peak 1	0.025 ug/mL
							PCB-1262 Peak 2	0.025 ug/mL
							PCB-1262 Peak 3	0.025 ug/mL
							PCB-1262 Peak 4	0.025 ug/mL
							PCB-1262 Peak 5	0.025 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L2_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	0.5 mL	PCB-1232 Peak 1	0.05 ug/mL
							PCB-1232 Peak 2	0.05 ug/mL
							PCB-1232 Peak 3	0.05 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1232 Peak 4	0.05 ug/mL
							PCB-1232 Peak 5	0.05 ug/mL
							PCB-1262 Peak 1	0.05 ug/mL
							PCB-1262 Peak 2	0.05 ug/mL
							PCB-1262 Peak 3	0.05 ug/mL
							PCB-1262 Peak 4	0.05 ug/mL
							PCB-1262 Peak 5	0.05 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19	RESTEK, Lot A0132023			(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L3_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	1 mL	PCB-1232 Peak 1	0.1 ug/mL
							PCB-1232 Peak 2	0.1 ug/mL
							PCB-1232 Peak 3	0.1 ug/mL
							PCB-1232 Peak 4	0.1 ug/mL
							PCB-1232 Peak 5	0.1 ug/mL
							PCB-1262 Peak 1	0.1 ug/mL
							PCB-1262 Peak 2	0.1 ug/mL
							PCB-1262 Peak 3	0.1 ug/mL
							PCB-1262 Peak 4	0.1 ug/mL
							PCB-1262 Peak 5	0.1 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L4_00022	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	2.5 mL	PCB-1232 Peak 1	0.25 ug/mL
							PCB-1232 Peak 2	0.25 ug/mL
							PCB-1232 Peak 3	0.25 ug/mL
							PCB-1232 Peak 4	0.25 ug/mL
							PCB-1232 Peak 5	0.25 ug/mL
							PCB-1262 Peak 1	0.25 ug/mL
							PCB-1262 Peak 2	0.25 ug/mL
							PCB-1262 Peak 3	0.25 ug/mL
							PCB-1262 Peak 4	0.25 ug/mL
							PCB-1262 Peak 5	0.25 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L5_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	5 mL	PCB-1232 Peak 1	0.5 ug/mL
							PCB-1232 Peak 2	0.5 ug/mL
							PCB-1232 Peak 3	0.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1232 Peak 4	0.5 ug/mL
							PCB-1232 Peak 5	0.5 ug/mL
							PCB-1262 Peak 1	0.5 ug/mL
							PCB-1262 Peak 2	0.5 ug/mL
							PCB-1262 Peak 3	0.5 ug/mL
							PCB-1262 Peak 4	0.5 ug/mL
							PCB-1262 Peak 5	0.5 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19	RESTEK, Lot A0132023			(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L6_00019	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_3262_L7_00017	7.5 mL	PCB-1232 Peak 1	0.75 ug/mL
							PCB-1232 Peak 2	0.75 ug/mL
							PCB-1232 Peak 3	0.75 ug/mL
							PCB-1232 Peak 4	0.75 ug/mL
							PCB-1232 Peak 5	0.75 ug/mL
							PCB-1262 Peak 1	0.75 ug/mL
							PCB-1262 Peak 2	0.75 ug/mL
							PCB-1262 Peak 3	0.75 ug/mL
							PCB-1262 Peak 4	0.75 ug/mL
							PCB-1262 Peak 5	0.75 ug/mL
.AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
..AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_3262_L7_00017	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_3262_RES_00001	100 uL	PCB-1232 Peak 1	1 ug/mL
							PCB-1232 Peak 2	1 ug/mL
							PCB-1232 Peak 3	1 ug/mL
							PCB-1232 Peak 4	1 ug/mL
							PCB-1232 Peak 5	1 ug/mL
							PCB-1262 Peak 1	1 ug/mL
							PCB-1262 Peak 2	1 ug/mL
							PCB-1262 Peak 3	1 ug/mL
							PCB-1262 Peak 4	1 ug/mL
							PCB-1262 Peak 5	1 ug/mL
.AR_3262_RES_00001	04/22/19		RESTEK, Lot A0132023		(Purchased Reagent)		PCB-1232 Peak 1	1000 ug/mL
							PCB-1232 Peak 2	1000 ug/mL
							PCB-1232 Peak 3	1000 ug/mL
							PCB-1232 Peak 4	1000 ug/mL
							PCB-1232 Peak 5	1000 ug/mL
							PCB-1262 Peak 1	1000 ug/mL
							PCB-1262 Peak 2	1000 ug/mL
							PCB-1262 Peak 3	1000 ug/mL
							PCB-1262 Peak 4	1000 ug/mL
							PCB-1262 Peak 5	1000 ug/mL
AR_4268_ICV_00013	12/06/18	06/06/18	Hexane, Lot 186983	100 mL	AR_1242_RESss_00010	25 uL	PCB-1242	250 ng/mL
.AR_1242_RESss_00010	06/06/19		RESTEK, Lot A0105175		(Purchased Reagent)		PCB-1242	1000 ug/mL
AR_4268_L1_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	0.25 mL	PCB-1242 Peak 1	0.025 ug/mL
							PCB-1242 Peak 2	0.025 ug/mL
							PCB-1242 Peak 3	0.025 ug/mL
							PCB-1242 Peak 4	0.025 ug/mL
							PCB-1242 Peak 5	0.025 ug/mL
							PCB-1268 Peak 1	0.025 ug/mL
							PCB-1268 Peak 2	0.025 ug/mL
							PCB-1268 Peak 3	0.025 ug/mL
							PCB-1268 Peak 4	0.025 ug/mL
							PCB-1268 Peak 5	0.025 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L2_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	0.5 mL	PCB-1242 Peak 1	0.05 ug/mL
							PCB-1242 Peak 2	0.05 ug/mL
							PCB-1242 Peak 3	0.05 ug/mL
							PCB-1242 Peak 4	0.05 ug/mL
							PCB-1242 Peak 5	0.05 ug/mL
							PCB-1268 Peak 1	0.05 ug/mL
							PCB-1268 Peak 2	0.05 ug/mL
							PCB-1268 Peak 3	0.05 ug/mL
							PCB-1268 Peak 4	0.05 ug/mL
							PCB-1268 Peak 5	0.05 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L3_00020	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	1 mL	PCB-1242 Peak 1	0.1 ug/mL
							PCB-1242 Peak 2	0.1 ug/mL
							PCB-1242 Peak 3	0.1 ug/mL
							PCB-1242 Peak 4	0.1 ug/mL
							PCB-1242 Peak 5	0.1 ug/mL
							PCB-1268 Peak 1	0.1 ug/mL
							PCB-1268 Peak 2	0.1 ug/mL
							PCB-1268 Peak 3	0.1 ug/mL
							PCB-1268 Peak 4	0.1 ug/mL
							PCB-1268 Peak 5	0.1 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L4_00023	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	2.5 mL	PCB-1242 Peak 1	0.25 ug/mL
							PCB-1242 Peak 2	0.25 ug/mL
							PCB-1242 Peak 3	0.25 ug/mL
							PCB-1242 Peak 4	0.25 ug/mL
							PCB-1242 Peak 5	0.25 ug/mL
							PCB-1268 Peak 1	0.25 ug/mL
							PCB-1268 Peak 2	0.25 ug/mL
							PCB-1268 Peak 3	0.25 ug/mL
							PCB-1268 Peak 4	0.25 ug/mL
							PCB-1268 Peak 5	0.25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L5_00021	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	5 mL	PCB-1242 Peak 1	0.5 ug/mL
							PCB-1242 Peak 2	0.5 ug/mL
							PCB-1242 Peak 3	0.5 ug/mL
							PCB-1242 Peak 4	0.5 ug/mL
							PCB-1242 Peak 5	0.5 ug/mL
							PCB-1268 Peak 1	0.5 ug/mL
							PCB-1268 Peak 2	0.5 ug/mL
							PCB-1268 Peak 3	0.5 ug/mL
							PCB-1268 Peak 4	0.5 ug/mL
							PCB-1268 Peak 5	0.5 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L6_00018	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	10 mL	AR_4268_L7_00016	7.5 mL	PCB-1242 Peak 1	0.75 ug/mL
							PCB-1242 Peak 2	0.75 ug/mL
							PCB-1242 Peak 3	0.75 ug/mL
							PCB-1242 Peak 4	0.75 ug/mL
							PCB-1242 Peak 5	0.75 ug/mL
							PCB-1268 Peak 1	0.75 ug/mL
							PCB-1268 Peak 2	0.75 ug/mL
							PCB-1268 Peak 3	0.75 ug/mL
							PCB-1268 Peak 4	0.75 ug/mL
							PCB-1268 Peak 5	0.75 ug/mL
.AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL
..AR_4268_RES_00001	04/22/19		RESTEK, Lot A0133093		(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
AR_4268_L7_00016	04/22/19	10/22/18	Hexane, Lot Hexane_Cycl_00052	100 mL	AR_4268_RES_00001	100 uL	PCB-1242 Peak 1	1 ug/mL
							PCB-1242 Peak 2	1 ug/mL
							PCB-1242 Peak 3	1 ug/mL
							PCB-1242 Peak 4	1 ug/mL
							PCB-1242 Peak 5	1 ug/mL
							PCB-1268 Peak 1	1 ug/mL
							PCB-1268 Peak 2	1 ug/mL
							PCB-1268 Peak 3	1 ug/mL
							PCB-1268 Peak 4	1 ug/mL
							PCB-1268 Peak 5	1 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.AR_4268_RES_00001	04/22/19	RESTEK, Lot A0133093			(Purchased Reagent)		PCB-1242 Peak 1	1000 ug/mL
							PCB-1242 Peak 2	1000 ug/mL
							PCB-1242 Peak 3	1000 ug/mL
							PCB-1242 Peak 4	1000 ug/mL
							PCB-1242 Peak 5	1000 ug/mL
							PCB-1268 Peak 1	1000 ug/mL
							PCB-1268 Peak 2	1000 ug/mL
							PCB-1268 Peak 3	1000 ug/mL
							PCB-1268 Peak 4	1000 ug/mL
							PCB-1268 Peak 5	1000 ug/mL
BNB IS_00012	01/26/19	07/26/18	Hexane, Lot 190112	100 mL	BNB 10000ppb_00008	10 mL	1-Bromo-2-nitrobenzene	1000 ng/mL
.BNB 10000ppb_00008	01/26/19	07/26/18	Hexane, Lot 190112	100 mL	BNB stock_00015	1 mL	1-Bromo-2-nitrobenzene	10000 ng/mL
..BNB stock_00015	07/26/19	Restek, Lot A0127264			(Purchased Reagent)		1-Bromo-2-nitrobenzene	1000 ug/mL
CN 10ppm_00321	11/19/18	11/12/18	2% NaOH, Lot 1% NaOH_00322	100 mg/L	CN CAL Std_00062	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	10 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN CAL Std_00062	11/30/18	Ricca, Lot 1805F17			(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	1000 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
CN CAL 1 ppm_01458	11/16/18	11/15/18	1% NaOH, Lot N/A	100 mL	CN 10ppm_00321	10 mL	Cyanide, Total	1 mg/L
.CN 10ppm_00321	11/19/18	11/12/18	2% NaOH, Lot 1% NaOH_00322	100 mg/L	CN CAL Std_00062	1 mL	Cyanide, Total	10 mg/L
..CN CAL Std_00062	11/30/18	Ricca, Lot 1805F17			(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Daily_01225	11/16/18	11/15/18	1% HNO3, Lot N/A	100 mL	CN ICV Int_00511	1 mL	Cyanide, Total	0.1 mg/L
.CN ICV Int_00511	11/19/18	11/12/18	1% NaOH, Lot 1% NaOH_00322	100 mL	CN ICV Std_00052	1 mL	Cyanide, Total	10 mg/L
..CN ICV Std_00052	11/30/18	SPEX, Lot 13-66YPX			(Purchased Reagent)		Cyanide, Total	1000 mg/L
CN ICV Int_00511	11/19/18	11/12/18	1% NaOH, Lot 1% NaOH_00322	100 mL	CN ICV Std_00052	1 mL	Cyanide, Amenable	10 mg/L
							Cyanide, Free	10 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	10 mg/L
							Cyanide, Weak Acid Dissociable	10 mg/L
.CN ICV Std_00052	11/30/18	SPEX, Lot 13-66YPX			(Purchased Reagent)		Cyanide, Amenable	1000 mg/L
							Cyanide, Free	1000 mg/L
							Cyanide, Non-amenable	0 mg/L
							Cyanide, Total	1000 mg/L
							Cyanide, Weak Acid Dissociable	1000 mg/L
Hg Biwk ICV_00261	11/26/18	11/12/18	1% HNO3, Lot K23022	100 mL	Hg ICV Stock_00010	0.4 mL	Mercury	0.4 mg/L
.Hg ICV Stock_00010	03/05/19	Inorganic Ventures, Lot H2-HG02113R			(Purchased Reagent)		Mercury	100 mg/L
Hg Daily Spk_02292	11/17/18	11/16/18	1% HNO3, Lot K23022	100 mL	Hg Mnth Spike_00134	1 mL	Mercury	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.Hg Mnth Spike_00134	12/10/18	11/12/18	1% HNO3, Lot K23022	100 mL	Hg Ultra Prim_00012	1 mL	Mercury	10 mg/L
..Hg Ultra Prim_00012	03/09/19		Ultra Scientific, Lot T00602		(Purchased Reagent)		Mercury	1000 mg/L
IC CAL cl/so4_00227	11/03/18	10/27/18	Di Water, Lot na	100 mL	IC CL cal_00054	25 mL	Chloride	250 mg/L
					IC sulfatecal_00053	25 mL	Sulfate	250 mg/L
.IC CL cal_00054	08/30/19		SPEX CertiPrep, Lot 4-101CL-2X		(Purchased Reagent)		Chloride	1000 mg/L
.IC sulfatecal_00053	08/30/19		SPEX CertiPrep, Lot 4-131SO4-2X		(Purchased Reagent)		Sulfate	1000 mg/L
IC CAL cl/so4_00228	11/10/18	11/03/18	Di Water, Lot na	100 mL	IC sulfatecal_00053	25 mL	Sulfate	250 mg/L
.IC sulfatecal_00053	08/30/19		SPEX CertiPrep, Lot 4-131SO4-2X		(Purchased Reagent)		Sulfate	1000 mg/L
IC Cal low_00411	11/06/18	10/30/18	Di Water, Lot NA	100 mL	IC Br cal_00015	5 mL	Bromide	50 mg/L
					IC FL cal_00013	5 mL	Fluoride	50 mg/L
					IC N02 CAL_00043	5 mL	Nitrite as N	50 mg/L
					IC N03 cal_00019	5 mL	Nitrate as N	50 mg/L
					IC P04 cal_00018	5 mL	Orthophosphate as P	50 mg/L
.IC Br cal_00015	01/31/19		Ricca, Lot 4707D55		(Purchased Reagent)		Bromide	1000 mg/L
.IC FL cal_00013	10/31/19		Ricca, Lot 4805C89		(Purchased Reagent)		Fluoride	1000 mg/L
.IC N02 CAL_00043	01/31/19		RICCA, Lot 4808990		(Purchased Reagent)		Nitrite as N	1000 ppm
.IC N03 cal_00019	01/31/20		Ricca, Lot 2807e96		(Purchased Reagent)		Nitrate as N	1000 mg/L
.IC P04 cal_00018	11/30/19		RICCA, Lot 4711L59		(Purchased Reagent)		Orthophosphate as P	1000 mg/L
IC Cal low_00412	11/09/18	11/02/18	Di Water, Lot NA	100 mL	IC N02 CAL_00043	5 mL	Nitrite as N	50 mg/L
					IC N03 cal_00019	5 mL	Nitrate as N	50 mg/L
.IC N02 CAL_00043	01/31/19		RICCA, Lot 4808990		(Purchased Reagent)		Nitrite as N	1000 ppm
.IC N03 cal_00019	01/31/20		Ricca, Lot 2807e96		(Purchased Reagent)		Nitrate as N	1000 mg/L
IC ICV 5_00214	11/06/18	10/30/18	Di Water, Lot na	10 mL	IC NO2 ICV_00016	0.5 mL	Nitrite as N	50 mg/L
					IC NO3 ICV_00012	0.5 mL	Nitrate as N	50 mg/L
.IC NO2 ICV_00016	05/31/20		ERA, Lot 020518		(Purchased Reagent)		Nitrite as N	1000 mg/L
.IC NO3 ICV_00012	12/31/18		ERA, Lot 140616		(Purchased Reagent)		Nitrate as N	1000 mg/L
IC LCS_01391	11/04/18	11/03/18	Di Water, Lot 27	200 mL	IC Cal low_00412	20 mL	Nitrite as N	5 mg/L
							Nitrate as N	5 mg/L
					IC sulfatecal_00053	20 mL	Sulfate	100 mg/L
.IC Cal low_00412	11/09/18	11/02/18	Di Water, Lot NA	100 mL	IC N02 CAL_00043	5 mL	Nitrite as N	50 mg/L
					IC N03 cal_00019	5 mL	Nitrate as N	50 mg/L
..IC N02 CAL_00043	01/31/19		RICCA, Lot 4808990		(Purchased Reagent)		Nitrite as N	1000 ppm
..IC N03 cal_00019	01/31/20		Ricca, Lot 2807e96		(Purchased Reagent)		Nitrate as N	1000 mg/L
.IC sulfatecal_00053	08/30/19		SPEX CertiPrep, Lot 4-131SO4-2X		(Purchased Reagent)		Sulfate	1000 mg/L
IC SO4 ICV_00017	06/30/19		ERA, Lot 210617		(Purchased Reagent)		Sulfate	1000 mg/L
ICMS/MSD WEEK_00563	11/10/18	11/03/18	Di Water, Lot NA	10 mL	IC SPK 6 ANIO_00021	5 mL	Nitrate as N	500.003 mg/L
							Sulfate	2500.26 mg/L
					IC SPK N02SOL_00013	5 mL	Nitrite as N	499.973 mg/L
.IC SPK 6 ANIO_00021	10/01/19	10/01/18	Di Water, Lot NA	1000 mL	IC MS/MSD N03_00005	6.068 g	Nitrate as N	1000.01 mg/L
					IC MS/MSD S04_00005	9.0704 g	Sulfate	5000.51 mg/L
..IC MS/MSD N03_00005	09/27/28		FISHER, Lot 176192		(Purchased Reagent)		Nitrate as N	0.1648 g/g
..IC MS/MSD S04_00005	09/29/20		FISHER, Lot 147276		(Purchased Reagent)		Sulfate	0.5513 g/g
.IC SPK N02SOL_00013	06/05/19	06/05/18	Di Water, Lot na	500 mL	IC MS/MSD N02_00002	2.4628 g	Nitrite as N	999.946 mg/L
..IC MS/MSD N02_00002	01/12/27		fisher, Lot 164254		(Purchased Reagent)		Nitrite as N	0.20301 g/g

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
ICP CCV_00350	05/04/19	11/02/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	ICP ICAL1A_00812	250 mL	Aluminum	0.5 mg/L
							Calcium	5 mg/L
							Iron	2.5 mg/L
							Magnesium	20 mg/L
							Phosphorus	1 mg/L
							Potassium	50 mg/L
							Sodium	5 mg/L
.ICP ICAL1A_00812	05/04/19	11/02/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	1000 mL	Icp cal std 3_00018	10 mL	Aluminum	1 mg/L
							Calcium	10 mg/L
							Iron	5 mg/L
							Magnesium	40 mg/L
							Phosphorus	2 mg/L
							Potassium	100 mg/L
							Sodium	10 mg/L
..Icp cal std 3_00018	08/23/19	Inorganic Ventures, Lot M2-MEB663620			(Purchased Reagent)		Aluminum	100 mg/L
							Calcium	1000 mg/L
							Iron	500 mg/L
							Magnesium	4000 mg/L
							Phosphorus	200 mg/L
							Potassium	10000 mg/L
							Sodium	1000 mg/L
ICP CCVH_00614	12/11/18	11/02/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	ICP ICAL2A_00513	250 mL	Aluminum	50 mg/L
							Iron	50 mg/L
							Sodium	250 mg/L
.ICP ICAL2A_00513	12/11/18	11/02/18	5%HCl/5% HNO3, Lot see reagent log	1000 mL	10000 Al_00018	10 mL	Aluminum	100 mg/L
					10000 Fe_00021	10 mL	Iron	100 mg/L
					10000 Na_00067	50 mL	Sodium	500 mg/L
..10000 Al_00018	06/26/19	Inorganic Ventures, Lot K2-AL			(Purchased Reagent)		Aluminum	10000 mg/L
..10000 Fe_00021	08/08/19	Inorganic Ventures, Lot M2-FE659835			(Purchased Reagent)		Iron	10000 mg/L
..10000 Na_00067	09/05/19	Inorganic Ventures, Lot N2-NA668816			(Purchased Reagent)		Sodium	10000 mg/L
ICP ICSA_00173	12/14/18	10/19/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	500 mL	Icp stk ICSA_00024	50 mL	Aluminum	500 mg/L
							Calcium	500 mg/L
							Iron	200 mg/L
							Magnesium	500 mg/L
.Icp stk ICSA_00024	07/30/19	Inorganic Ventures, Lot K2-MEB643109			(Purchased Reagent)		Aluminum	5000 mg/L
							Calcium	5000 mg/L
							Iron	2000 mg/L
							Magnesium	5000 mg/L
ICP ICSAB_00194	12/01/18	11/02/18	5%/5% HCL/HNO3, Lot SEE LOGBOOK	250 mL	10000 Si_00015	0.25 mL	Si	10 mg/L
							SiO2	21.4 mg/L
					ANALYTES B_00014	2.5 mL	Barium	0.5 mg/L
							Beryllium	0.5 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Cadmium	1 mg/L
							Chromium	0.5 mg/L
							Cobalt	0.5 mg/L
							Copper	0.5 mg/L
							Lead	1 mg/L
							Manganese	0.5 mg/L
							Nickel	1 mg/L
							Silver	1 mg/L
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
					ICP ISAB 1B_00011	2.5 mL	Thallium	10 mg/L
					ICP ISAB STD1_00010	2.5 mL	Antimony	1 mg/L
							Arsenic	2 mg/L
							B	2 mg/L
							Li	1 mg/L
							Mo	1 mg/L
							Phosphorus	2 mg/L
							Potassium	50 mg/L
							Selenium	5 mg/L
							Sodium	50 mg/L
							Sr	1 mg/L
					ICP ISAB STD2_00013	2.5 mL	Sn	10 mg/L
							Ti	1 mg/L
					Icp stk ICSA_00024	25 mL	Aluminum	500 mg/L
							Calcium	500 mg/L
							Iron	200 mg/L
							Magnesium	500 mg/L
.10000 Si_00015	09/24/19	Inorganic ventures, Lot M2-SI657321			(Purchased Reagent)		Si	10000 mg/L
							SiO2	21400 mg/L
.ANALYTES B_00014	04/01/19	SPEX, Lot 5-177MKBY			(Purchased Reagent)		Barium	50 mg/L
							Beryllium	50 mg/L
							Cadmium	100 mg/L
							Chromium	50 mg/L
							Cobalt	50 mg/L
							Copper	50 mg/L
							Lead	100 mg/L
							Manganese	50 mg/L
							Nickel	100 mg/L
							Silver	100 mg/L
							Vanadium	50 mg/L
							Zinc	100 mg/L
.ICP ISAB 1B_00011	12/01/18	High Purity, Lot 1734922			(Purchased Reagent)		Thallium	1000 mg/L
.ICP ISAB STD1_00010	12/01/18	High Purity, Lot 1734921			(Purchased Reagent)		Antimony	100 mg/L
							Arsenic	200 mg/L
							B	200 mg/L
							Li	100 mg/L
							Mo	100 mg/L
							Phosphorus	200 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Potassium	5000 mg/L
							Selenium	500 mg/L
							Sodium	5000 mg/L
							Sr	100 mg/L
.ICP ISAB STD2_00013	01/03/19		High Purity, Lot 1721944		(Purchased Reagent)		Sn	1000 mg/L
							Ti	100 mg/L
.Icp stk ICSA_00024	07/30/19		Inorganic Ventures, Lot K2-MEB643109		(Purchased Reagent)		Aluminum	5000 mg/L
							Calcium	5000 mg/L
							Iron	2000 mg/L
							Magnesium	5000 mg/L
ICP ICV_00677	04/30/19	11/06/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	Icp ICVL A_00014	1 mL	Aluminum	0.25 ppm
							Calcium	2 ppm
							Iron	0.25 ppm
							Magnesium	10 ppm
							Potassium	20 ppm
							Sodium	2 ppm
					Icp ICVL B_00016	1 mL	Phosphorus	2 ppm
.Icp ICVL A_00014	04/30/19		High Purity, Lot 1810602		(Purchased Reagent)		Aluminum	25 mg/L
							Calcium	200 mg/L
							Iron	25 mg/L
							Magnesium	1000 mg/L
							Potassium	2000 mg/L
							Sodium	200 mg/L
.Icp ICVL B_00016	04/30/19		HIGH PURITY, Lot 1810603		(Purchased Reagent)		Phosphorus	200 mg/L
ICP ICV_00678	04/30/19	11/07/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	Icp ICVL A_00014	1 mL	Aluminum	0.25 ppm
							Calcium	2 ppm
							Iron	0.25 ppm
							Magnesium	10 ppm
							Potassium	20 ppm
							Sodium	2 ppm
					Icp ICVL B_00016	1 mL	Phosphorus	2 ppm
.Icp ICVL A_00014	04/30/19		High Purity, Lot 1810602		(Purchased Reagent)		Aluminum	25 mg/L
							Calcium	200 mg/L
							Iron	25 mg/L
							Magnesium	1000 mg/L
							Potassium	2000 mg/L
							Sodium	200 mg/L
.Icp ICVL B_00016	04/30/19		HIGH PURITY, Lot 1810603		(Purchased Reagent)		Phosphorus	200 mg/L
ICP ICVH_00791	04/30/19	11/06/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	Icp ICVH_00746	1 mL	Aluminum	40 mg/L
							Iron	80 mg/L
							Sodium	40 mg/L
.Icp ICVH_00746	09/30/19		High Purity, Lot 1824227		(Purchased Reagent)		Aluminum	4000 mg/L
							Iron	8000 mg/L
							Sodium	4000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
ICP ICVH_00792	04/30/19	11/07/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	Icp ICVH_00746	1 mL	Aluminum	40 mg/L
							Iron	80 mg/L
							Sodium	40 mg/L
.Icp ICVH_00746	09/30/19	High Purity, Lot 1824227			(Purchased Reagent)		Aluminum	4000 mg/L
							Iron	8000 mg/L
							Sodium	4000 mg/L
ICP LLCCV_02393	11/07/18	11/06/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	ICP LLCCV-2a_00008	1 mL	Phosphorus	3000 ppb
					ICP LLCCV-4_00008	1 mL	Aluminum	100 ppb
							Calcium	200 ppb
							Iron	100 ppb
							Magnesium	200 ppb
							Potassium	3000 ppb
							Sodium	1000 ppb
.ICP LLCCV-2a_00008	10/08/19	Inorganic Ventures, Lot M2-MEB654597			(Purchased Reagent)		Phosphorus	300 mg/L
.ICP LLCCV-4_00008	09/26/19	Inorganic Ventures, Lot M2-MEb670719			(Purchased Reagent)		Aluminum	10 mg/L
							Calcium	20 mg/L
							Iron	10 mg/L
							Magnesium	20 mg/L
							Potassium	300 mg/L
							Sodium	100 mg/L
ICP LLCCV_02394	11/08/18	11/07/18	5%HNO3/5% HCl, Lot SEE LOGBOOK	100 mL	ICP LLCCV-2a_00008	1 mL	Phosphorus	3000 ppb
					ICP LLCCV-4_00008	1 mL	Aluminum	100 ppb
							Calcium	200 ppb
							Iron	100 ppb
							Magnesium	200 ppb
							Potassium	3000 ppb
							Sodium	1000 ppb
.ICP LLCCV-2a_00008	10/08/19	Inorganic Ventures, Lot M2-MEB654597			(Purchased Reagent)		Phosphorus	300 mg/L
.ICP LLCCV-4_00008	09/26/19	Inorganic Ventures, Lot M2-MEb670719			(Purchased Reagent)		Aluminum	10 mg/L
							Calcium	20 mg/L
							Iron	10 mg/L
							Magnesium	20 mg/L
							Potassium	300 mg/L
							Sodium	100 mg/L
ICP SPK 2B_00082	11/01/19	Inorganic Ventures, Lot N2-MEB665203			(Purchased Reagent)		Antimony	50 mg/L
							B	100 mg/L
							Mo	100 mg/L
							Si	1000 mg/L
							SiO2	2140 mg/L
							Sn	200 mg/L
							Sulfur	200 mg/L
							Ti	100 mg/L
							Zr	50 mg/L
ICP SPK 3A_00154	10/18/19	Inorganic Ventures, Lot N2-MEB672708			(Purchased Reagent)		Aluminum	200 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Arsenic	100 mg/L
							Barium	200 mg/L
							Beryllium	5 mg/L
							Bi	200 mg/L
							Cadmium	10 mg/L
							Calcium	5000 mg/L
							Chromium	20 mg/L
							Cobalt	50 mg/L
							Copper	25 mg/L
							Iron	100 mg/L
							Lead	50 mg/L
							Li	100 mg/L
							Magnesium	5000 mg/L
							Manganese	50 mg/L
							Nickel	50 mg/L
							Phosphorus	1000 mg/L
							Potassium	5000 mg/L
							Selenium	200 mg/L
							Silver	5 mg/L
							Sodium	5000 mg/L
							Sr	100 mg/L
							Th	100 mg/L
							Thallium	200 mg/L
							U	200 mg/L
							Vanadium	50 mg/L
							Zinc	50 mg/L
ms 77 RL_01800	11/14/18	11/13/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	ms 77 cal std_01907	0.5 mL	Arsenic	1 ppb
							Beryllium	1 ppb
							Cadmium	1 ppb
							Chromium	1 ppb
							Cobalt	1 ppb
							Lead	1 ppb
							Nickel	1 ppb
							Selenium	1 ppb
							Silver	1 ppb
							Thallium	1 ppb
							Zinc	1 ppb
							Antimony	1 ppb
.ms 77 cal std_01907	11/14/18	11/13/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Arsenic	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Lead	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Silver	0.1 mg/L
							Thallium	0.1 mg/L
							Zinc	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Antimony	0.1 mg/L
..MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Arsenic	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Lead	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Silver	20 mg/L
							Thallium	20 mg/L
							Zinc	20 mg/L
..MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Antimony	20 mg/L
ms 77 RL_01801	11/15/18	11/14/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	ms 77 cal std_01908	0.5 mL	Arsenic	1 ppb
							Barium	1 ppb
							Beryllium	1 ppb
							Cadmium	1 ppb
							Chromium	1 ppb
							Cobalt	1 ppb
							Copper	1 ppb
							Lead	1 ppb
							Manganese	1 ppb
							Nickel	1 ppb
							Selenium	1 ppb
							Thallium	1 ppb
							Zinc	1 ppb
							Antimony	1 ppb
.ms 77 cal std_01908	11/15/18	11/14/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Thallium	0.1 mg/L
							Zinc	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Antimony	0.1 mg/L
..MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Thallium	20 mg/L
							Zinc	20 mg/L
..MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Antimony	20 mg/L
ms 77 alt RL_01075	11/15/18	11/14/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	1 ppm Ba_00010	0.05 mL	Barium	1 ppb
					1 ppm Cu_00007	0.1 mL	Copper	2 ppb
					1 ppm Mn_00007	0.05 mL	Manganese	1 ppb
					1 ppm V_00017	0.25 mL	Vanadium	5 ppb
.1 ppm Ba_00010	04/17/19	10/17/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	1000 Ba_00013	0.05 mL	Barium	1 mg/L
..1000 Ba_00013	08/24/19	Inorganic Ventures, Lot m2-BA658823			(Purchased Reagent)		Barium	1000 mg/L
.1 ppm Cu_00007	04/04/19	10/04/18	2%HNO3/0.5% HCl, Lot 185595/187518	50 mL	1000 Cu_00013	0.05 mL	Copper	1 mg/L
..1000 Cu_00013	08/24/19	Inorganic Ventures, Lot M2-CU656225			(Purchased Reagent)		Copper	1000 mg/L
.1 ppm Mn_00007	12/11/18	03/20/18	1% HNO3, Lot 183840	50 mL	1000 Mn_00015	0.05 mL	Manganese	1 mg/L
..1000 Mn_00015	12/11/18	Inorganic Ventures, Lot K2-MN651112			(Purchased Reagent)		Manganese	1000 mg/L
.1 ppm V_00017	04/11/19	10/12/18	2%HNO3/0.5% HCl, Lot 185595/187518	50 mL	1000 V_00015	0.05 mL	Vanadium	1 mg/L
..1000 V_00015	08/31/19	Inorganoc Ventures, Lot K2-V651103			(Purchased Reagent)		Vanadium	1000 mg/L
ms 77 alt RL_01076	11/15/18	11/14/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	1 ppm V_00017	0.25 mL	Vanadium	5 ppb
.1 ppm V_00017	04/11/19	10/12/18	2%HNO3/0.5% HCl, Lot 185595/187518	50 mL	1000 V_00015	0.05 mL	Vanadium	1 mg/L
..1000 V_00015	08/31/19	Inorganoc Ventures, Lot K2-V651103			(Purchased Reagent)		Vanadium	1000 mg/L
ms 77 cal std_01907	11/14/18	11/13/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Silver	0.1 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.1 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Zinc	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Antimony	0.1 mg/L
.MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Silver	20 mg/L
							Thallium	20 mg/L
							Vanadium	20 mg/L
							Zinc	20 mg/L
.MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Antimony	20 mg/L
ms 77 cal std_01908	11/15/18	11/14/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Silver	0.1 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.1 mg/L
							Zinc	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Antimony	0.1 mg/L
.MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Silver	20 mg/L
							Thallium	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Vanadium	20 mg/L
							Zinc	20 mg/L
.MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Antimony	20 mg/L
ms 77 ccv_01915	11/14/18	11/13/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	ms 77 cal std_01907	50 mL	Arsenic	0.05 mg/L
							Barium	0.05 mg/L
							Beryllium	0.05 mg/L
							Cadmium	0.05 mg/L
							Chromium	0.05 mg/L
							Cobalt	0.05 mg/L
							Copper	0.05 mg/L
							Lead	0.05 mg/L
							Manganese	0.05 mg/L
							Nickel	0.05 mg/L
							Selenium	0.05 mg/L
							Silver	0.05 mg/L
							Thallium	0.05 mg/L
							Vanadium	0.05 mg/L
							Zinc	0.05 mg/L
							Antimony	0.05 mg/L
.ms 77 cal std_01907	11/14/18	11/13/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Silver	0.1 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.1 mg/L
							Zinc	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Antimony	0.1 mg/L
..MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Silver	20 mg/L
							Thallium	20 mg/L
							Vanadium	20 mg/L
							Zinc	20 mg/L
..MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Antimony	20 mg/L
ms 77 ccv_01916	11/15/18	11/14/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	ms 77 cal std_01908	50 mL	Arsenic	0.05 mg/L
							Barium	0.05 mg/L
							Beryllium	0.05 mg/L
							Cadmium	0.05 mg/L
							Chromium	0.05 mg/L
							Cobalt	0.05 mg/L
							Copper	0.05 mg/L
							Lead	0.05 mg/L
							Manganese	0.05 mg/L
							Nickel	0.05 mg/L
							Selenium	0.05 mg/L
							Silver	0.05 mg/L
							Thallium	0.05 mg/L
							Vanadium	0.05 mg/L
							Zinc	0.05 mg/L
							Antimony	0.05 mg/L
.ms 77 cal std_01908	11/15/18	11/14/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Silver	0.1 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.1 mg/L
							Zinc	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Antimony	0.1 mg/L
..MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nickel	20 mg/L
							Selenium	20 mg/L
							Silver	20 mg/L
							Thallium	20 mg/L
							Vanadium	20 mg/L
							Zinc	20 mg/L
..MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Antimony	20 mg/L
ms 77 icsa_00387	11/20/18	11/13/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	MS ICSA STOCK_00030	5 mL	Mo	2 mg/L
.MS ICSA STOCK_00030	05/08/19	Inorganic Ventures, Lot m2-meb662772			(Purchased Reagent)		Mo	20 mg/L
ms 77 icsab_00386	11/20/18	11/13/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS CALSTD-1_00125	0.5 mL	Arsenic	0.1 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.1 mg/L
							Cobalt	0.1 mg/L
							Copper	0.1 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.1 mg/L
							Selenium	0.1 mg/L
							Silver	0.1 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.1 mg/L
							Zinc	0.1 mg/L
					MS CALSTD-2_00094	0.5 mL	Antimony	0.1 mg/L
							Mo	2.1 mg/L
					MS ICSA STOCK_00030	10 mL	Mo	2.1 mg/L
.MS CALSTD-1_00125	04/10/19	Inorganic Ventures, Lot m2-meb660182			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Silver	20 mg/L
							Thallium	20 mg/L
							Vanadium	20 mg/L
							Zinc	20 mg/L
.MS CALSTD-2_00094	08/06/19	Inorganic Ventures, Lot m2-meb664004			(Purchased Reagent)		Antimony	20 mg/L
							Mo	20 mg/L
.MS ICSA STOCK_00030	05/08/19	Inorganic Ventures, Lot m2-meb662772			(Purchased Reagent)		Mo	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MS 77 ICV_01911	11/14/18	11/13/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	MS ICV StockA_00008	0.1 mL	Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Cobalt	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Manganese	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Thallium	40 ug/L
							Vanadium	40 ug/L
							Zinc	40 ug/L
					MS ICV StockB_00008	0.1 mL	Antimony	40 ug/L
							Silver	40 ug/L
.MS ICV StockA_00008	11/30/18		HIGH PURITY, Lot 1731407		(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Thallium	20 mg/L
							Vanadium	20 mg/L
							Zinc	20 mg/L
.MS ICV StockB_00008	11/30/18		HIGH PURITY, Lot 1731408		(Purchased Reagent)		Antimony	20 mg/L
							Silver	20 mg/L
MS 77 ICV_01912	11/15/18	11/14/18	2%HNO3/0.5% HCl, Lot 200458/198300	50 mL	MS ICV StockA_00008	0.1 mL	Arsenic	40 ug/L
							Barium	40 ug/L
							Beryllium	40 ug/L
							Cadmium	40 ug/L
							Chromium	40 ug/L
							Cobalt	40 ug/L
							Copper	40 ug/L
							Lead	40 ug/L
							Manganese	40 ug/L
							Nickel	40 ug/L
							Selenium	40 ug/L
							Thallium	40 ug/L
							Vanadium	40 ug/L
							Zinc	40 ug/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS ICV StockB_00008	0.1 mL	Antimony	40 ug/L
							Silver	40 ug/L
.MS ICV StockA_00008	11/30/18		HIGH PURITY, Lot 1731407		(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L
							Thallium	20 mg/L
							Vanadium	20 mg/L
							Zinc	20 mg/L
.MS ICV StockB_00008	11/30/18		HIGH PURITY, Lot 1731408		(Purchased Reagent)		Antimony	20 mg/L
							Silver	20 mg/L
MS 77 LLCCV_01717	11/14/18	11/13/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS LLCCV 2A_00006	1 mL	Antimony	0.002 mg/L
					MS LLCCV1_00020	1 mL	Arsenic	0.005 mg/L
							Barium	0.001 mg/L
							Beryllium	0.001 mg/L
							Cadmium	0.001 mg/L
							Chromium	0.002 mg/L
							Cobalt	0.001 mg/L
							Copper	0.002 mg/L
							Lead	0.001 mg/L
							Manganese	0.001 mg/L
							Nickel	0.002 mg/L
							Selenium	0.005 mg/L
							Silver	0.005 mg/L
							Thallium	0.001 mg/L
							Vanadium	0.005 mg/L
							Zinc	0.01 mg/L
.MS LLCCV 2A_00006	08/03/19		Inorganic Ventures, Lot m2-meb664006		(Purchased Reagent)		Antimony	0.2 mg/L
.MS LLCCV1_00020	08/03/19		Inorganic Ventures, Lot m2-meb664005		(Purchased Reagent)		Arsenic	0.5 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.2 mg/L
							Cobalt	0.1 mg/L
							Copper	0.2 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.2 mg/L
							Selenium	0.5 mg/L
							Silver	0.5 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Thallium	0.1 mg/L
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
MS 77 LLCCV_01718	11/15/18	11/14/18	2%HNO3/0.5% HCl, Lot 200458/198300	100 mL	MS LLCCV 2A_00006	1 mL	Antimony	0.002 mg/L
					MS LLCCV1_00020	1 mL	Arsenic	0.005 mg/L
							Barium	0.001 mg/L
							Beryllium	0.001 mg/L
							Cadmium	0.001 mg/L
							Chromium	0.002 mg/L
							Cobalt	0.001 mg/L
							Copper	0.002 mg/L
							Lead	0.001 mg/L
							Manganese	0.001 mg/L
							Nickel	0.002 mg/L
							Selenium	0.005 mg/L
							Silver	0.005 mg/L
							Thallium	0.001 mg/L
							Vanadium	0.005 mg/L
							Zinc	0.01 mg/L
.MS LLCCV 2A_00006	08/03/19	Inorganic Ventures, Lot m2-meb664006			(Purchased Reagent)		Antimony	0.2 mg/L
.MS LLCCV1_00020	08/03/19	Inorganic Ventures, Lot m2-meb664005			(Purchased Reagent)		Arsenic	0.5 mg/L
							Barium	0.1 mg/L
							Beryllium	0.1 mg/L
							Cadmium	0.1 mg/L
							Chromium	0.2 mg/L
							Cobalt	0.1 mg/L
							Copper	0.2 mg/L
							Lead	0.1 mg/L
							Manganese	0.1 mg/L
							Nickel	0.2 mg/L
							Selenium	0.5 mg/L
							Silver	0.5 mg/L
							Thallium	0.1 mg/L
							Vanadium	0.5 mg/L
							Zinc	1 mg/L
MS CALSTD-1_00133	10/29/19	Inorganic Ventures, Lot n2-meb673086			(Purchased Reagent)		Arsenic	20 mg/L
							Barium	20 mg/L
							Beryllium	20 mg/L
							Cadmium	20 mg/L
							Chromium	20 mg/L
							Cobalt	20 mg/L
							Copper	20 mg/L
							Lead	20 mg/L
							Manganese	20 mg/L
							Nickel	20 mg/L
							Selenium	20 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Silver	20 mg/L
							Th	20 mg/L
							Thallium	20 mg/L
							U	20 mg/L
							Vanadium	20 mg/L
							Zinc	20 mg/L
MS spike 2_00072	03/13/19	09/13/18	1% HNO3, Lot 192582	250 mL	1000 B_00017	5 mL	B	20 mg/L
					1000 Li_00037	10 mL	Li	40 mg/L
					1000 Mo_00013	5 mL	Mo	20 mg/L
					1000 Sb_00018	5 mL	Antimony	20 mg/L
					1000 Sn_00015	5 mL	Sn	20 mg/L
					1000 Sr_00011	5 mL	Sr	20 mg/L
					1000 W IV_00014	5 mL	W	20 mg/L
					1000 Zr_00017	5 mL	Zr	20 mg/L
					10000 Al_00018	5 mL	Aluminum	200 mg/L
					10000 Fe_00021	5 mL	Iron	200 mg/L
.1000 B_00017	07/25/19	Inorganic Ventures, Lot M2-B663296			(Purchased Reagent)		B	1000 mg/L
.1000 Li_00037	09/12/19	Inorganic Ventures, Lot N2-L1665824			(Purchased Reagent)		Li	1000 mg/L
.1000 Mo_00013	08/31/19	Inorganic Ventures, Lot M2-MO657085			(Purchased Reagent)		Mo	1000 mg/L
.1000 Sb_00018	05/04/19	Inorganic Ventures, Lot M2-SB661224			(Purchased Reagent)		Antimony	1000 mg/L
.1000 Sn_00015	08/24/19	Inorganic Ventures, Lot M2-SN659324			(Purchased Reagent)		Sn	1000 mg/L
.1000 Sr_00011	08/24/19	Inorganic Ventures, Lot M2-SR658331			(Purchased Reagent)		Sr	1000 mg/L
.1000 W IV_00014	07/06/19	Inorganic Ventures, Lot n2-w664865			(Purchased Reagent)		W	1000 mg/L
.1000 Zr_00017	03/13/19	Inorganic Ventures, Lot M2-ZR655896			(Purchased Reagent)		Zr	1000 mg/L
.10000 Al_00018	06/26/19	Inorganic Ventures, Lot K2-AL			(Purchased Reagent)		Aluminum	10000 mg/L
.10000 Fe_00021	08/08/19	Inorganic Ventures, Lot M2-FE659835			(Purchased Reagent)		Iron	10000 mg/L
MS-AP9ACCV080_00142	12/31/18	08/02/18	Methylene Chloride, Lot 187286	0.5 mL	MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-BZHDA-CCV_00049	11/30/18	06/07/18	Methylene Chloride, Lot 187286	0.5 mL	MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-DFTPP_00047							Aramite, Total	
							Diallate	
							Isosafrole	
							Methyl Phenols,Total	

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phthalic acid	
							Tentatively Identified Compound	
							Total Cresols	
							TPAH	
					MS-47548-U_00015	1 mL	4,4'-DDD	0.05 ug/mL
							4,4'-DDE	0.05 ug/mL
							4,4'-DDT	50 ug/mL
							Benzidine_T	50 ug/mL
							DFTPP	50 ug/mL
							Pentachlorophenol_T	50 ug/mL
.MS-47548-U_00015	03/31/19		Supelco, Lot XA19099V		(Purchased Reagent)		4,4'-DDD	1 ug/mL
							4,4'-DDE	1 ug/mL
							4,4'-DDT	1000 ug/mL
							Benzidine_T	1000 ug/mL
							DFTPP	1000 ug/mL
							Pentachlorophenol_T	1000 ug/mL
MS-FAMSSV_100_00020	04/04/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	2000 ug/mL
MS-HSLA004_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	10 uL	2,4,6-Tribromophenol (Surr)	4 ug/mL
							2-Fluorobiphenyl	4 ug/mL
							2-Fluorophenol (Surr)	4 ug/mL
							Nitrobenzene-d5	4 ug/mL
							Phenol-d5 (Surr)	4 ug/mL
							Terphenyl-d14	4 ug/mL
							Famphur	4 ug/mL
							Alachlor	4 ug/mL
							3,3'-Dichlorobenzidine	4 ug/mL
							Benzoic acid	8 ug/mL
							Atrazine	4 ug/mL
							Caprolactam	4 ug/mL
							1,1'-Biphenyl	4 ug/mL
							1,2,4,5-Tetrachlorobenzene	4 ug/mL
							1,2,4-Trichlorobenzene	4 ug/mL
							1,2-Dichlorobenzene	4 ug/mL
							1,2-Diphenylhydrazine	4.0439 ug/mL
							1,3-Dichlorobenzene	4 ug/mL
							1,3-Dinitrobenzene	4 ug/mL
							1,4-Dichlorobenzene	4 ug/mL
							1,4-Dioxane	4 ug/mL
							1-Methylnaphthalene	4 ug/mL
							2,3,4,6-Tetrachlorophenol	4 ug/mL
							2,4,5-Trichlorophenol	4 ug/mL
							2,4,6-Trichlorophenol	4 ug/mL
							2,4-Dichlorophenol	4 ug/mL
							2,4-Dimethylphenol	4 ug/mL
							2,4-Dinitrophenol	8 ug/mL
							2,4-Dinitrotoluene	4 ug/mL
							2,6-Dichlorophenol	4 ug/mL
							2,6-Dinitrotoluene	4 ug/mL
							2-Chloronaphthalene	4 ug/mL
							2-Chlorophenol	4 ug/mL
							2-Methylnaphthalene	4 ug/mL
							2-Methylphenol	4 ug/mL
							2-Nitroaniline	4 ug/mL
							2-Nitrophenol	4 ug/mL
							3 & 4 Methylphenol	4 ug/mL
							3-Nitroaniline	4 ug/mL
							4,6-Dinitro-2-methylphenol	8 ug/mL
							4-Bromophenyl phenyl ether	4 ug/mL
							4-Chloro-3-methylphenol	4 ug/mL
							4-Chloroaniline	4 ug/mL
							4-Chlorophenyl phenyl ether	4 ug/mL
							4-Nitroaniline	4 ug/mL
							4-Nitrophenol	8 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene	4 ug/mL
							Acenaphthylene	4 ug/mL
							Acetophenone	4 ug/mL
							Aniline	4 ug/mL
							Anthracene	4 ug/mL
							Azobenzene	4 ug/mL
							Benzo[a]anthracene	4 ug/mL
							Benzo[a]pyrene	4 ug/mL
							Benzo[b]fluoranthene	4 ug/mL
							Benzo[g,h,i]perylene	4 ug/mL
							Benzo[k]fluoranthene	4 ug/mL
							Benzyl alcohol	4 ug/mL
							bis (2-chloroisopropyl) ether	4 ug/mL
							Bis(2-chloroethoxy)methane	4 ug/mL
							Bis(2-chloroethyl)ether	4 ug/mL
							Bis(2-ethylhexyl) phthalate	4 ug/mL
							Butyl benzyl phthalate	4 ug/mL
							Carbazole	4 ug/mL
							Chrysene	4 ug/mL
							Di-n-butyl phthalate	4 ug/mL
							Di-n-octyl phthalate	4 ug/mL
							Dibenz(a,h)anthracene	4 ug/mL
							Dibenzofuran	4 ug/mL
							Diethyl phthalate	4 ug/mL
							Dimethyl phthalate	4 ug/mL
							Diphenylamine	3.4 ug/mL
							Fluoranthene	4 ug/mL
							Fluorene	4 ug/mL
							Hexachlorobenzene	4 ug/mL
							Hexachlorobutadiene	4 ug/mL
							Hexachlorocyclopentadiene	4 ug/mL
							Hexachloroethane	4 ug/mL
							Indeno[1,2,3-cd]pyrene	4 ug/mL
							Isophorone	4 ug/mL
							N-Nitrosodi-n-propylamine	4 ug/mL
							N-Nitrosodimethylamine	4 ug/mL
							N-Nitrosodiphenylamine	4 ug/mL
							Naphthalene	4 ug/mL
							Nitrobenzene	4 ug/mL
							Pentachlorophenol	8 ug/mL
							Phenanthrene	4 ug/mL
							Phenol	4 ug/mL
							Pyrene	4 ug/mL
							Pyridine	8 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA010_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	25 uL	2,4,6-Tribromophenol (Surr)	10 ug/mL
							2-Fluorobiphenyl	10 ug/mL
							2-Fluorophenol (Surr)	10 ug/mL
							Nitrobenzene-d5	10 ug/mL
							Phenol-d5 (Surr)	10 ug/mL
							Terphenyl-d14	10 ug/mL
							Famphur	10 ug/mL
							Alachlor	10 ug/mL
							3,3'-Dichlorobenzidine	10 ug/mL
							Benzoic acid	20 ug/mL
							Atrazine	10 ug/mL
							Caprolactam	10 ug/mL
							1,1'-Biphenyl	10 ug/mL
							1,2,4,5-Tetrachlorobenzene	10 ug/mL
							1,2,4-Trichlorobenzene	10 ug/mL
							1,2-Dichlorobenzene	10 ug/mL
							1,2-Diphenylhydrazine	10.1097 ug/mL
							1,3-Dichlorobenzene	10 ug/mL
							1,3-Dinitrobenzene	10 ug/mL
							1,4-Dichlorobenzene	10 ug/mL
							1,4-Dioxane	10 ug/mL
							1-Methylnaphthalene	10 ug/mL
							2,3,4,6-Tetrachlorophenol	10 ug/mL
							2,4,5-Trichlorophenol	10 ug/mL
							2,4,6-Trichlorophenol	10 ug/mL
							2,4-Dichlorophenol	10 ug/mL
							2,4-Dimethylphenol	10 ug/mL
							2,4-Dinitrophenol	20 ug/mL
							2,4-Dinitrotoluene	10 ug/mL
							2,6-Dichlorophenol	10 ug/mL
							2,6-Dinitrotoluene	10 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chloronaphthalene	10 ug/mL
							2-Chlorophenol	10 ug/mL
							2-Methylnaphthalene	10 ug/mL
							2-Methylphenol	10 ug/mL
							2-Nitroaniline	10 ug/mL
							2-Nitrophenol	10 ug/mL
							3 & 4 Methylphenol	10 ug/mL
							3-Nitroaniline	10 ug/mL
							4,6-Dinitro-2-methylphenol	20 ug/mL
							4-Bromophenyl phenyl ether	10 ug/mL
							4-Chloro-3-methylphenol	10 ug/mL
							4-Chloroaniline	10 ug/mL
							4-Chlorophenyl phenyl ether	10 ug/mL
							4-Nitroaniline	10 ug/mL
							4-Nitrophenol	20 ug/mL
							Acenaphthene	10 ug/mL
							Acenaphthylene	10 ug/mL
							Acetophenone	10 ug/mL
							Aniline	10 ug/mL
							Anthracene	10 ug/mL
							Azobenzene	10 ug/mL
							Benzo[a]anthracene	10 ug/mL
							Benzo[a]pyrene	10 ug/mL
							Benzo[b]fluoranthene	10 ug/mL
							Benzo[g,h,i]perylene	10 ug/mL
							Benzo[k]fluoranthene	10 ug/mL
							Benzyl alcohol	10 ug/mL
							bis (2-chloroisopropyl) ether	10 ug/mL
							Bis(2-chloroethoxy)methane	10 ug/mL
							Bis(2-chloroethyl)ether	10 ug/mL
							Bis(2-ethylhexyl) phthalate	10 ug/mL
							Butyl benzyl phthalate	10 ug/mL
							Carbazole	10 ug/mL
							Chrysene	10 ug/mL
							Di-n-butyl phthalate	10 ug/mL
							Di-n-octyl phthalate	10 ug/mL
							Dibenz(a,h)anthracene	10 ug/mL
							Dibenzofuran	10 ug/mL
							Diethyl phthalate	10 ug/mL
							Dimethyl phthalate	10 ug/mL
							Diphenylamine	8.5 ug/mL
							Fluoranthene	10 ug/mL
							Fluorene	10 ug/mL
							Hexachlorobenzene	10 ug/mL
							Hexachlorobutadiene	10 ug/mL
							Hexachlorocyclopentadiene	10 ug/mL
							Hexachloroethane	10 ug/mL
							Indeno[1,2,3-cd]pyrene	10 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isophorone	10 ug/mL
							N-Nitrosodi-n-propylamine	10 ug/mL
							N-Nitrosodimethylamine	10 ug/mL
							N-Nitrosodiphenylamine	10 ug/mL
							Naphthalene	10 ug/mL
							Nitrobenzene	10 ug/mL
							Pentachlorophenol	20 ug/mL
							Phenanthrene	10 ug/mL
							Phenol	10 ug/mL
							Pyrene	10 ug/mL
							Pyridine	20 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA020_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	50 uL	2,4,6-Tribromophenol (Surr)	20 ug/mL
							2-Fluorobiphenyl	20 ug/mL
							2-Fluorophenol (Surr)	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Phenol-d5 (Surr)	20 ug/mL
							Terphenyl-d14	20 ug/mL
							Famphur	20 ug/mL
							Alachlor	20 ug/mL
							3,3'-Dichlorobenzidine	20 ug/mL
							Benzoic acid	40 ug/mL
							Atrazine	20 ug/mL
							Caprolactam	20 ug/mL
							1,1'-Biphenyl	20 ug/mL
							1,2,4,5-Tetrachlorobenzene	20 ug/mL
							1,2,4-Trichlorobenzene	20 ug/mL
							1,2-Dichlorobenzene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Diphenylhydrazine	20.2195 ug/mL
							1,3-Dichlorobenzene	20 ug/mL
							1,3-Dinitrobenzene	20 ug/mL
							1,4-Dichlorobenzene	20 ug/mL
							1,4-Dioxane	20 ug/mL
							1-Methylnaphthalene	20 ug/mL
							2,3,4,6-Tetrachlorophenol	20 ug/mL
							2,4,5-Trichlorophenol	20 ug/mL
							2,4,6-Trichlorophenol	20 ug/mL
							2,4-Dichlorophenol	20 ug/mL
							2,4-Dimethylphenol	20 ug/mL
							2,4-Dinitrophenol	40 ug/mL
							2,4-Dinitrotoluene	20 ug/mL
							2,6-Dichlorophenol	20 ug/mL
							2,6-Dinitrotoluene	20 ug/mL
							2-Chloronaphthalene	20 ug/mL
							2-Chlorophenol	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							2-Methylphenol	20 ug/mL
							2-Nitroaniline	20 ug/mL
							2-Nitrophenol	20 ug/mL
							3 & 4 Methylphenol	20 ug/mL
							3-Nitroaniline	20 ug/mL
							4,6-Dinitro-2-methylphenol	40 ug/mL
							4-Bromophenyl phenyl ether	20 ug/mL
							4-Chloro-3-methylphenol	20 ug/mL
							4-Chloroaniline	20 ug/mL
							4-Chlorophenyl phenyl ether	20 ug/mL
							4-Nitroaniline	20 ug/mL
							4-Nitrophenol	40 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Acetophenone	20 ug/mL
							Aniline	20 ug/mL
							Anthracene	20 ug/mL
							Azobenzene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Benzyl alcohol	20 ug/mL
							bis (2-chloroisopropyl) ether	20 ug/mL
							Bis(2-chloroethoxy)methane	20 ug/mL
							Bis(2-chloroethyl)ether	20 ug/mL
							Bis(2-ethylhexyl) phthalate	20 ug/mL
							Butyl benzyl phthalate	20 ug/mL
							Carbazole	20 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	20 ug/mL
							Di-n-butyl phthalate	20 ug/mL
							Di-n-octyl phthalate	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Dibenzofuran	20 ug/mL
							Diethyl phthalate	20 ug/mL
							Dimethyl phthalate	20 ug/mL
							Diphenylamine	17 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Hexachlorobenzene	20 ug/mL
							Hexachlorobutadiene	20 ug/mL
							Hexachlorocyclopentadiene	20 ug/mL
							Hexachloroethane	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Isophorone	20 ug/mL
							N-Nitrosodi-n-propylamine	20 ug/mL
							N-Nitrosodimethylamine	20 ug/mL
							N-Nitrosodiphenylamine	20 ug/mL
							Naphthalene	20 ug/mL
							Nitrobenzene	20 ug/mL
							Pentachlorophenol	40 ug/mL
							Phenanthrene	20 ug/mL
							Phenol	20 ug/mL
							Pyrene	20 ug/mL
							Pyridine	40 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA050_00040	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	125 uL	2,4,6-Tribromophenol (Surr)	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorobiphenyl	50 ug/mL
							2-Fluorophenol (Surr)	50 ug/mL
							Nitrobenzene-d5	50 ug/mL
							Phenol-d5 (Surr)	50 ug/mL
							Terphenyl-d14	50 ug/mL
							Famphur	50 ug/mL
							Alachlor	50 ug/mL
							3,3'-Dichlorobenzidine	50 ug/mL
							Benzoic acid	100 ug/mL
							Atrazine	50 ug/mL
							Caprolactam	50 ug/mL
							1,1'-Biphenyl	50 ug/mL
							1,2,4,5-Tetrachlorobenzene	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Diphenylhydrazine	50.5487 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	50 ug/mL
							1-Methylnaphthalene	50 ug/mL
							2,3,4,6-Tetrachlorophenol	50 ug/mL
							2,4,5-Trichlorophenol	50 ug/mL
							2,4,6-Trichlorophenol	50 ug/mL
							2,4-Dichlorophenol	50 ug/mL
							2,4-Dimethylphenol	50 ug/mL
							2,4-Dinitrophenol	100 ug/mL
							2,4-Dinitrotoluene	50 ug/mL
							2,6-Dichlorophenol	50 ug/mL
							2,6-Dinitrotoluene	50 ug/mL
							2-Chloronaphthalene	50 ug/mL
							2-Chlorophenol	50 ug/mL
							2-Methylnaphthalene	50 ug/mL
							2-Methylphenol	50 ug/mL
							2-Nitroaniline	50 ug/mL
							2-Nitrophenol	50 ug/mL
							3 & 4 Methylphenol	50 ug/mL
							3-Nitroaniline	50 ug/mL
							4,6-Dinitro-2-methylphenol	100 ug/mL
							4-Bromophenyl phenyl ether	50 ug/mL
							4-Chloro-3-methylphenol	50 ug/mL
							4-Chloroaniline	50 ug/mL
							4-Chlorophenyl phenyl ether	50 ug/mL
							4-Nitroaniline	50 ug/mL
							4-Nitrophenol	100 ug/mL
							Acenaphthene	50 ug/mL
							Acenaphthylene	50 ug/mL
							Acetophenone	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Aniline	50 ug/mL
							Anthracene	50 ug/mL
							Azobenzene	50 ug/mL
							Benzo[a]anthracene	50 ug/mL
							Benzo[a]pyrene	50 ug/mL
							Benzo[b]fluoranthene	50 ug/mL
							Benzo[g,h,i]perylene	50 ug/mL
							Benzo[k]fluoranthene	50 ug/mL
							Benzyl alcohol	50 ug/mL
							bis (2-chloroisopropyl) ether	50 ug/mL
							Bis(2-chloroethoxy)methane	50 ug/mL
							Bis(2-chloroethyl)ether	50 ug/mL
							Bis(2-ethylhexyl) phthalate	50 ug/mL
							Butyl benzyl phthalate	50 ug/mL
							Carbazole	50 ug/mL
							Chrysene	50 ug/mL
							Di-n-butyl phthalate	50 ug/mL
							Di-n-octyl phthalate	50 ug/mL
							Dibenz(a,h)anthracene	50 ug/mL
							Dibenzofuran	50 ug/mL
							Diethyl phthalate	50 ug/mL
							Dimethyl phthalate	50 ug/mL
							Diphenylamine	42.5 ug/mL
							Fluoranthene	50 ug/mL
							Fluorene	50 ug/mL
							Hexachlorobenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexachlorocyclopentadiene	50 ug/mL
							Hexachloroethane	50 ug/mL
							Indeno[1,2,3-cd]pyrene	50 ug/mL
							Isophorone	50 ug/mL
							N-Nitrosodi-n-propylamine	50 ug/mL
							N-Nitrosodimethylamine	50 ug/mL
							N-Nitrosodiphenylamine	50 ug/mL
							Naphthalene	50 ug/mL
							Nitrobenzene	50 ug/mL
							Pentachlorophenol	100 ug/mL
							Phenanthrene	50 ug/mL
							Phenol	50 ug/mL
							Pyrene	50 ug/mL
							Pyridine	100 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA080_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	200 uL	2,4,6-Tribromophenol (Surr)	80 ug/mL
							2-Fluorobiphenyl	80 ug/mL
							2-Fluorophenol (Surr)	80 ug/mL
							Nitrobenzene-d5	80 ug/mL
							Phenol-d5 (Surr)	80 ug/mL
							Terphenyl-d14	80 ug/mL
							Famphur	80 ug/mL
							Alachlor	80 ug/mL
							3,3'-Dichlorobenzidine	80 ug/mL
							Benzoic acid	160 ug/mL
							Atrazine	80 ug/mL
							Caprolactam	80 ug/mL
							1,1'-Biphenyl	80 ug/mL
							1,2,4,5-Tetrachlorobenzene	80 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,2-Diphenylhydrazine	80.878 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,3-Dinitrobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							1-Methylnaphthalene	80 ug/mL
							2,3,4,6-Tetrachlorophenol	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dichlorophenol	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methylnaphthalene	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Acenaphthene	80 ug/mL
							Acenaphthylene	80 ug/mL
							Acetophenone	80 ug/mL
							Aniline	80 ug/mL
							Anthracene	80 ug/mL
							Azobenzene	80 ug/mL
							Benzo[a]anthracene	80 ug/mL
							Benzo[a]pyrene	80 ug/mL
							Benzo[b]fluoranthene	80 ug/mL
							Benzo[g,h,i]perylene	80 ug/mL
							Benzo[k]fluoranthene	80 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Chrysene	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenz(a,h)anthracene	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Diphenylamine	68 ug/mL
							Fluoranthene	80 ug/mL
							Fluorene	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Indeno[1,2,3-cd]pyrene	80 ug/mL
							Isophorone	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodimethylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							Naphthalene	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenanthrene	80 ug/mL
							Phenol	80 ug/mL
							Pyrene	80 ug/mL
							Pyridine	160 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA120_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	300 uL	2,4,6-Tribromophenol (Surr)	120 ug/mL
							2-Fluorobiphenyl	120 ug/mL
							2-Fluorophenol (Surr)	120 ug/mL
							Nitrobenzene-d5	120 ug/mL
							Phenol-d5 (Surr)	120 ug/mL
							Terphenyl-d14	120 ug/mL
							Famphur	120 ug/mL
							Alachlor	120 ug/mL
							3,3'-Dichlorobenzidine	120 ug/mL
							Benzoic acid	240 ug/mL
							Atrazine	120 ug/mL
							Caprolactam	120 ug/mL
							1,1'-Biphenyl	120 ug/mL
							1,2,4,5-Tetrachlorobenzene	120 ug/mL
							1,2,4-Trichlorobenzene	120 ug/mL
							1,2-Dichlorobenzene	120 ug/mL
							1,2-Diphenylhydrazine	121.317 ug/mL
							1,3-Dichlorobenzene	120 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dinitrobenzene	120 ug/mL
							1,4-Dichlorobenzene	120 ug/mL
							1,4-Dioxane	120 ug/mL
							1-Methylnaphthalene	120 ug/mL
							2,3,4,6-Tetrachlorophenol	120 ug/mL
							2,4,5-Trichlorophenol	120 ug/mL
							2,4,6-Trichlorophenol	120 ug/mL
							2,4-Dichlorophenol	120 ug/mL
							2,4-Dimethylphenol	120 ug/mL
							2,4-Dinitrophenol	240 ug/mL
							2,4-Dinitrotoluene	120 ug/mL
							2,6-Dichlorophenol	120 ug/mL
							2,6-Dinitrotoluene	120 ug/mL
							2-Chloronaphthalene	120 ug/mL
							2-Chlorophenol	120 ug/mL
							2-Methylnaphthalene	120 ug/mL
							2-Methylphenol	120 ug/mL
							2-Nitroaniline	120 ug/mL
							2-Nitrophenol	120 ug/mL
							3 & 4 Methylphenol	120 ug/mL
							3-Nitroaniline	120 ug/mL
							4,6-Dinitro-2-methylphenol	240 ug/mL
							4-Bromophenyl phenyl ether	120 ug/mL
							4-Chloro-3-methylphenol	120 ug/mL
							4-Chloroaniline	120 ug/mL
							4-Chlorophenyl phenyl ether	120 ug/mL
							4-Nitroaniline	120 ug/mL
							4-Nitrophenol	240 ug/mL
							Acenaphthene	120 ug/mL
							Acenaphthylene	120 ug/mL
							Acetophenone	120 ug/mL
							Aniline	120 ug/mL
							Anthracene	120 ug/mL
							Azobenzene	120 ug/mL
							Benzo[a]anthracene	120 ug/mL
							Benzo[a]pyrene	120 ug/mL
							Benzo[b]fluoranthene	120 ug/mL
							Benzo[g,h,i]perylene	120 ug/mL
							Benzo[k]fluoranthene	120 ug/mL
							Benzyl alcohol	120 ug/mL
							bis (2-chloroisopropyl) ether	120 ug/mL
							Bis(2-chloroethoxy)methane	120 ug/mL
							Bis(2-chloroethyl)ether	120 ug/mL
							Bis(2-ethylhexyl) phthalate	120 ug/mL
							Butyl benzyl phthalate	120 ug/mL
							Carbazole	120 ug/mL
							Chrysene	120 ug/mL
							Di-n-butyl phthalate	120 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-octyl phthalate	120 ug/mL
							Dibenz(a,h)anthracene	120 ug/mL
							Dibenzofuran	120 ug/mL
							Diethyl phthalate	120 ug/mL
							Dimethyl phthalate	120 ug/mL
							Diphenylamine	102 ug/mL
							Fluoranthene	120 ug/mL
							Fluorene	120 ug/mL
							Hexachlorobenzene	120 ug/mL
							Hexachlorobutadiene	120 ug/mL
							Hexachlorocyclopentadiene	120 ug/mL
							Hexachloroethane	120 ug/mL
							Indeno[1,2,3-cd]pyrene	120 ug/mL
							Isophorone	120 ug/mL
							N-Nitrosodi-n-propylamine	120 ug/mL
							N-Nitrosodimethylamine	120 ug/mL
							N-Nitrosodiphenylamine	120 ug/mL
							Naphthalene	120 ug/mL
							Nitrobenzene	120 ug/mL
							Pentachlorophenol	240 ug/mL
							Phenanthrene	120 ug/mL
							Phenol	120 ug/mL
							Pyrene	120 ug/mL
							Pyridine	240 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA160_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	400 uL	2,4,6-Tribromophenol (Surr)	160 ug/mL
							2-Fluorobiphenyl	160 ug/mL
							2-Fluorophenol (Surr)	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene-d5	160 ug/mL
							Phenol-d5 (Surr)	160 ug/mL
							Terphenyl-d14	160 ug/mL
							Famphur	160 ug/mL
							Alachlor	160 ug/mL
							3,3'-Dichlorobenzidine	160 ug/mL
							Benzoic acid	320 ug/mL
							Atrazine	160 ug/mL
							Caprolactam	160 ug/mL
							1,1'-Biphenyl	160 ug/mL
							1,2,4,5-Tetrachlorobenzene	160 ug/mL
							1,2,4-Trichlorobenzene	160 ug/mL
							1,2-Dichlorobenzene	160 ug/mL
							1,2-Diphenylhydrazine	161.756 ug/mL
							1,3-Dichlorobenzene	160 ug/mL
							1,3-Dinitrobenzene	160 ug/mL
							1,4-Dichlorobenzene	160 ug/mL
							1,4-Dioxane	160 ug/mL
							1-Methylnaphthalene	160 ug/mL
							2,3,4,6-Tetrachlorophenol	160 ug/mL
							2,4,5-Trichlorophenol	160 ug/mL
							2,4,6-Trichlorophenol	160 ug/mL
							2,4-Dichlorophenol	160 ug/mL
							2,4-Dimethylphenol	160 ug/mL
							2,4-Dinitrophenol	320 ug/mL
							2,4-Dinitrotoluene	160 ug/mL
							2,6-Dichlorophenol	160 ug/mL
							2,6-Dinitrotoluene	160 ug/mL
							2-Chloronaphthalene	160 ug/mL
							2-Chlorophenol	160 ug/mL
							2-Methylnaphthalene	160 ug/mL
							2-Methylphenol	160 ug/mL
							2-Nitroaniline	160 ug/mL
							2-Nitrophenol	160 ug/mL
							3 & 4 Methylphenol	160 ug/mL
							3-Nitroaniline	160 ug/mL
							4,6-Dinitro-2-methylphenol	320 ug/mL
							4-Bromophenyl phenyl ether	160 ug/mL
							4-Chloro-3-methylphenol	160 ug/mL
							4-Chloroaniline	160 ug/mL
							4-Chlorophenyl phenyl ether	160 ug/mL
							4-Nitroaniline	160 ug/mL
							4-Nitrophenol	320 ug/mL
							Acenaphthene	160 ug/mL
							Acenaphthylene	160 ug/mL
							Acetophenone	160 ug/mL
							Aniline	160 ug/mL
							Anthracene	160 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Azobenzene	160 ug/mL
							Benzo[a]anthracene	160 ug/mL
							Benzo[a]pyrene	160 ug/mL
							Benzo[b]fluoranthene	160 ug/mL
							Benzo[g,h,i]perylene	160 ug/mL
							Benzo[k]fluoranthene	160 ug/mL
							Benzyl alcohol	160 ug/mL
							bis (2-chloroisopropyl) ether	160 ug/mL
							Bis(2-chloroethoxy)methane	160 ug/mL
							Bis(2-chloroethyl)ether	160 ug/mL
							Bis(2-ethylhexyl) phthalate	160 ug/mL
							Butyl benzyl phthalate	160 ug/mL
							Carbazole	160 ug/mL
							Chrysene	160 ug/mL
							Di-n-butyl phthalate	160 ug/mL
							Di-n-octyl phthalate	160 ug/mL
							Dibenz(a,h)anthracene	160 ug/mL
							Dibenzofuran	160 ug/mL
							Diethyl phthalate	160 ug/mL
							Dimethyl phthalate	160 ug/mL
							Diphenylamine	136 ug/mL
							Fluoranthene	160 ug/mL
							Fluorene	160 ug/mL
							Hexachlorobenzene	160 ug/mL
							Hexachlorobutadiene	160 ug/mL
							Hexachlorocyclopentadiene	160 ug/mL
							Hexachloroethane	160 ug/mL
							Indeno[1,2,3-cd]pyrene	160 ug/mL
							Isophorone	160 ug/mL
							N-Nitrosodi-n-propylamine	160 ug/mL
							N-Nitrosodimethylamine	160 ug/mL
							N-Nitrosodiphenylamine	160 ug/mL
							Naphthalene	160 ug/mL
							Nitrobenzene	160 ug/mL
							Pentachlorophenol	320 ug/mL
							Phenanthrene	160 ug/mL
							Phenol	160 ug/mL
							Pyrene	160 ug/mL
							Pyridine	320 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MS-569730 HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732 HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLA200_00039	01/30/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLA_STK_00048	500 uL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
							Famphur	200 ug/mL
							Alachlor	200 ug/mL
							3,3'-Dichlorobenzidine	200 ug/mL
							Benzoic acid	400 ug/mL
							Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
							1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Naphthalene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
					MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-HSLA_STK_00048	01/30/19	10/01/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-568023_00043	1 mL	Famphur	200 ug/mL
					MS-568033_00026	0.5 mL	Alachlor	200 ug/mL
					MS-569730_HSL_00008	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-569732_HSL_00006	1 mL	Atrazine	200 ug/mL
							Caprolactam	200 ug/mL
					MS-571995_00002	2 mL	1,1'-Biphenyl	200 ug/mL
							1,2,4,5-Tetrachlorobenzene	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Diphenylhydrazine	202.195 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dinitrobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							1-Methylnaphthalene	200 ug/mL
							2,3,4,6-Tetrachlorophenol	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dichlorophenol	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							2-Methylphenol	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Acetophenone	200 ug/mL
							Aniline	200 ug/mL
							Anthracene	200 ug/mL
							Azobenzene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Chrysene	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Diphenylamine	170 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodimethylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenanthrene	200 ug/mL
							Phenol	200 ug/mL
							Pyrene	200 ug/mL
							Pyridine	400 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-568023_00043	06/30/20		Restek, Lot A0139090		(Purchased Reagent)		Famphur	2000 ug/mL
..MS-568033_00026	06/30/19		Restek, Lot A0133057		(Purchased Reagent)		Alachlor	4000 ug/mL
..MS-569730_HSL_00008	10/31/19		Restek, Lot A0137351		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-569732_HSL_00006	10/31/19		Restek, Lot A0137125		(Purchased Reagent)		Atrazine	2000 ug/mL
							Caprolactam	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,1'-Biphenyl	1000 ug/mL
							1,2,4,5-Tetrachlorobenzene	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Diphenylhydrazine	1010.97 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dinitrobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							1-Methylnaphthalene	1000 ug/mL
							2,3,4,6-Tetrachlorophenol	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dichlorophenol	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Acetophenone	1000 ug/mL
							Aniline	1000 ug/mL
							Anthracene	1000 ug/mL
							Azobenzene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Chrysene	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Diphenylamine	850 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodimethylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Naphthalene	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenanthrene	1000 ug/mL
							Phenol	1000 ug/mL
							Pyrene	1000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyridine	2000 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLACCV080_00173	11/30/18	10/01/18	Methylene Chloride, Lot 187286	0.5 mL	MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLACCV080_00173	11/30/18	10/01/18	Methylene Chloride, Lot 187286	0.5 mL	MS-HSLA_STK_00047	200 uL	2,4,6-Tribromophenol (Surr)	80 ug/mL
							2-Fluorobiphenyl	80 ug/mL
							2-Fluorophenol (Surr)	80 ug/mL
							Nitrobenzene-d5	80 ug/mL
							Phenol-d5 (Surr)	80 ug/mL
							Terphenyl-d14	80 ug/mL
							3,3'-Dichlorobenzidine	80 ug/mL
							Benzoic acid	160 ug/mL
							1,2,4-Trichlorobenzene	80 ug/mL
							1,2-Dichlorobenzene	80 ug/mL
							1,3-Dichlorobenzene	80 ug/mL
							1,4-Dichlorobenzene	80 ug/mL
							1,4-Dioxane	80 ug/mL
							2,4,5-Trichlorophenol	80 ug/mL
							2,4,6-Trichlorophenol	80 ug/mL
							2,4-Dichlorophenol	80 ug/mL
							2,4-Dimethylphenol	80 ug/mL
							2,4-Dinitrophenol	160 ug/mL
							2,4-Dinitrotoluene	80 ug/mL
							2,6-Dinitrotoluene	80 ug/mL
							2-Chloronaphthalene	80 ug/mL
							2-Chlorophenol	80 ug/mL
							2-Methylphenol	80 ug/mL
							2-Nitroaniline	80 ug/mL
							2-Nitrophenol	80 ug/mL
							3 & 4 Methylphenol	80 ug/mL
							3-Nitroaniline	80 ug/mL
							4,6-Dinitro-2-methylphenol	160 ug/mL
							4-Bromophenyl phenyl ether	80 ug/mL
							4-Chloro-3-methylphenol	80 ug/mL
							4-Chloroaniline	80 ug/mL
							4-Chlorophenyl phenyl ether	80 ug/mL
							4-Nitroaniline	80 ug/mL
							4-Nitrophenol	160 ug/mL
							Benzyl alcohol	80 ug/mL
							bis (2-chloroisopropyl) ether	80 ug/mL
							Bis(2-chloroethoxy)methane	80 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bis(2-chloroethyl)ether	80 ug/mL
							Bis(2-ethylhexyl) phthalate	80 ug/mL
							Butyl benzyl phthalate	80 ug/mL
							Carbazole	80 ug/mL
							Di-n-butyl phthalate	80 ug/mL
							Di-n-octyl phthalate	80 ug/mL
							Dibenzofuran	80 ug/mL
							Diethyl phthalate	80 ug/mL
							Dimethyl phthalate	80 ug/mL
							Hexachlorobenzene	80 ug/mL
							Hexachlorobutadiene	80 ug/mL
							Hexachlorocyclopentadiene	80 ug/mL
							Hexachloroethane	80 ug/mL
							Isophorone	80 ug/mL
							N-Nitrosodi-n-propylamine	80 ug/mL
							N-Nitrosodiphenylamine	80 ug/mL
							Nitrobenzene	80 ug/mL
							Pentachlorophenol	160 ug/mL
							Phenol	80 ug/mL
.MS-HSLA_STK_00047	11/30/18	06/21/18	Methylene Chloride, Lot 187286	10 mL	MS-567685_00004	0.4 mL	2,4,6-Tribromophenol (Surr)	200 ug/mL
							2-Fluorobiphenyl	200 ug/mL
							2-Fluorophenol (Surr)	200 ug/mL
							Nitrobenzene-d5	200 ug/mL
							Phenol-d5 (Surr)	200 ug/mL
							Terphenyl-d14	200 ug/mL
					MS-569730_HSL_00007	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
					MS-569731_00079	2 mL	Benzoic acid	400 ug/mL
					MS-571995_00002	2 mL	1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenol	200 ug/mL
..MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2,4,6-Tribromophenol (Surr)	5000 ug/mL
							2-Fluorobiphenyl	5000 ug/mL
							2-Fluorophenol (Surr)	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Phenol-d5 (Surr)	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
..MS-569730_HSL_00007	11/30/18		Restek, Lot A0127472		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
..MS-569731_00079	03/31/19		Restek, Lot A0130477		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-571995_00002	09/30/19		Restek, Lot A0136052		(Purchased Reagent)		1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenol	1000 ug/mL
MS-HSLB1B3SSV_00052	03/06/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLB1B3SSV_00052	03/06/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLB1_STK_00012	250 uL	Benzoic acid	200 ug/mL
							1,2,4-Trichlorobenzene	100 ug/mL
							1,2-Dichlorobenzene	100 ug/mL
							1,3-Dichlorobenzene	100 ug/mL
							1,4-Dichlorobenzene	100 ug/mL
							1,4-Dioxane	100 ug/mL
							2,4,5-Trichlorophenol	100 ug/mL
							2,4,6-Trichlorophenol	100 ug/mL
							2,4-Dichlorophenol	100 ug/mL
							2,4-Dimethylphenol	100 ug/mL
							2,4-Dinitrophenol	200 ug/mL
							2,4-Dinitrotoluene	100 ug/mL
							2,6-Dinitrotoluene	100 ug/mL
							2-Chloronaphthalene	100 ug/mL
							2-Chlorophenol	100 ug/mL
							2-Methylphenol	100 ug/mL
							2-Nitroaniline	100 ug/mL
							2-Nitrophenol	100 ug/mL
							3 & 4 Methylphenol	100 ug/mL
							3-Nitroaniline	100 ug/mL
							4,6-Dinitro-2-methylphenol	200 ug/mL
							4-Bromophenyl phenyl ether	100 ug/mL
							4-Chloro-3-methylphenol	100 ug/mL
							4-Chloroaniline	100 ug/mL
							4-Chlorophenyl phenyl ether	100 ug/mL
							4-Nitroaniline	100 ug/mL
							4-Nitrophenol	200 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzyl alcohol	100 ug/mL
							bis (2-chloroisopropyl) ether	100 ug/mL
							Bis(2-chloroethoxy)methane	100 ug/mL
							Bis(2-chloroethyl)ether	100 ug/mL
							Bis(2-ethylhexyl) phthalate	100 ug/mL
							Butyl benzyl phthalate	100 ug/mL
							Carbazole	100 ug/mL
							Di-n-butyl phthalate	100 ug/mL
							Di-n-octyl phthalate	100 ug/mL
							Dibenzofuran	100 ug/mL
							Diethyl phthalate	100 ug/mL
							Dimethyl phthalate	100 ug/mL
							Hexachlorobenzene	100 ug/mL
							Hexachlorobutadiene	100 ug/mL
							Hexachlorocyclopentadiene	100 ug/mL
							Hexachloroethane	100 ug/mL
							Isophorone	100 ug/mL
							N-Nitrosodi-n-propylamine	100 ug/mL
							N-Nitrosodiphenylamine	100 ug/mL
							Nitrobenzene	100 ug/mL
							Pentachlorophenol	200 ug/mL
							Phenol	100 ug/mL
.MS-HSLB1_STK_00012	03/31/19	06/18/18	Methylene Chloride, Lot 187286	5 mL	MS-569731.SEC_00003	1 mL	Benzoic acid	400 ug/mL
					MS-571995.SEC_00002	1 mL	1,2,4-Trichlorobenzene	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	200 ug/mL
							2,4,5-Trichlorophenol	200 ug/mL
							2,4,6-Trichlorophenol	200 ug/mL
							2,4-Dichlorophenol	200 ug/mL
							2,4-Dimethylphenol	200 ug/mL
							2,4-Dinitrophenol	400 ug/mL
							2,4-Dinitrotoluene	200 ug/mL
							2,6-Dinitrotoluene	200 ug/mL
							2-Chloronaphthalene	200 ug/mL
							2-Chlorophenol	200 ug/mL
							2-Methylphenol	200 ug/mL
							2-Nitroaniline	200 ug/mL
							2-Nitrophenol	200 ug/mL
							3 & 4 Methylphenol	200 ug/mL
							3-Nitroaniline	200 ug/mL
							4,6-Dinitro-2-methylphenol	400 ug/mL
							4-Bromophenyl phenyl ether	200 ug/mL
							4-Chloro-3-methylphenol	200 ug/mL
							4-Chloroaniline	200 ug/mL
							4-Chlorophenyl phenyl ether	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitroaniline	200 ug/mL
							4-Nitrophenol	400 ug/mL
							Benzyl alcohol	200 ug/mL
							bis (2-chloroisopropyl) ether	200 ug/mL
							Bis(2-chloroethoxy)methane	200 ug/mL
							Bis(2-chloroethyl)ether	200 ug/mL
							Bis(2-ethylhexyl) phthalate	200 ug/mL
							Butyl benzyl phthalate	200 ug/mL
							Carbazole	200 ug/mL
							Di-n-butyl phthalate	200 ug/mL
							Di-n-octyl phthalate	200 ug/mL
							Dibenzofuran	200 ug/mL
							Diethyl phthalate	200 ug/mL
							Dimethyl phthalate	200 ug/mL
							Hexachlorobenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexachlorocyclopentadiene	200 ug/mL
							Hexachloroethane	200 ug/mL
							Isophorone	200 ug/mL
							N-Nitrosodi-n-propylamine	200 ug/mL
							N-Nitrosodiphenylamine	200 ug/mL
							Nitrobenzene	200 ug/mL
							Pentachlorophenol	400 ug/mL
							Phenol	200 ug/mL
..MS-569731.SEC_00003	05/31/19		Restek, Lot A0132859		(Purchased Reagent)		Benzoic acid	2000 ug/mL
..MS-571995.SEC_00002	03/31/19		Restek, Lot A0131190		(Purchased Reagent)		1,2,4-Trichlorobenzene	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,4,5-Trichlorophenol	1000 ug/mL
							2,4,6-Trichlorophenol	1000 ug/mL
							2,4-Dichlorophenol	1000 ug/mL
							2,4-Dimethylphenol	1000 ug/mL
							2,4-Dinitrophenol	2000 ug/mL
							2,4-Dinitrotoluene	1000 ug/mL
							2,6-Dinitrotoluene	1000 ug/mL
							2-Chloronaphthalene	1000 ug/mL
							2-Chlorophenol	1000 ug/mL
							2-Methylphenol	1000 ug/mL
							2-Nitroaniline	1000 ug/mL
							2-Nitrophenol	1000 ug/mL
							3 & 4 Methylphenol	1000 ug/mL
							3-Nitroaniline	1000 ug/mL
							4,6-Dinitro-2-methylphenol	2000 ug/mL
							4-Bromophenyl phenyl ether	1000 ug/mL
							4-Chloro-3-methylphenol	1000 ug/mL
							4-Chloroaniline	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Chlorophenyl phenyl ether	1000 ug/mL
							4-Nitroaniline	1000 ug/mL
							4-Nitrophenol	2000 ug/mL
							Benzyl alcohol	1000 ug/mL
							bis (2-chloroisopropyl) ether	1000 ug/mL
							Bis(2-chloroethoxy)methane	1000 ug/mL
							Bis(2-chloroethyl)ether	1000 ug/mL
							Bis(2-ethylhexyl) phthalate	1000 ug/mL
							Butyl benzyl phthalate	1000 ug/mL
							Carbazole	1000 ug/mL
							Di-n-butyl phthalate	1000 ug/mL
							Di-n-octyl phthalate	1000 ug/mL
							Dibenzofuran	1000 ug/mL
							Diethyl phthalate	1000 ug/mL
							Dimethyl phthalate	1000 ug/mL
							Hexachlorobenzene	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Hexachlorocyclopentadiene	1000 ug/mL
							Hexachloroethane	1000 ug/mL
							Isophorone	1000 ug/mL
							N-Nitrosodi-n-propylamine	1000 ug/mL
							N-Nitrosodiphenylamine	1000 ug/mL
							Nitrobenzene	1000 ug/mL
							Pentachlorophenol	2000 ug/mL
							Phenol	1000 ug/mL
MS-HSLB2SSV_00047	02/28/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-IS_00014	50 uL	1,4-Dichlorobenzene-d4	40 ug/mL
							Acenaphthene-d10	40 ug/mL
							Chrysene-d12	40 ug/mL
							Naphthalene-d8	40 ug/mL
							Perylene-d12	40 ug/mL
							Phenanthrene-d10	40 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-HSLB2SSV_00047	02/28/19	10/23/18	Methylene Chloride, Lot 203837	0.5 mL	MS-HSLB2_STK_00010	250 uL	3,3'-Dichlorobenzidine	100 ug/mL
.MS-HSLB2_STK_00010	02/28/19	06/18/18	Methylene Chloride, Lot 187286	10 mL	MS-569730SEC_00004	1 mL	3,3'-Dichlorobenzidine	200 ug/mL
..MS-569730SEC_00004	04/30/19		Restek, Lot A0131614		(Purchased Reagent)		3,3'-Dichlorobenzidine	2000 ug/mL
MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	1,4-Dichlorobenzene-d4	400 ug/mL
							Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Naphthalene-d8	400 ug/mL
							Perylene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
.MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2000 ug/mL
							Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Naphthalene-d8	2000 ug/mL
							Perylene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
.MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
..MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
..MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-SIM SSV2_00004	03/31/19	07/02/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
MS-SIM SSV2_00004	03/31/19	07/02/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM SSV_00130	30 uL	1-Methylnaphthalene	0.6 ug/mL
							2-Methylnaphthalene	0.6 ug/mL
							Acenaphthene	0.6 ug/mL
							Acenaphthylene	0.6 ug/mL
							Anthracene	0.6 ug/mL
							Benzo[a]anthracene	0.6 ug/mL
							Benzo[a]pyrene	0.6 ug/mL
							Benzo[b]fluoranthene	0.6 ug/mL
							Benzo[g,h,i]perylene	0.6 ug/mL
							Benzo[k]fluoranthene	0.6 ug/mL
							Chrysene	0.6 ug/mL
							Dibenz(a,h)anthracene	0.6 ug/mL
							Fluoranthene	0.6 ug/mL
							Fluorene	0.6 ug/mL
							Indeno[1,2,3-cd]pyrene	0.6 ug/mL
							Naphthalene	0.6 ug/mL
							Phenanthrene	0.6 ug/mL
							Pyrene	0.6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-SIM SSV_00130	03/31/19	07/02/18	Methylene Chloride, Lot 187286	10 mL	MS-HSLB1_STK_00012	1 mL	1-Methylnaphthalene	20 ug/mL
							2-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
..MS-HSLB1_STK_00012	03/31/19	06/18/18	Methylene Chloride, Lot 187286	5 mL	MS-571995.SEC_00002	1 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	200 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-571995.SEC_00002	03/31/19		Restek, Lot A0131190		(Purchased Reagent)		1-Methylnaphthalene	1000 ug/mL
							2-Methylnaphthalene	1000 ug/mL
							Acenaphthene	1000 ug/mL
							Acenaphthylene	1000 ug/mL
							Anthracene	1000 ug/mL
							Benzo[a]anthracene	1000 ug/mL
							Benzo[a]pyrene	1000 ug/mL
							Benzo[b]fluoranthene	1000 ug/mL
							Benzo[g,h,i]perylene	1000 ug/mL
							Benzo[k]fluoranthene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chrysene	1000 ug/mL
							Dibenz(a,h)anthracene	1000 ug/mL
							Fluoranthene	1000 ug/mL
							Fluorene	1000 ug/mL
							Indeno[1,2,3-cd]pyrene	1000 ug/mL
							Naphthalene	1000 ug/mL
							Phenanthrene	1000 ug/mL
							Pyrene	1000 ug/mL
MS-SIMSL 0.01_00005	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	5 uL	2-methylnaphthalene-d10	0.01 ug/mL
							Fluoranthene-d10	0.01 ug/mL
							2-Methylnaphthalene	0.02 ug/mL
							1-Methylnaphthalene	0.01 ug/mL
							Acenaphthene	0.01 ug/mL
							Acenaphthylene	0.01 ug/mL
							Anthracene	0.01 ug/mL
							Benzo[a]anthracene	0.01 ug/mL
							Benzo[a]pyrene	0.01 ug/mL
							Benzo[b]fluoranthene	0.01 ug/mL
							Benzo[g,h,i]perylene	0.01 ug/mL
							Benzo[k]fluoranthene	0.01 ug/mL
							Chrysene	0.01 ug/mL
							Dibenz(a,h)anthracene	0.01 ug/mL
							Fluoranthene	0.01 ug/mL
							Fluorene	0.01 ug/mL
							Indeno[1,2,3-cd]pyrene	0.01 ug/mL
							Naphthalene	0.01 ug/mL
							Phenanthrene	0.01 ug/mL
							Pyrene	0.01 ug/mL
							2-Fluorobiphenyl	0.01 ug/mL
							Nitrobenzene-d5	0.01 ug/mL
							Terphenyl-d14	0.01 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.02_00079	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	10 uL	2-methylnaphthalene-d10	0.02 ug/mL
							Fluoranthene-d10	0.02 ug/mL
							2-Methylnaphthalene	0.04 ug/mL
							1-Methylnaphthalene	0.02 ug/mL
							Acenaphthene	0.02 ug/mL
							Acenaphthylene	0.02 ug/mL
							Anthracene	0.02 ug/mL
							Benzo[a]anthracene	0.02 ug/mL
							Benzo[a]pyrene	0.02 ug/mL
							Benzo[b]fluoranthene	0.02 ug/mL
							Benzo[g,h,i]perylene	0.02 ug/mL
							Benzo[k]fluoranthene	0.02 ug/mL
							Chrysene	0.02 ug/mL
							Dibenz(a,h)anthracene	0.02 ug/mL
							Fluoranthene	0.02 ug/mL
							Fluorene	0.02 ug/mL
							Indeno[1,2,3-cd]pyrene	0.02 ug/mL
							Naphthalene	0.02 ug/mL
							Phenanthrene	0.02 ug/mL
							Pyrene	0.02 ug/mL
							2-Fluorobiphenyl	0.02 ug/mL
							Nitrobenzene-d5	0.02 ug/mL
							Terphenyl-d14	0.02 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MS-SIMSL 0.05_00007	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	25 uL	2-methylnaphthalene-d10	0.05 ug/mL
							Fluoranthene-d10	0.05 ug/mL
							2-Methylnaphthalene	0.1 ug/mL
							1-Methylnaphthalene	0.05 ug/mL
							Acenaphthene	0.05 ug/mL
							Acenaphthylene	0.05 ug/mL
							Anthracene	0.05 ug/mL
							Benzo[a]anthracene	0.05 ug/mL
							Benzo[a]pyrene	0.05 ug/mL
							Benzo[b]fluoranthene	0.05 ug/mL
							Benzo[g,h,i]perylene	0.05 ug/mL
							Benzo[k]fluoranthene	0.05 ug/mL
							Chrysene	0.05 ug/mL
							Dibenz(a,h)anthracene	0.05 ug/mL
							Fluoranthene	0.05 ug/mL
							Fluorene	0.05 ug/mL
							Indeno[1,2,3-cd]pyrene	0.05 ug/mL
							Naphthalene	0.05 ug/mL
							Phenanthrene	0.05 ug/mL
							Pyrene	0.05 ug/mL
							2-Fluorobiphenyl	0.05 ug/mL
							Nitrobenzene-d5	0.05 ug/mL
							Terphenyl-d14	0.05 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.1_00075	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MS-SIMSL Int._00026	50 uL	2-methylnaphthalene-d10	0.1 ug/mL
							Fluoranthene-d10	0.1 ug/mL
							2-Methylnaphthalene	0.2 ug/mL
							1-Methylnaphthalene	0.1 ug/mL
							Acenaphthene	0.1 ug/mL
							Acenaphthylene	0.1 ug/mL
							Anthracene	0.1 ug/mL
							Benzo[a]anthracene	0.1 ug/mL
							Benzo[a]pyrene	0.1 ug/mL
							Benzo[b]fluoranthene	0.1 ug/mL
							Benzo[g,h,i]perylene	0.1 ug/mL
							Benzo[k]fluoranthene	0.1 ug/mL
							Chrysene	0.1 ug/mL
							Dibenz(a,h)anthracene	0.1 ug/mL
							Fluoranthene	0.1 ug/mL
							Fluorene	0.1 ug/mL
							Indeno[1,2,3-cd]pyrene	0.1 ug/mL
							Naphthalene	0.1 ug/mL
							Phenanthrene	0.1 ug/mL
							Pyrene	0.1 ug/mL
							2-Fluorobiphenyl	0.1 ug/mL
							Nitrobenzene-d5	0.1 ug/mL
							Terphenyl-d14	0.1 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.3_00074	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL Int._00026	150 uL	2-methylnaphthalene-d10	0.3 ug/mL
							Fluoranthene-d10	0.3 ug/mL
							2-Methylnaphthalene	0.6 ug/mL
							1-Methylnaphthalene	0.3 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acenaphthene	0.3 ug/mL
							Acenaphthylene	0.3 ug/mL
							Anthracene	0.3 ug/mL
							Benzo[a]anthracene	0.3 ug/mL
							Benzo[a]pyrene	0.3 ug/mL
							Benzo[b]fluoranthene	0.3 ug/mL
							Benzo[g,h,i]perylene	0.3 ug/mL
							Benzo[k]fluoranthene	0.3 ug/mL
							Chrysene	0.3 ug/mL
							Dibenz(a,h)anthracene	0.3 ug/mL
							Fluoranthene	0.3 ug/mL
							Fluorene	0.3 ug/mL
							Indeno[1,2,3-cd]pyrene	0.3 ug/mL
							Naphthalene	0.3 ug/mL
							Phenanthrene	0.3 ug/mL
							Pyrene	0.3 ug/mL
							2-Fluorobiphenyl	0.3 ug/mL
							Nitrobenzene-d5	0.3 ug/mL
							Terphenyl-d14	0.3 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL Int._00026	01/30/19	08/01/18	Methylene Chloride, Lot 187286	10 mL	MS-SIMSL_00027	1 mL	2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							2-Methylnaphthalene	4 ug/mL
							1-Methylnaphthalene	2 ug/mL
							Acenaphthene	2 ug/mL
							Acenaphthylene	2 ug/mL
							Anthracene	2 ug/mL
							Benzo[a]anthracene	2 ug/mL
							Benzo[a]pyrene	2 ug/mL
							Benzo[b]fluoranthene	2 ug/mL
							Benzo[g,h,i]perylene	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[k]fluoranthene	2 ug/mL
							Chrysene	2 ug/mL
							Dibenz(a,h)anthracene	2 ug/mL
							Fluoranthene	2 ug/mL
							Fluorene	2 ug/mL
							Indeno[1,2,3-cd]pyrene	2 ug/mL
							Naphthalene	2 ug/mL
							Phenanthrene	2 ug/mL
							Pyrene	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Terphenyl-d14	2 ug/mL
..MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
...DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
...MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
....MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
....MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
...MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
....MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 0.6_00144	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00027	30 uL	2-methylnaphthalene-d10	0.6 ug/mL
							Fluoranthene-d10	0.6 ug/mL
							2-Methylnaphthalene	1.2 ug/mL
							1-Methylnaphthalene	0.6 ug/mL
							Acenaphthene	0.6 ug/mL
							Acenaphthylene	0.6 ug/mL
							Anthracene	0.6 ug/mL
							Benzo[a]anthracene	0.6 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]pyrene	0.6 ug/mL
							Benzo[b]fluoranthene	0.6 ug/mL
							Benzo[g,h,i]perylene	0.6 ug/mL
							Benzo[k]fluoranthene	0.6 ug/mL
							Chrysene	0.6 ug/mL
							Dibenz(a,h)anthracene	0.6 ug/mL
							Fluoranthene	0.6 ug/mL
							Fluorene	0.6 ug/mL
							Indeno[1,2,3-cd]pyrene	0.6 ug/mL
							Naphthalene	0.6 ug/mL
							Phenanthrene	0.6 ug/mL
							Pyrene	0.6 ug/mL
							2-Fluorobiphenyl	0.6 ug/mL
							Nitrobenzene-d5	0.6 ug/mL
							Terphenyl-d14	0.6 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19	Restek, Lot A0130500			(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 1.2_00075	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00027	60 uL	2-methylnaphthalene-d10	1.2 ug/mL
							Fluoranthene-d10	1.2 ug/mL
							2-Methylnaphthalene	2.4 ug/mL
							1-Methylnaphthalene	1.2 ug/mL
							Acenaphthene	1.2 ug/mL
							Acenaphthylene	1.2 ug/mL
							Anthracene	1.2 ug/mL
							Benzo[a]anthracene	1.2 ug/mL
							Benzo[a]pyrene	1.2 ug/mL
							Benzo[b]fluoranthene	1.2 ug/mL
							Benzo[g,h,i]perylene	1.2 ug/mL
							Benzo[k]fluoranthene	1.2 ug/mL
							Chrysene	1.2 ug/mL
							Dibenz(a,h)anthracene	1.2 ug/mL
							Fluoranthene	1.2 ug/mL
							Fluorene	1.2 ug/mL
							Indeno[1,2,3-cd]pyrene	1.2 ug/mL
							Naphthalene	1.2 ug/mL
							Phenanthrene	1.2 ug/mL
							Pyrene	1.2 ug/mL
							2-Fluorobiphenyl	1.2 ug/mL
							Nitrobenzene-d5	1.2 ug/mL
							Terphenyl-d14	1.2 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19	O2SI, Lot 334026			(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MS-SIMSL 2.5_00074	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00027	125 uL	2-methylnaphthalene-d10	2.5 ug/mL
							Fluoranthene-d10	2.5 ug/mL
							2-Methylnaphthalene	5 ug/mL
							1-Methylnaphthalene	2.5 ug/mL
							Acenaphthene	2.5 ug/mL
							Acenaphthylene	2.5 ug/mL
							Anthracene	2.5 ug/mL
							Benzo[a]anthracene	2.5 ug/mL
							Benzo[a]pyrene	2.5 ug/mL
							Benzo[b]fluoranthene	2.5 ug/mL
							Benzo[g,h,i]perylene	2.5 ug/mL
							Benzo[k]fluoranthene	2.5 ug/mL
							Chrysene	2.5 ug/mL
							Dibenz(a,h)anthracene	2.5 ug/mL
							Fluoranthene	2.5 ug/mL
							Fluorene	2.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Indeno[1,2,3-cd]pyrene	2.5 ug/mL
							Naphthalene	2.5 ug/mL
							Phenanthrene	2.5 ug/mL
							Pyrene	2.5 ug/mL
							2-Fluorobiphenyl	2.5 ug/mL
							Nitrobenzene-d5	2.5 ug/mL
							Terphenyl-d14	2.5 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20	Restek, Lot A0112833			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22	Restek, Lot A0129635			(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MS-SIMSL 5_00076	01/30/19	08/06/18	Methylene Chloride, Lot 187286	1000 uL	MS-SIM IS_00033	100 uL	Acenaphthene-d10	0.6 ug/mL
							Chrysene-d12	0.6 ug/mL
							Phenanthrene-d10	0.6 ug/mL
					MS-SIMSL_00027	250 uL	2-methylnaphthalene-d10	5 ug/mL
							Fluoranthene-d10	5 ug/mL
							2-Methylnaphthalene	10 ug/mL
							1-Methylnaphthalene	5 ug/mL
							Acenaphthene	5 ug/mL
							Acenaphthylene	5 ug/mL
							Anthracene	5 ug/mL
							Benzo[a]anthracene	5 ug/mL
							Benzo[a]pyrene	5 ug/mL
							Benzo[b]fluoranthene	5 ug/mL
							Benzo[g,h,i]perylene	5 ug/mL
							Benzo[k]fluoranthene	5 ug/mL
							Chrysene	5 ug/mL
							Dibenz(a,h)anthracene	5 ug/mL
							Fluoranthene	5 ug/mL
							Fluorene	5 ug/mL
							Indeno[1,2,3-cd]pyrene	5 ug/mL
							Naphthalene	5 ug/mL
							Phenanthrene	5 ug/mL
							Pyrene	5 ug/mL
							2-Fluorobiphenyl	5 ug/mL
							Nitrobenzene-d5	5 ug/mL
							Terphenyl-d14	5 ug/mL
.MS-SIM IS_00033	04/04/19	05/02/18	Methylene Chloride, Lot 181545	100 mL	MS-IS_00014	1500 uL	Acenaphthene-d10	6 ug/mL
							Chrysene-d12	6 ug/mL
							Phenanthrene-d10	6 ug/mL
..MS-IS_00014	04/04/19	04/04/18	Methylene Chloride, Lot 181545	250 mL	MS-567684_00019	5 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
					MS-567684_00020	45 mL	Acenaphthene-d10	400 ug/mL
							Chrysene-d12	400 ug/mL
							Phenanthrene-d10	400 ug/mL
...MS-567684_00019	07/31/20		Restek, Lot A0112833		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
...MS-567684_00020	08/31/22		Restek, Lot A0129635		(Purchased Reagent)		Acenaphthene-d10	2000 ug/mL
							Chrysene-d12	2000 ug/mL
							Phenanthrene-d10	2000 ug/mL
.MS-SIMSL_00027	01/30/19	08/01/18	Methylene Chloride, Lot 181545	10 mL	DOD_ADD_SURR_00002	200 uL	2-methylnaphthalene-d10	20 ug/mL
							Fluoranthene-d10	20 ug/mL
					MS-SIM SL_Stk_00020	1 mL	2-Methylnaphthalene	40 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1-Methylnaphthalene	20 ug/mL
							Acenaphthene	20 ug/mL
							Acenaphthylene	20 ug/mL
							Anthracene	20 ug/mL
							Benzo[a]anthracene	20 ug/mL
							Benzo[a]pyrene	20 ug/mL
							Benzo[b]fluoranthene	20 ug/mL
							Benzo[g,h,i]perylene	20 ug/mL
							Benzo[k]fluoranthene	20 ug/mL
							Chrysene	20 ug/mL
							Dibenz(a,h)anthracene	20 ug/mL
							Fluoranthene	20 ug/mL
							Fluorene	20 ug/mL
							Indeno[1,2,3-cd]pyrene	20 ug/mL
							Naphthalene	20 ug/mL
							Phenanthrene	20 ug/mL
							Pyrene	20 ug/mL
					MS-SIMSurrInt_00008	0.2 mL	2-Fluorobiphenyl	20 ug/mL
							Nitrobenzene-d5	20 ug/mL
							Terphenyl-d14	20 ug/mL
..DOD_ADD_SURR_00002	05/22/19		O2SI, Lot 334026		(Purchased Reagent)		2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
..MS-SIM SL_Stk_00020	03/31/19	08/01/18	Methylene Chloride, Lot 187286	5 mL	MS-31010_00011	0.5 mL	2-Methylnaphthalene	400 ug/mL
					MS-31995_00005	0.5 mL	1-Methylnaphthalene	200 ug/mL
							2-Methylnaphthalene	400 ug/mL
							Acenaphthene	200 ug/mL
							Acenaphthylene	200 ug/mL
							Anthracene	200 ug/mL
							Benzo[a]anthracene	200 ug/mL
							Benzo[a]pyrene	200 ug/mL
							Benzo[b]fluoranthene	200 ug/mL
							Benzo[g,h,i]perylene	200 ug/mL
							Benzo[k]fluoranthene	200 ug/mL
							Chrysene	200 ug/mL
							Dibenz(a,h)anthracene	200 ug/mL
							Fluoranthene	200 ug/mL
							Fluorene	200 ug/mL
							Indeno[1,2,3-cd]pyrene	200 ug/mL
							Naphthalene	200 ug/mL
							Phenanthrene	200 ug/mL
							Pyrene	200 ug/mL
...MS-31010_00011	03/31/19		Restek, Lot A0116027		(Purchased Reagent)		2-Methylnaphthalene	2000 ug/mL
...MS-31995_00005	01/31/21		Restek, Lot A0108907		(Purchased Reagent)		1-Methylnaphthalene	2000 ug/mL
							2-Methylnaphthalene	2000 ug/mL
							Acenaphthene	2000 ug/mL
							Acenaphthylene	2000 ug/mL
							Anthracene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzo[a]anthracene	2000 ug/mL
							Benzo[a]pyrene	2000 ug/mL
							Benzo[b]fluoranthene	2000 ug/mL
							Benzo[g,h,i]perylene	2000 ug/mL
							Benzo[k]fluoranthene	2000 ug/mL
							Chrysene	2000 ug/mL
							Dibenz(a,h)anthracene	2000 ug/mL
							Fluoranthene	2000 ug/mL
							Fluorene	2000 ug/mL
							Indeno[1,2,3-cd]pyrene	2000 ug/mL
							Naphthalene	2000 ug/mL
							Phenanthrene	2000 ug/mL
							Pyrene	2000 ug/mL
..MS-SIMSurrInt_00008	01/30/19	08/01/18	Methylene Chloride, Lot 187286	1 mL	MS-567685_00004	200 uL	2-Fluorobiphenyl	1000 ug/mL
							Nitrobenzene-d5	1000 ug/mL
							Terphenyl-d14	1000 ug/mL
...MS-567685_00004	01/30/19		Restek, Lot A0130500		(Purchased Reagent)		2-Fluorobiphenyl	5000 ug/mL
							Nitrobenzene-d5	5000 ug/mL
							Terphenyl-d14	5000 ug/mL
MV-568718-D_00014	05/31/22		RESTEK, Lot A0127975		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
MV-ARCH SS A_00107	04/18/19	10/18/18	P&T Methanol, Lot 177891	50 mL	MV-567650_00027	5 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MV-567650_00027	01/31/22		Restek, Lot A0124069		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MV-BFB_00026							1,2-Dichloroethene, Total	
							1,2-Dichloroethene, Total (URS)	
							1,3-Dichloropropene, Total	
							TAH	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
							Xylenes, Total (URS)	
					MV-STS110N1_00066	1.25 mL	BFB	50 ug/mL
.MV-STS110N1_00066	10/31/19		Ultra Scientific, Lot CH-3248Z		(Purchased Reagent)		BFB	2000 ug/mL
MV-BFB_00027							1,2-Dichloroethene, Total	

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloroethene, Total (URS)	
							1,3-Dichloropropene, Total	
							TAH	
							Tentatively Identified Compound	
							Total BTEX	
							Trihalomethanes, Total	
							Xylenes, Total	
							Xylenes, Total (URS)	
					MV-STS110N1_00066	1.25 mL	BFB	50 ug/mL
.MV-STS110N1_00066	10/31/19	Ultra Scientific, Lot CH-3248Z			(Purchased Reagent)		BFB	2000 ug/mL
MV-MegaMain B_00002	10/31/18	09/29/18	P&T Methanol, Lot 181124	50 mL	MV-569721.sec_00005	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722.sec_00005	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-571992.sec_00001	1000 uL	1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloroethene, Total	100 ug/mL
							1,2-Dichloropropane	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Methylene Chloride	50 ug/mL
							Styrene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Xylenes, Total	100 ug/mL
.MV-569721.sec_00005	01/31/20		RESTEK, Lot A0113880		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722.sec_00005	06/30/20		RESTEK, Lot A0128832		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-571992.sec_00001	12/31/18		RESTEK, Lot A0123775		(Purchased Reagent)		1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	5000 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMain B_00003	11/30/18	11/01/18	P&T Methanol, Lot 181124	50 mL	MV-569721.sec_00005	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722.sec_00005	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-571992.sec_00001	1000 uL	1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloroethene, Total	100 ug/mL
							1,2-Dichloropropane	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Methylene Chloride	50 ug/mL
							Styrene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.MV-569721.sec_00005	01/31/20		RESTEK, Lot A0113880		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722.sec_00005	06/30/20		RESTEK, Lot A0128832		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-571992.sec_00001	12/31/18		RESTEK, Lot A0123775		(Purchased Reagent)		1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	5000 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMainA_00002	10/31/18	10/04/18	P&T Methanol, Lot 181124	50 mL	MV-568720_00022	1266 uL	Acrolein	500.07 ug/mL
					MV-569721_00006	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722_00008	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-569723_00004	1000 uL	2-Chloroethyl vinyl ether	50 ug/mL
					MV-569724_00016	1000 uL	Vinyl acetate	100 ug/mL
					MV-569727_00007	4000 uL	Cyclohexanone	2000 ug/mL
					MV-571992_00001	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1,4-Dioxane	1000 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
					MV-CUS17739_00004	2500 uL	1-Chlorohexane	50 ug/mL
							2-Pentanone	200 ug/mL
							sec-Butyl Alcohol	1500 ug/mL
.MV-568720_00022	10/31/18		RESTEK, Lot A0137497		(Purchased Reagent)		Acrolein	19750 ug/mL
.MV-569721_00006	10/31/20		RESTEK, Lot A0131486		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00008	10/31/20		RESTEK, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-569723_00004	12/31/20		RESTEK, Lot A0133302		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.MV-569724_00016	10/31/18		RESTEK, Lot A0137562		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
.MV-569727_00007	02/29/20		RESTEK, Lot A0124672		(Purchased Reagent)		Cyclohexanone	25000 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Dibromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.MV-CUS17739_00004	10/31/20		Ultra, Lot CS-4707		(Purchased Reagent)		1-Chlorohexane	1000 ug/mL
							2-Pentanone	4000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butyl Alcohol	30000 ug/mL
MV-MegaMainA_00002	10/31/18	10/04/18	P&T Methanol, Lot 181124	50 mL	MV-571992_00001	1000 uL	1,2-Dichloroethene, Total	100 ug/mL
							Xylenes, Total	100 ug/mL
.MV-571992_00001	12/31/18		RESTEK, Lot A0123711		(Purchased Reagent)		1,2-Dichloroethene, Total	5000 ug/mL
							Xylenes, Total	5000 ug/mL
MV-MegaMainA_00005	11/30/18	11/01/18	P&T Methanol, Lot 181124	50 mL	MV-569721_00006	800 uL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					MV-569722_00008	1000 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
					MV-571992_00001	1000 uL	1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2-Dibromoethane	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloroethene, Total	100 ug/mL
							1,2-Dichloropropane	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Methylene Chloride	50 ug/mL
							Styrene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							Xylenes, Total	100 ug/mL
.MV-569721_00006	10/31/20		RESTEK, Lot A0131486		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MV-569722_00008	10/31/20		RESTEK, Lot A0131502		(Purchased Reagent)		Bromomethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.MV-571992_00001	12/31/18	RESTEK, Lot A0123711			(Purchased Reagent)		1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloroethene, Total	5000 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
SFD ICV INT_01516	02/01/19	11/07/18	Di Water, Lot N/A	500 mL	50% NaOH_00015	2 mL	Sodium Hydroxide	2000 mg/L
					SFD ICV STK_00005	4.17228 g	Sulfide	1114 mg/L
.50% NaOH_00015	02/01/19	Fisher, Lot 1603D65			(Purchased Reagent)		Sodium Hydroxide	50 %
.SFD ICV STK_00005	03/26/23	Acros, Lot B0132482A			(Purchased Reagent)		Sulfide	0.1335 g/g
SIM_LVI_SURR_00006	02/11/19	10/01/18	ACETONE, Lot Acetone_00198	500 mL	8270SIMSurStk_00001	1 mL	2,4,6 - Tribromophenol	2 ug/mL
							2,4,6-Tribromophenol (Surr)	2 ug/mL
							2-Fluorobiphenyl	2 ug/mL
							2-Fluorophenol (Surr)	2 ug/mL
							2-methylnaphthalene-d10	2 ug/mL
							Fluoranthene-d10	2 ug/mL
							Fluoranthene-d10 (Surr)	2 ug/mL
							Nitrobenzene-d5	2 ug/mL
							Phenol-d5 (Surr)	2 ug/mL
							Phenol-d6	2 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Terphenyl-d14	2 ug/mL
.8270SIMSurStk_00001	02/11/19		o2si, Lot 334025		(Purchased Reagent)		2,4,6 - Tribromophenol	1000 mg/L
							2,4,6-Tribromophenol (Surr)	1000 mg/L
							2-Fluorobiphenyl	1000 mg/L
							2-Fluorophenol (Surr)	1000 mg/L
							2-methylnaphthalene-d10	1000 mg/L
							Fluoranthene-d10	1000 mg/L
							Fluoranthene-d10 (Surr)	1000 mg/L
							Nitrobenzene-d5	1000 mg/L
							Phenol-d5 (Surr)	1000 mg/L
							Phenol-d6	1000 mg/L
							Terphenyl-d14	1000 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HPNCSP_00020	11/11/18	05/24/18	Acetone, Lot Acetone 00089	200 mL	HPNCTA_00006	0.1012 g	Nitrocellulose	506 ug/mL
.HPNCTA_00006	11/01/21	Theater Affects, Lot 060217A			(Purchased Reagent)		Nitrocellulose	1 g/g
HPNQIC_00018	05/09/19	11/09/18	MIllipore Water, Lot HPLC H2O 0047	10 mL	HPNQTA_00034	50 uL	Nitroguanidine	500 ng/mL
.HPNQTA_00034	10/14/20	AccuStandard, Inc, Lot 218091193			(Purchased Reagent)		Nitroguanidine	100 ug/mL
HPNQL2_00020	05/06/19	11/09/18	Water, Lot HPLC H2O 00047	50 mL	HPNQSP_00045	20 uL	Nitroguanidine	20 ng/mL
.HPNQSP_00045	05/06/19	11/06/18	Methanol, Lot Methanol 000272	10 mL	HPNQTA_00033	0.5 mL	Nitroguanidine	50 ug/mL
..HPNQTA_00033	06/30/23	Restek, Lot A0139086			(Purchased Reagent)		Nitroguanidine	1000 ug/mL
HPNQL3_00018	05/06/19	11/09/18	MIllipore Water, Lot HPLC H2O 00047	50 mL	HPNQSP_00045	50 uL	Nitroguanidine	50 ng/mL
.HPNQSP_00045	05/06/19	11/06/18	Methanol, Lot Methanol 000272	10 mL	HPNQTA_00033	0.5 mL	Nitroguanidine	50 ug/mL
..HPNQTA_00033	06/30/23	Restek, Lot A0139086			(Purchased Reagent)		Nitroguanidine	1000 ug/mL
HPNQL4_00023	05/06/19	11/07/18	MIllipore Water, Lot M11062018	50 mL	HPNQSP_00045	100 uL	Nitroguanidine	100 ng/mL
.HPNQSP_00045	05/06/19	11/06/18	Methanol, Lot Methanol 000272	10 mL	HPNQTA_00033	0.5 mL	Nitroguanidine	50 ug/mL
..HPNQTA_00033	06/30/23	Restek, Lot A0139086			(Purchased Reagent)		Nitroguanidine	1000 ug/mL
HPNQL4_00024	05/06/19	11/09/18	MIllipore Water, Lot HPLC H2O 00047	50 mL	HPNQSP_00045	100 uL	Nitroguanidine	100 ng/mL
.HPNQSP_00045	05/06/19	11/06/18	Methanol, Lot Methanol 000272	10 mL	HPNQTA_00033	0.5 mL	Nitroguanidine	50 ug/mL
..HPNQTA_00033	06/30/23	Restek, Lot A0139086			(Purchased Reagent)		Nitroguanidine	1000 ug/mL
HPNQL5_00022	05/06/19	11/07/18	MIllipore Water, Lot M11062018	50 mL	HPNQSP_00045	200 uL	Nitroguanidine	200 ng/mL
.HPNQSP_00045	05/06/19	11/06/18	Methanol, Lot Methanol 000272	10 mL	HPNQTA_00033	0.5 mL	Nitroguanidine	50 ug/mL
..HPNQTA_00033	06/30/23	Restek, Lot A0139086			(Purchased Reagent)		Nitroguanidine	1000 ug/mL
HPNQL6_00018	05/06/19	11/09/18	MIllipore Water, Lot HPLC H2O 00047	25 mL	HPNQSP_00045	250 uL	Nitroguanidine	500 ng/mL
.HPNQSP_00045	05/06/19	11/06/18	Methanol, Lot Methanol 000272	10 mL	HPNQTA_00033	0.5 mL	Nitroguanidine	50 ug/mL
..HPNQTA_00033	06/30/23	Restek, Lot A0139086			(Purchased Reagent)		Nitroguanidine	1000 ug/mL
HPNQL7_00018	05/06/19	11/09/18	MIllipore Water, Lot HPLC H2O 00047	25 mL	HPNQSP_00045	500 uL	Nitroguanidine	1000 ng/mL
.HPNQSP_00045	05/06/19	11/06/18	Methanol, Lot Methanol 000272	10 mL	HPNQTA_00033	0.5 mL	Nitroguanidine	50 ug/mL
..HPNQTA_00033	06/30/23	Restek, Lot A0139086			(Purchased Reagent)		Nitroguanidine	1000 ug/mL
HPNQSP_00045	05/06/19	11/06/18	Methanol, Lot Methanol 000272	10 mL	HPNQTA_00033	0.5 mL	Nitroguanidine	50 ug/mL
.HPNQTA_00033	06/30/23	Restek, Lot A0139086			(Purchased Reagent)		Nitroguanidine	1000 ug/mL
WC-353.2-ICV_00097	11/30/18	10/30/18	DI Water, Lot xxxxxxx	100 mL	WC-N02-1000_00095	0.05 mL	Nitrocellulose	7.9365 mg/L as N

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					WC-N03-1000_00062	0.05 mL	Nitrocellulose	7.9365 mg/L as N
.WC-N02-1000_00095	04/30/19	CPI International, Lot 162702-20			(Purchased Reagent)		Nitrocellulose	7936.5 mg/L as N
.WC-N03-1000_00062	01/23/19	CPI, Lot 119041-8			(Purchased Reagent)		Nitrocellulose	7936.5 mg/L as N
WC-353.2-L4_00089	11/30/18	10/30/18	DI Water, Lot xxxx	100 mL	WC-353.2-INT_00102	1 mL	Nitrocellulose	7.93651 mg/L as N
.WC-353.2-INT_00102	11/30/18	10/30/18	DI Water, Lot xxxxxxx	10 mL	WC-N02-1000_00091	0.5 mL	Nitrocellulose	793.65 mg/L as N
					WC-N03-1000_00061	0.5 mL	Nitrocellulose	793.65 mg/L as N
..WC-N02-1000_00091	12/22/18	ERA, Lot 011017			(Purchased Reagent)		Nitrocellulose	7936.51 mg/L as N
..WC-N03-1000_00061	12/22/18	ERA, Lot 391017			(Purchased Reagent)		Nitrocellulose	7936.5 mg/L as N

Reagent

1000 B_00017

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 18, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 18, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGB1
Lot Number:	M2-B663296
Matrix:	H2O
Value / Analyte(s):	1 000 µg/mL ea: Boron
Starting Material:	Recrystallized Boric Acid
Starting Material Lot#:	M2-B02142
Starting Material Purity:	100.0000%

4938584
ID: 1000 B_00017
Exp: 12/18/21 Prpd: SJS
1000 B IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 5 µg/mL

Density: 1.001 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM 3107 Lot Number: 110830

Assay Method #2 **1004 ± 5 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.000108	M	Eu	< 0.000108	O	Na	< 0.006144	M	Se	< 0.001738	M	Zn	0.000509
O	Al	< 0.030720	M	Fe	< 0.004779	M	Nb	< 0.000108	O	Si	0.001028	M	Zr	< 0.000217
M	As	< 0.000869	M	Ga	< 0.000108	M	Nd	< 0.000108	M	Sm	< 0.000108			
M	Au	< 0.000108	M	Gd	< 0.000108	M	Ni	< 0.001303	M	Sn	< 0.000325			
s	B	<	M	Ge	< 0.000434	M	Os	< 0.003039	M	Sr	< 0.000108			
M	Ba	< 0.000217	M	Hf	< 0.000108	i	P	< 0.000001	M	Ta	< 0.000108			
O	Be	< 0.000409	M	Hg	< 0.000217	M	Pb	< 0.000108	M	Tb	< 0.000108			
M	Bi	< 0.000108	M	Ho	< 0.000108	M	Pd	< 0.000108	M	Te	< 0.000325			
O	Ca	0.000864	M	In	< 0.000108	M	Pr	< 0.000108	M	Th	< 0.000108			
M	Cd	< 0.000108	M	Ir	< 0.000108	M	Pt	< 0.000108	M	Ti	< 0.000651			
M	Ce	< 0.000108	O	K	< 0.010240	M	Rb	< 0.000108	M	Tl	< 0.000108			
M	Co	< 0.000108	M	La	< 0.000108	M	Re	< 0.000108	M	Tm	< 0.000108			
M	Cr	< 0.000434	M	Li	< 0.000108	M	Rh	< 0.000108	M	U	< 0.000108			
M	Cs	< 0.000108	M	Lu	< 0.000108	M	Ru	< 0.000108	M	V	< 0.004128			
M	Cu	< 0.000434	O	Mg	0.000019	i	S	< 0.000001	M	W	< 0.000108			
M	Dy	< 0.000108	M	Mn	< 0.000217	M	Sb	< 0.000434	M	Y	< 0.000108			
M	Er	< 0.000108	M	Mo	< 0.000217	M	Sc	< 0.001955	M	Yb	< 0.000108			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 10.81 +3 4 B(OH)3 and B(OH)4-1

Chemical Compatibility -Moderately soluble in HCl, HNO3, H2SO4 and HF aqueous matrices and very soluble in NH4OH . Stable with all metals and inorganic anions at low to moderate ppm levels.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-1,000 ppm solutions chemically stable for years in 1% HNO3 / LDPE container. 1000 -10,000 ppm stable for years in dilute NH4OH / LDPE container.

B Containing Samples (Preparation and Solution) -Metal (Crystalline form is scarcely attacked by acids or alkaline solutions; amorphous form is soluble in conc. HNO3 or H2SO4); B(OH)3 (water soluble); Ores(avoid acid digestions and use caustic fusions in PtE); Organic Matrices (dry ash mixed with Na2CO3 in PtE at 450EC then increase heat to 1000EC to fuse; or perform a Na2O2 fusion in a NiE crucible / Parr bomb).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 11 amu	700 ppt	N/A	
ICP-OES 208.959 nm	0.007/0.0005 µg/mL	1	Mo
ICP-OES 249.678 nm	0.004/0.003 µg/mL	1	Os, W, Co, Cr, Hf
ICP-OES 249.773 nm	0.003/0.001 µg/mL	1	W, Ce, Co, Th, Ta, Mn, Mo, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Ba_00013

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 15, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 15, 2021**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Chemist, Technical Manager

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA1
Lot Number:	M2-BA658823
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Barium
Starting Material:	Ba(NO3)2
Starting Material Lot#:	1894
Starting Material Purity:	99.9986%

4954176
ID: 1000 Ba_00013
Exp: 06/15/21 Prpd: SJS
1000 Ba IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 5 µg/mL
Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1000 ± 4 µg/mL**
ICP Assay NIST SRM 3104a Lot Number: 140909

Assay Method #2 **1001 ± 3 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002004	O	Eu	<	0.002078	O	Na		0.000887	O	Se	<	0.024936	O	Zn	<	0.000520
O	Al	<	0.004156	O	Fe		0.000151	M	Nb	<	0.000200	O	Si	<	0.004156	M	Zr	<	0.000801
O	As	<	0.008312	M	Ga	<	0.000200	M	Nd	<	0.000401	O	Sm	<	0.010390				
M	Au	<	0.001002	M	Gd	<	0.000200	O	Ni	<	0.001559	M	Sn	<	0.000200				
O	B	<	0.001039	M	Ge	<	0.001202	n	Os	<		O	Sr		0.011227				
s	Ba	<		M	Hf	<	0.001202	O	P	<	0.031170	M	Ta	<	0.000200				
O	Be	<	0.000208	O	Hg	<	0.002598	M	Pb	<	0.001202	M	Tb	<	0.000200				
M	Bi	<	0.000601	M	Ho	<	0.000200	M	Pd	<	0.000200	M	Te	<	0.003005				
O	Ca		0.000719	M	In		0.000166	M	Pr	<	0.000200	M	Th	<	0.004007				
M	Cd	<	0.000200	M	Ir	<	0.000200	M	Pt	<	0.000200	O	Ti	<	0.001039				
M	Ce	<	0.000200	O	K	<	0.031170	M	Rb	<	0.001002	M	Tl	<	0.000200				
M	Co	<	0.000401	O	La	<	0.007273	M	Re	<	0.000200	M	Tm	<	0.001002				
O	Cr	<	0.002078	M	Li	<	0.000801	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.000200	M	Lu	<	0.000200	O	Ru	<	0.003117	O	V	<	0.001559				
O	Cu	<	0.001247	O	Mg		0.000054	O	S		0.013943	M	W	<	0.001002				
M	Dy	<	0.000200	O	Mn	<	0.000312	M	Sb	<	0.000200	O	Y	<	0.000831				
M	Er	<	0.000200	O	Mo	<	0.001766	O	Sc	<	0.000208	M	Yb	<	0.000601				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 Ba(H2O)6+2
Chemical Compatibility - Soluble in HCl, and HNO3. Avoid H2SO4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO3 / LDPE container.
Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent BaSO4 precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Cu_00013

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 06, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 06, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

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Christiansburg, VA 24073 - USA
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

4780773
ID: 1000 Cu_00013
Exp: 03/06/21 Prpd: SJS
1000 Cu IV

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU1
Lot Number:	M2-CU656225
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Copper
Starting Material:	Cu shot
Starting Material Lot#:	1718
Starting Material Purity:	100.0000%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	1002 ± 5 µg/mL
Certified Density:	1.017 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1001 ± 4 µg/mL** ICP Assay NIST SRM 3114 Lot Number: 121207
Assay Method #2	**1002 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM by one method

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.017868	M	Eu	<	0.026802	O	Na		0.000168	M	Se	<	0.071472	O	Zn	<	0.010000
O	Al	<	0.000900	O	Fe	<	0.001100	M	Nb	<	0.004467	O	Si	<	0.003400	M	Zr	<	0.044670
M	As	<	0.089340	M	Ga	<	0.008934	M	Nd	<	0.017868	M	Sm	<	0.008934				
M	Au	<	0.026802	M	Gd	<	0.008934	O	Ni	<	0.003000	O	Sn	<	0.004000				
M	B	<	0.625382	M	Ge	<	0.053604	n	Os	<		M	Sr	<	0.004467				
M	Ba	<	0.089340	M	Hf	<	0.017868	O	P	<	0.002600	M	Ta	<	0.062538				
M	Be	<	0.004467	O	Hg	<	0.015000	O	Pb	<	0.010000	M	Tb	<	0.002680				
M	Bi	<	0.003573	M	Ho	<	0.004467	M	Pd	<	0.044670	M	Te	<	0.268021				
O	Ca		0.000078	M	In	<	0.089340	M	Pr	<	0.002680	M	Th	<	0.008934				
M	Cd	<	0.026802	M	Ir	<	0.044670	M	Pt	<	0.017868	M	Ti	<	0.446701				
M	Ce	<	0.044670	O	K		0.000224	M	Rb	<	0.008934	M	Tl	<	0.008934				
M	Co	<	0.026802	M	La	<	0.004467	M	Re	<	0.008934	M	Tm	<	0.003573				
M	Cr	<	0.044670	O	Li	<	0.000020	M	Rh	<	0.008934	M	U	<	0.017868				
M	Cs	<	0.002680	M	Lu	<	0.003573	M	Ru	<	0.017868	O	V	<	0.003000				
s	Cu	<		O	Mg		0.000003	n	S	<		M	W	<	0.089340				
M	Dy	<	0.053604	O	Mn	<	0.000200	M	Sb	<	0.004467	M	Y	<	0.357361				
M	Er	<	0.044670	M	Mo	<	0.017868	M	Sc	<	0.089340	M	Yb	<	0.008934				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 Cu(H2O)62+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4, HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

Reagent

1000 Li_00037

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 16, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 16, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

5107546
ID: 1000 Li_00037
Exp: 03/16/22 Prpd: SJS
1000 Li

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGLI1
Lot Number:	N2-LI665824
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Lithium
Starting Material:	Li2CO3
Starting Material Lot#:	1613
Starting Material Purity:	99.9985%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 4 µg/mL

Density: 1.005 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **999 ± 4 µg/mL**
ICP Assay NIST SRM 3129a Lot Number: 100714

Assay Method #2 **1000 ± 1 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods—Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004204	M	Eu	<	0.006306	O	Na		0.016217	M	Se	<	0.016817	O	Zn		0.001621
O	Al		0.000459	O	Fe		0.001081	M	Nb	<	0.001051	O	Si		0.025948	M	Zr	<	0.010511
M	As	<	0.021022	M	Ga	<	0.002102	M	Nd	<	0.004204	M	Sm	<	0.002102				
M	Au	<	0.006306	M	Gd	<	0.002102	O	Ni	<	0.002300	O	Sn	<	0.006000				
O	B		0.000270	M	Ge	<	0.012613	n	Os	<		O	Sr		0.000108				
O	Ba		0.000108	M	Hf	<	0.004204	O	P	<	0.002500	M	Ta	<	0.014715				
O	Be	<	0.000200	O	Hg	<	0.015000	M	Pb	<	0.006306	M	Tb	<	0.000630				
M	Bi	<	0.000840	M	Ho	<	0.001051	M	Pd	<	0.010511	M	Te	<	0.063067				
O	Ca		0.024867	O	In	<	0.004000	M	Pr	<	0.000630	M	Th	<	0.002102				
M	Cd	<	0.006306	M	Ir	<	0.010511	M	Pt	<	0.004204	O	Ti	<	0.000700				
M	Ce	<	0.010511	O	K		0.011082	M	Rb	<	0.002102	M	Tl	<	0.002102				
M	Co	<	0.006306	M	La	<	0.001051	M	Re	<	0.002102	M	Tm	<	0.000840				
M	Cr	<	0.010511	s	Li	<		M	Rh	<	0.002102	M	U	<	0.004204				
M	Cs	<	0.000630	M	Lu	<	0.000840	M	Ru	<	0.004204	O	V	<	0.000900				
O	Cu	<	0.001400	O	Mg		0.007027	O	S		0.009190	O	W	<	0.004000				
M	Dy	<	0.012613	O	Mn		0.000037	M	Sb	<	0.001051	M	Y	<	0.084089				
M	Er	<	0.010511	M	Mo	<	0.004204	M	Sc	<	0.021022	M	Yb	<	0.002102				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 6.94 +1 (6) Li+(aq) large effective radius due to hydration sphere

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Li Containing Samples (Preparation and Solution) -Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of Li in sodium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 7 amu	10 ppt	n/a	
ICP-OES 323.261 nm	1.1 / 0.05 micro;g/mL	1	Sb, Th, Ni
ICP-OES 460.286 nm	0.9 / 0.04 µg/mL	1	Zr, Th
ICP-OES 670.784 nm	0.002 / 0.00002 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Mn_00015

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 22, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 22, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Chemist, Technical Manager

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
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tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN1
Lot Number:	K2-MN651112
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	1,000 µg/mL ea: Manganese
Starting Material:	Mn Flake
Starting Material Lot#:	1909 and 1573
Starting Material Purity:	99.9920%

4628197
ID: 1000 Mn_00016
Exp: 08/22/20 Prpd: SJS
1000 Mn IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 995 ± 4 µg/mL

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 — **996 ± 4 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #2 — **995 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000671	M	Eu	<	0.000671	O	Na		0.012155	M	Se	<	0.014098	O	Zn	<	0.023580
O	Al		0.003665	O	Fe		0.000937	M	Nb	<	0.000671	O	Si		0.012827	M	Zr	<	0.004699
M	As	<	0.006713	M	Ga	<		M	Nd	<	0.006713	M	Sm	<	0.004028				
M	Au	<	0.000671	M	Gd	<	0.006713	M	Ni		0.001426	M	Sn	<	0.004028				
M	B		0.011628	M	Ge	<	0.100699	M	Os	<	0.000650	O	Sr		0.000157				
M	Ba	<	0.003357	M	Hf	<	0.000671	i	P	<		M	Ta	<	0.000671				
M	Be	<	0.001343	M	Hg	<	0.003249	M	Pb		0.001101	M	Tb	<	0.000671				
M	Bi	<	0.000671	M	Ho	<	0.000671	M	Pd	<	0.006713	M	Te	<	0.040280				
O	Ca		0.005090	M	In	<	0.000671	M	Pr	<	0.002685	M	Th	<	0.000671				
M	Cd	<	0.001343	M	Ir	<	0.000650	M	Pt	<	0.000671	O	Ti	<	0.001179				
M	Ce	<	0.013427	O	K		0.001934	M	Rb	<	0.010741	M	Tl	<	0.000671				
M	Co		0.001971	M	La	<	0.006713	M	Re	<	0.000671	M	Tm	<	0.000671				
M	Cr		0.000927	O	Li		0.000081	M	Rh	<	0.020140	M	U	<	0.004028				
M	Cs	<	0.000671	M	Lu	<	0.000671	M	Ru	<	0.000650	M	V	<	0.000671				
M	Cu		0.001333	O	Mg		0.037056	i	S	<		M	W	<	0.006713				
M	Dy	<	0.003357	s	Mn	<		M	Sb	<	0.013427	M	Y	<	0.033566				
M	Er	<	0.003357	O	Mo	<	0.011790	O	Sc	<	0.001179	M	Yb	<	0.002014				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 Mn(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H2SO4 and heat to SO3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 Mo_00013

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01

ACCREDITED Reference Material Producer Certificate 863.02

4938580
ID: 1000 As_00020
Exp: 05/24/21 Prpd: SJS
1000 As IV

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS1
Lot Number:	M2-AS657780
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	1971 and 1851
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Certified Density: 1.011 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **999 ± 4 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.002234	M	Eu	<	0.000466	O	Na		0.000767	M	Se	<	0.002797	O	Zn		0.000370
O	Al		0.001986	O	Fe		0.000079	O	Nb	<	0.005585	O	Si		0.004236	M	Zr	<	0.001865
s	As	<		M	Ga	<	0.000466	M	Nd	<	0.000466	M	Sm	<	0.000466				
M	Au	<	0.002796	M	Gd	<	0.000466	M	Ni		0.000486	M	Sn	<	0.000932				
O	B		0.000556	M	Ge	<	0.000932	M	Os	<	0.000466	M	Sr	<	0.001865				
O	Ba	<	0.000670	M	Hf	<	0.000466	O	P	<	0.027925	M	Ta	<	0.000466				
O	Be	<	0.000111	M	Hg	<	0.009321	M	Pb	<	0.002797	M	Tb	<	0.000466				
M	Bi	<	0.000466	M	Ho	<	0.000466	M	Pd	<	0.000466	M	Te	<	0.004663				
O	Ca		0.000503	M	In	<	0.023315	M	Pr	<	0.000466	M	Th	<	0.000466				
M	Cd	<	0.000466	M	Ir	<	0.000466	M	Pt	<	0.000466	O	Ti		0.000052				
M	Ce	<	0.000466	O	K		0.000185	M	Rb	<	0.001865	M	Tl	<	0.000466				
M	Co	<	0.000466	M	La	<	0.000466	M	Re	<	0.000466	M	Tm	<	0.000466				
O	Cr	<	0.002122	O	Li	<	0.000111	M	Rh	<	0.000466	M	U	<	0.000466				
M	Cs	<	0.000932	M	Lu	<	0.000466	M	Ru	<	0.000466	M	V	<	0.001865				
O	Cu	<	0.002904	O	Mg		0.000034	O	S	<	0.017872	M	W	<	0.004663				
M	Dy	<	0.000466	O	Mn		0.000018	M	Sb	<	0.000466	O	Y	<	0.000558				
M	Er	<	0.000466	M	Mo	<	0.000466	O	Sc	<	0.001005	M	Yb	<	0.000466				

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 24, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- May 24, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H_3AsO_4 and $HAsO_2$

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices water and NH_4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H_2O / HNO_3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K_2CO_3 and KNO_3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na_2CO_3 / Na_2O_2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.002234	M	Eu	<	0.000466	O	Na		0.000767	M	Se	<	0.002797	O	Zn		0.000370
O	Al		0.001986	O	Fe		0.000079	O	Nb	<	0.005585	O	Si		0.004236	M	Zr	<	0.001865
s	As	<		M	Ga	<	0.000466	M	Nd	<	0.000466	M	Sm	<	0.000466				
M	Au	<	0.002796	M	Gd	<	0.000466	M	Ni		0.000486	M	Sn	<	0.000932				
O	B		0.000556	M	Ge	<	0.000932	M	Os	<	0.000466	M	Sr	<	0.001865				
O	Ba	<	0.000670	M	Hf	<	0.000466	O	P	<	0.027925	M	Ta	<	0.000466				
O	Be	<	0.000111	M	Hg	<	0.009321	M	Pb	<	0.002797	M	Tb	<	0.000466				
M	Bi	<	0.000466	M	Ho	<	0.000466	M	Pd	<	0.000466	M	Te	<	0.004663				
O	Ca		0.000503	M	In	<	0.023315	M	Pr	<	0.000466	M	Th	<	0.000466				
M	Cd	<	0.000466	M	Ir	<	0.000466	M	Pt	<	0.000466	O	Ti		0.000052				
M	Ce	<	0.000466	O	K		0.000185	M	Rb	<	0.001865	M	Tl	<	0.000466				
M	Co	<	0.000466	M	La	<	0.000466	M	Re	<	0.000466	M	Tm	<	0.000466				
O	Cr	<	0.002122	O	Li	<	0.000111	M	Rh	<	0.000466	M	U	<	0.000466				
M	Cs	<	0.000932	M	Lu	<	0.000466	M	Ru	<	0.000466	M	V	<	0.001865				
O	Cu	<	0.002904	O	Mg		0.000034	O	S	<	0.017872	M	W	<	0.004663				
M	Dy	<	0.000466	O	Mn		0.000018	M	Sb	<	0.000466	O	Y	<	0.000558				
M	Er	<	0.000466	M	Mo	<	0.000466	O	Sc	<	0.001005	M	Yb	<	0.000466				

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

4938580
ID: 1000 As_00020
Exp: 05/24/21 Prpd: SJS
1000 As IV

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS1
Lot Number:	M2-AS657780
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	1971 and 1851
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Certified Density: 1.011 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1 **999 ± 4 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Reagent

1000 Sb_00018

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

toll: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

4799296
ID: 1000 Sb_00018
Exp: 09/22/21 Prpd: SJS
1000 Sb IV

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB1
Lot Number:	M2-SB661224
Matrix:	1% (v/v) HNO3 3% (v/v) Tartaric Acid
Value / Analyte(s):	1 000 µg/mL ea: Antimony
Starting Material:	Sb Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9898%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	1000 ± 8 µg/mL
Density:	1.021 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1000 ± 4 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.000100	M	Eu	< 0.000100	O	Na	0.007430	M	Se	< 0.003732	M	Zn	0.000243
O	Al	0.000972	O	Fe	0.002146	O	Nb	< 0.001813	O	Si	0.019119	M	Zr	< 0.001210
M	As	< 0.003228	M	Ga	< 0.000100	M	Nd	< 0.000100	M	Sm	< 0.000100			
M	Au	< 0.001993	M	Gd	< 0.000100	O	Ni	0.000525	M	Sn	< 0.001815			
O	B	0.003132	M	Ge	< 0.000807	M	Os	< 0.000099	O	Sr	< 0.000085			
O	Ba	< 0.001067	M	Hf	< 0.000100	O	P	0.006825	O	Ta	< 0.001013			
O	Be	< 0.000028	M	Hg	< 0.000299	M	Pb	< 0.000605	M	Tb	< 0.000100			
M	Bi	< 0.000100	M	Ho	< 0.000100	M	Pd	< 0.000201	M	Te	< 0.001109			
O	Ca	0.001113	M	In	< 0.000100	M	Pr	< 0.001008	M	Th	< 0.000100			
M	Cd	< 0.000100	M	Ir	< 0.000398	M	Pt	< 0.000100	O	Tl	0.001106			
O	Ce	< 0.007469	O	K	0.052286	M	Rb	< 0.002824	M	Tl	< 0.000100			
M	Co	< 0.000100	O	La	< 0.000759	M	Re	< 0.000100	M	Tm	< 0.000100			
O	Cr	0.010314	O	Li	< 0.000053	M	Rh	< 0.000100	M	U	< 0.000100			
M	Cs	< 0.002017	M	Lu	< 0.000100	M	Ru	< 0.000099	M	V	< 0.000100			
O	Cu	< 0.000597	O	Mg	0.000486	n	S	<	M	W	< 0.001008			
M	Dy	< 0.000403	O	Mn	0.000172	s	Sb	<	M	Y	< 0.000100			
M	Er	< 0.000100	M	Mo	0.000317	O	Sc	< 0.000049	O	Yb	< 0.000064			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1

Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

1000 Sn_00015

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 06, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 06, 2021**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael Z Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

Tel: 800.669.6799 - 540.585.3030
Fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

5203484
ID: 1000 Sn_00015
Exp: 07/06/17 Prpd: SJS
1000 Sn IV

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSN1
Lot Number:	M2-SN659324
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Tin
Starting Material:	Sn shot
Starting Material Lot#:	1789
Starting Material Purity:	99.9976%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 6 µg/mL

Density: 1.001 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 3 µg/mL**
ICP Assay NIST SRM 3161a Lot Number: 140917

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods—Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

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k = coverage factor = 2 in all cases at Inorganic Ventures

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u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

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- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000100	M	Eu	<	0.000100	O	Na		0.000683	M	Se	<	0.005701	O	Zn	<	0.000308
O	Al	<	0.004116	O	Fe		0.000989	M	Nb	<	0.000200	O	Si		0.012513	O	Zr	<	0.000514
M	As	<	0.001100	M	Ga	<	0.000100	M	Nd	<	0.000100	M	Sm	<	0.000100				
M	Au	<	0.000199	M	Gd	<	0.000500	O	Ni	<	0.001234	s	Sn	<					
O	B	<	0.001296	M	Ge	<	0.000700	M	Os	<	0.000099	O	Sr	<	0.000025				
O	Ba	<	0.000246	M	Hf	<	0.001600	O	P	<	0.020580	O	Ta	<	0.009261				
O	Be	<	0.000102	M	Hg	<	0.000996	M	Pb		0.003700	M	Tb	<	0.000100				
M	Bi		0.000337	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.001800				
O	Ca		0.000470	O	In		0.005468	M	Pr	<	0.006001	M	Th	<	0.000100				
O	Cd	<	0.000284	M	Ir	<	0.000099	M	Pt	<	0.000200	O	Tl	<	0.000514				
M	Ce	<	0.010001	O	K	<	0.003447	M	Rb	<	0.000500	M	Tl	<	0.000100				
O	Co	<	0.001337	O	La	<	0.001025	M	Re	<	0.000100	M	Tm	<	0.000100				
O	Cr	<	0.001029	O	Li	<	0.000077	M	Rh	<	0.000100	M	U	<	0.000100				
M	Cs	<	0.030005	M	Lu	<	0.000200	M	Ru	<	0.000099	M	V	<	0.000500				
O	Cu	<	0.002058	O	Mg		0.000037	n	S	<		M	W	<	0.000100				
M	Dy	<	0.000100	M	Mn	<	0.000100	O	Sb	<	0.020580	M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000100	O	Sc	<	0.000164	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 118.71 +4 4,5, 6,7,8 Sn(OH)xFy2-

Chemical Compatibility -Soluble in HCl and dilute HF / HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away. (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated.) Stable with most inorganic anions provided it is in the chemical form shown above.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the Sn(OH)xFy2- for 1 year in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Sn(OH)xFy2- chemically stable for years in 2-5% HNO3 / trace HF in a LDPE container.

Sn Containing Samples (Preparation and Solution) - Metal (Soluble in HF / HNO3 or HCl); Oxides - SnO (soluble in HCl), SnO2 -very resistant to all acids including HF(Fusion with equal parts of Na2CO3 and S. It is then soluble in water or dilute acids as the thiostannate.); Alloys (Treat first 0.1 g with 10 mL conc. H2SO4 to boiling until the alloy disintegrates and nearly all of the sulfuric acid is expelled. Then add 100 mL O2 free water and 50 mL of conc HCl or transfer to a plastic container and add 1 mL HF in either case warming gently to bring about solution.); Organic Matrices (Volatility and precipitation of the insoluble stannic oxide are problems. Consultation of the literature should be made for individual matrices / Sn compounds.)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 120 amu	5 ppt	N/A	120Te, 104Ru16O, 104Pd16O
ICP-OES 189.989 nm	0.03 / 0.003 µg/mL	1	
ICP-OES 242.949 nm	0.1 / 0.01 µg/mL	1	W, Mo, Rh ,Ta, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

1000 Sr_00011

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 14, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 14, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

540.585.3030
Fax: 540.585.3012
sales@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	M2-SR658331
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	1716 1967 1966
Starting Material Purity:	99.9937%

4938582
ID: 1000 Sr_00011
Exp: 06/14/18 Prpd: SJS
1000 Sr IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	1002 ± 5 µg/mL
Density:	1.001 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**1002 ± 3 µg/mL** ICP Assay NIST SRM 3153a Lot Number: 990906
Assay Method #2	**1001 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.003318	M	Eu	<	0.000995	O	Na		0.000474	M	Se	<	0.023047	O	Zn		0.000121
O	Al		0.000486	O	Fe		0.000826	M	Nb	<	0.000497	O	Si		0.001483	M	Zr	<	0.007967
M	As	<	0.001493	M	Ga	<	0.001991	M	Nd	<	0.000497	M	Sm	<	0.000497				
M	Au	<	0.005394	M	Gd	<	0.002987	M	Ni		0.001357	M	Sn		0.000306				
O	B	<	0.005530	M	Ge	<	0.004979	M	Os	<	0.000490	s	Sr	<					
M	Ba		0.104336	M	Hf	<	0.000497	O	P	<	0.033180	M	Ta	<	0.000497				
O	Be	<	0.000132	M	Hg	<	0.000980	M	Pb		0.001160	M	Tb	<	0.000497				
M	Bi		0.000350	M	Ho	<	0.000497	M	Pd	<	0.002451	O	Te	<	0.022120				
O	Ca		0.003185	M	In	<	0.000497	M	Pr	<	0.000995	M	Th	<	0.000497				
M	Cd		0.000153	M	Ir	<	0.000490	M	Pt	<	0.002987	M	Ti		0.000186				
M	Ce		0.001193	O	K		0.001945	M	Rb	<	0.006971	M	Tl	<	0.000497				
M	Co		0.000153	M	La	<	0.003983	M	Re	<	0.000497	M	Tm	<	0.000497				
O	Cr	<	0.005530	O	Li	<	0.004202	O	Rh	<	0.006636	M	U	<	0.000497				
M	Cs	<	0.001991	M	Lu	<	0.000497	M	Ru	<	0.000980	M	V	<	0.001991				
O	Cu	<	0.006636	O	Mg		0.000126	O	S	<	0.055300	M	W	<	0.001493				
M	Dy	<	0.000497	M	Mn		0.000120	M	Sb	<	0.003983	O	Y	<	0.003318				
M	Er	<	0.000497	M	Mo	<	0.006971	O	Sc	<	0.003318	M	Yb		0.000043				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 Sr(H2O)6+2
Chemical Compatibility - Soluble in HCl, and HNO3. Avoid H2SO4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO3 / LDPE container.
Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

1000 v_00015

INORGANIC VENTURES
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV1
Lot Number:	K2-V651103
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Vanadium
Starting Material:	V2O5
Starting Material Lot#:	1782
Starting Material Purity:	99.9947%

4780772
ID: 1000 V_00015
Exp: 06/22/20 Prpd: SJS
1000 V IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 5 µg/mL

Certified Density: 1.016 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**1001 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**999 ± 5 µg/mL** ICP Assay NIST SRM 3165 Lot Number: 992706

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods | **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000199	M	Eu	<	0.000099	O	Na		0.007915	M	Se	<	0.006683	O	Zn	<	0.006624
M	Al		0.009352	O	Fe		0.033582	M	Nb		0.001127	O	Si		0.002638	M	Zr	<	0.001995
M	As	<	0.001596	M	Ga		0.000433	M	Nd	<	0.000399	M	Sm	<	0.000099				
M	Au	<	0.000300	M	Gd	<	0.000099	M	Ni	<	0.006982	M	Sn	<	0.001396				
M	B	<	0.016458	M	Ge	<	0.000399	M	Os	<	0.000100	O	Sr		0.000143				
M	Ba		0.000184	M	Hf	<	0.000099	O	P	<	0.055200	M	Ta	<	0.000099				
M	Be	<	0.000498	M	Hg	<	0.008001	M	Pb		0.000238	M	Tb	<	0.000099				
M	Bi	<	0.000399	M	Ho	<	0.000099	M	Pd	<	0.000099	M	Te	<	0.001197				
O	Ca		0.011993	M	In	<	0.000099	M	Pr	<	0.000099	M	Th	<	0.000199				
M	Cd	<	0.000099	M	Ir	<	0.000100	M	Pt	<	0.000199	M	Ti		0.001452				
M	Ce	<	0.000399	O	K	<	0.110400	M	Rb	<	0.000598	M	Tl	<	0.001396				
M	Co	<	0.000099	M	La	<	0.000199	M	Re	<	0.000099	M	Tm	<	0.000099				
O	Cr		0.016311	O	Li	<	0.003312	M	Rh	<	0.000399	M	U	<	0.000199				
M	Cs	<	0.000184	M	Lu	<	0.000099	M	Ru	<	0.000100	s	V	<					
M	Cu	<	0.002793	O	Mg	<	0.033120	n	S	<		M	W		0.000368				
M	Dy	<	0.000099	M	Mn		0.000650	M	Sb		0.009363	M	Y	<	0.000099				
M	Er	<	0.000099	M	Mo		0.011021	M	Sc	<	0.000498	M	Yb	<	0.000099				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

-While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 H2V10O284-
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4, HF, H3PO4 and strong basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na2CO3 / KNO3); Oxides (V2O3 - use HCl, V2O4 - use HCl or HNO3, V2O5 - use concentrated acids); Ores (Na2CO3 / KNO3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V2O5 above) .
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 22, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 22, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Chemist, Technical Manager

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Reagent

1000 W IV_00014

INORGANIC VENTURES
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGW1
Lot Number:	N2-W664865
Matrix:	0.2% (v/v) HNO3 2% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Tungsten
Starting Material:	W Powder
Starting Material Lot#:	1898
Starting Material Purity:	99.9941%

5204592
ID: 1000 W IV_00014
Exp:07/05/19 Prpd:LMT Opn:07/05/18
1000 Tungsten IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 6 µg/mL

Density: 1.007 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **999 ± 6 µg/mL**
ICP Assay NIST SRM 3163 Lot Number: 140606

Assay Method #2 **997 ± 7 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001202	M	Eu	<	0.000200	O	Na		0.001960	M	Se	<	0.004000	M	Zn	0.002074
O	Al	<	0.033570	M	Fe	<	0.079372	M	Nb	<	0.180390	i	Si	<		O	Zr	< 0.005595
M	As	<	0.010422	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200			
M	Au	<	0.030804	M	Gd	<	0.000200	M	Ni	<	0.017638	M	Sn		0.000266			
M	B	<	0.003808	M	Ge	<	0.001403	M	Os	<	0.000200	M	Sr	<	0.000801			
M	Ba	<	0.002004	M	Hf		0.000288	i	P	<		M	Ta		0.011947			
M	Be	<	0.000601	i	Hg	<		M	Pb	<	0.005612	M	Tb	<	0.000200			
M	Bi	<	0.009219	M	Ho	<	0.000200	M	Pd	<	0.001800	M	Te	<	0.001603			
O	Ca		0.004290	M	In	<	0.000200	M	Pr	<	0.000601	M	Th	<	0.012426			
M	Cd	<	0.000200	M	Ir	<	0.000200	M	Pt	<	0.001603	M	Ti		0.004115			
M	Ce	<	0.000200	O	K		0.039229	M	Rb	<	0.001603	M	Tl	<	0.003206			
M	Co	<	0.000200	M	La	<	0.000200	M	Re	<	0.300651	M	Tm	<	0.000200			
O	Cr	<	0.011190	O	Li	<	0.000434	M	Rh	<	0.000200	M	U	<	0.001202			
M	Cs		0.000088	M	Lu	<	0.000200	M	Ru	<	0.000200	M	V	<	0.009219			
M	Cu	<	0.003607	M	Mg		0.000632	i	S	<		s	W	<				
M	Dy	<	0.000200	M	Mn	<	0.005211	M	Sb	<	0.008819	M	Y	<	0.000200			
M	Er	<	0.000200	M	Mo		0.000232	O	Sc	<	0.000543	M	Yb	<	0.000200			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 183.85 +6 6,7,8,9 WOF5-2(chemical form as received)
Chemical Compatibility -W is very readily hydrolyzed requiring 0.1 to 1% HF solutions for stabile acidic solutions. The [WOF5]-2 is soluble in % levels of HCl and HNO3 provided it is in the [WOF5]-2 form. Stable at ppm levels with some metals provided it is fluorinated. <U>Do not mix with Alkaline or Rare Earths</U>. W is best to be mixed only with other fluorinated metals (Ti, Zr, Hf, Nb, Ta, Mo, Si, Sn, Ge). Look for yellow WO3 precipitate if mixed with other transitions at higher levels indicating instability. The yellow WO3 will form over a period of weeks even in trace HF, therefore, <U>HF levels of W multi-element blends should be ∼ 1%</U>.
Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [WOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [WOF5]-2 chemically stable for years in 1% HF in a LDPE container.
W Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3); Oxide (soluble in HF or NH4OH) ; Organic Matrices (dry ash at 450 0C in Pt0 and dissolve oxide with HF).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 182 amu	5 ppt	N/A	166Er16O
ICP-OES 207.911 nm	0.03/0.001 µg/mL	1	Ru, In
ICP-OES 209.475 nm	0.05/0.008 µg/mL	1	Mo
ICP-OES 224.875 nm	0.05/0.005 µg/mL	1	Co, Rh, Ag

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 19, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 19, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

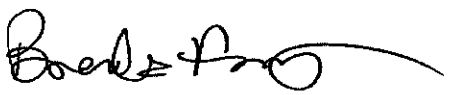
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician



Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

1000 Zr_00017

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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

4902292
ID: 1000 Zr_00017
Exp: 03/17/17 Prpd: SJS
1000 Zr IV

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZR1
Lot Number:	M2-ZR655896
Matrix:	tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Zirconium
Starting Material:	ZrO2
Starting Material Lot#:	1842
Starting Material Purity:	99.9913%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	998 ± 5 µg/mL
Density:	1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**998 ± 3 µg/mL**
	ICP Assay NIST SRM 3169 Lot Number: 130920

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{its} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{its} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

n	Ag	<		M	Eu	<	0.000247	O	Na	<	0.314400	M	Se	<	0.494400	O	Zn		0.000102
O	Al	<	0.073360	O	Fe		0.004477	O	Nb	<	0.104800	O	Si	<	0.104800	s	Zr	<	
M	As	<	0.012360	M	Ga	<	0.001236	M	Nd	<	0.000742	M	Sm	<	0.007416				
M	Au	<	0.012360	M	Gd	<	0.000247	O	Ni	<	0.003144	M	Sn	<	0.024720				
M	B	<	0.009888	M	Ge	<	0.000742	n	Os	<		M	Sr		0.000295				
M	Ba	<	0.007416	O	Hf		0.010745	O	P	<	0.052400	O	Ta	<	0.104800				
M	Be	<	0.000247	O	Hg	<	0.001048	M	Pb		0.000316	M	Tb	<	0.000247				
M	Bi	<	0.017304	M	Ho	<	0.000247	M	Pd	<	0.024720	M	Te	<	0.247200				
O	Ca	<	0.104800	M	In	<	0.002472	M	Pr	<	0.000247	M	Th	<	0.012360				
O	Cd		0.059101	M	Ir	<	0.012360	M	Pt	<	0.024720	M	Ti	<	0.017304				
M	Ce	<	0.002472	O	K	<	0.157200	M	Rb	<	0.002472	M	Tl	<	0.000247				
M	Co	<	0.002472	M	La	<	0.000247	M	Re	<	0.000247	M	Tm	<	0.000247				
O	Cr	<	0.010480	M	Li	<	0.009888	M	Rh	<	0.000247	M	U	<	0.001236				
M	Cs	<	0.012360	M	Lu	<	0.000247	M	Ru	<	0.000247	M	V	<	0.019776				
O	Cu		0.002238	O	Mg		0.000111	O	S		0.044774	M	W	<	0.024720				
M	Dy	<	0.000247	M	Mn	<	0.012360	M	Sb	<	0.002472	M	Y	<	0.000247				
M	Er	<	0.000247	O	Mo		0.001656	O	Sc	<	0.002096	M	Yb	<	0.000247				

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.8799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 17, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

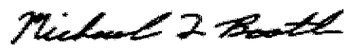
Certificate Prepared By:

James King Jr
Chemist, Technical Manager



Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Revision 1: Added 30 mL Phrases. 092117JB

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 91.22 +4 6,7,8 Zr(F)6-2
Chemical Compatibility -Soluble in concentrated HCl, HF, H2SO4 (very hot) and HNO3. Avoid H3PO4and neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions but precipitation with phosphate, oxalate, and tartrate with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.
Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the Zr(F)6-2 + Zr(OH)4F2-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Zr(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in a LDPE container.
Zr Containing Samples (Preparation and Solution) -Metal (Soluble in H2O / HF / HNO3); Oxide unlike TiO2 th ZrO2 is best fused in one of the following ways (Na2O2 in Ni0, Na2CO3 in Pt0 or Borax in Pt0); Organic Matrices (dry ash at 450 0C in Pt0 and dissolve by fusing with Na2CO3 and dissolving in HF / HNO3 / H2O).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 90 amu	2 ppt	N/A	74Ge16O, 74Se16O, [180X+2 (where X = Hf, Ta, W)]
ICP-OES 272.261 nm	0.018/0.001 µg/mL	1	Cr, V, Th, W
ICP-OES 339.198 nm	0.008/0.0007 µg/mL	1	Th, Mo
ICP-OES 343.823 nm	0.007/0.0004 µg/mL	1	Hf, Nb

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

10000 Al_00018

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 08, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 08, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Donna Senn

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

300 Technology Drive
Christiansburg, VA 24073 - USA
Inorganic Ventures

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	K2-AL653003
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Al Shot
Starting Material Lot#:	1834
Starting Material Purity:	99.9965%

4785865
ID: 10000 Al_00018
Exp: 11/08/20 Prpd: CML
10000 Al IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 33 µg/mL

Certified Density: 1.083 g/mL (measured at 20 ± 1 °C)

Assay Information:

Assay Method #1	**10008 ± 39 µg/mL** ICP Assay NIST SRM 3101a Lot Number: 140903
Assay Method #2	**10039 ± 26 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u^2_{char\ a}) / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u^2_{char\ b}) / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM by one method

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000521	M	Eu	<	0.000521	O	Na		0.039566	M	Se	<	0.003648	M	Zn	0.030987
s	Al	<		O	Fe		0.031494	M	Nb	<	0.000521	O	Si		0.185691	O	Zr	0.000399
M	As	<	0.012509	M	Ga		0.002264	M	Nd		0.004290	M	Sm	<	0.002085			
M	Au	<	0.000518	M	Gd	<	0.004170	O	Ni	<	0.012890	M	Sn	<	0.005212			
O	B		0.008253	M	Ge	<	0.002606	M	Os	<	0.000518	O	Sr		0.000202			
O	Ba	<	0.000659	M	Hf	<	0.000521	n	P	<		M	Ta	<	0.000521			
O	Be	<	0.000258	M	Hg	<	0.001555	M	Pb		0.001549	M	Tb	<	0.000521			
M	Bi	<	0.005212	M	Ho	<	0.000521	M	Pd	<	0.000521	M	Te	<	0.014072			
O	Ca		0.013185	M	In	<	0.002085	M	Pr		0.000953	M	Th	<	0.007297			
M	Cd	<	0.004170	M	Ir	<	0.000518	M	Pt	<	0.000521	O	Ti		0.001589			
M	Ce		0.011680	O	K		0.026175	M	Rb	<	0.000521	M	Tl		0.003099			
M	Co	<	0.000521	O	La		0.007115	M	Re	<	0.000521	M	Tm	<	0.000521			
O	Cr		0.001038	O	Li	<	0.000103	M	Rh	<	0.000521	M	U	<	0.005212			
M	Cs	<	0.000521	M	Lu	<	0.000521	M	Ru	<	0.000518	M	V		0.001549			
O	Cu		0.030608	O	Mg		0.016615	i	S	<		M	W	<	0.000521			
M	Dy	<	0.003127	O	Mn		0.000589	M	Sb	<	0.018763	O	Y	<	0.002578			
M	Er		0.000834	M	Mo	<	0.002085	O	Sc		0.000548	M	Yb	<	0.000521			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, HF and H2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

Reagent

10000 Fe_00021

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 12, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 12, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

300 Technology Drive
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Fax: 540.585.3012
inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGFE10
Lot Number:	M2-FE659835
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Iron
Starting Material:	Iron Metal
Starting Material Lot#:	2031 & 2146
Starting Material Purity:	99.9919%

4954179
ID: 10000 Fe_00021
Exp: 07/12/21 Prpd: SJS
10000 Fe IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value:	9993 ± 25 µg/mL
Density:	1.040 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10014 ± 52 µg/mL** ICP Assay NIST SRM 3126a Lot Number: 140812
Assay Method #2	**9988 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000607	M	Eu	<	0.000607	O	Na		0.009866	M	Se	<	0.032805	O	Zn	0.119626
M	Al		0.009492	s	Fe	<		M	Nb	<	0.000607	O	Si		0.035517	M	Zr	< 0.002430
M	As		0.060562	M	Ga	<	0.048601	M	Nd	<	0.000607	M	Sm	<	0.000607			
M	Au	<	0.008508	M	Gd	<	0.000607	O	Ni		0.182522	M	Sn	<	0.012150			
M	B	<	0.015187	M	Ge		0.060202	M	Os	<	0.001215	O	Sr	<	0.000997			
O	Ba	<	0.002494	M	Hf	<	0.000607	i	P	<	0.000001	M	Ta	<	0.000607			
M	Be	<	0.000607	M	Hg	<	0.001215	M	Pb		0.001321	M	Tb	<	0.000607			
M	Bi	<	0.000607	M	Ho	<	0.000607	M	Pd	<	0.000607	M	Te	<	0.001822			
O	Ca		0.022445	M	In	<	0.000607	M	Pr	<	0.000607	M	Th	<	0.001215			
M	Cd	<	0.000607	M	Ir	<	0.006685	M	Pt	<	0.000607	M	Ti	<	0.009720			
M	Ce	<	0.000607	O	K		0.003453	M	Rb	<	0.000607	M	Tl	<	0.000607			
O	Co		0.254052	M	La	<	0.000607	M	Re	<	0.000607	M	Tm	<	0.000607			
O	Cr		0.034284	O	Li	<	0.000124	M	Rh	<	0.000607	M	U	<	0.002430			
M	Cs	<	0.000607	M	Lu	<	0.000607	M	Ru	<	0.000607	M	V	<	0.003645			
O	Cu		0.019732	O	Mg		0.001973	O	S		0.032064	M	W	<	0.003645			
M	Dy	<	0.000607	O	Mn		0.073995	M	Sb		0.043139	M	Y	<	0.000607			
M	Er	<	0.000607	M	Mo		0.012016	M	Sc	<	0.001822	M	Yb	<	0.000607			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 55.85 +3 6 Fe(H2O)63+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF and H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Fe Containing Samples (Preparation and Solution) - Metal (Soluble in HCl); Oxides (If the oxide has been at a high temperature then Na2CO3 fusion in Pt0 followed by HCl dissolution otherwise dissolve in dilute HCl); Ores (See Oxides above using only the fusion approach).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 56 amu	970 ppt	N/A	40Ar15N1H, 40Ar16O, 36Ar17O1H , 38Ar18O, 37Cl18O1H, 40Ca16O
ICP-OES 238.204 nm	0.005/0.001 µg/mL	1	Ru, Co
ICP-OES 239.562 nm	0.005/0.001 µg/mL	1	Co, W, Cr
ICP-OES 259.940 nm	0.006/0.001 µg/mL	1	Hf, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

10000 Na_00067

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 06, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 06, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	N2-NA668816
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	1870
Starting Material Purity:	99.9997%

5225623
ID: 10000 Na_00067
Exp: 06/06/22 Prpd: SJS
10000 Na IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9997 ± 18 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **10000 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9966 ± 58 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 120715

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods — Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$.

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002004	M	Eu	<	0.001002	s	Na	<		M	Se	<	0.028065	M	Zn	<	0.001002
O	Al	<	0.007396	M	Fe	<	0.008018	M	Nb	<	0.001002	O	Si	<	0.024654	M	Zr	<	0.001002
M	As	<	0.002004	M	Ga	<	0.001002	M	Nd	<	0.001002	M	Sm	<	0.001002				
M	Au	<	0.001002	M	Gd	<	0.001002	M	Ni	<	0.003007	M	Sn	<	0.003007				
O	B	<	0.024654	M	Ge	<	0.002004	M	Os	<	0.018045	M	Sr		0.001145				
M	Ba		0.000127	M	Hf	<	0.001002	O	P	<	0.043145	M	Ta	<	0.001002				
O	Be	<	0.000739	M	Hg	<	0.003007	M	Pb	<	0.001002	M	Tb	<	0.001002				
M	Bi	<	0.001002	M	Ho	<	0.001002	M	Pd	<	0.001002	M	Te	<	0.006014				
O	Ca		0.059185	M	In	<	0.001002	M	Pr	<	0.001002	M	Th	<	0.001002				
M	Cd	<	0.001002	M	Ir	<	0.001002	M	Pt	<	0.001002	M	Ti	<	0.002004				
M	Ce	<	0.001002	O	K		0.018935	M	Rb	<	0.001002	M	Tl	<	0.001002				
O	Co	<	0.004314	M	La	<	0.001002	M	Re	<	0.001002	M	Tm	<	0.001002				
M	Cr	<	0.004009	O	Li	<	0.000246	M	Rh	<	0.001002	M	U	<	0.001002				
M	Cs	<	0.001002	M	Lu	<	0.001002	M	Ru	<	0.001002	M	V	<	0.008018				
M	Cu	<	0.005011	M	Mg		0.004580	O	S	<	0.036982	M	W	<	0.002004				
M	Dy	<	0.001002	M	Mn	<	0.002004	M	Sb	<	0.001002	M	Y	<	0.001002				
M	Er	<	0.001002	M	Mo	<	0.001002	M	Sc	<	0.001002	M	Yb	<	0.001002				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

Reagent

10000 Si_00015

INORGANIC™ VENTURES

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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI10
Lot Number:	M2-SI657321
Matrix:	1% (v/v) HNO3 1.4% (v/v) HF
Value / Analyte(s):	10 000 µg/mL ea: Silicon
Starting Material:	Fumed Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9908%

4938600
ID: 10000 Si_00015
Exp: 04/25/21 Prpd: SJS
10000 SI IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10023 ± 48 µg/mL

Density: 1.045 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **10051 ± 52 µg/mL**
ICP Assay NIST SRM 3150 Lot Number: 130912

Assay Method #2 **9989 ± 57 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001488	M	Eu	<	0.000248	O	Na		0.016935	M	Se	<	0.002977	O	Zn	<	0.012935
O	Al		0.112342	M	Fe		0.026932	O	Nb	<	0.005610	s	Si	<		O	Zr	<	0.001122
M	As	<	0.003953	M	Ga	<	0.000248	M	Nd	<	0.000248	M	Sm	<	0.000248				
M	Au	<	0.029405	M	Gd	<	0.000248	M	Ni	<	0.003225	M	Sn	<	0.000744				
O	B		0.143798	M	Ge	<	0.001240	M	Os	<	0.000247	O	Sr		0.001081				
O	Ba		0.002655	M	Hf		0.001987	i	P	<	0.000001	M	Ta		0.015006				
O	Be	<	0.000336	M	Hg	<	0.001482	M	Pb	<	0.000744	M	Tb	<	0.000248				
M	Bi		0.007751	M	Ho	<	0.000248	M	Pd	<	0.000248	M	Te	<	0.000744				
O	Ca		0.211203	M	In	<	0.000496	M	Pr	<	0.000248	M	Th	<	0.007940				
M	Cd	<	0.000248	M	Ir	<	0.000247	M	Pt	<	0.000248	O	Ti		0.004305				
M	Ce	<	0.000992	O	K		0.027489	M	Rb	<	0.068983	M	Tl	<	0.007940				
M	Co	<	0.000248	M	La	<	0.000248	M	Re	<	0.000248	M	Tm	<	0.000248				
O	Cr	<	0.004488	O	Li		0.000096	M	Rh	<	0.000248	M	U	<	0.000248				
M	Cs	<	0.006451	M	Lu	<	0.000248	M	Ru	<	0.000247	M	V	<	0.005459				
O	Cu	<	0.001945	O	Mg		0.013364	O	S		1.364159	M	W	<	0.005459				
M	Dy	<	0.000248	M	Mn	<	0.002481	M	Sb	<	0.003970	M	Y	<	0.000248				
M	Er	<	0.000248	M	Mo	<	0.002233	O	Sc	<	0.000235	M	Yb	<	0.000248				

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 25, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 25, 2021**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Brenda Francis
Product Documentation Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Revision1: Added 30mL statements 092217JAK

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

Reagent

571995_00043

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0136052

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2019 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBH5677) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 161108JLM) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,011.2 µg/mL	+/- 11.6933 µg/mL +/- 24.0420 µg/mL +/- 38.2625 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF1351V) **Purity** 99%	1,005.1 µg/mL	+/- 5.8439 µg/mL +/- 12.0154 µg/mL +/- 19.1224 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,002.6 µg/mL	+/- 5.8292 µg/mL +/- 11.9851 µg/mL +/- 19.0742 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,001.4 µg/mL	+/- 5.8222 µg/mL +/- 11.9708 µg/mL +/- 19.0513 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBH3926V) **Purity** 99%	1,000.7 µg/mL	+/- 5.8180 µg/mL +/- 11.9620 µg/mL +/- 19.0374 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,007.1 µg/mL	+/- 5.8552	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)		+/- 12.0385	µg/mL	Unstressed
	Purity 99%			+/- 19.1592	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,001.0 µg/mL	+/- 5.8199	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)		+/- 11.9660	µg/mL	Unstressed
	Purity 99%			+/- 19.0437	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,004.4 µg/mL	+/- 5.8397	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)		+/- 12.0067	µg/mL	Unstressed
	Purity 99%			+/- 19.1084	µg/mL	Stressed
11	Benzyl alcohol		1,005.2 µg/mL	+/- 5.8443	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)		+/- 12.0162	µg/mL	Unstressed
	Purity 99%			+/- 19.1236	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,001.2 µg/mL	+/- 5.8211	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot 68996CMV)		+/- 11.9684	µg/mL	Unstressed
	Purity 99%			+/- 19.0475	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,001.6 µg/mL	+/- 5.8234	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)		+/- 11.9732	µg/mL	Unstressed
	Purity 99%			+/- 19.0551	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,006.7 µg/mL	+/- 5.8528	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 5510800)		+/- 12.0336	µg/mL	Unstressed
	Purity 98%			+/- 19.1513	µg/mL	Stressed
15	Acetophenone		1,005.5 µg/mL	+/- 5.8459	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG7113)		+/- 12.0194	µg/mL	Unstressed
	Purity 99%			+/- 19.1287	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		501.0 µg/mL	+/- 2.9196	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)		+/- 5.9923	µg/mL	Unstressed
	Purity 99%			+/- 9.5334	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.7 µg/mL	+/- 2.9235	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)		+/- 6.0002	µg/mL	Unstressed
	Purity 99%			+/- 9.5461	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,003.1 µg/mL	+/- 5.8323	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot NOPCF)		+/- 11.9915	µg/mL	Unstressed
	Purity 99%			+/- 19.0843	µg/mL	Stressed
19	Hexachloroethane		1,003.4 µg/mL	+/- 5.8339	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)		+/- 11.9947	µg/mL	Unstressed
	Purity 99%			+/- 19.0894	µg/mL	Stressed
20	Nitrobenzene		1,002.3 µg/mL	+/- 5.8273	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)		+/- 11.9812	µg/mL	Unstressed
	Purity 99%			+/- 19.0678	µg/mL	Stressed
21	Isophorone		1,003.3 µg/mL	+/- 5.8334	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)		+/- 11.9938	µg/mL	Unstressed
	Purity 98%			+/- 19.0879	µg/mL	Stressed
22	2-Nitrophenol		1,007.7 µg/mL	+/- 5.8587	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)		+/- 12.0457	µg/mL	Unstressed
	Purity 99%			+/- 19.1706	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.9 µg/mL	+/- 5.8191	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)		+/- 11.9644	µg/mL	Unstressed
	Purity 99%			+/- 19.0412	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 4621000)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
25	2,4-Dichlorophenol		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9915	µg/mL	Unstressed
	Purity 99%				+/-	19.0843	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,005.0	µg/mL	+/-	5.8432	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0138	µg/mL	Unstressed
	Purity 99%				+/-	19.1198	µg/mL	Stressed
27	Naphthalene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
29	4-Chloroaniline		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
30	Hexachlorobutadiene		1,002.5	µg/mL	+/-	5.8284	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9835	µg/mL	Unstressed
	Purity 99%				+/-	19.0716	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,007.7	µg/mL	+/-	5.8587	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBG8884)			+/-	12.0459	µg/mL	Unstressed
	Purity 96%				+/-	19.1708	µg/mL	Stressed
33	1-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-9)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,004.3	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0051	µg/mL	Unstressed
	Purity 99%				+/-	19.1059	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,007.1	µg/mL	+/-	5.8552	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012017H)			+/-	12.0385	µg/mL	Unstressed
	Purity 99%				+/-	19.1592	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,003.5	µg/mL	+/-	5.8342	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	11.9955	µg/mL	Unstressed
	Purity 99%				+/-	19.0907	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,006.4	µg/mL	+/-	5.8513	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0306	µg/mL	Unstressed
	Purity 99%				+/-	19.1465	µg/mL	Stressed
38	2-Chloronaphthalene		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
39	Biphenyl		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed

40	2-Nitroaniline		1,004.5	µg/mL	+/-	5.8401	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	12.0075	µg/mL	Unstressed
	Purity 99%				+/-	19.1097	µg/mL	Stressed
41	Acenaphthylene		1,006.0	µg/mL	+/-	5.8491	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)			+/-	12.0260	µg/mL	Unstressed
	Purity 97%				+/-	19.1392	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
43	Dimethylphthalate		1,003.7	µg/mL	+/-	5.8358	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9987	µg/mL	Unstressed
	Purity 99%				+/-	19.0957	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.7	µg/mL	+/-	5.8183	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCBB8606V)			+/-	11.9628	µg/mL	Unstressed
	Purity 99%				+/-	19.0387	µg/mL	Stressed
45	3-Nitroaniline		1,005.2	µg/mL	+/-	5.8443	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)			+/-	12.0162	µg/mL	Unstressed
	Purity 99%				+/-	19.1236	µg/mL	Stressed
46	Acenaphthene		1,005.9	µg/mL	+/-	5.8482	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)			+/-	12.0242	µg/mL	Unstressed
	Purity 99%				+/-	19.1363	µg/mL	Stressed
47	2,4-Dinitrophenol		2,008.3	µg/mL	+/-	11.6766	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF9439V)			+/-	24.0077	µg/mL	Unstressed
	Purity 99%				+/-	38.2080	µg/mL	Stressed
48	Dibenzofuran		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBW2691V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
49	4-Nitrophenol		2,009.3	µg/mL	+/-	11.6824	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBV0501V)			+/-	24.0197	µg/mL	Unstressed
	Purity 99%				+/-	38.2270	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,003.9	µg/mL	+/-	5.8366	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	12.0003	µg/mL	Unstressed
	Purity 99%				+/-	19.0983	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,001.9	µg/mL	+/-	5.8253	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B180305L)			+/-	11.9772	µg/mL	Unstressed
	Purity 99%				+/-	19.0615	µg/mL	Stressed
52	Fluorene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10193329)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
53	n-Hexadecane (C16)		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBG2582V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
54	Diethylphthalate		1,003.3	µg/mL	+/-	5.8335	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBV9622V)			+/-	11.9939	µg/mL	Unstressed
	Purity 99%				+/-	19.0881	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed

56	4-Nitroaniline		1,003.1	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9907	µg/mL	Unstressed
	Purity 98%				+/-	19.0830	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,003.7	µg/mL	+/-	11.6495	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC25844V)			+/-	23.9520	µg/mL	Unstressed
	Purity 99%				+/-	38.1192	µg/mL	Stressed
58	Diphenylamine		852.3	µg/mL	+/-	4.9555	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1888	µg/mL	Unstressed
	Purity 99%				+/-	16.2154	µg/mL	Stressed
59	Azobenzene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBQ0927V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,022.3	µg/mL	+/-	5.9439	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.2210	µg/mL	Unstressed
	Purity 99%				+/-	19.4496	µg/mL	Stressed
61	Hexachlorobenzene		1,002.5	µg/mL	+/-	5.8288	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot 7013600)			+/-	11.9843	µg/mL	Unstressed
	Purity 99%				+/-	19.0729	µg/mL	Stressed
62	Pentachlorophenol		2,002.1	µg/mL	+/-	11.6406	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170306KJA)			+/-	23.9336	µg/mL	Unstressed
	Purity 99%				+/-	38.0900	µg/mL	Stressed
63	n-Octadecane (C18)		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot OGCDK)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
64	Phenanthrene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
65	Anthracene		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBV7759V)			+/-	11.9573	µg/mL	Unstressed
	Purity 99%				+/-	19.0298	µg/mL	Stressed
66	Carbazole		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 6489700)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.7	µg/mL	+/-	5.8470	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0218	µg/mL	Unstressed
	Purity 99%				+/-	19.1325	µg/mL	Stressed
68	Fluoranthene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	12.0204	µg/mL	Unstressed
	Purity 98%				+/-	19.1302	µg/mL	Stressed
69	Pyrene		1,005.8	µg/mL	+/-	5.8478	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0234	µg/mL	Unstressed
	Purity 99%				+/-	19.1351	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKBZ4553V)			+/-	11.9571	µg/mL	Unstressed
	Purity 98%				+/-	19.0295	µg/mL	Stressed
71	Benz(a)anthracene		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012012)			+/-	11.9915	µg/mL	Unstressed
	Purity 98%				+/-	19.0842	µg/mL	Stressed

72	Chrysene		1,004.6	µg/mL	+/-	5.8408	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0091	µg/mL	Unstressed
	Purity 99%				+/-	19.1122	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,002.7	µg/mL	+/-	5.8296	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	11.9859	µg/mL	Unstressed
	Purity 99%				+/-	19.0754	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.9	µg/mL	+/-	5.8602	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 6016000)			+/-	12.0489	µg/mL	Unstressed
	Purity 99%				+/-	19.1756	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.6	µg/mL	+/-	5.8350	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9971	µg/mL	Unstressed
	Purity 99%				+/-	19.0932	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012017K)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
77	Benzo(a)pyrene		1,002.1	µg/mL	+/-	5.8261	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9788	µg/mL	Unstressed
	Purity 99%				+/-	19.0640	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,004.0	µg/mL	+/-	5.8373	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0019	µg/mL	Unstressed
	Purity 99%				+/-	19.1008	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.9	µg/mL	+/-	5.8195	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9652	µg/mL	Unstressed
	Purity 99%				+/-	19.0425	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

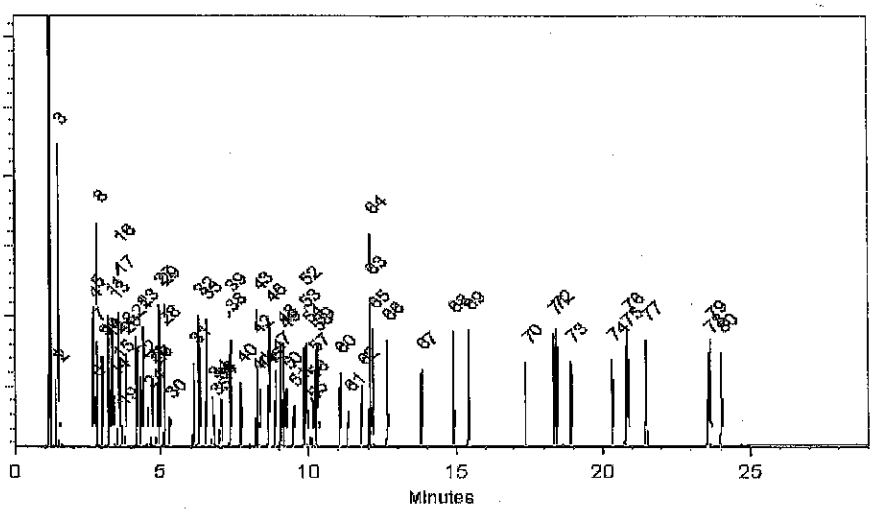
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician **Date Mixed:** 12-Mar-2018 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 27-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

571995_00044

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Certificate of Analysis

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ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0136052

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2019 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBH5677) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 161108JLM) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,011.2 µg/mL	+/- 11.6933 µg/mL +/- 24.0420 µg/mL +/- 38.2625 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF1351V) **Purity** 99%	1,005.1 µg/mL	+/- 5.8439 µg/mL +/- 12.0154 µg/mL +/- 19.1224 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,002.6 µg/mL	+/- 5.8292 µg/mL +/- 11.9851 µg/mL +/- 19.0742 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,001.4 µg/mL	+/- 5.8222 µg/mL +/- 11.9708 µg/mL +/- 19.0513 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBH3926V) **Purity** 99%	1,000.7 µg/mL	+/- 5.8180 µg/mL +/- 11.9620 µg/mL +/- 19.0374 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,007.1 µg/mL	+/- 5.8552	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)		+/- 12.0385	µg/mL	Unstressed
	Purity 99%			+/- 19.1592	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,001.0 µg/mL	+/- 5.8199	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBM5751V)		+/- 11.9660	µg/mL	Unstressed
	Purity 99%			+/- 19.0437	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,004.4 µg/mL	+/- 5.8397	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)		+/- 12.0067	µg/mL	Unstressed
	Purity 99%			+/- 19.1084	µg/mL	Stressed
11	Benzyl alcohol		1,005.2 µg/mL	+/- 5.8443	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBC1850V)		+/- 12.0162	µg/mL	Unstressed
	Purity 99%			+/- 19.1236	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,001.2 µg/mL	+/- 5.8211	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot 68996CMV)		+/- 11.9684	µg/mL	Unstressed
	Purity 99%			+/- 19.0475	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,001.6 µg/mL	+/- 5.8234	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)		+/- 11.9732	µg/mL	Unstressed
	Purity 99%			+/- 19.0551	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,006.7 µg/mL	+/- 5.8528	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 5510800)		+/- 12.0336	µg/mL	Unstressed
	Purity 98%			+/- 19.1513	µg/mL	Stressed
15	Acetophenone		1,005.5 µg/mL	+/- 5.8459	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG7113)		+/- 12.0194	µg/mL	Unstressed
	Purity 99%			+/- 19.1287	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		501.0 µg/mL	+/- 2.9196	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)		+/- 5.9923	µg/mL	Unstressed
	Purity 99%			+/- 9.5334	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.7 µg/mL	+/- 2.9235	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)		+/- 6.0002	µg/mL	Unstressed
	Purity 99%			+/- 9.5461	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,003.1 µg/mL	+/- 5.8323	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot NOPCF)		+/- 11.9915	µg/mL	Unstressed
	Purity 99%			+/- 19.0843	µg/mL	Stressed
19	Hexachloroethane		1,003.4 µg/mL	+/- 5.8339	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)		+/- 11.9947	µg/mL	Unstressed
	Purity 99%			+/- 19.0894	µg/mL	Stressed
20	Nitrobenzene		1,002.3 µg/mL	+/- 5.8273	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)		+/- 11.9812	µg/mL	Unstressed
	Purity 99%			+/- 19.0678	µg/mL	Stressed
21	Isophorone		1,003.3 µg/mL	+/- 5.8334	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)		+/- 11.9938	µg/mL	Unstressed
	Purity 98%			+/- 19.0879	µg/mL	Stressed
22	2-Nitrophenol		1,007.7 µg/mL	+/- 5.8587	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)		+/- 12.0457	µg/mL	Unstressed
	Purity 99%			+/- 19.1706	µg/mL	Stressed
23	2,4-Dimethylphenol		1,000.9 µg/mL	+/- 5.8191	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)		+/- 11.9644	µg/mL	Unstressed
	Purity 99%			+/- 19.0412	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 4621000)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
25	2,4-Dichlorophenol		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9915	µg/mL	Unstressed
	Purity 99%				+/-	19.0843	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,005.0	µg/mL	+/-	5.8432	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0138	µg/mL	Unstressed
	Purity 99%				+/-	19.1198	µg/mL	Stressed
27	Naphthalene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
29	4-Chloroaniline		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
30	Hexachlorobutadiene		1,002.5	µg/mL	+/-	5.8284	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9835	µg/mL	Unstressed
	Purity 99%				+/-	19.0716	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,007.7	µg/mL	+/-	5.8587	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBG8884)			+/-	12.0459	µg/mL	Unstressed
	Purity 96%				+/-	19.1708	µg/mL	Stressed
33	1-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-9)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,004.3	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0051	µg/mL	Unstressed
	Purity 99%				+/-	19.1059	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,007.1	µg/mL	+/-	5.8552	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012017H)			+/-	12.0385	µg/mL	Unstressed
	Purity 99%				+/-	19.1592	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,003.5	µg/mL	+/-	5.8342	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	11.9955	µg/mL	Unstressed
	Purity 99%				+/-	19.0907	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,006.4	µg/mL	+/-	5.8513	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0306	µg/mL	Unstressed
	Purity 99%				+/-	19.1465	µg/mL	Stressed
38	2-Chloronaphthalene		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
39	Biphenyl		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed

40	2-Nitroaniline		1,004.5	µg/mL	+/-	5.8401	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)			+/-	12.0075	µg/mL	Unstressed
	Purity 99%				+/-	19.1097	µg/mL	Stressed
41	Acenaphthylene		1,006.0	µg/mL	+/-	5.8491	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)			+/-	12.0260	µg/mL	Unstressed
	Purity 97%				+/-	19.1392	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,001.8	µg/mL	+/-	5.8246	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)			+/-	11.9756	µg/mL	Unstressed
	Purity 99%				+/-	19.0590	µg/mL	Stressed
43	Dimethylphthalate		1,003.7	µg/mL	+/-	5.8358	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)			+/-	11.9987	µg/mL	Unstressed
	Purity 99%				+/-	19.0957	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,000.7	µg/mL	+/-	5.8183	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot BCBB8606V)			+/-	11.9628	µg/mL	Unstressed
	Purity 99%				+/-	19.0387	µg/mL	Stressed
45	3-Nitroaniline		1,005.2	µg/mL	+/-	5.8443	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)			+/-	12.0162	µg/mL	Unstressed
	Purity 99%				+/-	19.1236	µg/mL	Stressed
46	Acenaphthene		1,005.9	µg/mL	+/-	5.8482	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)			+/-	12.0242	µg/mL	Unstressed
	Purity 99%				+/-	19.1363	µg/mL	Stressed
47	2,4-Dinitrophenol		2,008.3	µg/mL	+/-	11.6766	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBF9439V)			+/-	24.0077	µg/mL	Unstressed
	Purity 99%				+/-	38.2080	µg/mL	Stressed
48	Dibenzofuran		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBW2691V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
49	4-Nitrophenol		2,009.3	µg/mL	+/-	11.6824	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBV0501V)			+/-	24.0197	µg/mL	Unstressed
	Purity 99%				+/-	38.2270	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,003.9	µg/mL	+/-	5.8366	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	12.0003	µg/mL	Unstressed
	Purity 99%				+/-	19.0983	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,001.9	µg/mL	+/-	5.8253	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot B180305L)			+/-	11.9772	µg/mL	Unstressed
	Purity 99%				+/-	19.0615	µg/mL	Stressed
52	Fluorene		1,002.0	µg/mL	+/-	5.8257	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10193329)			+/-	11.9780	µg/mL	Unstressed
	Purity 99%				+/-	19.0628	µg/mL	Stressed
53	n-Hexadecane (C16)		1,001.6	µg/mL	+/-	5.8234	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBG2582V)			+/-	11.9732	µg/mL	Unstressed
	Purity 99%				+/-	19.0551	µg/mL	Stressed
54	Diethylphthalate		1,003.3	µg/mL	+/-	5.8335	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBV9622V)			+/-	11.9939	µg/mL	Unstressed
	Purity 99%				+/-	19.0881	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed

56	4-Nitroaniline		1,003.1	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9907	µg/mL	Unstressed
	Purity 98%				+/-	19.0830	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,003.7	µg/mL	+/-	11.6495	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC25844V)			+/-	23.9520	µg/mL	Unstressed
	Purity 99%				+/-	38.1192	µg/mL	Stressed
58	Diphenylamine		852.3	µg/mL	+/-	4.9555	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1888	µg/mL	Unstressed
	Purity 99%				+/-	16.2154	µg/mL	Stressed
59	Azobenzene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBQ0927V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,022.3	µg/mL	+/-	5.9439	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.2210	µg/mL	Unstressed
	Purity 99%				+/-	19.4496	µg/mL	Stressed
61	Hexachlorobenzene		1,002.5	µg/mL	+/-	5.8288	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot 7013600)			+/-	11.9843	µg/mL	Unstressed
	Purity 99%				+/-	19.0729	µg/mL	Stressed
62	Pentachlorophenol		2,002.1	µg/mL	+/-	11.6406	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170306KJA)			+/-	23.9336	µg/mL	Unstressed
	Purity 99%				+/-	38.0900	µg/mL	Stressed
63	n-Octadecane (C18)		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot OGCDK)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
64	Phenanthrene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
65	Anthracene		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBV7759V)			+/-	11.9573	µg/mL	Unstressed
	Purity 99%				+/-	19.0298	µg/mL	Stressed
66	Carbazole		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 6489700)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.7	µg/mL	+/-	5.8470	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0218	µg/mL	Unstressed
	Purity 99%				+/-	19.1325	µg/mL	Stressed
68	Fluoranthene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	12.0204	µg/mL	Unstressed
	Purity 98%				+/-	19.1302	µg/mL	Stressed
69	Pyrene		1,005.8	µg/mL	+/-	5.8478	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0234	µg/mL	Unstressed
	Purity 99%				+/-	19.1351	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKBZ4553V)			+/-	11.9571	µg/mL	Unstressed
	Purity 98%				+/-	19.0295	µg/mL	Stressed
71	Benz(a)anthracene		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012012)			+/-	11.9915	µg/mL	Unstressed
	Purity 98%				+/-	19.0842	µg/mL	Stressed

72	Chrysene		1,004.6	µg/mL	+/-	5.8408	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0091	µg/mL	Unstressed
	Purity 99%				+/-	19.1122	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,002.7	µg/mL	+/-	5.8296	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	11.9859	µg/mL	Unstressed
	Purity 99%				+/-	19.0754	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.9	µg/mL	+/-	5.8602	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 6016000)			+/-	12.0489	µg/mL	Unstressed
	Purity 99%				+/-	19.1756	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.6	µg/mL	+/-	5.8350	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9971	µg/mL	Unstressed
	Purity 99%				+/-	19.0932	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012017K)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
77	Benzo(a)pyrene		1,002.1	µg/mL	+/-	5.8261	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	11.9788	µg/mL	Unstressed
	Purity 99%				+/-	19.0640	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,004.0	µg/mL	+/-	5.8373	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0019	µg/mL	Unstressed
	Purity 99%				+/-	19.1008	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,001.9	µg/mL	+/-	5.8249	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	11.9764	µg/mL	Unstressed
	Purity 99%				+/-	19.0602	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.9	µg/mL	+/-	5.8195	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9652	µg/mL	Unstressed
	Purity 99%				+/-	19.0425	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

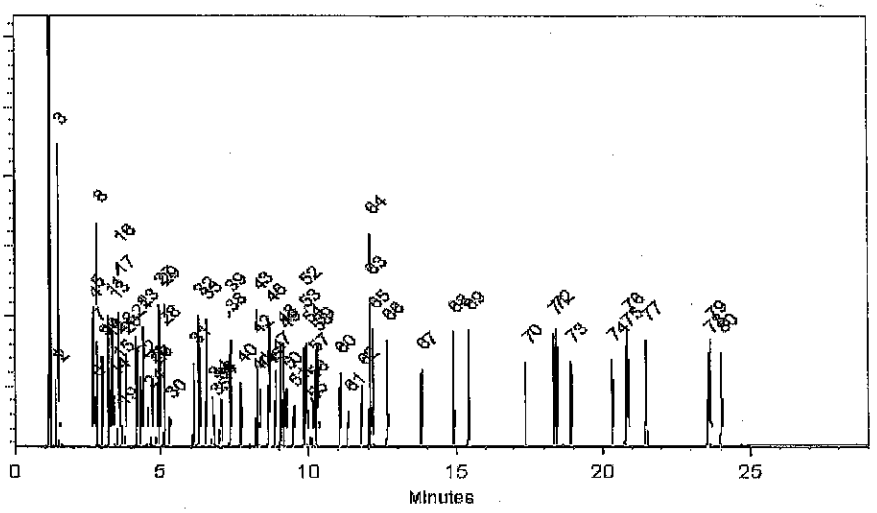
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician **Date Mixed:** 12-Mar-2018 **Balance:** 1128360905

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 27-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

571995_00049

RESTEK
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane		1,006.6 µg/mL	+/- 5.8525 µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)		+/- 12.0330 µg/mL	Unstressed
	Purity 99%			+/- 19.1503 µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1 µg/mL	+/- 5.8437 µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)		+/- 12.0150 µg/mL	Unstressed
	Purity 99%			+/- 19.1217 µg/mL	Stressed
3	Pyridine		2,012.7 µg/mL	+/- 11.7020 µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)		+/- 24.0599 µg/mL	Unstressed
	Purity 99%			+/- 38.2910 µg/mL	Stressed
4	Phenol		1,008.6 µg/mL	+/- 5.8641 µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)		+/- 12.0569 µg/mL	Unstressed
	Purity 99%			+/- 19.1883 µg/mL	Stressed
5	Aniline		1,006.2 µg/mL	+/- 5.8501 µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)		+/- 12.0282 µg/mL	Unstressed
	Purity 99%			+/- 19.1427 µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5 µg/mL	+/- 5.8693 µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)		+/- 12.0676 µg/mL	Unstressed
	Purity 99%			+/- 19.2054 µg/mL	Stressed
7	n-Decane (C10)		1,010.0 µg/mL	+/- 5.8722 µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)		+/- 12.0736 µg/mL	Unstressed
	Purity 99%			+/- 19.2150 µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

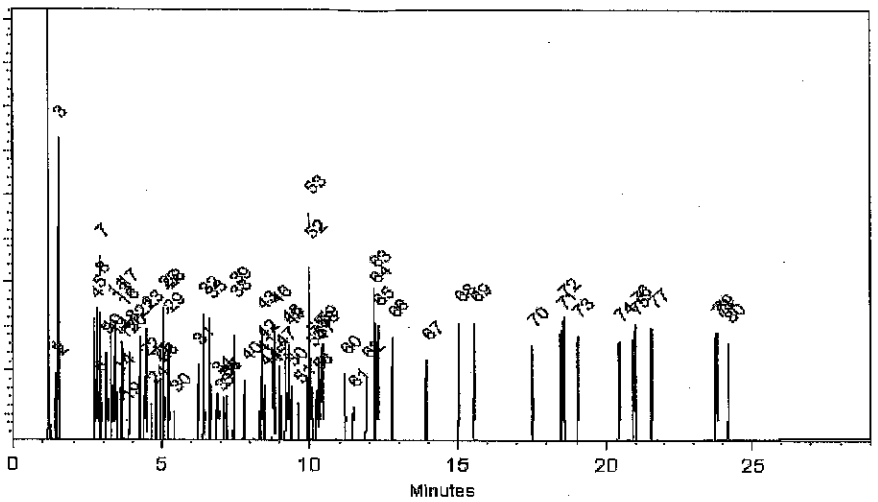
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,007.2	µg/mL	+/- 5.8557 +/- 12.0395 +/- 19.1608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,009.1	µg/mL	+/- 5.8670 +/- 12.0628 +/- 19.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,008.1	µg/mL	+/- 5.8612 +/- 12.0509 +/- 19.1788	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBG3580V)	2,013.2	µg/mL	+/- 11.7049 +/- 24.0659 +/- 38.3005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,007.0	µg/mL	+/- 5.8548 +/- 12.0377 +/- 19.1579	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,015.4	µg/mL	+/- 11.7177 +/- 24.0922 +/- 38.3424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,009.5	µg/mL	+/- 5.8693 +/- 12.0676 +/- 19.2054	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,005.3	µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,007.7	µg/mL	+/- 5.8591 +/- 12.0465 +/- 19.1718	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ3997)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.4	µg/mL	+/- 5.8571 +/- 12.0425 +/- 19.1655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,006.7	µg/mL	+/- 5.8530 +/- 12.0342 +/- 19.1522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00050

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBJ5124) **Purity** 99%	1,006.6 µg/mL	+/- 5.8525 µg/mL +/- 12.0330 µg/mL +/- 19.1503 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 180322JLM) **Purity** 99%	1,005.1 µg/mL	+/- 5.8437 µg/mL +/- 12.0150 µg/mL +/- 19.1217 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,012.7 µg/mL	+/- 11.7020 µg/mL +/- 24.0599 µg/mL +/- 38.2910 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF9719V) **Purity** 99%	1,008.6 µg/mL	+/- 5.8641 µg/mL +/- 12.0569 µg/mL +/- 19.1883 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL +/- 12.0282 µg/mL +/- 19.1427 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,009.5 µg/mL	+/- 5.8693 µg/mL +/- 12.0676 µg/mL +/- 19.2054 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBJ8526) **Purity** 99%	1,010.0 µg/mL	+/- 5.8722 µg/mL +/- 12.0736 µg/mL +/- 19.2150 µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

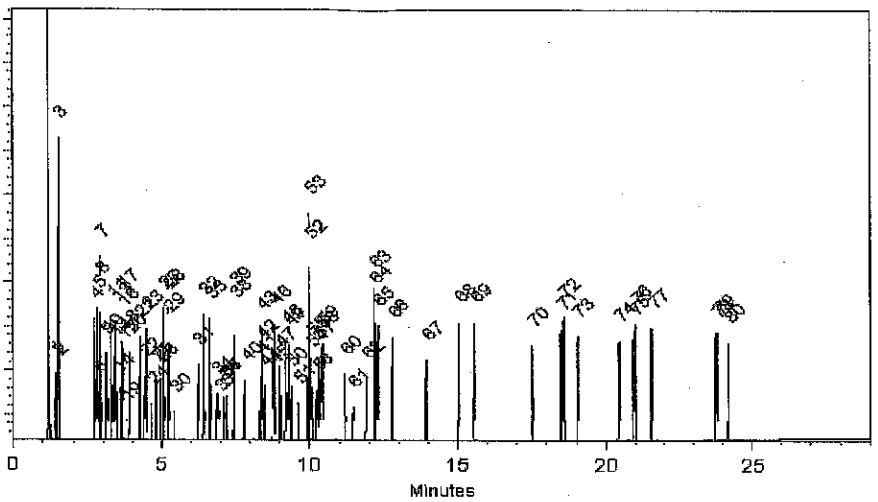
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,007.2	µg/mL	+/- 5.8557 +/- 12.0395 +/- 19.1608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,009.1	µg/mL	+/- 5.8670 +/- 12.0628 +/- 19.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,008.1	µg/mL	+/- 5.8612 +/- 12.0509 +/- 19.1788	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBG3580V)	2,013.2	µg/mL	+/- 11.7049 +/- 24.0659 +/- 38.3005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,007.0	µg/mL	+/- 5.8548 +/- 12.0377 +/- 19.1579	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,015.4	µg/mL	+/- 11.7177 +/- 24.0922 +/- 38.3424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,009.5	µg/mL	+/- 5.8693 +/- 12.0676 +/- 19.2054	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,005.3	µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,007.7	µg/mL	+/- 5.8591 +/- 12.0465 +/- 19.1718	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ3997)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.4	µg/mL	+/- 5.8571 +/- 12.0425 +/- 19.1655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,006.7	µg/mL	+/- 5.8530 +/- 12.0342 +/- 19.1522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00051

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBJ5124) **Purity** 99%	1,006.6 µg/mL	+/- 5.8525 µg/mL +/- 12.0330 µg/mL +/- 19.1503 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 180322JLM) **Purity** 99%	1,005.1 µg/mL	+/- 5.8437 µg/mL +/- 12.0150 µg/mL +/- 19.1217 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,012.7 µg/mL	+/- 11.7020 µg/mL +/- 24.0599 µg/mL +/- 38.2910 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF9719V) **Purity** 99%	1,008.6 µg/mL	+/- 5.8641 µg/mL +/- 12.0569 µg/mL +/- 19.1883 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,006.2 µg/mL	+/- 5.8501 µg/mL +/- 12.0282 µg/mL +/- 19.1427 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,009.5 µg/mL	+/- 5.8693 µg/mL +/- 12.0676 µg/mL +/- 19.2054 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBJ8526) **Purity** 99%	1,010.0 µg/mL	+/- 5.8722 µg/mL +/- 12.0736 µg/mL +/- 19.2150 µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

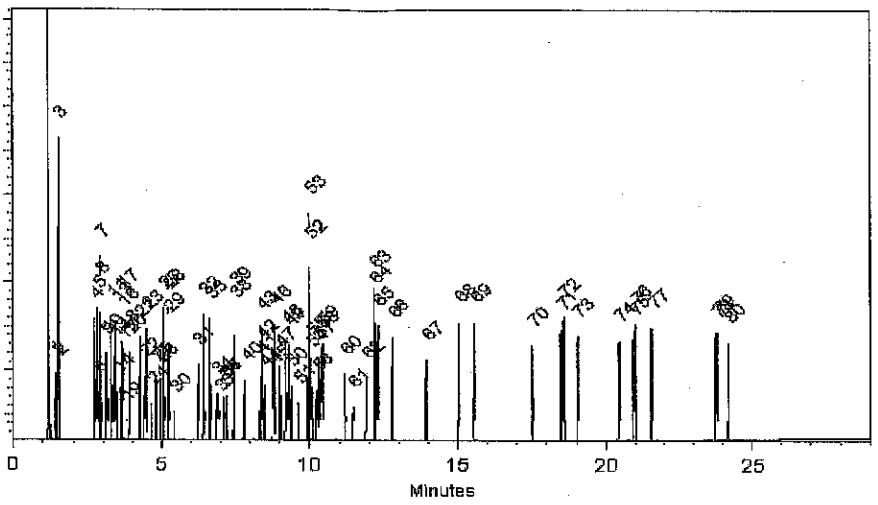
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline		1,007.5 µg/mL	+/- 5.8577	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)		+/- 12.0437	µg/mL	Unstressed
	Purity 99%			+/- 19.1674	µg/mL	Stressed
41	Acenaphthylene		1,007.2 µg/mL	+/- 5.8557	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)		+/- 12.0395	µg/mL	Unstressed
	Purity 97%			+/- 19.1608	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,008.9 µg/mL	+/- 5.8658	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 12.0605	µg/mL	Unstressed
	Purity 99%			+/- 19.1940	µg/mL	Stressed
43	Dimethylphthalate		1,009.2 µg/mL	+/- 5.8676	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)		+/- 12.0640	µg/mL	Unstressed
	Purity 99%			+/- 19.1997	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,009.1 µg/mL	+/- 5.8670	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)		+/- 12.0628	µg/mL	Unstressed
	Purity 99%			+/- 19.1978	µg/mL	Stressed
45	3-Nitroaniline		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
46	Acenaphthene		1,008.1 µg/mL	+/- 5.8612	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)		+/- 12.0509	µg/mL	Unstressed
	Purity 99%			+/- 19.1788	µg/mL	Stressed
47	2,4-Dinitrophenol		2,013.2 µg/mL	+/- 11.7049	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBG3580V)		+/- 24.0659	µg/mL	Unstressed
	Purity 99%			+/- 38.3005	µg/mL	Stressed
48	Dibenzofuran		1,007.0 µg/mL	+/- 5.8548	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)		+/- 12.0377	µg/mL	Unstressed
	Purity 99%			+/- 19.1579	µg/mL	Stressed
49	4-Nitrophenol		2,015.4 µg/mL	+/- 11.7177	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)		+/- 24.0922	µg/mL	Unstressed
	Purity 99%			+/- 38.3424	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,009.5 µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)		+/- 12.0676	µg/mL	Unstressed
	Purity 99%			+/- 19.2054	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.3 µg/mL	+/- 5.8449	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)		+/- 12.0174	µg/mL	Unstressed
	Purity 99%			+/- 19.1255	µg/mL	Stressed
52	Fluorene		1,007.7 µg/mL	+/- 5.8591	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)		+/- 12.0465	µg/mL	Unstressed
	Purity 98%			+/- 19.1718	µg/mL	Stressed
53	n-Hexadecane (C16)		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ3997)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
54	Diethylphthalate		1,007.4 µg/mL	+/- 5.8571	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)		+/- 12.0425	µg/mL	Unstressed
	Purity 99%			+/- 19.1655	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,006.7 µg/mL	+/- 5.8530	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)		+/- 12.0342	µg/mL	Unstressed
	Purity 99%			+/- 19.1522	µg/mL	Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00052

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane		1,006.6	µg/mL	+/- 5.8525	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)			+/- 12.0330	µg/mL	Unstressed
	Purity 99%				+/- 19.1503	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1	µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)			+/- 12.0150	µg/mL	Unstressed
	Purity 99%				+/- 19.1217	µg/mL	Stressed
3	Pyridine		2,012.7	µg/mL	+/- 11.7020	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 24.0599	µg/mL	Unstressed
	Purity 99%				+/- 38.2910	µg/mL	Stressed
4	Phenol		1,008.6	µg/mL	+/- 5.8641	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)			+/- 12.0569	µg/mL	Unstressed
	Purity 99%				+/- 19.1883	µg/mL	Stressed
5	Aniline		1,006.2	µg/mL	+/- 5.8501	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 12.0282	µg/mL	Unstressed
	Purity 99%				+/- 19.1427	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5	µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 12.0676	µg/mL	Unstressed
	Purity 99%				+/- 19.2054	µg/mL	Stressed
7	n-Decane (C10)		1,010.0	µg/mL	+/- 5.8722	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)			+/- 12.0736	µg/mL	Unstressed
	Purity 99%				+/- 19.2150	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

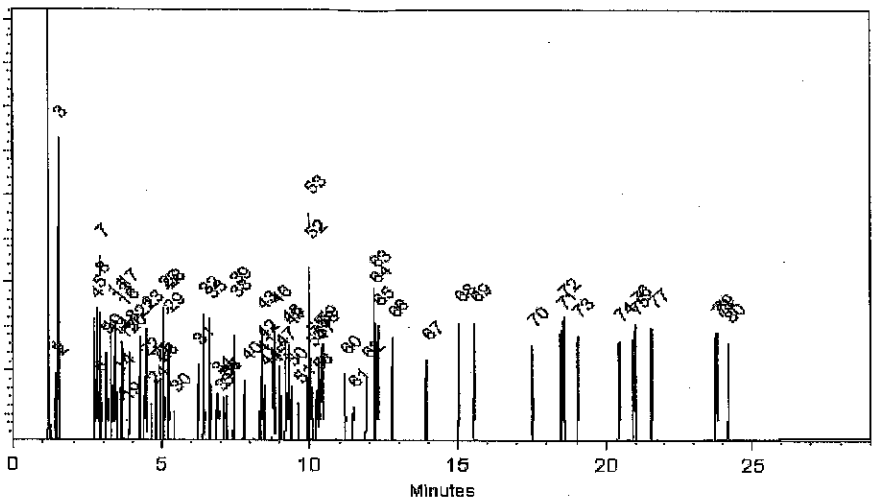
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,007.2	µg/mL	+/- 5.8557 +/- 12.0395 +/- 19.1608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,009.1	µg/mL	+/- 5.8670 +/- 12.0628 +/- 19.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,008.1	µg/mL	+/- 5.8612 +/- 12.0509 +/- 19.1788	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBG3580V)	2,013.2	µg/mL	+/- 11.7049 +/- 24.0659 +/- 38.3005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,007.0	µg/mL	+/- 5.8548 +/- 12.0377 +/- 19.1579	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,015.4	µg/mL	+/- 11.7177 +/- 24.0922 +/- 38.3424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,009.5	µg/mL	+/- 5.8693 +/- 12.0676 +/- 19.2054	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,005.3	µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,007.7	µg/mL	+/- 5.8591 +/- 12.0465 +/- 19.1718	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ3997)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.4	µg/mL	+/- 5.8571 +/- 12.0425 +/- 19.1655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,006.7	µg/mL	+/- 5.8530 +/- 12.0342 +/- 19.1522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00053

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 **Purity** 99%	(Lot SHBJ5124)	1,006.6 µg/mL	+/- 5.8525 µg/mL +/- 12.0330 µg/mL +/- 19.1503 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 **Purity** 99%	(Lot 180322JLM)	1,005.1 µg/mL	+/- 5.8437 µg/mL +/- 12.0150 µg/mL +/- 19.1217 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 **Purity** 99%	(Lot SHBC7174V)	2,012.7 µg/mL	+/- 11.7020 µg/mL +/- 24.0599 µg/mL +/- 38.2910 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 **Purity** 99%	(Lot SHBF9719V)	1,008.6 µg/mL	+/- 5.8641 µg/mL +/- 12.0569 µg/mL +/- 19.1883 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 **Purity** 99%	(Lot K22Z462)	1,006.2 µg/mL	+/- 5.8501 µg/mL +/- 12.0282 µg/mL +/- 19.1427 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 **Purity** 99%	(Lot SHBD4430V)	1,009.5 µg/mL	+/- 5.8693 µg/mL +/- 12.0676 µg/mL +/- 19.2054 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 **Purity** 99%	(Lot SHBJ8526)	1,010.0 µg/mL	+/- 5.8722 µg/mL +/- 12.0736 µg/mL +/- 19.2150 µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

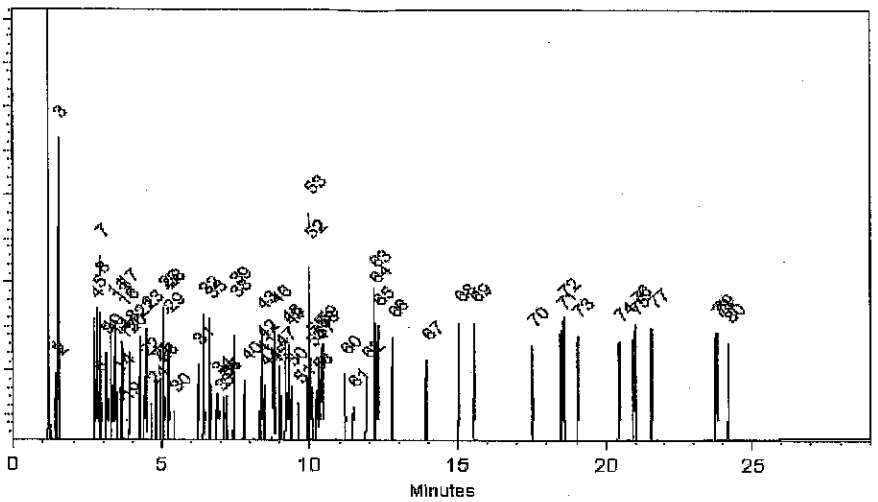
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline **CAS #** 88-74-4 **Purity** 99%	(Lot MKBK7597V)	1,007.5	µg/mL	+/- 5.8577 +/- 12.0437 +/- 19.1674	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene **CAS #** 208-96-8 **Purity** 97%	(Lot O03R)	1,007.2	µg/mL	+/- 5.8557 +/- 12.0395 +/- 19.1608	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBN4329V)	1,008.9	µg/mL	+/- 5.8658 +/- 12.0605 +/- 19.1940	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate **CAS #** 131-11-3 **Purity** 99%	(Lot 10117699)	1,009.2	µg/mL	+/- 5.8676 +/- 12.0640 +/- 19.1997	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,009.1	µg/mL	+/- 5.8670 +/- 12.0628 +/- 19.1978	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline **CAS #** 99-09-2 **Purity** 99%	(Lot MKBX1283V)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene **CAS #** 83-32-9 **Purity** 99%	(Lot MKCC8329)	1,008.1	µg/mL	+/- 5.8612 +/- 12.0509 +/- 19.1788	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol **CAS #** 51-28-5 **Purity** 99%	(Lot STBG3580V)	2,013.2	µg/mL	+/- 11.7049 +/- 24.0659 +/- 38.3005	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran **CAS #** 132-64-9 **Purity** 99%	(Lot MKCD9952)	1,007.0	µg/mL	+/- 5.8548 +/- 12.0377 +/- 19.1579	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol **CAS #** 100-02-7 **Purity** 99%	(Lot MKBK1842V)	2,015.4	µg/mL	+/- 11.7177 +/- 24.0922 +/- 38.3424	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,009.5	µg/mL	+/- 5.8693 +/- 12.0676 +/- 19.2054	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol **CAS #** 58-90-2 **Purity** 99%	(Lot PR-30126)	1,005.3	µg/mL	+/- 5.8449 +/- 12.0174 +/- 19.1255	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene **CAS #** 86-73-7 **Purity** 98%	(Lot 10174662)	1,007.7	µg/mL	+/- 5.8591 +/- 12.0465 +/- 19.1718	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) **CAS #** 544-76-3 **Purity** 99%	(Lot SHBJ3997)	1,009.8	µg/mL	+/- 5.8711 +/- 12.0712 +/- 19.2112	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate **CAS #** 84-66-2 **Purity** 99%	(Lot MKCB0810V)	1,007.4	µg/mL	+/- 5.8571 +/- 12.0425 +/- 19.1655	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether **CAS #** 7005-72-3 **Purity** 99%	(Lot MKBX5225V)	1,006.7	µg/mL	+/- 5.8530 +/- 12.0342 +/- 19.1522	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00055

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane		1,006.6 µg/mL	+/- 5.8525	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)		+/- 12.0330	µg/mL	Unstressed
	Purity 99%			+/- 19.1503	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1 µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)		+/- 12.0150	µg/mL	Unstressed
	Purity 99%			+/- 19.1217	µg/mL	Stressed
3	Pyridine		2,012.7 µg/mL	+/- 11.7020	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)		+/- 24.0599	µg/mL	Unstressed
	Purity 99%			+/- 38.2910	µg/mL	Stressed
4	Phenol		1,008.6 µg/mL	+/- 5.8641	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)		+/- 12.0569	µg/mL	Unstressed
	Purity 99%			+/- 19.1883	µg/mL	Stressed
5	Aniline		1,006.2 µg/mL	+/- 5.8501	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)		+/- 12.0282	µg/mL	Unstressed
	Purity 99%			+/- 19.1427	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5 µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)		+/- 12.0676	µg/mL	Unstressed
	Purity 99%			+/- 19.2054	µg/mL	Stressed
7	n-Decane (C10)		1,010.0 µg/mL	+/- 5.8722	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)		+/- 12.0736	µg/mL	Unstressed
	Purity 99%			+/- 19.2150	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

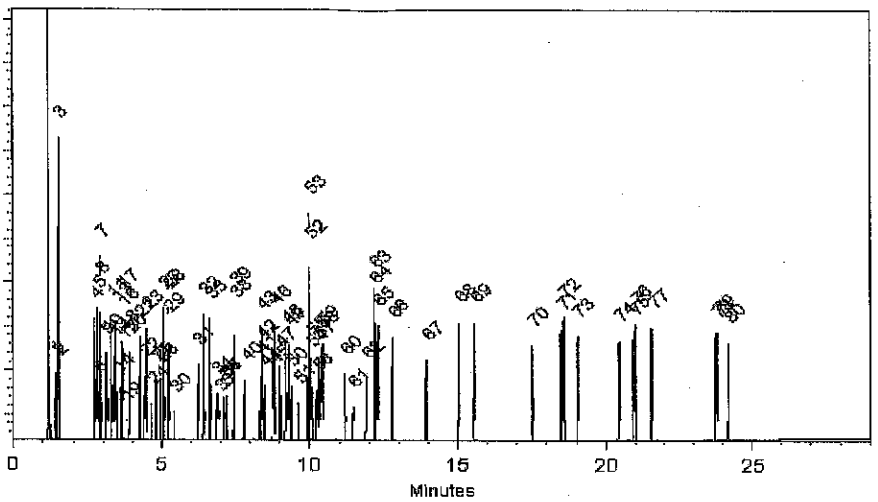
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline		1,007.5 µg/mL	+/- 5.8577	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)		+/- 12.0437	µg/mL	Unstressed
	Purity 99%			+/- 19.1674	µg/mL	Stressed
41	Acenaphthylene		1,007.2 µg/mL	+/- 5.8557	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)		+/- 12.0395	µg/mL	Unstressed
	Purity 97%			+/- 19.1608	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,008.9 µg/mL	+/- 5.8658	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 12.0605	µg/mL	Unstressed
	Purity 99%			+/- 19.1940	µg/mL	Stressed
43	Dimethylphthalate		1,009.2 µg/mL	+/- 5.8676	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)		+/- 12.0640	µg/mL	Unstressed
	Purity 99%			+/- 19.1997	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,009.1 µg/mL	+/- 5.8670	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)		+/- 12.0628	µg/mL	Unstressed
	Purity 99%			+/- 19.1978	µg/mL	Stressed
45	3-Nitroaniline		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
46	Acenaphthene		1,008.1 µg/mL	+/- 5.8612	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)		+/- 12.0509	µg/mL	Unstressed
	Purity 99%			+/- 19.1788	µg/mL	Stressed
47	2,4-Dinitrophenol		2,013.2 µg/mL	+/- 11.7049	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBG3580V)		+/- 24.0659	µg/mL	Unstressed
	Purity 99%			+/- 38.3005	µg/mL	Stressed
48	Dibenzofuran		1,007.0 µg/mL	+/- 5.8548	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)		+/- 12.0377	µg/mL	Unstressed
	Purity 99%			+/- 19.1579	µg/mL	Stressed
49	4-Nitrophenol		2,015.4 µg/mL	+/- 11.7177	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)		+/- 24.0922	µg/mL	Unstressed
	Purity 99%			+/- 38.3424	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,009.5 µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)		+/- 12.0676	µg/mL	Unstressed
	Purity 99%			+/- 19.2054	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.3 µg/mL	+/- 5.8449	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)		+/- 12.0174	µg/mL	Unstressed
	Purity 99%			+/- 19.1255	µg/mL	Stressed
52	Fluorene		1,007.7 µg/mL	+/- 5.8591	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)		+/- 12.0465	µg/mL	Unstressed
	Purity 98%			+/- 19.1718	µg/mL	Stressed
53	n-Hexadecane (C16)		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ3997)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
54	Diethylphthalate		1,007.4 µg/mL	+/- 5.8571	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)		+/- 12.0425	µg/mL	Unstressed
	Purity 99%			+/- 19.1655	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,006.7 µg/mL	+/- 5.8530	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)		+/- 12.0342	µg/mL	Unstressed
	Purity 99%			+/- 19.1522	µg/mL	Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

571995_00056

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0140111

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dioxane		1,006.6	µg/mL	+/- 5.8525	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBJ5124)			+/- 12.0330	µg/mL	Unstressed
	Purity 99%				+/- 19.1503	µg/mL	Stressed
2	N-Nitrosodimethylamine		1,005.1	µg/mL	+/- 5.8437	µg/mL	Gravimetric
	CAS # 62-75-9	(Lot 180322JLM)			+/- 12.0150	µg/mL	Unstressed
	Purity 99%				+/- 19.1217	µg/mL	Stressed
3	Pyridine		2,012.7	µg/mL	+/- 11.7020	µg/mL	Gravimetric
	CAS # 110-86-1	(Lot SHBC7174V)			+/- 24.0599	µg/mL	Unstressed
	Purity 99%				+/- 38.2910	µg/mL	Stressed
4	Phenol		1,008.6	µg/mL	+/- 5.8641	µg/mL	Gravimetric
	CAS # 108-95-2	(Lot SHBF9719V)			+/- 12.0569	µg/mL	Unstressed
	Purity 99%				+/- 19.1883	µg/mL	Stressed
5	Aniline		1,006.2	µg/mL	+/- 5.8501	µg/mL	Gravimetric
	CAS # 62-53-3	(Lot K22Z462)			+/- 12.0282	µg/mL	Unstressed
	Purity 99%				+/- 19.1427	µg/mL	Stressed
6	Bis(2-chloroethyl)ether		1,009.5	µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 111-44-4	(Lot SHBD4430V)			+/- 12.0676	µg/mL	Unstressed
	Purity 99%				+/- 19.2054	µg/mL	Stressed
7	n-Decane (C10)		1,010.0	µg/mL	+/- 5.8722	µg/mL	Gravimetric
	CAS # 124-18-5	(Lot SHBJ8526)			+/- 12.0736	µg/mL	Unstressed
	Purity 99%				+/- 19.2150	µg/mL	Stressed

24	Bis(2-chloroethoxy)methane		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 5670100)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
25	2,4-Dichlorophenol		1,009.0	µg/mL	+/-	5.8664	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBJ8113V)			+/-	12.0616	µg/mL	Unstressed
	Purity 99%				+/-	19.1959	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
27	Naphthalene		1,008.3	µg/mL	+/-	5.8623	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	12.0533	µg/mL	Unstressed
	Purity 99%				+/-	19.1826	µg/mL	Stressed
28	2,6-Dichlorophenol		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
29	4-Chloroaniline		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
30	Hexachlorobutadiene		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8461	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBF0201V)			+/-	12.0199	µg/mL	Unstressed
	Purity 96%				+/-	19.1294	µg/mL	Stressed
33	1-Methylnaphthalene		1,002.4	µg/mL	+/-	5.8283	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 523400-9)			+/-	11.9833	µg/mL	Unstressed
	Purity 98%				+/-	19.0712	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,007.2	µg/mL	+/-	5.8559	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0401	µg/mL	Unstressed
	Purity 99%				+/-	19.1617	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012015)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,009.2	µg/mL	+/-	5.8676	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0640	µg/mL	Unstressed
	Purity 99%				+/-	19.1997	µg/mL	Stressed
38	2-Chloronaphthalene		1,006.8	µg/mL	+/-	5.8536	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	12.0353	µg/mL	Unstressed
	Purity 99%				+/-	19.1541	µg/mL	Stressed
39	Biphenyl		1,006.3	µg/mL	+/-	5.8507	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	12.0294	µg/mL	Unstressed
	Purity 99%				+/-	19.1446	µg/mL	Stressed

56	4-Nitroaniline		1,007.5	µg/mL	+/-	5.8579	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	12.0442	µg/mL	Unstressed
	Purity 98%				+/-	19.1681	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,012.4	µg/mL	+/-	11.7003	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot B180716L)			+/-	24.0564	µg/mL	Unstressed
	Purity 99%				+/-	38.2853	µg/mL	Stressed
58	Diphenylamine		856.1	µg/mL	+/-	4.9889	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.2395	µg/mL	Unstressed
	Purity 99%				+/-	16.2906	µg/mL	Stressed
59	Azobenzene		1,009.8	µg/mL	+/-	5.8709	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBS6535V)			+/-	12.0709	µg/mL	Unstressed
	Purity 97%				+/-	19.2106	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
61	Hexachlorobenzene		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LRAB8468)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
62	Pentachlorophenol		2,005.9	µg/mL	+/-	11.6625	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170717KJA)			+/-	23.9787	µg/mL	Unstressed
	Purity 99%				+/-	38.1617	µg/mL	Stressed
63	n-Octadecane (C18)		1,004.8	µg/mL	+/-	5.8420	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot T7N4E)			+/-	12.0114	µg/mL	Unstressed
	Purity 99%				+/-	19.1160	µg/mL	Stressed
64	Phenanthrene		1,005.3	µg/mL	+/-	5.8449	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	12.0174	µg/mL	Unstressed
	Purity 99%				+/-	19.1255	µg/mL	Stressed
65	Anthracene		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
66	Carbazole		1,002.7	µg/mL	+/-	5.8298	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 7528800)			+/-	11.9863	µg/mL	Unstressed
	Purity 99%				+/-	19.0761	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
68	Fluoranthene		1,002.6	µg/mL	+/-	5.8294	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	11.9856	µg/mL	Unstressed
	Purity 98%				+/-	19.0749	µg/mL	Stressed
69	Pyrene		1,009.3	µg/mL	+/-	5.8682	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0652	µg/mL	Unstressed
	Purity 99%				+/-	19.2016	µg/mL	Stressed
70	Benzyl butyl phthalate		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKCF0058)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
71	Benz(a)anthracene		1,004.8	µg/mL	+/-	5.8422	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012018)			+/-	12.0118	µg/mL	Unstressed
	Purity 96%				+/-	19.1166	µg/mL	Stressed

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

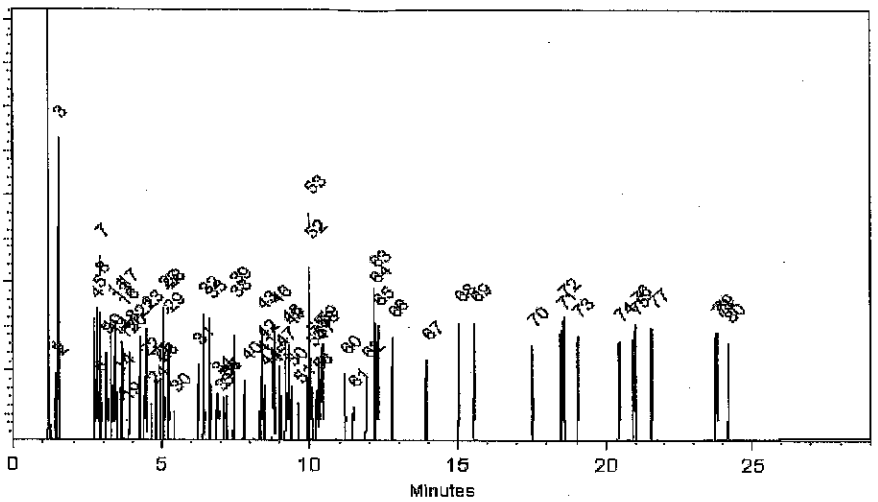
Carrier Gas:
hydrogen-constant flow 1.8 mL/min.

Temp. Program:
80°C (hold 0.1 min.) to 330°C
@ 9.6°C/min. (hold 2.86 min.)

Inj. Temp:
250°C

Det. Temp:
340°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cydnei L. Crust
Cydnei L. Crust - Mix Technician

Date Mixed: 30-Jul-2018 **Balance:** B442140311

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Aug-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

72	Chrysene		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot 012015)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,007.3	µg/mL	+/-	5.8565	µg/mL	Gravimetric
	CAS # 117-81-7	(Lot MKBZ3868V)			+/-	12.0413	µg/mL	Unstressed
	Purity 99%				+/-	19.1636	µg/mL	Stressed
74	Di-n-octyl phthalate		1,007.0	µg/mL	+/-	5.8548	µg/mL	Gravimetric
	CAS # 117-84-0	(Lot 7170200)			+/-	12.0377	µg/mL	Unstressed
	Purity 99%				+/-	19.1579	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,003.7	µg/mL	+/-	5.8356	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot 012012B)			+/-	11.9983	µg/mL	Unstressed
	Purity 99%				+/-	19.0951	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,005.7	µg/mL	+/-	5.8472	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot 012012K)			+/-	12.0222	µg/mL	Unstressed
	Purity 99%				+/-	19.1332	µg/mL	Stressed
77	Benzo(a)pyrene		1,008.8	µg/mL	+/-	5.8653	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	12.0593	µg/mL	Unstressed
	Purity 99%				+/-	19.1921	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,006.9	µg/mL	+/-	5.8542	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	12.0365	µg/mL	Unstressed
	Purity 99%				+/-	19.1560	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.2	µg/mL	+/-	5.8152	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER05121401)			+/-	11.9565	µg/mL	Unstressed
	Purity 99%				+/-	19.0285	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

40	2-Nitroaniline		1,007.5 µg/mL	+/- 5.8577	µg/mL	Gravimetric
	CAS # 88-74-4	(Lot MKBK7597V)		+/- 12.0437	µg/mL	Unstressed
	Purity 99%			+/- 19.1674	µg/mL	Stressed
41	Acenaphthylene		1,007.2 µg/mL	+/- 5.8557	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot O03R)		+/- 12.0395	µg/mL	Unstressed
	Purity 97%			+/- 19.1608	µg/mL	Stressed
42	1,3-Dinitrobenzene		1,008.9 µg/mL	+/- 5.8658	µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 12.0605	µg/mL	Unstressed
	Purity 99%			+/- 19.1940	µg/mL	Stressed
43	Dimethylphthalate		1,009.2 µg/mL	+/- 5.8676	µg/mL	Gravimetric
	CAS # 131-11-3	(Lot 10117699)		+/- 12.0640	µg/mL	Unstressed
	Purity 99%			+/- 19.1997	µg/mL	Stressed
44	2,6-Dinitrotoluene		1,009.1 µg/mL	+/- 5.8670	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)		+/- 12.0628	µg/mL	Unstressed
	Purity 99%			+/- 19.1978	µg/mL	Stressed
45	3-Nitroaniline		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 99-09-2	(Lot MKBX1283V)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
46	Acenaphthene		1,008.1 µg/mL	+/- 5.8612	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKCC8329)		+/- 12.0509	µg/mL	Unstressed
	Purity 99%			+/- 19.1788	µg/mL	Stressed
47	2,4-Dinitrophenol		2,013.2 µg/mL	+/- 11.7049	µg/mL	Gravimetric
	CAS # 51-28-5	(Lot STBG3580V)		+/- 24.0659	µg/mL	Unstressed
	Purity 99%			+/- 38.3005	µg/mL	Stressed
48	Dibenzofuran		1,007.0 µg/mL	+/- 5.8548	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKCD9952)		+/- 12.0377	µg/mL	Unstressed
	Purity 99%			+/- 19.1579	µg/mL	Stressed
49	4-Nitrophenol		2,015.4 µg/mL	+/- 11.7177	µg/mL	Gravimetric
	CAS # 100-02-7	(Lot MKBK1842V)		+/- 24.0922	µg/mL	Unstressed
	Purity 99%			+/- 38.3424	µg/mL	Stressed
50	2,4-Dinitrotoluene		1,009.5 µg/mL	+/- 5.8693	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)		+/- 12.0676	µg/mL	Unstressed
	Purity 99%			+/- 19.2054	µg/mL	Stressed
51	2,3,4,6-Tetrachlorophenol		1,005.3 µg/mL	+/- 5.8449	µg/mL	Gravimetric
	CAS # 58-90-2	(Lot PR-30126)		+/- 12.0174	µg/mL	Unstressed
	Purity 99%			+/- 19.1255	µg/mL	Stressed
52	Fluorene		1,007.7 µg/mL	+/- 5.8591	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)		+/- 12.0465	µg/mL	Unstressed
	Purity 98%			+/- 19.1718	µg/mL	Stressed
53	n-Hexadecane (C16)		1,009.8 µg/mL	+/- 5.8711	µg/mL	Gravimetric
	CAS # 544-76-3	(Lot SHBJ3997)		+/- 12.0712	µg/mL	Unstressed
	Purity 99%			+/- 19.2112	µg/mL	Stressed
54	Diethylphthalate		1,007.4 µg/mL	+/- 5.8571	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKCB0810V)		+/- 12.0425	µg/mL	Unstressed
	Purity 99%			+/- 19.1655	µg/mL	Stressed
55	4-Chlorophenyl phenyl ether		1,006.7 µg/mL	+/- 5.8530	µg/mL	Gravimetric
	CAS # 7005-72-3	(Lot MKBX5225V)		+/- 12.0342	µg/mL	Unstressed
	Purity 99%			+/- 19.1522	µg/mL	Stressed

8	2-Chlorophenol		1,005.6	µg/mL	+/-	5.8466	µg/mL	Gravimetric
	CAS # 95-57-8	(Lot STBF2690V)			+/-	12.0210	µg/mL	Unstressed
	Purity 99%				+/-	19.1312	µg/mL	Stressed
9	1,3-Dichlorobenzene		1,009.7	µg/mL	+/-	5.8705	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	12.0700	µg/mL	Unstressed
	Purity 99%				+/-	19.2092	µg/mL	Stressed
10	1,4-Dichlorobenzene		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
11	Benzyl alcohol		1,009.6	µg/mL	+/-	5.8699	µg/mL	Gravimetric
	CAS # 100-51-6	(Lot SHBJ0534)			+/-	12.0688	µg/mL	Unstressed
	Purity 99%				+/-	19.2073	µg/mL	Stressed
12	1,2-Dichlorobenzene		1,007.7	µg/mL	+/-	5.8589	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	12.0461	µg/mL	Unstressed
	Purity 99%				+/-	19.1712	µg/mL	Stressed
13	2-Methylphenol (o-cresol)		1,008.4	µg/mL	+/-	5.8629	µg/mL	Gravimetric
	CAS # 95-48-7	(Lot SHBH6379)			+/-	12.0545	µg/mL	Unstressed
	Purity 99%				+/-	19.1845	µg/mL	Stressed
14	2,2'-oxybis(1-chloropropane)		1,007.6	µg/mL	+/-	5.8583	µg/mL	Gravimetric
	CAS # 108-60-1	(Lot 7577400)			+/-	12.0449	µg/mL	Unstressed
	Purity 99%				+/-	19.1693	µg/mL	Stressed
15	Acetophenone		1,009.4	µg/mL	+/-	5.8687	µg/mL	Gravimetric
	CAS # 98-86-2	(Lot STBG8586)			+/-	12.0664	µg/mL	Unstressed
	Purity 99%				+/-	19.2035	µg/mL	Stressed
16	3-Methylphenol (m-cresol)		504.9	µg/mL	+/-	2.9423	µg/mL	Gravimetric
	CAS # 108-39-4	(Lot SHBD0627V)			+/-	6.0389	µg/mL	Unstressed
	Purity 99%				+/-	9.6077	µg/mL	Stressed
17	4-Methylphenol (p-cresol)		501.8	µg/mL	+/-	2.9242	µg/mL	Gravimetric
	CAS # 106-44-5	(Lot 49396APV)			+/-	6.0018	µg/mL	Unstressed
	Purity 99%				+/-	9.5487	µg/mL	Stressed
18	N-Nitroso-di-n-propylamine		1,006.6	µg/mL	+/-	5.8525	µg/mL	Gravimetric
	CAS # 621-64-7	(Lot OPAGF)			+/-	12.0330	µg/mL	Unstressed
	Purity 99%				+/-	19.1503	µg/mL	Stressed
19	Hexachloroethane		1,001.4	µg/mL	+/-	5.8222	µg/mL	Gravimetric
	CAS # 67-72-1	(Lot 4H3SF)			+/-	11.9708	µg/mL	Unstressed
	Purity 99%				+/-	19.0513	µg/mL	Stressed
20	Nitrobenzene		1,005.9	µg/mL	+/-	5.8484	µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)			+/-	12.0246	µg/mL	Unstressed
	Purity 99%				+/-	19.1370	µg/mL	Stressed
21	Isophorone		1,009.1	µg/mL	+/-	5.8670	µg/mL	Gravimetric
	CAS # 78-59-1	(Lot MKBG2442V)			+/-	12.0629	µg/mL	Unstressed
	Purity 98%				+/-	19.1979	µg/mL	Stressed
22	2-Nitrophenol		1,008.7	µg/mL	+/-	5.8647	µg/mL	Gravimetric
	CAS # 88-75-5	(Lot BCBH7602V)			+/-	12.0581	µg/mL	Unstressed
	Purity 99%				+/-	19.1902	µg/mL	Stressed
23	2,4-Dimethylphenol		1,008.6	µg/mL	+/-	5.8641	µg/mL	Gravimetric
	CAS # 105-67-9	(Lot 10165155)			+/-	12.0569	µg/mL	Unstressed
	Purity 99%				+/-	19.1883	µg/mL	Stressed

Reagent

6860-ISStock1_00013

Cambridge Isotope Laboratories, Inc.

Certificate of Analysis

Quality Standards:
ISO Guide 34 • ISO/IEC 17025 • ISO 13485 • cGMP

Product Name: PERCHLORIC ACID, SODIUM SALT
(Isotopic Label & Enrichment Specification) (18O4, 90%+) 100 UG/ML IN WATE

Lot Number: SDDG-013

Catalog Number: OLM-7310-S

3956404
ID: 6860-ISStock1_00013
Desc: Cat#OLM-7310-S, 100ug/mL Cl18O4
Exp: 2/27/2024 Prpd/Rcvd: 6/20/2016
Sol: Prpd: fiedlerh
Cat#OLM-7310-S, 100ug/mL Cl18O4

Product Information

Chemical Purity Specification:	≥ 98%
Labeled CAS Number:	NA
Unlabeled CAS Number:	7601-89-0
MW*:	130.4
Chemical Formula:	NaCl*O4
Storage:	Store at room temperature away from light and moisture.
Stability:	See storage and expiration date.

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible. Results are representative of QC testing at time of release from Quality Control unless otherwise stated.

Volumetric measurements were made with Class A glassware. Gravimetry is traceable to the NIST through calibrated balances and certified, calibrated, standard weights. The calibrations are traceable to the NIST under Test No. 822/270236-04. The calibrations also meet specifications outlined in ISO 9001, ISO/IEC 17025, ANSI/NSCL Z540-1-1994, NCR Document 10CFR50 Appendix B, and applicable subdocuments.

This COA references the bulk catalog number before packaging. The COA also applies to the CIL finished good catalog number , Some possible packaging sizes and their corresponding suffix are -1.2, -1, -0.5, -10, or -0.1.

* *For isotopically labeled compounds, MW listed is for the fully enriched product.*

Approved by: T. J. Eckersley

Timothy J. Eckersley, Ph.D., Quality Assurance

Quality Control Tests and Results

QC Release Date	2/27/2014
Expiration Date	2/27/2024
Concentration Based on Gravimetry	102 µg/mL
Chemical Purity of Neat Material(s)	98%
LC/MS for Concentration	109.4 ± 2.8 µg/mL (k=2)

50 Frontage Road, Andover, MA 01810-5413 USA • 1.800.322.1174 (North America) • 1.978.749.8000 (International) • isotope.com

Reagent

6860ICVStock1_00009

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 9001 QS Registered
ISO 17025-34-35-43 Accredited
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57001
Lot Number: 032416
Description: Perchlorate (ClO_4^-)

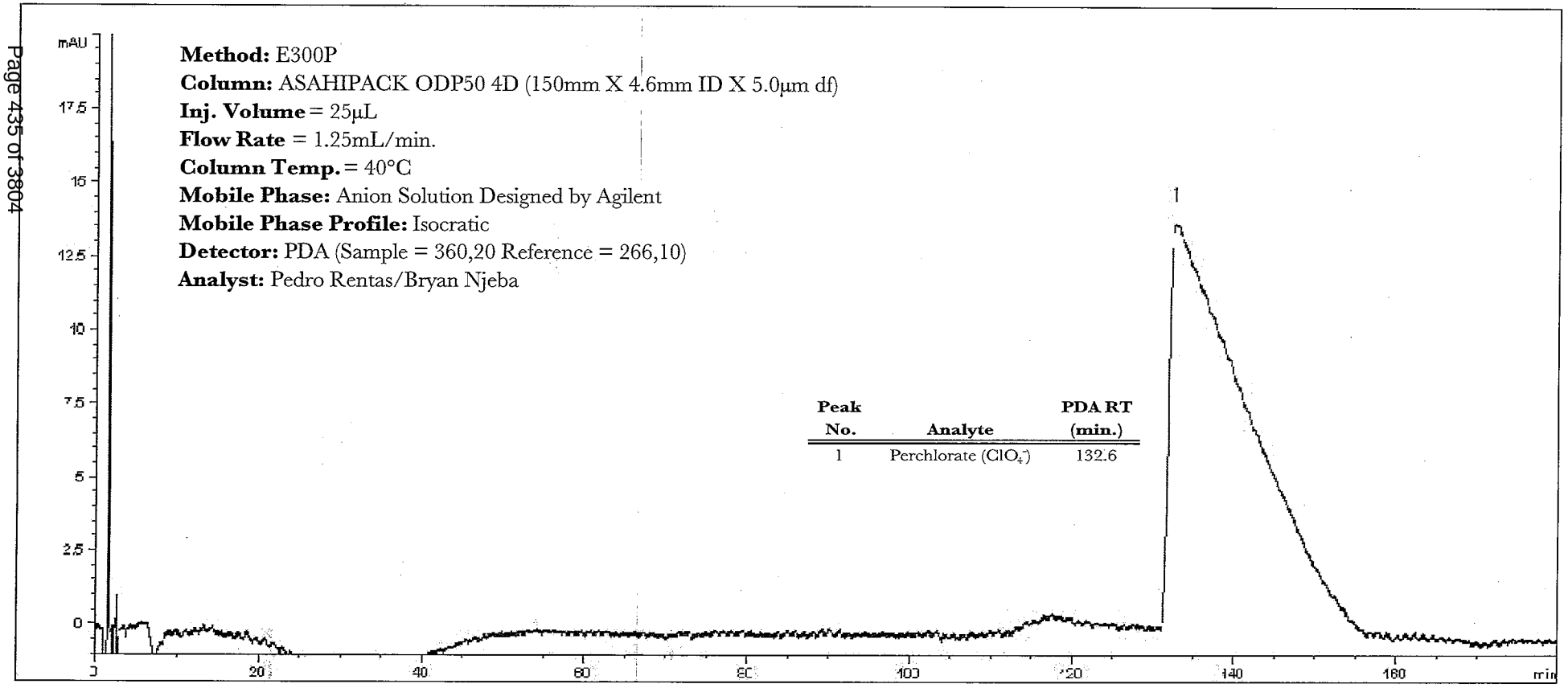
Lot #
Solvent: 032416 ASTM Type 1 Water

Expiration Date: 032419
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 822-275872-11 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 499.84 0.042 Flask Uncertainty

Formulated By:	Lawrence Barry	032416
Reviewed By:	Pedro L. Rentas	032416

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity	Uncertainty Purity	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium Perchlorate (ClO4)	IN119	MKBN1540V	1000.0	98.0	0.10	81.2	0.62795	0.62799	**1000.1**	**2.1**	07601-89-0	N/A	N/A	3152a

Method: E300P
Column: ASAHIPACK ODP50 4D (150mm X 4.6mm ID X 5.0µm df)
Inj. Volume = 25µL
Flow Rate = 1.25mL/min.
Column Temp. = 40°C
Mobile Phase: Anion Solution Designed by Agilent
Mobile Phase Profile: Isocratic
Detector: PDA (Sample = 360,20 Reference = 266,10)
Analyst: Pedro Rentas/Bryan Njeba



Peak No.	Analyte	PDA RT (min.)
1	Perchlorate (ClO_4^-)	132.6

Reagent

6860StockClO4_00014

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

AccuTrace™ Reference Standard

Catalog No: IC-PER-10X-1
Description: Perchlorate Standard
Element: Perchlorate (ClO_4)
SRM: Ind. Std.
Lot: 218065075
Matrix: Water
Hazards: *Refer to SDS for complete safety information*

Date Certified: Jun 25, 2018
Expiration: Jul 25, 2020
Sample Size: 100 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO 17034 Scope of Accreditation: Yes

Signal Word: None

Component		SRM #	Prepared Concentration (µg/mL)
ClO_4	Perchlorate	Ind. Std.	1000

The gravimetric uncertainty for this product is ±0.24%. The CRM uncertainty is ±2.4%.

The final solution was checked against an independent standard to verify its concentration.

We use the highest purity raw materials available to minimize impurity levels in the final solution. Typically 99.999%+ pure starting materials are used as well as ASTM Type I 18 megohm deionized water.

All solutions are filtered through a 0.2 µm filter prior to being bottled.

All glassware used in preparation is Class A and calibrated regularly.

All weights are traceable through NIST, Test No. 822-275872-11

All bottles are triple rinsed with deionized water prior to use.

Shake bottle prior to use and do not pipette directly out of the bottle. Use only cleaned Class A volumetric glassware. Keep bottle tightly capped.

Certified By: Meigan O'Leary

Meigan O'Leary, Inorganic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

Reagent

8081 ToxStock_00018

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
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CERTIFICATE OF ANALYSIS

Catalog No: P-093S-H-10X
Description: Toxaphene Standard
Lot: 215011420
Solvent: Hexane
Hazards: **HIGHLY FLAMMABLE** - *Refer to SDS for safety info*



Danger 2

Date Certified: Jan 30, 2015
Expiration: Jan 30, 2025
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Toxaphene	8001-35-2	Tech Mix	1001	1001

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values:
A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

Page 1 of 1

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 5/16

Reagent

8081/82 Surr_00105

Preliminary Report

TestAmerica Denver

Recovery Report

Data File:	\\ChromNA\Denver\ChromData\SGC_P3\20180928-74499.b\09281804.D				
Lims ID:	8082 Surr 105				
Client ID:					
Sample Type:	Client				
Inject. Date:	28-Sep-2018 11:22:28	ALS Bottle#:	4	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	8082 Surr 105				
Misc. Info.:	280-0074499-004				
Operator ID:	JAX/MED	Instrument ID:	SGC_P3		
Method:	\\ChromNA\Denver\ChromData\SGC_P3\20180928-74499.b\PCB_P3.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	01-Oct-2018 09:58:25	Calib Date:	20-Sep-2018 22:52:41		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P3\20180920-74190.b\09201835.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0302				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	20.3	101.59
$ 15 DCB Decachlorobiphenyl	20.0	15.6	78.08

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	16.1	80.29
$ 15 DCB Decachlorobiphenyl	20.0	17.4	86.89

Reagent

8081ABResPS_00026

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #2222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32415 **Lot No.:** A0129369

Description : Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB #3 2,000 µg/mL, Hexane/Toluene (50:50), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2021 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	alpha-BHC		2,012.0	µg/mL	+/- 11.8075	µg/mL	Gravimetric
	CAS # 319-84-6	(Lot 0911942)			+/- 91.6450	µg/mL	Unstressed
	Purity 99%				+/- 132.3230	µg/mL	Stressed
2	gamma-BHC (Lindane)		2,010.5	µg/mL	+/- 11.7987	µg/mL	Gravimetric
	CAS # 58-89-9	(Lot 6357300)			+/- 91.5767	µg/mL	Unstressed
	Purity 99%				+/- 132.2244	µg/mL	Stressed
3	beta-BHC		2,011.9	µg/mL	+/- 11.8072	µg/mL	Gravimetric
	CAS # 319-85-7	(Lot SZBD116XV)			+/- 91.6423	µg/mL	Unstressed
	Purity 98%				+/- 132.3191	µg/mL	Stressed
4	delta-BHC		2,017.0	µg/mL	+/- 11.8369	µg/mL	Gravimetric
	CAS # 319-86-8	(Lot ER02101401)			+/- 91.8728	µg/mL	Unstressed
	Purity 99%				+/- 132.6518	µg/mL	Stressed
5	Heptachlor		2,011.5	µg/mL	+/- 11.8046	µg/mL	Gravimetric
	CAS # 76-44-8	(Lot NT056422)			+/- 91.6223	µg/mL	Unstressed
	Purity 99%				+/- 132.2901	µg/mL	Stressed
6	Aldrin		2,009.0	µg/mL	+/- 11.7899	µg/mL	Gravimetric
	CAS # 309-00-2	(Lot 5923100)			+/- 91.5084	µg/mL	Unstressed
	Purity 98%				+/- 132.1257	µg/mL	Stressed
7	Heptachlor epoxide (isomer B)		2,007.0	µg/mL	+/- 11.7782	µg/mL	Gravimetric
	CAS # 1024-57-3	(Lot ER121511-01)			+/- 91.4173	µg/mL	Unstressed
	Purity 99%				+/- 131.9942	µg/mL	Stressed

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

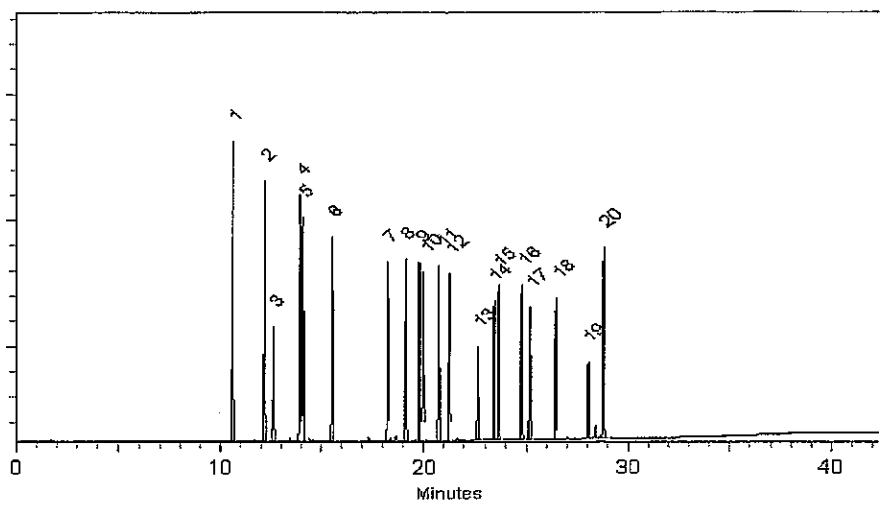
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 24-Jul-2017 **Balance:** B442140311

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 25-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

8	trans-Chlordane		2,007.0	µg/mL	+/-	11.7782	µg/mL	Gravimetric
	CAS # 5103-74-2	(Lot ER061906-04)			+/-	91.4173	µg/mL	Unstressed
	Purity 99%				+/-	131.9942	µg/mL	Stressed
9	cis-Chlordane		2,006.0	µg/mL	+/-	11.7723	µg/mL	Gravimetric
	CAS # 5103-71-9	(Lot ER062410-01)			+/-	91.3717	µg/mL	Unstressed
	Purity 99%				+/-	131.9284	µg/mL	Stressed
10	Endosulfan I		2,013.0	µg/mL	+/-	11.8134	µg/mL	Gravimetric
	CAS # 959-98-8	(Lot ER012105-02)			+/-	91.6906	µg/mL	Unstressed
	Purity 99%				+/-	132.3888	µg/mL	Stressed
11	4,4'-DDE		2,008.5	µg/mL	+/-	11.7870	µg/mL	Gravimetric
	CAS # 72-55-9	(Lot GHYQG)			+/-	91.4856	µg/mL	Unstressed
	Purity 99%				+/-	132.0928	µg/mL	Stressed
12	Dieldrin		2,006.0	µg/mL	+/-	11.7723	µg/mL	Gravimetric
	CAS # 60-57-1	(Lot ER030105-03)			+/-	91.3717	µg/mL	Unstressed
	Purity 99%				+/-	131.9284	µg/mL	Stressed
13	Endrin		2,019.3	µg/mL	+/-	11.8503	µg/mL	Gravimetric
	CAS # 72-20-8	(Lot 6429800)			+/-	91.9771	µg/mL	Unstressed
	Purity 98%				+/-	132.8025	µg/mL	Stressed
14	4,4'-DDD		2,014.9	µg/mL	+/-	11.8244	µg/mL	Gravimetric
	CAS # 72-54-8	(Lot ER061207-01)			+/-	91.7762	µg/mL	Unstressed
	Purity 98%				+/-	132.5124	µg/mL	Stressed
15	Endosulfan II		2,007.5	µg/mL	+/-	11.7811	µg/mL	Gravimetric
	CAS # 33213-65-9	(Lot ER102407-02)			+/-	91.4401	µg/mL	Unstressed
	Purity 99%				+/-	132.0271	µg/mL	Stressed
16	Endrin aldehyde		2,008.5	µg/mL	+/-	11.7870	µg/mL	Gravimetric
	CAS # 7421-93-4	(Lot ER082306-01)			+/-	91.4856	µg/mL	Unstressed
	Purity 99%				+/-	132.0928	µg/mL	Stressed
17	4,4'-DDT		2,009.0	µg/mL	+/-	11.7899	µg/mL	Gravimetric
	CAS # 50-29-3	(Lot S37912V)			+/-	91.5084	µg/mL	Unstressed
	Purity 99%				+/-	132.1257	µg/mL	Stressed
18	Endosulfan sulfate		2,009.3	µg/mL	+/-	11.7916	µg/mL	Gravimetric
	CAS # 1031-07-8	(Lot SZBC213XV)			+/-	91.5211	µg/mL	Unstressed
	Purity 96%				+/-	132.1441	µg/mL	Stressed
19	Methoxychlor		2,015.4	µg/mL	+/-	11.8273	µg/mL	Gravimetric
	CAS # 72-43-5	(Lot 6429900)			+/-	91.7985	µg/mL	Unstressed
	Purity 98%				+/-	132.5446	µg/mL	Stressed
20	Endrin ketone		2,007.5	µg/mL	+/-	11.7811	µg/mL	Gravimetric
	CAS # 53494-70-5	(Lot 160405JLM)			+/-	91.4401	µg/mL	Unstressed
	Purity 99%				+/-	132.0271	µg/mL	Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081ABResPS_00028

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32415 **Lot No.:** A0133751

Description : Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB #3 2,000 µg/mL, Hexane/Toluene (50:50), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	alpha-BHC **CAS #** 319-84-6 (Lot 0911942) **Purity** 99%	2,017.5 µg/mL	+/- 11.8398 µg/mL +/- 91.8956 µg/mL +/- 132.6847 µg/mL	Gravimetric Unstressed Stressed
2	gamma-BHC (Lindane) **CAS #** 58-89-9 (Lot 6815700) **Purity** 99%	2,010.5 µg/mL	+/- 11.7987 µg/mL +/- 91.5767 µg/mL +/- 132.2244 µg/mL	Gravimetric Unstressed Stressed
3	beta-BHC **CAS #** 319-85-7 (Lot BCBS8692V) **Purity** 98%	2,014.9 µg/mL	+/- 11.8244 µg/mL +/- 91.7762 µg/mL +/- 132.5124 µg/mL	Gravimetric Unstressed Stressed
4	delta-BHC **CAS #** 319-86-8 (Lot ER02101401) **Purity** 99%	2,010.0 µg/mL	+/- 11.7958 µg/mL +/- 91.5539 µg/mL +/- 132.1915 µg/mL	Gravimetric Unstressed Stressed
5	Heptachlor **CAS #** 76-44-8 (Lot NT057754) **Purity** 99%	2,016.5 µg/mL	+/- 11.8340 µg/mL +/- 91.8500 µg/mL +/- 132.6190 µg/mL	Gravimetric Unstressed Stressed
6	Aldrin **CAS #** 309-00-2 (Lot 6869200) **Purity** 97%	2,010.8 µg/mL	+/- 11.8006 µg/mL +/- 91.5908 µg/mL +/- 132.2447 µg/mL	Gravimetric Unstressed Stressed
7	Heptachlor epoxide (isomer B) **CAS #** 1024-57-3 (Lot ER121511-01) **Purity** 99%	2,017.5 µg/mL	+/- 11.8398 µg/mL +/- 91.8956 µg/mL +/- 132.6847 µg/mL	Gravimetric Unstressed Stressed

8	trans-Chlordane		2,012.5	µg/mL	+/-	11.8105	µg/mL	Gravimetric
	CAS # 5103-74-2	(Lot ER061906-04)			+/-	91.6678	µg/mL	Unstressed
	Purity 99%				+/-	132.3559	µg/mL	Stressed
9	cis-Chlordane		2,014.0	µg/mL	+/-	11.8193	µg/mL	Gravimetric
	CAS # 5103-71-9	(Lot ER062410-01)			+/-	91.7361	µg/mL	Unstressed
	Purity 99%				+/-	132.4545	µg/mL	Stressed
10	Endosulfan I		2,010.0	µg/mL	+/-	11.7958	µg/mL	Gravimetric
	CAS # 959-98-8	(Lot ER012105-02)			+/-	91.5539	µg/mL	Unstressed
	Purity 99%				+/-	132.1915	µg/mL	Stressed
11	4,4'-DDE		2,011.0	µg/mL	+/-	11.8017	µg/mL	Gravimetric
	CAS # 72-55-9	(Lot ER011106-01)			+/-	91.5995	µg/mL	Unstressed
	Purity 99%				+/-	132.2572	µg/mL	Stressed
12	Dieldrin		2,011.0	µg/mL	+/-	11.8017	µg/mL	Gravimetric
	CAS # 60-57-1	(Lot 5416800)			+/-	91.5995	µg/mL	Unstressed
	Purity 99%				+/-	132.2572	µg/mL	Stressed
13	Endrin		2,016.4	µg/mL	+/-	11.8331	µg/mL	Gravimetric
	CAS # 72-20-8	(Lot 6898800)			+/-	91.8432	µg/mL	Unstressed
	Purity 98%				+/-	132.6091	µg/mL	Stressed
14	4,4'-DDD		2,010.5	µg/mL	+/-	11.7987	µg/mL	Gravimetric
	CAS # 72-54-8	(Lot HAN02-KNCK)			+/-	91.5767	µg/mL	Unstressed
	Purity 99%				+/-	132.2244	µg/mL	Stressed
15	Endosulfan II		2,009.5	µg/mL	+/-	11.7929	µg/mL	Gravimetric
	CAS # 33213-65-9	(Lot 6815600)			+/-	91.5312	µg/mL	Unstressed
	Purity 99%				+/-	132.1586	µg/mL	Stressed
16	Endrin aldehyde		2,007.5	µg/mL	+/-	11.7811	µg/mL	Gravimetric
	CAS # 7421-93-4	(Lot ER082306-01)			+/-	91.4401	µg/mL	Unstressed
	Purity 99%				+/-	132.0271	µg/mL	Stressed
17	4,4'-DDT		2,012.5	µg/mL	+/-	11.8105	µg/mL	Gravimetric
	CAS # 50-29-3	(Lot S37912V)			+/-	91.6678	µg/mL	Unstressed
	Purity 99%				+/-	132.3559	µg/mL	Stressed
18	Endosulfan sulfate		2,020.0	µg/mL	+/-	11.8545	µg/mL	Gravimetric
	CAS # 1031-07-8	(Lot BCBR9875V)			+/-	92.0094	µg/mL	Unstressed
	Purity 99%				+/-	132.8491	µg/mL	Stressed
19	Methoxychlor		2,018.5	µg/mL	+/-	11.8457	µg/mL	Gravimetric
	CAS # 72-43-5	(Lot 6736800)			+/-	91.9411	µg/mL	Unstressed
	Purity 99%				+/-	132.7505	µg/mL	Stressed
20	Endrin ketone		2,015.5	µg/mL	+/-	11.8281	µg/mL	Gravimetric
	CAS # 53494-70-5	(Lot 160405JLM)			+/-	91.8045	µg/mL	Unstressed
	Purity 99%				+/-	132.5532	µg/mL	Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

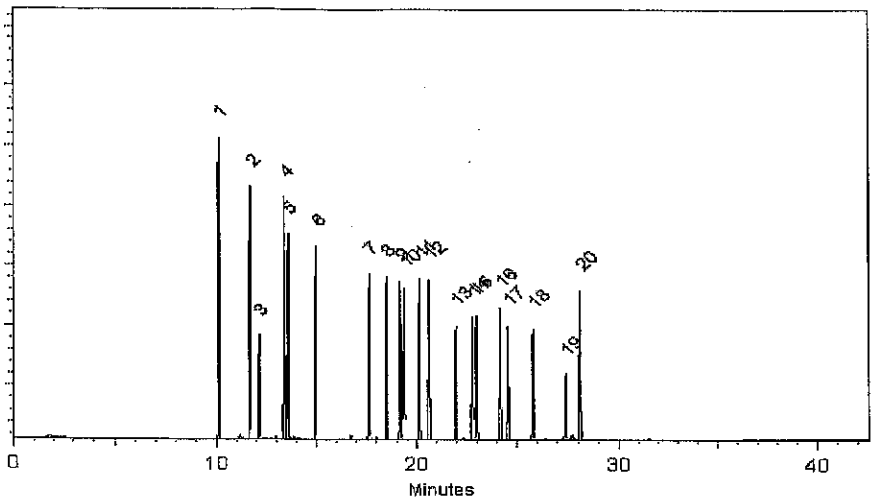
Carrier Gas:
hellum-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 27-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 02-Jan-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Reagent

8081ABResSS_00012

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32415.sec **Lot No.:** A0108854

Description : Organochlorine Pesticide Mix AB #3

Organochlorine Pesticide Mix AB #3 2,000 µg/mL, Hexane/Toluene (50:50), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	alpha-BHC **CAS #** 319-84-6.SEC (Lot 1623900) **Purity** 99%	2,009.5 µg/mL	+/- 11.7929 µg/mL +/- 78.6071 µg/mL +/- 124.7419 µg/mL	Gravimetric Unstressed Stressed
2	gamma-BHC (Lindane) **CAS #** 58-89-9.SEC (Lot LC00563V) **Purity** 99%	2,010.0 µg/mL	+/- 11.7958 µg/mL +/- 78.6267 µg/mL +/- 124.7729 µg/mL	Gravimetric Unstressed Stressed
3	beta-BHC **CAS #** 319-85-7.SEC (Lot 1808700) **Purity** 98%	2,003.1 µg/mL	+/- 11.7554 µg/mL +/- 78.3575 µg/mL +/- 124.3458 µg/mL	Gravimetric Unstressed Stressed
4	delta-BHC **CAS #** 319-86-8.SEC (Lot 1912200) **Purity** 99%	2,003.5 µg/mL	+/- 11.7577 µg/mL +/- 78.3724 µg/mL +/- 124.3694 µg/mL	Gravimetric Unstressed Stressed
5	Heptachlor **CAS #** 76-44-8.SEC (Lot 1745400) **Purity** 99%	2,000.5 µg/mL	+/- 11.7401 µg/mL +/- 78.2551 µg/mL +/- 124.1832 µg/mL	Gravimetric Unstressed Stressed
6	Aldrin **CAS #** 309-00-2.SEC (Lot ER062311-01) **Purity** 98%	2,004.1 µg/mL	+/- 11.7612 µg/mL +/- 78.3959 µg/mL +/- 124.4067 µg/mL	Gravimetric Unstressed Stressed

8	trans-Chlordane		2,006.0	µg/mL	+/-	11.7723	µg/mL	Gravimetric
	CAS # 5103-74-2.SEC	(Lot LC06193V)			+/-	78.4702	µg/mL	Unstressed
	Purity 99%				+/-	124.5246	µg/mL	Stressed
9	cis-Chlordane		2,009.0	µg/mL	+/-	11.7899	µg/mL	Gravimetric
	CAS # 5103-71-9.SEC	(Lot 24407)			+/-	78.5876	µg/mL	Unstressed
	Purity 99%				+/-	124.7108	µg/mL	Stressed
10	Endosulfan I		2,002.1	µg/mL	+/-	11.7497	µg/mL	Gravimetric
	CAS # 959-98-8.SEC	(Lot 1710200)			+/-	78.3192	µg/mL	Unstressed
	Purity 98%				+/-	124.2850	µg/mL	Stressed
11	4,4'-DDE		2,001.5	µg/mL	+/-	11.7459	µg/mL	Gravimetric
	CAS # 72-55-9.SEC	(Lot 1833500)			+/-	78.2942	µg/mL	Unstressed
	Purity 99%				+/-	124.2453	µg/mL	Stressed
12	Dieldrin		1,995.3	µg/mL	+/-	11.7094	µg/mL	Gravimetric
	CAS # 60-57-1.SEC	(Lot 1274700)			+/-	78.0509	µg/mL	Unstressed
	Purity 98%				+/-	123.8591	µg/mL	Stressed
13	Endrin		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 72-20-8 *	(Lot LC06045V)			+/-	78.2355	µg/mL	Unstressed
	Purity 99%				+/-	124.1521	µg/mL	Stressed
14	4,4'-DDD		2,009.0	µg/mL	+/-	11.7899	µg/mL	Gravimetric
	CAS # 72-54-8.SEC	(Lot 1141700)			+/-	78.5876	µg/mL	Unstressed
	Purity 98%				+/-	124.7108	µg/mL	Stressed
15	Endosulfan II		2,010.0	µg/mL	+/-	11.7958	µg/mL	Gravimetric
	CAS # 33213-65-9.SEC	(Lot 3437500)			+/-	78.6267	µg/mL	Unstressed
	Purity 99%				+/-	124.7729	µg/mL	Stressed
16	Endrin aldehyde		2,016.4	µg/mL	+/-	11.8331	µg/mL	Gravimetric
	CAS # 7421-93-4.SEC	(Lot 21752)			+/-	78.8751	µg/mL	Unstressed
	Purity 98%				+/-	125.1671	µg/mL	Stressed
17	4,4'-DDT		2,016.5	µg/mL	+/-	11.8340	µg/mL	Gravimetric
	CAS # 50-29-3.SEC	(Lot 3478000)			+/-	78.8809	µg/mL	Unstressed
	Purity 99%				+/-	125.1764	µg/mL	Stressed
18	Endosulfan sulfate		2,007.5	µg/mL	+/-	11.7813	µg/mL	Gravimetric
	CAS # 1031-07-8.SEC	(Lot 1888900)			+/-	78.5301	µg/mL	Unstressed
	Purity 98%				+/-	124.6196	µg/mL	Stressed
19	Methoxychlor		2,007.0	µg/mL	+/-	11.7782	µg/mL	Gravimetric
	CAS # 72-43-5.SEC	(Lot LC09014V)			+/-	78.5093	µg/mL	Unstressed
	Purity 99%				+/-	124.5867	µg/mL	Stressed
20	Endrin ketone		2,007.5	µg/mL	+/-	11.7813	µg/mL	Gravimetric
	CAS # 53494-70-5.SEC	(Lot 091307RD)			+/-	78.5301	µg/mL	Unstressed
	Purity 98%				+/-	124.6196	µg/mL	Stressed
Solvent:	Hexane/Toluene (50:50)							
	CAS # 110-54-3/108-88-3							
	Purity 99%							

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

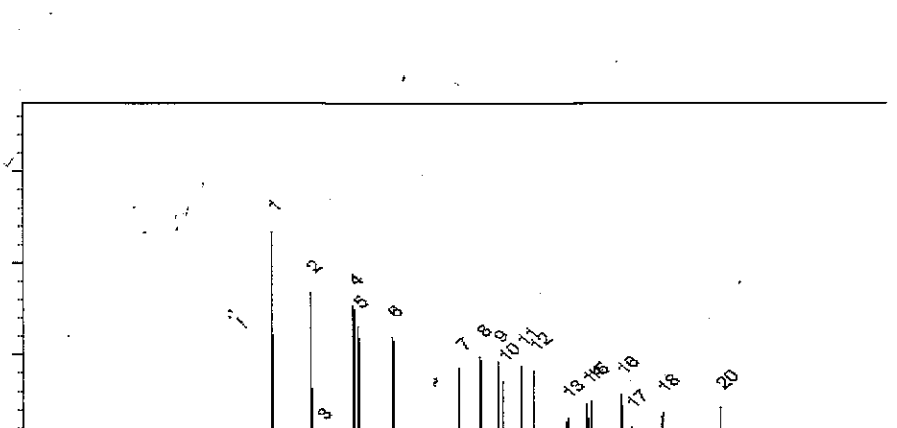
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Lane Kibe - Mix Technician

Date Mixed: 04-Feb-2015 **Balance:** B345965662

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 12-Feb-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

This certificated has been updated on 31January2017 for the following reasons and supersedes any pre-existing certificate: Elution order corrected to have Endosulfan 1 as peak 10 (was listed as peak 11), 4,4'-DDE as peak 11 (was listed as peak 10), 4,4'-DDT as peak 17 (was listed as 16), Endrin aldehyde as peak 16 (was listed as 17).

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081EvalBStk2_00020

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8081-DS
Description: 4,4'-DDT & Endrin
Lot: 217101288
Solvent: Hexane
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Oct 30, 2017
Expiration: Nov 30, 2018
Sample Size: 1 mL
Components: 2
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
4,4'-DDT	50-29-3	98.2	200.6	197.0
Endrin	72-20-8	98.1	200.8	197.0

Received 03.28.18 KDK

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 4/17

Reagent

8081HCBStkPS_00021

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: APP-9-112
Description: Hexachlorobenzene
Lot: 216101286
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Oct 26, 2016
Expiration: Oct 26, 2026
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Hexachlorobenzene	118-74-1	99.2	100.4	99.6

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. This value is the expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

CERTIFICATION REPORT

1. **Quality Documentation:** This certificate is designed in accordance with ISO Guide 31 (Reference Materials - Contents of Certificates and Labels) and ISO Guide 35 (Reference Materials – General and Statistical Principles for Certification).

2. **Quality Standards:**

   ISO Guide 34 - General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   AR-1463

   ISO/IEC 17025 - General Requirements for the Competence of Testing and Calibration Laboratories ANAB Certificate Number AT-1339

   AT-1339

   ISO 9001 - Quality Management System - Requirements Eagle Registrations Certificate Number 3774

3. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 11. If dilution is required, use only Class A glassware and diluent compatible with all certified analytes in this preparation. All solutions should be thoroughly mixed prior to use.

4. **Raw Materials:** Reference standards are prepared from the highest quality starting materials with defined purities. All analytes and solvents are obtained from pre-qualified vendors and then analyzed or evaluated prior to use.

5. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.

6. **Homogeneity Assessment:** Homogeneity of the finished product is assessed by analyzing sample batches or by other methods consistent with the intended use of the product and by procedures that comply with the appropriate Quality System requirements, and ISO Guide 35.

7. **Stability Assessment:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label. To ensure a uniform solution, mix the contents of the sealed container thoroughly prior to use. Care should be taken not to contaminate the contents of the original container.

8. **Analytical Quality Control:** Products are tested by validated analytical methods specified in the manufacturer's quality system.

9. **Uncertainty Statistics and Confidence Limits:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_m = \sqrt{(u(P))^2 + (u(m))^2 + (u(V))^2}$. The expanded uncertainty, U_{CRM} assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level. The U_{CRM} for organic products is ±5%, the U_{CRM} for inorganic products is ±2%.

10. **Warranties:** The manufacturer warrants that its products shall conform to the description of such products as provided in its catalog or on the specific product label. This warranty is exclusive, and the manufacturer makes no other warranty, express or implied, including any implied warranty of merchantability or fitness for any particular purpose.

11. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. Due to the hazardous nature, only trained personnel should handle this product. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

Reagent

8081HCBStkSS_00036

Certificate of Analysis

Hexachlorobenzene Solution

Product Number: EPA-1125 **Page:** 1 of 1

Lot Number: CR-5129 **Lot Issue Date:** 08-Nov-2017 **Expiration Date:** 31-Dec-2021

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
hexachlorobenzene	000118-74-1	RM03125	1003 ± 5 µg/mL

Matrix: acetone

Storage: Store at Room Temperature (15° to 30°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ISO 9001
Registered
TUV USA, Inc.

250 SMITH STREET ▪ NORTH KINGSTOWN, RHODE ISLAND 02852 ▪ WWW.ULTRASCI.COM

Reagent

8081ToxPS_00034

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32071 **Lot No.:** A0123422

Description : Toxaphene Standard

Toxaphene Standard 5,000 µg/mL, Isooctane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Toxaphene	5,018.0 µg/mL	+/- 29.4484	µg/mL	Gravimetric
	CAS # 8001-35-2 (Lot NT054507)		+/- 159.0403	µg/mL	Unstressed
	Purity ---%		+/- 207.7596	µg/mL	Stressed

Solvent: Isooctane
CAS # 540-84-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

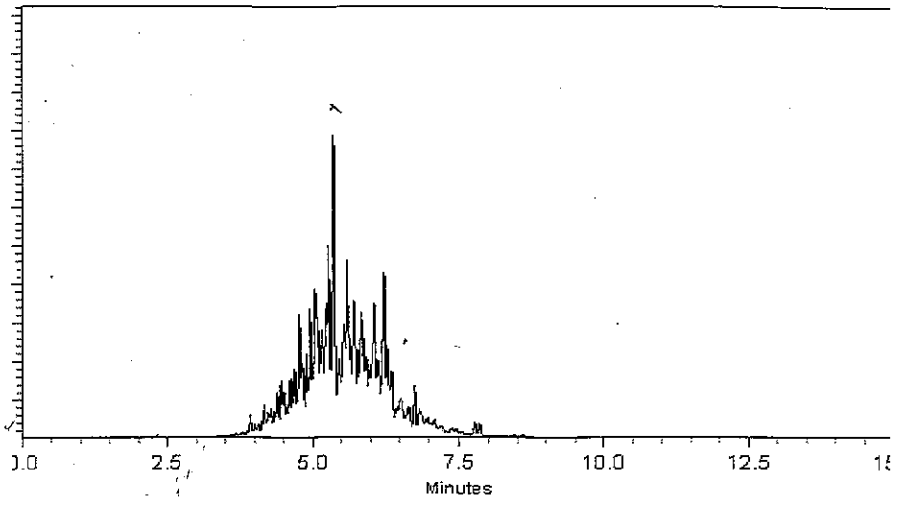
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 12-Dec-2016 **Balance:** B442140311

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 13-Dec-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\,stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\,stability} + U^2_{shipping\,stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081ToxPS_00039

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32071 **Lot No.:** A0128388

Description : Toxaphene Standard

Toxaphene Standard 5,000 µg/mL, Isooctane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2021 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Toxaphene	5,034.0 µg/mL	+/- 29.5423 µg/mL	Gravimetric
	CAS # 8001-35-2 (Lot NT057448)		+/- 159.5474 µg/mL	Unstressed
	Purity ----%		+/- 208.4220 µg/mL	Stressed

Solvent: Isooctane
CAS # 540-84-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

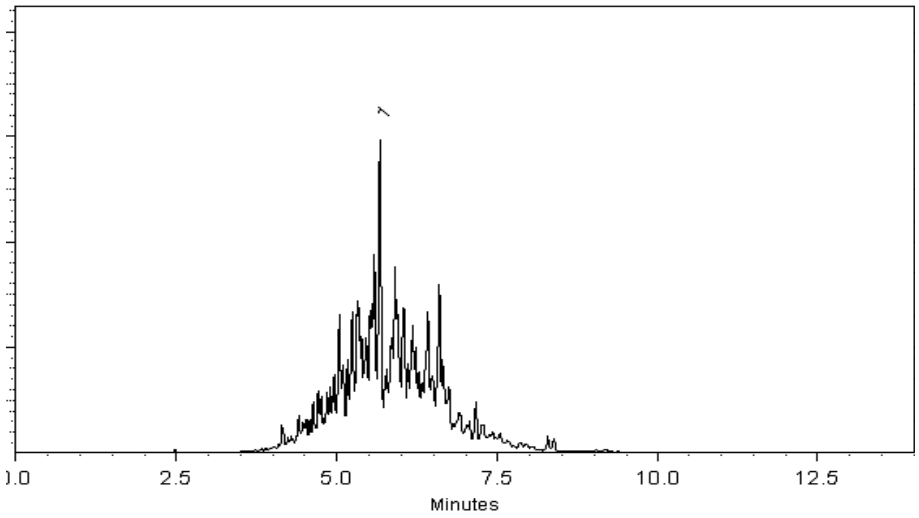
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Joseph Jaglowski - Mix Technician

Date Mixed: 12-Jun-2017 **Balance:** B707717271

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 03-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8081ToxSS_00020

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-093S-H-10X
Description: Toxaphene
Lot: 217071319
Solvent: Hexane
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Jul 20, 2017
Expiration: Jul 20, 2027
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Toxaphene	8001-35-2	Tech Mix	1002	1002

Received
03·28·18
KDK

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 4/17

Reagent

8082 LCS_00049

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8082 LCS _ 00049

Reagent ID: 8082 LCS_00049

		Expiration Date:	08/05/2018
Description:	2 ug/mL	Lab [illegible]:	TestAmerica Denver
No. of Bottles:	2	Prep [illegible]:	Sriphuthorn, Kittiyada
Storage Location:	North Prep	Solvent:	ACETONE
Reagent Volume:	500.000 mL	Solvent Lot:	Acetone_00221
Creation Date:	07/11/2018		
Open Date:			
Container(s):	5210229, 5210230		
Comment:	Take 1mL 8082LCSStock and dilute to 500mL in Ac[illegible]ne. 6 Month expiration date. Divide into 2 bottles.		

PASS 13-July 2018

Reagent Analyte Information

Analyte	%R	%D	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
PCB-1016	95	5.0	8082LCSSTOCK_[illegible]	04/[illegible]/2022	[illegible]	[illegible]	2.00000	ug/mL
PCB-1260	92	8.3	8082LCSSTOCK_00034	04/30/2022	1000.[illegible]	ug/mL	2.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8082LCSSTOCK_00034	Aroclor 1016/1260 1000UG/ML	ASTD	04/30/22	RESTEK	A011[illegible]2	3[illegible]39	1.00000	mL

Preliminary Report

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\07131804.D
Lims ID: 8082 LCS_00049
Client ID:
Sample Type: Client
Inject. Date: 13-Jul-2018 09:32:10 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 10.0000
Sample Info: 8082 LCS_00049
Misc. Info.: 280-0071939-004
Operator ID: JAX Instrument ID: SGC_P3

Method: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\PCB_P3.m
Limit Group: GCSV - 8082 - IS
Last Update: 13-Jul-2018 12:44:25 Calib Date: 20-May-2018 23:47:28
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P3\20180520-70135.b\05201835.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene						
1	1.832	1.834	-0.002	3364580530	1000.0	
2	1.755	1.754	0.001	914663468	1000.0	
					RPD = 0.00	
$ 14 Tetrachloro-m-xylene						U
1		2.750			ND	
2		2.781				
3 PCB-1221						U
1		2.967			ND	
1		3.110				
1		3.147				
2		3.097				
2		3.227				
2		3.280				
7 PCB-1232						U
1		3.145			ND	
1		3.492				
1		3.959				
1		4.099				
1		4.549				
2		3.279				
2		3.669				
2		4.126				
2		4.269				
2		4.796				

Preliminary Report

Data File: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\07131804.D

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
1 PCB-1016						
1	3.485	3.487	-0.002	203488343	184.8	
1	3.952	3.954	-0.002	484409114	193.2	
1	4.092	4.090	0.002	193370944	179.9	
1	4.302	4.304	-0.002	219686919	206.3	
1	4.538	4.537	0.001	208592567	186.9	
		Average of Peak Amounts =			190.2	
2	3.665	3.664	0.001	56306865	180.9	
2	4.122	4.121	0.001	130662122	182.6	
2	4.262	4.264	-0.002	49916935	174.4	
2	4.495	4.494	0.001	34467906	218.9	
2	4.785	4.787	-0.002	41291800	177.2	
		Average of Peak Amounts =			186.8	
					RPD = 1.79	
10 PCB-1242						U
1		3.492			ND	
1		3.962				
1		4.548				
1		5.038				
1		5.062				
2		3.669				
2		4.125				
2		4.269				
2		4.795				
2		4.932				
4 PCB-1248						U
1		3.952			ND	
1		4.308				
1		4.545				
1		5.295				
1		5.778				
2		4.125				
2		4.502				
2		4.792				
2		4.932				
2		6.105				

Preliminary Report

Data File: \\ChromNA\Denver\ChromData\SGC_P3\20180713-71939.b\07131804.D

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
9 PCB-1254						U
1		5.300			ND	
1		5.630				
1		5.783				
1		6.383				
1		6.750				
2		5.537				
2		5.960				
2		6.107				
2		6.657				
2		7.127				
12 PCB-1260						
1	6.005	6.007	-0.002	298207506	186.3	
1	6.732	6.730	0.002	587506377	189.6	
1	7.222	7.220	0.002	275021459	181.4	
1	7.652	7.654	-0.002	611908583	179.7	
1	8.035	8.037	-0.002	347624059	183.1	
		Average of Peak Amounts =			184.0	
2	6.645	6.647	-0.002	100659872	185.2	
2	7.115	7.114	0.001	156955927	189.0	
2	7.642	7.641	0.001	69492806	181.1	
2	8.009	8.011	-0.002	162573903	176.9	
2	8.512	8.514	-0.002	120717439	180.0	
		Average of Peak Amounts =			182.4	
					RPD = 0.87	
5 PCB-1262						U
1		6.385			ND	
1		6.909				
1		7.235				
1		7.669				
1		8.052				
2		6.656				
2		7.259				
2		7.652				
2		8.022				
2		8.526				

Reagent

8082LCSSTOCK_00034

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039 **Lot No.:** A0116282

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2022 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016 **CAS #** 12674-11-2 (Lot W-125-01) **Purity** ----%	1,009.0 µg/mL	+/- 5.8800 µg/mL +/- 31.9716 µg/mL +/- 41.7696 µg/mL		Gravimetric Unstressed Stressed
2	Aroclor 1260 **CAS #** 11096-82-5 (Lot W-129-06) **Purity** ----%	1,004.6 µg/mL	+/- 5.8543 µg/mL +/- 31.8322 µg/mL +/- 41.5875 µg/mL		Gravimetric Unstressed Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

34-35

Reagent

8270_LCS_Main_00055

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8270_LCS_Main_00055

Reagent ID: 8270_LCS_Main_00055

Description:	USE IN CONJUCTION WITH 8270_LCS_S	Expiration Date:	05/31/2019
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	Matsumoto, Jordan T
Reagent Volume:	500.000 mL	Solvent:	P&T Methanol
Creation Date:	10/01/2018	Solvent Lot:	MethanolP&T_00214
Open Date:			
Container(s):	5335109, 5335110, 5335111, 5335112, 5335262, 5335263		
Comment:	Make full volume.Place all stocks in a sonication bath for 5 minutes before use. Dilute to 500mL in P&T MeOH 40mL of MS-570666 or 571995 "8270 List 1 Std 1 MegaMix" 20mL of MS-569731 "Benzoic Acid" 10mL of "OP-572556" HCP 1 year expiration Exchange /MeCl2 verification All Standards in fridge.		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,1'-Biphenyl	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2,4,5-Tetrachlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2,4-Trichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2-Dichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,2-Diphenylhydrazine	571995_00044	09/30/2019	1010.97500	ug/mL	80.87796	ug/mL
1,3-Dichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,3-Dinitrobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,4-Dichlorobenzene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1,4-Dioxane	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
1-Methylnaphthalene	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,2'-oxybis[1-chloropropane]	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,3,4,6-Tetrachlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4,5-Trichlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4,6-Trichlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4-Dichlorophenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL
2,4-Dimethylphenol	571995_00044	09/30/2019	1000.00000	ug/mL	80.00000	ug/mL

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_D\20181003-74684.b\D29466.D
Lims ID: 8270_LCS_Main_00055 Inj. Date: 03-Oct-2018 16:53:30
Worklist ID: 280-0074684-028 Instrument: SMS_D
Method: SMSD_8270C

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3520C
16 1,4-Dioxane	80.0	61.0	76.3	40-110
17 N-Nitrosodimethylamine	80.0	61.8	77.2	48-121
18 Pyridine	160.0	117.7	73.6	34-112
28 Phenol	80.0	65.8	82.2	50-127
30 Aniline	80.0	64.3	80.4	34-106
32 Bis(2-chloroethyl)ether	80.0	62.8	78.5	53-132
35 n-Decane	80.0	60.1	75.2	14-120
36 2-Chlorophenol	80.0	64.3	80.4	54-124
37 1,3-Dichlorobenzene	80.0	62.6	78.2	31-124
38 1,4-Dichlorobenzene	80.0	61.9	77.4	34-123
39 Benzyl alcohol	80.0	66.1	82.6	54-124
40 1,2-Dichlorobenzene	80.0	62.2	77.8	36-123
41 2-Methylphenol	80.0	66.0	82.4	55-123
43 2,2'-oxybis[1-chloropro	80.0	63.4	79.2	44-132
44 Indene	80.0	66.2	82.7	49-111
45 3-Methylphenol	80.0	66.3	82.9	51-124
46 3 & 4 Methylphenol	80.0	66.3	82.9	51-124
47 4-Methylphenol	80.0	66.3	82.9	51-124
48 N-Nitrosodi-n-propylami	80.0	65.8	82.2	57-117
50 Acetophenone	80.0	66.3	82.9	46-127
53 Hexachloroethane	80.0	60.5	75.6	27-123
54 Nitrobenzene	80.0	64.6	80.8	59-117
57 Isophorone	80.0	70.7	88.4	58-111
59 2-Nitrophenol	80.0	67.6	84.5	61-121
60 2,4-Dimethylphenol	80.0	67.1	83.9	33-117
63 Bis(2-chloroethoxy)meth	80.0	67.2	84.0	62-114
64 Benzoic acid	80.0	69.1	86.4	41-111
68 2,4-Dichlorophenol	80.0	68.9	86.1	62-119
70 1,2,4-Trichlorobenzene	80.0	65.4	81.7	44-117
72 Naphthalene	80.0	65.9	82.4	50-119
73 4-Chloroaniline	80.0	67.4	84.3	30-99
74 2,6-Dichlorophenol	80.0	69.0	86.3	63-118
76 Hexachlorobutadiene	80.0	66.6	83.2	36-118
83 4-Chloro-3-methylphenol	80.0	69.7	87.2	65-121
87 2-Methylnaphthalene	80.0	68.9	86.1	53-119
89 1-Methylnaphthalene	80.0	68.8	86.0	54-116
90 Hexachlorocyclopentadie	160.0	148.3	92.7	10-106
91 1,2,4,5-Tetrachlorobenz	80.0	68.6	85.8	57-117
94 2,4,6-Trichlorophenol	80.0	72.8	91.1	60-137
96 2,4,5-Trichlorophenol	80.0	70.4	88.0	60-129
100 1,1'-Biphenyl	80.0	67.7	84.6	52-130

Preliminary Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_D\20181003-74684.b\D29466.D

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3520C
102 2-Chloronaphthalene	80.0	67.4	84.2	51-128
105 2-Nitroaniline	80.0	69.2	86.4	57-133
111 Dimethyl phthalate	80.0	71.3	89.1	59-131
112 1,3-Dinitrobenzene	80.0	72.7	90.8	65-135
113 2,6-Dinitrotoluene	80.0	72.1	90.2	65-135
115 Acenaphthylene	80.0	72.5	90.6	55-123
117 3-Nitroaniline	80.0	68.1	85.1	27-111
119 Acenaphthene	80.0	69.0	86.2	54-129
120 2,4-Dinitrophenol	160.0	127.4	79.6	56-121
121 4-Nitrophenol	160.0	135.0	84.4	50-140
124 2,4-Dinitrotoluene	80.0	72.1	90.1	65-135
125 Dibenzofuran	80.0	70.4	88.1	56-128
129 2,3,4,6-Tetrachlorophen	80.0	71.8	89.8	64-128
131 Hexadecane	80.0	68.1	85.2	47-129
132 Diethyl phthalate	80.0	72.2	90.2	60-133
134 4-Chlorophenyl phenyl e	80.0	70.7	88.3	56-130
135 Fluorene	80.0	71.1	88.9	51-133
138 4-Nitroaniline	80.0	69.9	87.4	54-128
139 4,6-Dinitro-2-methylphe	160.0	147.8	92.4	63-122
140 Diphenylamine	68.0	60.1	88.4	60-124
141 N-Nitrosodiphenylamine	80.0	69.1	86.4	63-116
142 1,2-Diphenylhydrazine	80.9	72.1	89.2	55-128
143 Azobenzene	80.0	71.4	89.2	55-128
152 4-Bromophenyl phenyl et	80.0	69.4	86.8	65-115
153 Hexachlorobenzene	80.0	71.2	89.0	65-114
156 n-Octadecane	80.0	68.5	85.6	
157 Pentachlorophenol	160.0	127.2	79.5	56-115
163 Phenanthrene	80.0	68.7	85.9	63-119
164 Anthracene	80.0	69.5	86.9	65-116
165 Carbazole	80.0	68.7	85.9	68-116
169 Di-n-butyl phthalate	80.0	70.5	88.1	65-118
176 Fluoranthene	80.0	70.7	88.3	65-118
180 Pyrene	80.0	68.7	85.8	59-124
187 Butyl benzyl phthalate	80.0	66.1	82.6	64-121
192 Benzo[a]anthracene	80.0	63.9	79.9	63-120
193 Bis(2-ethylhexyl) phtha	80.0	68.0	85.0	61-123
194 Chrysene	80.0	69.0	86.3	65-122
197 Di-n-octyl phthalate	80.0	66.7	83.4	56-119
198 Benzo[b]fluoranthene	80.0	68.7	85.9	64-122
200 Benzo[k]fluoranthene	80.0	71.3	89.1	69-125
202 Benzo[a]pyrene	80.0	68.7	85.9	62-114
208 Indeno[1,2,3-cd]pyrene	80.0	67.7	84.6	53-116
209 Dibenz(a,h)anthracene	80.0	68.7	85.8	60-120
210 Benzo[g,h,i]perylene	80.0	68.4	85.5	60-122

Preliminary Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_D\20181003-74684.b\D29466.D

Samples for Limit Group: 1, Lims Prep Method: 3520C
280-114613-C-3-A

Reagent

8270BO-SIMLCS_00031

Report Date: 17-Oct-2018 14:44:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_F\20181012-75020.b\F4024.D

Lims ID: 8270boSimlcs_00031 Inj. Date: 13-Oct-2018 03:44:30

Worklist ID: 280-0075020-025 Instrument: SMS_F

Method: SMSF_8270SIMX

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3546
8 1,4-Dioxane	900.0	*ND	0.0	
9 N-Nitrosodimethylamine	900.0	849.8	94.4	
10 Naphthalene	900.0	856.8	95.2	38-111
11 2-Methylnaphthalene	900.0	860.2	95.6	39-114
12 1-Methylnaphthalene	900.0	869.4	96.6	43-111
13 Dimethyl phthalate	900.0	*ND	0.0	
14 Acenaphthylene	900.0	768.8	85.4	39-116
15 Acenaphthene	900.0	806.4	89.6	44-111
16 Dibenzofuran	900.0	831.6	92.4	
17 Diethyl phthalate	900.0	*ND	0.0	
18 Fluorene	900.0	790.5	87.8	47-114
19 N-Nitrosodiphenylamine	900.0	772.8	85.9	
20 Phenanthrene	900.0	773.2	85.9	49-113
21 Anthracene	900.0	772.0	85.8	50-114
22 Di-n-butyl phthalate	900.0	756.7	84.1	
23 Fluoranthene	900.0	747.6	83.1	55-119
24 Pyrene	900.0	760.5	84.5	55-117
25 Butyl benzyl phthalate	900.0	760.1	84.5	
26 Benzo[a]anthracene	900.0	753.0	83.7	54-122
27 Chrysene	900.0	771.0	85.7	57-118
28 Bis(2-ethylhexyl) phtha	900.0	*ND	0.0	
29 Di-n-octyl phthalate	900.0	*ND	0.0	
30 Benzo[b]fluoranthene	900.0	798.5	88.7	53-128
31 Benzo[k]fluoranthene	900.0	804.9	89.4	56-123
32 Benzo[a]pyrene	900.0	789.2	87.7	50-125
33 Indeno[1,2,3-cd]pyrene	900.0	818.0	90.9	49-130
34 Dibenz(a,h)anthracene	900.0	812.6	90.3	50-129
35 Benzo[g,h,i]perylene	900.0	814.3	90.5	49-127

Samples for Limit Group: 1, Lims Prep Method: 3546

280-114910-A-16-P 280-114910-A-21-E 280-114910-A-22-E

280-114910-A-23-E 280-114859-A-2-A 280-114859-B-3-A

280-114859-B-4-A

Reagent

8270SIMSurStk_00001

o2si
smart solutions®

Quality System Audited & Registered
by NSF-ISR to ISO 9001:2008

2030 Savage Road
Charleston, South Carolina 29407
Phone: 866.272.0932
Fax: 866.509.5146
www.o2si.com

ACCREDITED

ISO 17025 Accredited Chemical Testing Lab
Cert. No. 3031.01

Date Received: _____

Certificate of Analysis

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
112220-01 -5PAK	334025	≤ -10 °C	Methylene Chloride	11-Feb-2019	Custom Surrogate Mix, 8-2220, 1000 mg/L, 5 x 1 ml

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration	
fluoranthene-d_{10}	93951-69-0	98.9	1458.12.2P	1002 +/- 4.54	mg/l
2-fluorobiphenyl	321-60-8	99.7	8.7.1P	1015 +/- 10.59	mg/l
2-fluorophenol	367-12-4	99.9	10.9.2P	1000 +/- 14.42	mg/L
2-methylnaphthalene-d_{10}	7297-45-2	98	1457.18.1P	1007 +/- 50.54	mg/l
nitrobenzene-d_5	4165-60-0	99.9	7.120.1P	1014 +/- 10.58	mg/l
phenol-d5	4165-62-2	99.6	11.12.3.2P	1004 +/- 10.48	mg/L
p-terphenyl-d_{14}	1718-51-0	100	9.12.8.1P	1008 +/- 10.52	mg/l
2,4,6-tribromophenol	118-79-6	99.8	12.1.5P	1001 +/- 14.43	mg/L

Certified By: Jarrett Howard

Jarrett Howard

Manufacture Date 22-Jan-2018

Follow all storage requirements, keep tightly closed when not in use, and use good laboratory practices when handling.
This Reference Material was manufactured, produced, and/or certified under a quality management system that is accredited to ISO 17034 and ISO/IEC 17025.

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.
The stated uncertainty is the expanded uncertainty with a coverage factor of two to give a 95% confidence level.

Reagent

8270Surrogate_00128

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8270Surrogate_00128

Reagent ID: 8270Surrogate_00128

Description:	8270 Surrogate 100ug/ml	Expiration Date:	07/09/2019
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	North Prep	Prepared By:	McAleese, Maura A
Reagent Volume:	1000.000 mL	Solvent:	ACETONE
Creation Date:	10/17/2018	Solvent Lot:	Acetone_00232
Open Date:			
Container(s):	5367833, 5367834, 5367835, 5367836		
Comment:	Sonicate 8270SurrStkHL 5 mins before use. Take 20mL of 8270SurstkHL and dilute to 1000mL in acetone. One year expiration date. Split into 4x250mL bottles. Requires solvent exchange to MeCl2 prior to submission for verification.		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,4,6 - Tribromophenol	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorobiphenyl	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00282	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6 - Tribromophenol	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6-Tribromophenol	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorobiphenyl	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2-Fluorophenol	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitrobenzene-d5	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d5	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Phenol-d6	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
Terphenyl-d14	8270SurStkHL_00283	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL
2,4,6 - Tribromophenol	8270SurStkHL_00289	10/17/2019	5000.00000	ug/mL	100.00000	ug/mL

Preliminary Report

TestAmerica Denver

Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_G6\20181023-75392.b\G6_35963.D
Lims ID: 8270Surrogate_00128
Client ID:
Sample Type: Client
Inject. Date: 23-Oct-2018 16:04:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 8270Surrogate_00128
Operator ID: HOEFLERA Instrument ID: SMS_G6

Method: \\ChromNA\Denver\ChromData\SMS_G6\20181023-75392.b\SMSG6_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 23-Oct-2018 16:59:20 Calib Date: 27-Sep-2018 16:16:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_G6\20180927-74477.b\G6_35533.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0305

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	98.7	98.69
$ 8 Phenol-d5	100.0	96.3	96.28
$ 9 Nitrobenzene-d5	100.0	92.0	92.00
$ 11 2-Fluorobiphenyl	100.0	87.8	87.81
$ 12 2,4,6-Tribromophenol	100.0	81.9	81.91
$ 13 Terphenyl-d14	100.0	92.3	92.34

Reagent

8270SurStkHL_00282

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,038.1 µg/mL	+/- 29.2918 µg/mL		Gravimetric
	CAS # 367-12-4	(Lot STBD7945V)		+/- 147.0277 µg/mL		Unstressed
	Purity 99%			+/- 178.4124 µg/mL		Stressed
2	Phenol-d5		5,031.4 µg/mL	+/- 29.2530 µg/mL		Gravimetric
	CAS # 4165-62-2	(Lot X-479)		+/- 146.8331 µg/mL		Unstressed
	Purity 99%			+/- 178.1763 µg/mL		Stressed
3	Nitrobenzene-d5		5,017.5 µg/mL	+/- 29.1720 µg/mL		Gravimetric
	CAS # 4165-60-0	(Lot PR-25462)		+/- 146.4265 µg/mL		Unstressed
	Purity 99%			+/- 177.6829 µg/mL		Stressed
4	2-Fluorobiphenyl		5,017.5 µg/mL	+/- 29.1720 µg/mL		Gravimetric
	CAS # 321-60-8	(Lot Z20C043)		+/- 146.4265 µg/mL		Unstressed
	Purity 99%			+/- 177.6829 µg/mL		Stressed
5	2,4,6-Tribromophenol		5,043.2 µg/mL	+/- 29.3216 µg/mL		Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)		+/- 147.1775 µg/mL		Unstressed
	Purity 99%			+/- 178.5942 µg/mL		Stressed
6	p-Terphenyl-d14		5,030.3 µg/mL	+/- 29.2464 µg/mL		Gravimetric
	CAS # 1718-51-0	(Lot PR-27278)		+/- 146.8000 µg/mL		Unstressed
	Purity 99%			+/- 178.1362 µg/mL		Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

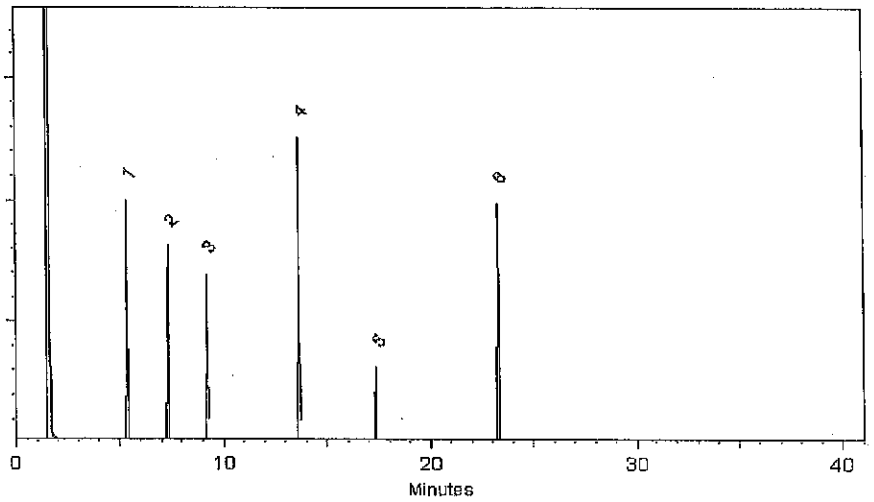
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8270SurStkHL_00283

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBD7945V) **Purity** 99%	5,038.1 µg/mL	+/- 29.2918 µg/mL +/- 147.0277 µg/mL +/- 178.4124 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 (Lot X-479) **Purity** 99%	5,031.4 µg/mL	+/- 29.2530 µg/mL +/- 146.8331 µg/mL +/- 178.1763 µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-25462) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot Z20C043) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot 29699MJV) **Purity** 99%	5,043.2 µg/mL	+/- 29.3216 µg/mL +/- 147.1775 µg/mL +/- 178.5942 µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 (Lot PR-27278) **Purity** 99%	5,030.3 µg/mL	+/- 29.2464 µg/mL +/- 146.8000 µg/mL +/- 178.1362 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

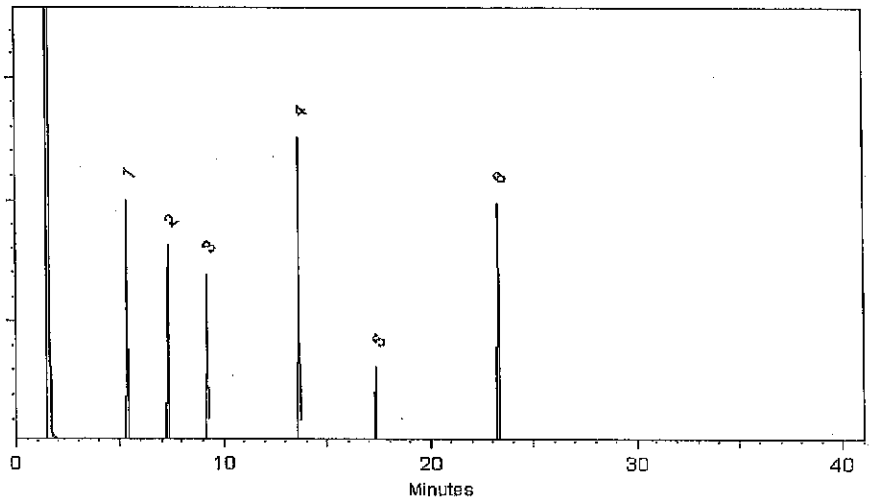
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8270SurStkHL_00289

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,038.1 µg/mL	+/- 29.2918 µg/mL		Gravimetric
	CAS # 367-12-4	(Lot STBD7945V)		+/- 147.0277 µg/mL		Unstressed
	Purity 99%			+/- 178.4124 µg/mL		Stressed
2	Phenol-d5		5,031.4 µg/mL	+/- 29.2530 µg/mL		Gravimetric
	CAS # 4165-62-2	(Lot X-479)		+/- 146.8331 µg/mL		Unstressed
	Purity 99%			+/- 178.1763 µg/mL		Stressed
3	Nitrobenzene-d5		5,017.5 µg/mL	+/- 29.1720 µg/mL		Gravimetric
	CAS # 4165-60-0	(Lot PR-25462)		+/- 146.4265 µg/mL		Unstressed
	Purity 99%			+/- 177.6829 µg/mL		Stressed
4	2-Fluorobiphenyl		5,017.5 µg/mL	+/- 29.1720 µg/mL		Gravimetric
	CAS # 321-60-8	(Lot Z20C043)		+/- 146.4265 µg/mL		Unstressed
	Purity 99%			+/- 177.6829 µg/mL		Stressed
5	2,4,6-Tribromophenol		5,043.2 µg/mL	+/- 29.3216 µg/mL		Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)		+/- 147.1775 µg/mL		Unstressed
	Purity 99%			+/- 178.5942 µg/mL		Stressed
6	p-Terphenyl-d14		5,030.3 µg/mL	+/- 29.2464 µg/mL		Gravimetric
	CAS # 1718-51-0	(Lot PR-27278)		+/- 146.8000 µg/mL		Unstressed
	Purity 99%			+/- 178.1362 µg/mL		Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

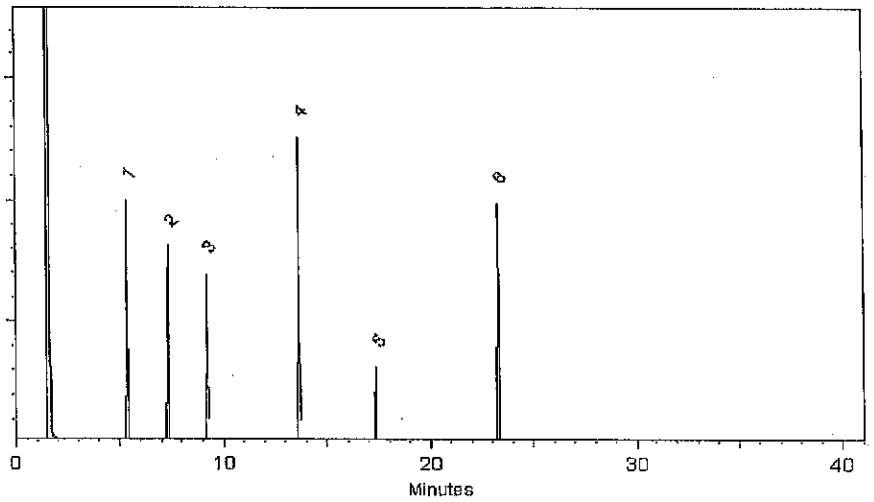
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8270SurStkHL_00290

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567685 **Lot No.:** A0133251

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBD7945V) **Purity** 99%	5,038.1 µg/mL	+/- 29.2918 µg/mL +/- 147.0277 µg/mL +/- 178.4124 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d5 **CAS #** 4165-62-2 (Lot X-479) **Purity** 99%	5,031.4 µg/mL	+/- 29.2530 µg/mL +/- 146.8331 µg/mL +/- 178.1763 µg/mL	Gravimetric Unstressed Stressed
3	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-25462) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
4	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot Z20C043) **Purity** 99%	5,017.5 µg/mL	+/- 29.1720 µg/mL +/- 146.4265 µg/mL +/- 177.6829 µg/mL	Gravimetric Unstressed Stressed
5	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot 29699MJV) **Purity** 99%	5,043.2 µg/mL	+/- 29.3216 µg/mL +/- 147.1775 µg/mL +/- 178.5942 µg/mL	Gravimetric Unstressed Stressed
6	p-Terphenyl-d14 **CAS #** 1718-51-0 (Lot PR-27278) **Purity** 99%	5,030.3 µg/mL	+/- 29.2464 µg/mL +/- 146.8000 µg/mL +/- 178.1362 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

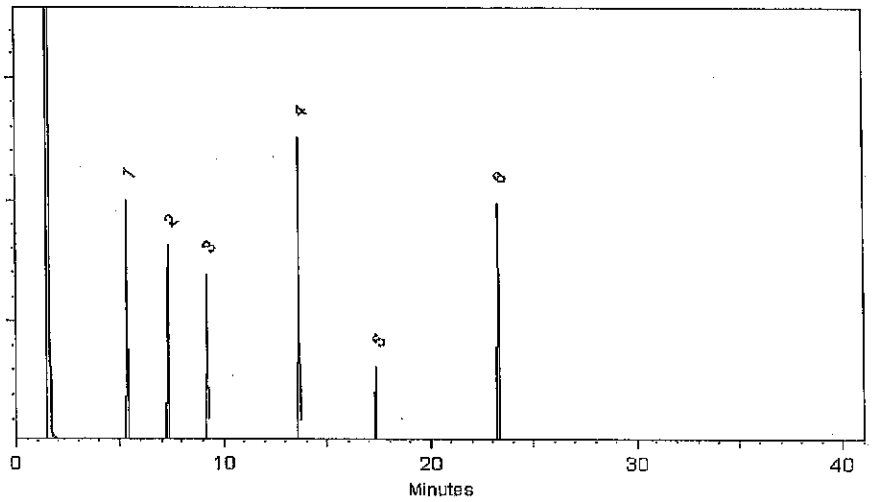
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 12-Dec-2017 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
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25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

8330 LCS_00078

*Standard is in the Explosives Room fridge *

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



Reagent ID: 8330 LCS_00078

		Expiration Date:	04/30/2018
Description:	10+100 ug/mL KEEP IN FREEZER	Laboratory:	TestAmerica Denver
No. of Bottles:	2	Prepared By:	Cokley, Cheyana D
Storage Location:	Explosives Prep	Solvent:	Acetonitrile
Reagent Volume:	100.000 mL	Solvent Lot:	ACN_00209
Creation Date:	02/08/2018		
Open Date:			
Container(s):	4957477, 4957478		
Comment:	MNX has been added back 10.22.17; new expiration is 1 year after its creation date		

OK HKF 2/15/18

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,6-Dinitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
2-Amino-4,6-dinitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
4-Amino-2,6-dinitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
m-Nitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
o-Nitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
p-Nitrotoluene	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
Tetryl	8330 LCSMix2_00102	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00061	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00062	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00069	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00070	02/08/2019	5000.00000	ug/mL	100.00000	ug/mL
1,3,5-Trinitrobenzene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
1,3-Dinitrobenzene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
2,4,6-Trinitrotoluene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
2,4-Dinitrotoluene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
HMX	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
Nitrobenzene	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
RDX	8330LCSMix1_00097	02/08/2019	1000.00000	ug/mL	10.00000	ug/mL
MNX	8330MNX_00002	04/30/2018	1000.00000	ug/mL	10.00000	ug/mL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330 LCS _ 00078

Reagent ID: 8330 LCS_00078

		Expiration Date:	04/30/2018
Description:	10+100 ug/mL KEEP IN FREEZER	Laboratory:	TestAmerica Denver
No. of Bottles:	2	Prepared By:	Cokley, Cheyana D
Storage Location:	Explosives Prep	Solvent:	Acetonitrile
Reagent Volume:	100.000 mL	Solvent Lot:	ACN_00209
Creation Date:	02/08/2018		
Open Date:			
Container(s):	4957477, 4957478		
Comment:	MNX has been added back 10.22.17; new expiration is 1 year after its creation date		

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,4,6-Trinitrophenol	PicricARestek_00056	06/30/2018	1000.00000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8330 LCSMix2_00102	31451 1000ug/mL 8330 Calibration Mix#2	ASTD	02/08/19	Restek	A0122699	31451	1.00000	mL
8330_NG_Stk_00061	Cat#568871 5,000ug/mL	ASTD	02/08/19	Restek	A0128695	568871	1.00000	mL
8330_NG_Stk_00062	Cat#568871 5,000ug/mL	ASTD	02/08/19	Restek	A0128695	568871	1.00000	mL
8330_PETN_Stk_00069	Cat#568872 5,000ug/mL	ASTD	02/08/19	Restek	A0127970	568872	1.00000	mL
8330_PETN_Stk_00070	Cat#568872 5,000ug/mL	ASTD	02/08/19	Restek	A0127970	568872	1.00000	mL
8330LCSMix1_00097	Cat#31450, 1000ug/mL Restek	ASTD	02/08/19	Restek	A0122924	31450	1.00000	mL
8330MNX_00002	8330 MNX	ASTD	04/30/18	Ultra Scientific	CR-1036	CUS-23986	1.00000	mL
PicricARestek_00056	Cat# 31499	ASTD	06/30/18	Restek	A096192	31499	1.00000	mL

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\CHHPLC_X\20180214-67233.b\001-1801.D

Lims ID: lcs0078 Inj. Date: 14-Feb-2018 18:29:33

Worklist ID: 280-0067233-022 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535
2 HMX	0.2000	0.1621	81.0	76-120
4 MNX	0.2000	*ND	0.0	* 60-136
5 RDX	0.2000	0.1745	87.2	80-120
6 2,4,6-Trinitrophenol	0.2000	0.1657	82.9	80-120
8 1,3,5-Trinitrobenzene	0.2000	0.1754	87.7	73-120
9 1,3-Dinitrobenzene	0.2000	0.1825	91.3	75-120
11 Nitrobenzene	0.2000	0.1956	97.8	64-120
12 Tetryl	0.2000	0.1897	94.9	10-120
13 Nitroglycerin	2.00	1.83	91.3	77-120
14 2,4,6-Trinitrotoluene	0.2000	0.1636	81.8	73-120
15 4-Amino-2,6-dinitrotolu	0.2000	0.1816	90.8	63-123
16 2-Amino-4,6-dinitrotolu	0.2000	0.1734	86.7	56-120
17 2,6-Dinitrotoluene	0.2000	0.1825	91.2	69-120
18 2,4-Dinitrotoluene	0.2000	0.1829	91.4	71-120
19 o-Nitrotoluene	0.2000	0.1976	98.8	52-120
20 p-Nitrotoluene	0.2000	0.1986	99.3	56-120
21 m-Nitrotoluene	0.2000	0.1924	96.2	61-124
22 PETN	2.00	1.80	90.2	77-123

Samples for Limit Group: 1, Lims Prep Method: 3535

600-160894-C-1-A 550-97259-C-14-A 550-97315-A-6-A

550-97324-A-12-A

Reagent

8330 LCS_00082

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330 LCS _ 00082

OK HKF 9/12/18

Reagent ID: 8330 LCS_00082

Description:	10+100 ug/mL KEEP IN FREEZER	Expiration Date:	06/28/2019
No. of Bottles:	2	Laboratory:	TestAmerica Denver
Storage Location:	Explosives Prep	Prepared By:	Carroll, Randall P
Reagent Volume:	100.000 mL	Solvent:	Acetonitrile
Creation Date:	09/07/2018	Solvent Lot:	ACN_00204
Open Date:			
Container(s):	5297539, 5297540		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
2,6-Dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
2-Amino-4,6-dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
4-Amino-2,6-dinitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
m-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
o-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
p-Nitrotoluene	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
Tetryl	8330 LCSMix2_00103	11/30/2021	1000.00000	ug/mL	10.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00057	07/31/2019	5000.00000	ug/mL	100.00000	ug/mL
Nitroglycerin	8330_NG_Stk_00063	07/31/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00049	06/30/2019	5000.00000	ug/mL	100.00000	ug/mL
PETN	8330_PETN_Stk_00066	05/31/2020	5000.00000	ug/mL	100.00000	ug/mL
1,3,5-Trinitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
1,3-Dinitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4,6-Trinitrotoluene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4-Dinitrotoluene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
HMX	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
Nitrobenzene	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
RDX	8330LCSMix1_00102	06/20/2022	1000.00000	ug/mL	10.00000	ug/mL
2,4,6-Trinitrophenol	PicricARestek_00078	09/30/2020	1000.00000	ug/mL	10.00000	ug/mL

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\09110010.D

Lims ID: 8330 LCS%O00082 Inj. Date: 11-Sep-2018 20:36:26

Worklist ID: 280-0073899-010 Instrument: CHHPLC_X3

Method: 8330_X3

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3535	Limits 2 3535
1 2,6-diamino-4-nitrotolu	0	*ND	0.0	80-150	
25 TNX	0	*ND	0.0	50-150	
2 HMX	0.4000	0.3899	97.5	66-115	65-135
3 2,4-diamino-6-nitrotolu	0	*ND	0.0	70-150	
24 DNX	0	*ND	0.0	50-150	
4 MNX	0	*ND	0.0	68-123	50-150
5 RDX	0.4000	0.3916	97.9	69-122	68-130
6 2,4,6-Trinitrophenol	0.4000	0.3998	100.0	63-135	80-120
$ 7 1,2-Dinitrobenzene	0	*ND	0.0	63-127	83-119
8 1,3,5-Trinitrobenzene	0.4000	0.4096	102.4	62-127	73-125
9 1,3-Dinitrobenzene	0.4000	0.4033	100.8	59-131	78-120
11 Nitrobenzene	0.4000	0.4045	101.1	46-144	65-134
10 3,5-Dinitroaniline	0	*ND	0.0	55-119	71-117
12 Tetryl	0.4000	0.4274	106.9	56-131	64-128
13 Nitroglycerin	4.00	3.97	99.4	70-125	74-127
14 2,4,6-Trinitrotoluene	0.4000	0.3842	96.1	46-139	71-123
15 4-Amino-2,6-dinitrotolu	0.4000	0.3737	93.4	43-120	76-125
16 2-Amino-4,6-dinitrotolu	0.4000	0.3998	100.0	46-124	79-120
17 2,6-Dinitrotoluene	0.4000	0.3828	95.7	51-130	77-127
18 2,4-Dinitrotoluene	0.4000	0.3881	97.0	53-127	78-120
19 o-Nitrotoluene	0.4000	0.3903	97.6	37-138	70-127
20 p-Nitrotoluene	0.4000	0.4065	101.6	41-137	71-127
21 m-Nitrotoluene	0.4000	0.3886	97.1	31-140	73-125
22 PETN	4.00	3.95	98.7	67-127	73-127

Samples for Limit Group: 1, Lims Prep Method: 3535

680-157496-D-1-B	680-157496-D-2-B	680-157496-D-3-B
680-157496-D-4-B	680-157496-D-5-B	680-157496-D-6-B
680-157496-D-7-B	680-157496-D-8-B	680-157496-D-9-B
490-158536-D-1-B	490-158590-A-1-B	490-158590-A-2-B
600-171866-C-1-B	280-113921-A-1-B	

Samples for Limit Group: 2, Lims Prep Method: 3535

160-30545-A-1-B	160-30545-A-6-B	160-30545-A-7-B

Reagent

8330 LCSMix2_00102

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31451 **Lot No.:** A0122699

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	Tetryl		1,000.0	µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 479-45-8	(Lot 091120JLM)			+/- 54.7830	µg/mL	Unstressed
	Purity 99%				+/- 63.8824	µg/mL	Stressed
2	4-Amino-2,6-dinitrotoluene		1,002.0	µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 19406-51-0	(Lot ER070908-01)			+/- 54.8926	µg/mL	Unstressed
	Purity 99%				+/- 64.0101	µg/mL	Stressed
3	2-Amino-4,6-dinitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 35572-78-2	(Lot 29550-55)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed
4	2,6-Dinitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed
5	2-Nitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 88-72-2	(Lot GA01)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed
6	4-Nitrotoluene		1,001.0	µg/mL	+/- 5.9459	µg/mL	Gravimetric
	CAS # 99-99-0	(Lot FAU01)			+/- 54.8400	µg/mL	Unstressed
	Purity 97%				+/- 63.9488	µg/mL	Stressed
7	3-Nitrotoluene		1,001.0	µg/mL	+/- 5.9456	µg/mL	Gravimetric
	CAS # 99-08-1	(Lot 07329LG)			+/- 54.8378	µg/mL	Unstressed
	Purity 99%				+/- 63.9463	µg/mL	Stressed

Reagent

8330 LCSMix2_00104

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

X2
500 8754/55

Catalog No. : 31451 **Lot No.:** A0122699

Description : 8330 Calibration Mix #2

8330 Calibration Std #2 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Tetryl **CAS #** 479-45-8 **Purity** 99%	(Lot 091120JLM)	1,000.0 µg/mL	+/- 5.9397 +/- 54.7830 +/- 63.8824	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	4-Amino-2,6-dinitrotoluene **CAS #** 19406-51-0 **Purity** 99%	(Lot ER070908-01)	1,002.0 µg/mL	+/- 5.9516 +/- 54.8926 +/- 64.0101	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	2-Amino-4,6-dinitrotoluene **CAS #** 35572-78-2 **Purity** 99%	(Lot 29550-55)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	2,6-Dinitrotoluene **CAS #** 606-20-2 **Purity** 99%	(Lot 1437483V)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	2-Nitrotoluene **CAS #** 88-72-2 **Purity** 99%	(Lot GA01)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	4-Nitrotoluene **CAS #** 99-99-0 **Purity** 97%	(Lot FAU01)	1,001.0 µg/mL	+/- 5.9459 +/- 54.8400 +/- 63.9488	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	3-Nitrotoluene **CAS #** 99-08-1 **Purity** 99%	(Lot 07329LG)	1,001.0 µg/mL	+/- 5.9456 +/- 54.8378 +/- 63.9463	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

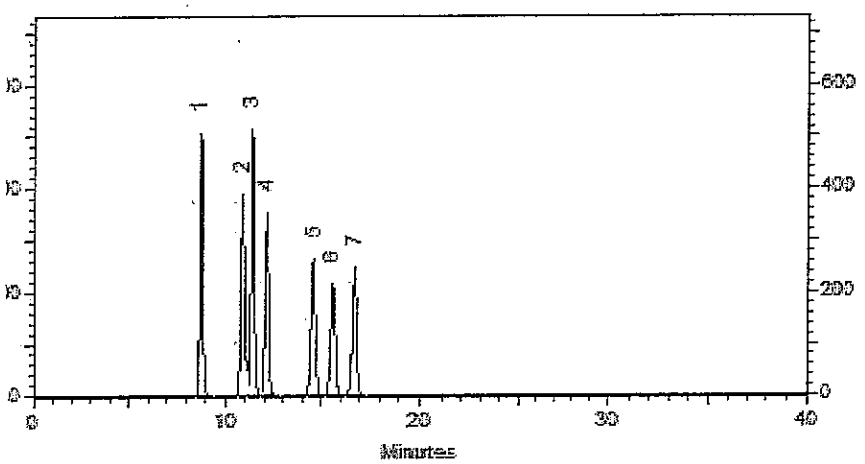
Flow Rate:
1.0 ml/min.

Mobile Phase A:
-

Mobile Phase B:
water:methanol (44:56 V/V)

Mobile Phase Composition:
100%B

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 06-Nov-2016 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 15-Nov-2016

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

8330 Stock_TS_00009

Certificate of Analysis

Combined Stock Solution

Product Number: NAIM-833E **Page:** 1 of 1

Lot Number: CR-1002 **Lot Issue Date:** 10-Mar-2017 **Expiration Date:** 30-Apr-2020

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
HMX	002691-41-0	RM06237	1000 ± 5 µg/mL
RDX	000121-82-4	RM10915	1000 ± 5 µg/mL
1,3,5-trinitrobenzene	000099-35-4	RM06608	1000 ± 5 µg/mL
m-dinitrobenzene	000099-65-0	RM04448	1001 ± 5 µg/mL
nitrobenzene	000098-95-3	RM11472	1002 ± 5 µg/mL
2,4,6-trinitrotoluene (TNT)	000118-96-7	RM11972	1004 ± 5 µg/mL
2,4-dinitrotoluene	000121-14-2	RM01209	1002 ± 5 µg/mL
tetryl	000479-45-8	RM12295	1000 ± 5 µg/mL
2,6-dinitrotoluene	000606-20-2	RM10763	1003 ± 5 µg/mL
2-nitrotoluene	000088-72-2	NT01996	1003 ± 5 µg/mL
3-nitrotoluene	000099-08-1	NT02212	1004 ± 5 µg/mL
4-nitrotoluene	000099-99-0	NT02096	1004 ± 5 µg/mL
2-amino-4,6-dinitrotoluene	035572-78-2	RM04229	1003 ± 5 µg/mL
4-amino-2,6-dinitrotoluene	019406-51-0	RM04226	1003 ± 5 µg/mL

Matrix: acetonitrile

Storage: Store at Room Temperature (15° to 30°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

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8330_NG_Stk_00061

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0128695

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_NG_Stk_00062

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0128695

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,012.0 µg/mL	+/- 46.6089	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.9046	µg/mL	Unstressed
	Purity 99%		+/- 322.1807	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_NG_Stk_00067

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0129124

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,008.0 µg/mL	+/- 46.5717	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.6836	µg/mL	Unstressed
	Purity 99%		+/- 321.9236	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_NG_Stk_00068

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568871 **Lot No.:** A0129124

Description : Custom Nitroglycerin Standard

Custom Nitroglycerin Standard 5,000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroglycerin	5,008.0 µg/mL	+/- 46.5717	µg/mL	Gravimetric
	CAS # 55-63-0 (Lot 170616JLM)		+/- 276.6836	µg/mL	Unstressed
	Purity 99%		+/- 321.9236	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00067

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00068

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00069

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330_PETN_Stk_00070

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568872 **Lot No.:** A0127970

Description : Custom PETN Standard

Custom PETN Standard 5000 µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	PETN	5,028.0 µg/mL	+/- 46.7577	µg/mL	Gravimetric
	CAS # 78-11-5 (Lot 051108JLM)		+/- 277.7886	µg/mL	Unstressed
	Purity 99%		+/- 323.2092	µg/mL	Stressed

Solvent: Acetonitrile
CAS # 75-05-8
Purity 99%

Reagent

8330LCSMix1_00097

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31450 **Lot No.:** A0122924

Description : 8330 Calibration Mix #1

8330 Calibration Std #1 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2021 **Storage:** 10°C or colder

5

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	HMX **CAS #** 2691-41-0 **Purity** 98%	(Lot 111005JLM)	999.6 µg/mL	+/- 5.9373 µg/mL +/- 54.7611 µg/mL +/- 63.8568 µg/mL		Gravimetric Unstressed Stressed
2	RDX **CAS #** 121-82-4 **Purity** 99%	(Lot 080220JLM)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed
3	1,3,5-Trinitrobenzene **CAS #** 99-35-4 **Purity** 99%	(Lot UNVVB)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL		Gravimetric Unstressed Stressed
4	1,3-Dinitrobenzene **CAS #** 99-65-0 **Purity** 99%	(Lot BCBB1436V)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL		Gravimetric Unstressed Stressed
5	Nitrobenzene **CAS #** 98-95-3 **Purity** 99%	(Lot SHBF2348V)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed
6	2,4,6-Trinitrotoluene **CAS #** 118-96-7 **Purity** 99%	(Lot 2554100)	1,001.0 µg/mL	+/- 5.9456 µg/mL +/- 54.8378 µg/mL +/- 63.9463 µg/mL		Gravimetric Unstressed Stressed
7	2,4-Dinitrotoluene **CAS #** 121-14-2 **Purity** 99%	(Lot MKAA0690V)	1,000.0 µg/mL	+/- 5.9397 µg/mL +/- 54.7830 µg/mL +/- 63.8824 µg/mL		Gravimetric Unstressed Stressed

Reagent

8330LCSMix1_00105

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31450 **Lot No.:** A0128688

Description : 8330 Calibration Mix #1

8330 Calibration Std #1 1000µg/mL, Acetonitrile, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	HMX		1,002.5 µg/mL	+/- 5.9548 µg/mL	Gravimetric
	CAS # 2691-41-0	(Lot 111005JLM)		+/- 54.9222 µg/mL	Unstressed
	Purity 98%			+/- 64.0446 µg/mL	Stressed
2	RDX		1,008.0 µg/mL	+/- 5.9872 µg/mL	Gravimetric
	CAS # 121-82-4	(Lot 080220JLM)		+/- 55.2213 µg/mL	Unstressed
	Purity 99%			+/- 64.3934 µg/mL	Stressed
3	1,3,5-Trinitrobenzene		1,004.9 µg/mL	+/- 5.9689 µg/mL	Gravimetric
	CAS # 99-35-4	(Lot DJ5QO)		+/- 55.0525 µg/mL	Unstressed
	Purity 97%			+/- 64.1967 µg/mL	Stressed
4	1,3-Dinitrobenzene		1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 99-65-0	(Lot BCBN4329V)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%			+/- 64.3295 µg/mL	Stressed
5	Nitrobenzene		1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 98-95-3	(Lot SHBG5577V)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%			+/- 64.3295 µg/mL	Stressed
6	2,4,6-Trinitrotoluene		1,004.0 µg/mL	+/- 5.9635 µg/mL	Gravimetric
	CAS # 118-96-7	(Lot 2554100)		+/- 55.0021 µg/mL	Unstressed
	Purity 99%			+/- 64.1379 µg/mL	Stressed
7	2,4-Dinitrotoluene		1,007.0 µg/mL	+/- 5.9813 µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)		+/- 55.1665 µg/mL	Unstressed
	Purity 99%			+/- 64.3295 µg/mL	Stressed

Reagent

8330PAStkPS_00054

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New Haven, CT 06513
USA

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Tel (203)786-5290
Fax (203)786-5287
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CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-3
Description: Picric acid
Lot: 216061376-01
Solvent: Acetonitrile (50%)
Methanol (50%)
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Jun 19, 2017
Expiration: Jul 19, 2019
Sample Size: 1 mL
Components: 1

Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Picric acid	88-89-1	99.1	100.1	99.2

Superseded

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. This value is the expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

Reagent

8330Surrogate_00098

IN Explosives (Prep) Fridge ☺ Thx

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330Surrogate_00098

Reagent ID: 8330Surrogate_00098

Description:	10ug/mL 1,2-Dinitrobenzene	Expiration Date:	03/01/2019
No. of Bottles:	4	Laboratory:	TestAmerica Denver
Storage Location:	Explosives Prep	Prepared By:	Cokley, Cheyana D
Reagent Volume:	500.000 mL	Solvent:	Acetonitrile
Creation Date:	03/01/2018	Solvent Lot:	ACN_00210
Open Date:			
Container(s):	4983902, 4983903, 4983904, 4983905		
Comment:	Stored Frozen. 6 month expiration date. Take 1mL of 1,2 Dinitrobenzene (8330SurrStock) and Dilute to 100 mL in ACN. Mulitply recipe as needed.		

HKF 0IC 3/7/18

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00123	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00124	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00125	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00126	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene (Surr)	8330SurrStkSS_00127	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8330SurrStkSS_0013	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0014	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0015	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0016	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_0017	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL

Preliminary Report

TestAmerica Denver
ICV, ICal Verification Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\03060015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 06-Mar-2018 13:40:54 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0067760-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 07-Mar-2018 14:58:37 Calib Date: 06-Mar-2018 13:17:57
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180306-67760.b\03060014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: XAWRK013

Start Cal Date: 06-Mar-2018 10:37:17
End Cal Date: 06-Mar-2018 13:17:57

Compound	Amount Added	Amount Detected	%Drift	Max. %Drift	%Rec	%Rec Limits	
2 HMX	0.4000	0.3593	-10.2	20.0	89.8		
4 MNX	0.4000	4.09	*923.6	20.0	1023.6		
5 RDX	0.4000	0.3939	-1.5	20.0	98.5		
6 2,4,6-Trinitrophen	0.4000	0.3960	-1.0	20.0	99.0		
$ 7 1,2-Dinitrobenzene	0.4000	0.3986	-0.4	20.0	99.6	———	8330 Surr_0097 used
8 1,3,5-Trinitrobenz	0.4000	0.4025	0.6	20.0	100.6		
9 1,3-Dinitrobenzene	0.4000	0.4001	0.0	20.0	100.0		
11 Nitrobenzene	0.4000	0.3982	-0.5	20.0	99.5		
12 Tetryl	0.4000	0.3934	-1.7	20.0	98.3		
14 2,4,6-Trinitrotolu	0.4000	0.3669	-8.3	20.0	91.7		
15 4-Amino-2,6-dinitr	0.4000	0.3788	-5.3	20.0	94.7		
16 2-Amino-4,6-dinitr	0.4000	0.3896	-2.6	20.0	97.4		
17 2,6-Dinitrotoluene	0.4000	0.3828	-4.3	20.0	95.7		
18 2,4-Dinitrotoluene	0.4000	0.3932	-1.7	20.0	98.3		
19 o-Nitrotoluene	0.4000	0.3947	-1.3	20.0	98.7		
20 p-Nitrotoluene	0.4000	0.4066	1.6	20.0	101.6		
21 m-Nitrotoluene	0.4000	0.3880	-3.0	20.0	97.0		

Reagent

8330Surrogate_00100

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8330Surrogate_00100

Reagent ID: 8330Surrogate_00100

		Expiration Date:	03/01/2019
Description:	10ug/mL 1,2-Dinitrobenzene	Laboratory:	TestAmerica Denver
No. of Bottles:	4	Prepared By:	Carroll, Randall P
Storage Location:	Explosives Prep	Solvent:	Acetonitrile
Reagent Volume:	500.000 mL	Solvent Lot:	ACN_00210
Creation Date:	09/07/2018		
Open Date:			
Container(s):	5297535, 5297536, 5297537, 5297538		
Comment:	Stored Frozen. 6 month expiration date. Take 1mL of 1,2 Dinitrobenzene (8330SurrStock) and Dilute to 10(mL in ACN. Mulitply recipe as needed.		

OK HKF 9/12/18

Reagent Analyte Information

Analyte	Source ID	Source Exp. Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2-Dinitrobenzene	8330SurrStkSS_00123	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00124	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00125	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00126	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL
1,2-Dinitrobenzene	8330SurrStkSS_00127	03/01/2019	1000.00000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8330SurrStkSS_00123	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00124	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00125	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00126	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL
8330SurrStkSS_00127	31453, 1000ug/mL Restek 1,2-DNB SS	ASTD	03/01/19	Restek	A0124792	31453	1.00000	mL

In EXP freezer

in O prep

Preliminary Report

TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\09110009.D				
Lims ID:	8330S+U+R+R+O+G+A+T+E%O00100				
Client ID:					
Sample Type:	Client				
Inject. Date:	11-Sep-2018 20:13:27	ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	8330S+U+R+R+O+G+				
Misc. Info.:	280-0073899-009				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180911-73899.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	12-Sep-2018 10:03:24	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	XAWRK011				

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.4000	0.4053	101.33

Reagent

8330SurrStkSS_00123

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00124

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00125

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Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00126

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00127

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00130

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00131

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00132

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00133

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0124792

Description : 8330 Surrogate Mix

8330 Surrogate Std 1, 2-Dinitrobenzene 1000µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,2-Dinitrobenzene	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.4187	µg/mL	Unstressed
	Purity 99%		+/- 57.7382	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStkSS_00141

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31453 **Lot No.:** A0131413

Description : 8330 Surrogate Mix

8330 Surrogate Mix 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	1,2-Dinitrobenzene	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 528-29-0 (Lot MKBW2921V)		+/- 56.1943	µg/mL	Unstressed
	Purity 99%		+/- 57.5086	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Reagent

8330SurrStock_00161

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New Haven, CT 06513
USA

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Fax (203)786-5287
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CERTIFICATE OF ANALYSIS

Catalog No: M-8330-SS
Description: 1,2-Dinitrobenzene Standard
Lot: 214081391
Solvent: Methanol
Hazards: HIGHLY FLAMMABLE - *Refer to SDS for safety info*



Danger 2

Date Certified: Aug 15, 2014
Expiration: Aug 15, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

3971066
ID: 8330SurrStock_00162
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

3971065
ID: 8330SurrStock_00161
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values:
A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO Guide 34, ISO/IEC 17025 and certified to ISO 9001

OR-ORG/INO-001
Rev. 7/11

Reagent

8330SurrStock_00162

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-SS
Description: 1,2-Dinitrobenzene Standard
Lot: 214081391
Solvent: Methanol
Hazards: HIGHLY FLAMMABLE - *Refer to SDS for safety info*



Danger 2

Date Certified: Aug 15, 2014
Expiration: Aug 15, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)
Included on ISO/IEC 17025 Scope of Accreditation: Yes
Included on ISO Guide 34 Scope of Accreditation: Yes

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
1,2-Dinitrobenzene	528-29-0	100.0	1002	1002

3971066
ID: 8330SurrStock_00162
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

3971065
ID: 8330SurrStock_00161
Exp: 08/15/24 Prpd: ACF
M-8330-SS 1000ug/ml AccuS

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty associated with the gravimetric values reported on this certificate is ±0.24%. The CRM Uncertainty calculated for this product is ±5%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values:
A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

See reverse side for additional information

Certified By: _____
Larry Decker, Organic QC Manager

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OR-ORG/INO-001
Rev. 7/11

Reagent

ANALYTES B_00014

ACCREDITED
Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: INT-B1 **Lot No.** 5-177MKBY

Description: Analytes B

Matrix: 5% HNO_3

This **ASSURANCE®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for analytical instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations. See side 2 for details of certification.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Certified	Uncertainty	SRM	Analyte	Labeled	Certified	Uncertainty	SRM
Ag	100 µg/mL	99.1 µg/mL	±0.5 µg/mL	3151*	Be	50 µg/mL	49.6 µg/mL	±0.3 µg/mL	3105a*
Cd	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3108*	Co	50 µg/mL	49.4 µg/mL	±0.3 µg/mL	3113*
Ni	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3136*	Cr	50 µg/mL	49.6 µg/mL	±0.3 µg/mL	3112a*
Pb	100 µg/mL	99.1 µg/mL	±0.5 µg/mL	3128*	Cu	50 µg/mL	49.8 µg/mL	±0.3 µg/mL	3114*
Zn	100 µg/mL	98.9 µg/mL	±0.5 µg/mL	3168a*	Mn	50 µg/mL	49.3 µg/mL	±0.3 µg/mL	3132*
Ba	50 µg/mL	49.3 µg/mL	±0.3 µg/mL	3104a*	V	50 µg/mL	49.8 µg/mL	±0.3 µg/mL	3165*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# 9-164YP, 12-03YP

5078581
ID: ANALYTES B_00014
Exp: 04/01/18 Prpd: SJS
ICP ANALYTES B SPEX

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the certified (measured) value. This includes uncertainty components due to preparation, measurement, homogeneity, and short-term and long-term stability. No measured concentration of any individual component exceeds ±2% of the labeled value. This guarantee is valid for a period of one year from the date of certification only when the material is unopened and stored under ambient laboratory conditions.

Date of Certification: APR · 2018 Certifying Officer: Kathleen Cullen

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements – certified by UL-DQS
- ISO 17025: General requirements for the competence of testing and calibration laboratories – accredited by A2LA
- ISO Guide 34: General requirements for the competence of reference material producers – accredited by A2LA
- ISO Guide 31: Reference Materials – Contents of certificates and labels
- ISO Guide 35: Reference Materials – General & Statistical Principals for Certification
- Guide To The Expression Of Uncertainty In Measurement 1997
- EURACHEM/CITAC Guide: Quantifying Uncertainty in Analytical Measurement – Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference materials producers
- ISO/REMCO N280

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Instructions for Use:

Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:

The homogeneity of the CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:

The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where $k = 2$ is the coverage factor at the 95% confidence level
- u_c is obtained by combining the individual element standard uncertainty components u_i, and $u_c = \sqrt{\sum u_i^2}$

Certification Traveler Report:

All certified values reported were derived from the Traveler Report (SPEX CertiPrep's traceability documentation) identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Legal Notice:

SPEX CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep, LLC of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep, LLC be liable for any loss of profits or any incidental, special, or consequential damages.

Reagent

AR_1221_RESss_00010

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32007.sec **Lot No.:** A0117382

Description : Aroclor® 1221 Standard

Aroclor® 1221 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2022 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1221	1,000.0 µg/mL	+/- 10.0737	µg/mL	Gravimetric
	CAS # 11104-28-2.SEC (Lot W-126-07)		+/- 32.7345	µg/mL	Unstressed
	Purity ----%		+/- 42.2047	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1232_RESss_00010

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32008.sec **Lot No.:** A095877

Description : Aroclor® 1232 Standard

Aroclor® 1232 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2019 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1232	1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 11141-16-5.SEC (Lot 130604JLM)		+/- 20.8959	µg/mL	Unstressed
	Purity ----%		+/- 34.3792	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1242_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32009.SEC **Lot No.:** A0105175

Description : Aroclor® 1242 Standard

Aroclor® 1242 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2020 **Storage:** 25°C nominal

Handling: This product contains PCB's

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1242	1,000.0 µg/mL	+/- 10.0737 µg/mL		Gravimetric
	CAS # 53469-21-9.SEC (Lot NTO1020)		+/- 32.1814 µg/mL		Unstressed
	Purity ----%		+/- 42.2011 µg/mL		Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1248_RES_00012

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32010 **Lot No.:** A0130978

Description : Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2023 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1248	1,001.6 µg/mL	+/- 5.8779	µg/mL	Gravimetric
	CAS # 12672-29-6 (Lot W-108-07)		+/- 31.7447	µg/mL	Unstressed
	Purity ----%		+/- 41.4691	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1248_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32010.SEC **Lot No.:** A0124143

Description : Aroclor® 1248 Standard

Aroclor® 1248 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2023 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1248	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 12672-29-6.SEC (Lot 106-248)		+/- 31.9609	µg/mL	Unstressed
	Purity ----%		+/- 41.7443	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1254_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32011.SEC **Lot No.:** A0105373

Description : Aroclor® 1254 Standard

Aroclor® 1254 Standard 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2020 **Storage:** 25°C nominal

Handling: This product contains PCB's

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Aroclor 1254	1,004.0 µg/mL	+/- 10.1140 µg/mL	Gravimetric
	CAS # 11097-69-1.SEC (Lot RM00922)		+/- 32.3101 µg/mL	Unstressed
	Purity ----%		+/- 42.3699 µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1660_RES_00001

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039 **Lot No.:** A0134815

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016	1,001.3 µg/mL	+/- 5.8348	µg/mL	Gravimetric
	CAS # 12674-11-2 (Lot 164887)		+/- 31.7260	µg/mL	Unstressed
	Purity ----%		+/- 41.4488	µg/mL	Stressed
2	Aroclor 1260	1,000.0 µg/mL	+/- 5.8275	µg/mL	Gravimetric
	CAS # 11096-82-5 (Lot 155463)		+/- 31.6864	µg/mL	Unstressed
	Purity ----%		+/- 41.3971	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_1660_RESss_00010

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32039.SEC **Lot No.:** A0114674

Description : Aroclor® 1016/1260 Mix

Aroclor® 1016/1260 Mix 1,000 µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2022 **Storage:** 25°C nominal

Handling: This product contains PCB's

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1016		1,000.7 µg/mL	+/- 5.9437	µg/mL	Gravimetric
	CAS # 12674-11-2.SEC	(Lot 129)		+/- 31.7284	µg/mL	Unstressed
	Purity ----%			+/- 41.4406	µg/mL	Stressed
2	Aroclor 1260		1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 11096-82-5.SEC	(Lot NTO1023)		+/- 31.7072	µg/mL	Unstressed
	Purity ----%			+/- 41.4130	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_2154_RES_00001

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569745 **Lot No.:** A0131802

Description : PCB-1221/1254 Standard

PCB-1221/1254 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1221	1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 11104-28-2 (Lot 2781200)		+/- 31.8975	µg/mL	Unstressed
	Purity ----%		+/- 41.6615	µg/mL	Stressed
2	Aroclor 1254	1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 11097-69-1 (Lot 124-191-B)		+/- 31.7706	µg/mL	Unstressed
	Purity ----%		+/- 41.4958	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_3262_RES_00001

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569746 **Lot No.:** A0132023

Description : PCB-1232/1262 Standard

PCB-1232/1262 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** >1 mL

Expiration Date : January 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	Aroclor 1232		1,004.0	µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 11141-16-5	(Lot W-107-05)			+/- 31.8340	µg/mL	Unstressed
	Purity ----%				+/- 41.5787	µg/mL	Stressed
2	Aroclor 1262		1,002.0	µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 37324-23-5	(Lot 3067100)			+/- 31.7706	µg/mL	Unstressed
	Purity ----%				+/- 41.4958	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_4268_RES_00001

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569747 **Lot No.:** A0133093

Description : PCB-1242/1268 Standard

PCB-1242/1268 Standard 1,000µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2024 **Storage:** 25°C nominal

Handling: This product contains PCBs.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Aroclor 1242	1,008.0 µg/mL	+/- 5.9872	µg/mL	Gravimetric
	CAS # 53469-21-9 (Lot 01141-A)		+/- 31.9609	µg/mL	Unstressed
	Purity ----%		+/- 41.7443	µg/mL	Stressed
2	Aroclor 1268	1,000.0 µg/mL	+/- 5.9397	µg/mL	Gravimetric
	CAS # 11100-14-4 (Lot 2743900)		+/- 31.7072	µg/mL	Unstressed
	Purity ----%		+/- 41.4130	µg/mL	Stressed

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Reagent

AR_SURR_RES_00073

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0121594

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : December 31, 2022 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene **CAS #** 877-09-8 (Lot 0052481) **Purity** 98%	200.0 µg/mL	+/- 1.1656 +/- 6.3378 +/- 8.2802	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	Decachlorobiphenyl (BZ# 209) **CAS #** 2051-24-3 (Lot ER071509-01) **Purity** 99%	201.2 µg/mL	+/- 1.1725 +/- 6.3753 +/- 8.3291	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Reagent

AR_SURR_RES_00084

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0130424

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2023 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2,4,5,6-Tetrachloro-m-xylene		201.2 µg/mL	+/- 1.1725	µg/mL	Gravimetric
	CAS # 877-09-8	(Lot 0052481)		+/- 6.3751	µg/mL	Unstressed
	Purity 98%			+/- 8.3288	µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)		201.5 µg/mL	+/- 1.1742	µg/mL	Gravimetric
	CAS # 2051-24-3	(Lot ER071509-01)		+/- 6.3848	µg/mL	Unstressed
	Purity 99%			+/- 8.3415	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

1-19-18

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0130424

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : November 30, 2023 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,4,5,6-Tetrachloro-m-xylene	201.2 µg/mL	+/- 1.1725 µg/mL	Gravimetric
	CAS # 877-09-8 (Lot 0052481)		+/- 6.3751 µg/mL	Unstressed
	Purity 98%		+/- 8.3288 µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)	201.5 µg/mL	+/- 1.1742 µg/mL	Gravimetric
	CAS # 2051-24-3 (Lot ER071509-01)		+/- 6.3848 µg/mL	Unstressed
	Purity 99%		+/- 8.3415 µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

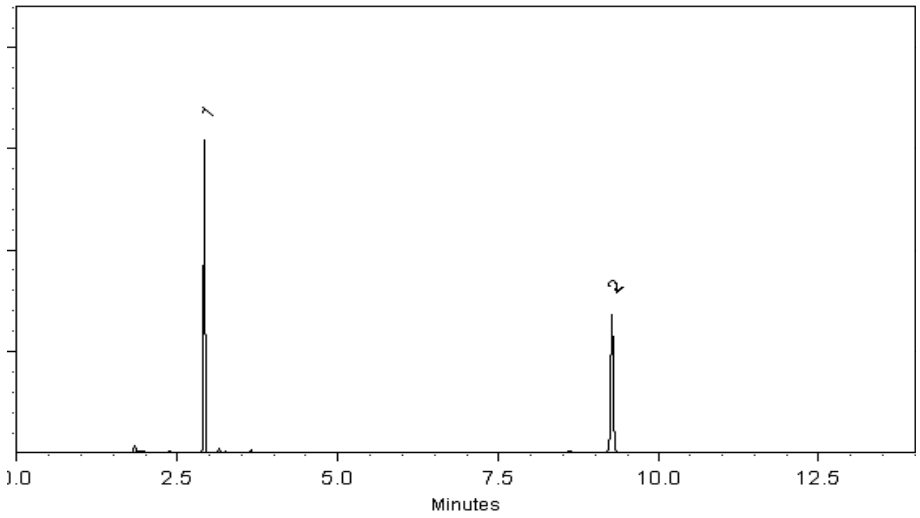
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 31-Aug-2017 **Balance:** B345965662

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 07-Sep-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32000 **Lot No.:** A0136320

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2024 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,4,5,6-Tetrachloro-m-xylene	200.3 µg/mL	+/- 1.1673 µg/mL	Gravimetric
	CAS # 877-09-8 (Lot 0052481)		+/- 6.3472 µg/mL	Unstressed
	Purity 98%		+/- 8.2923 µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)	200.2 µg/mL	+/- 1.1667 µg/mL	Gravimetric
	CAS # 2051-24-3 (Lot ER071509-01)		+/- 6.3436 µg/mL	Unstressed
	Purity 99%		+/- 8.2877 µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

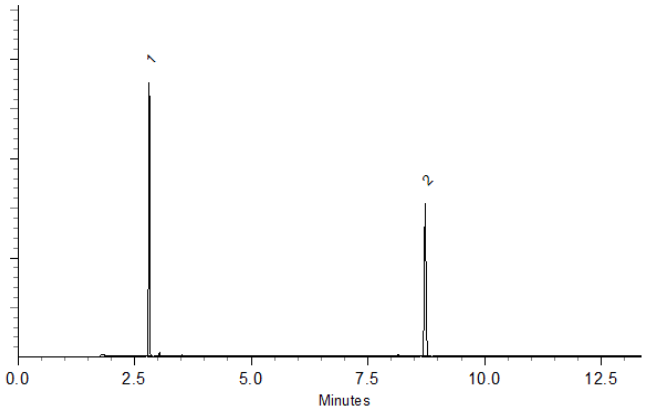
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dustin J Lidgett
Dustin Lidgett - Mix Technician

Date Mixed: 20-Mar-2018 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

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Catalog No. : 32000 **Lot No.:** A0136320

Description : Pesticide Surrogate Mix

Pesticide Surrogate Mix 200 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2024 **Storage:** 10°C or colder

Handling: Contains PCBs - sonicate prior to use.

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,4,5,6-Tetrachloro-m-xylene	200.3 µg/mL	+/- 1.1673 µg/mL	Gravimetric
	CAS # 877-09-8 (Lot 0052481)		+/- 6.3472 µg/mL	Unstressed
	Purity 98%		+/- 8.2923 µg/mL	Stressed
2	Decachlorobiphenyl (BZ# 209)	200.2 µg/mL	+/- 1.1667 µg/mL	Gravimetric
	CAS # 2051-24-3 (Lot ER071509-01)		+/- 6.3436 µg/mL	Unstressed
	Purity 99%		+/- 8.2877 µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

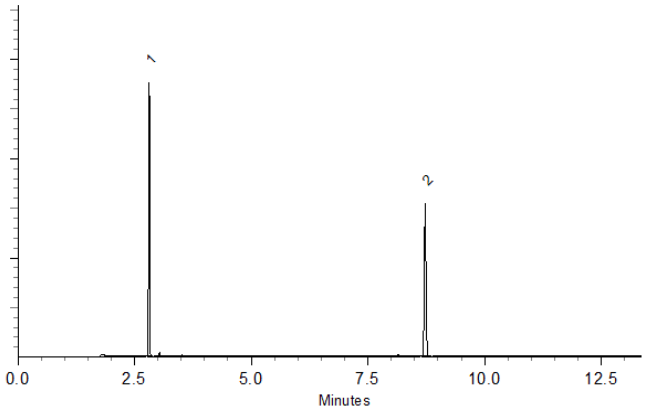
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
200°C to 300°C
@ 25°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Dustin J Lidgett
Dustin Lidgett - Mix Technician

Date Mixed: 20-Mar-2018 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Mar-2018

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

BNB stock_00014

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32279 **Lot No.:** A0127264

Description : 1-Bromo-2-nitrobenzene Standard

1-Bromo-2-nitrobenzene Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-2-nitrobenzene	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 577-19-5 (Lot 643872/1)		+/- 56.3065	µg/mL	Unstressed
	Purity 99%		+/- 57.6234	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

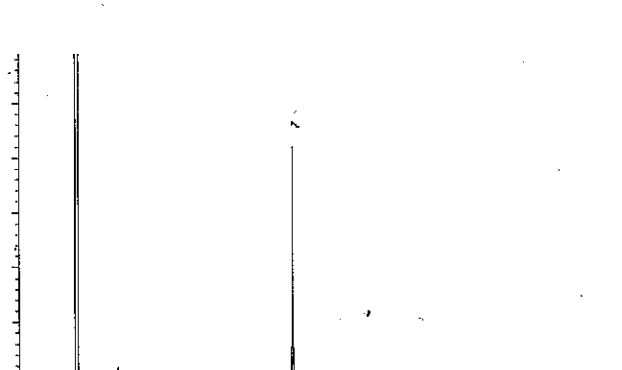
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 03-May-2017 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 05-May-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

BNB stock_00015

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32279 **Lot No.:** A0127264

Description : 1-Bromo-2-nitrobenzene Standard

1-Bromo-2-nitrobenzene Standard 1000 µg/mL, Acetone, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : August 31, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-2-nitrobenzene	1,004.0 µg/mL	+/- 5.9635	µg/mL	Gravimetric
	CAS # 577-19-5 (Lot 643872/1)		+/- 56.3065	µg/mL	Unstressed
	Purity 99%		+/- 57.6234	µg/mL	Stressed

Solvent: Acetone
CAS # 67-64-1
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

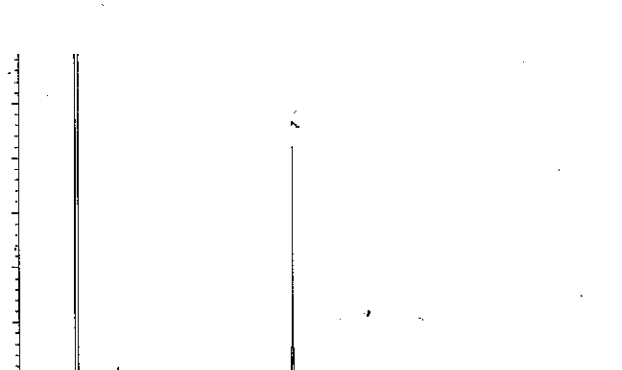
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 03-May-2017 **Balance:** B345965662

Justine Albertson - Operations Tech-ARM QC

Date Passed: 05-May-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

CN ICV Std_00052

Standard Verification Form

Standard Information			
Vendor Standard Name	5 ANION STANDARD 1000 ug/mL SIMPLE CYANIDE		
Vendor	SPEX		
Lot number	13-66YPX		
Initial Verification	☑ RK/11/11/18	Re-Verification	☑

TALS "Reagent" Information	
TALS Standard ID	CN ICV std-00052
COA Reviewed against what is in TALS	☑

Verification Information and Data			
Verified by	RK	Instrument ID	Alp-1
Verification Date	11/05/18	Method Reference	Total Cyanide
ID of Standard Used for Verification	CN ICV std-00052	Batch # / Chrom Work List #	

Attach to this form: formulary report , COA and data used for verification
Attach to standard in TALS: this form and all supporting documentation including the original CoA

See Acceptance Criteria Below:			
Approved for Use	☑	Not Approved for Use	☐

New expiration date can be no greater than ½ the designated standards shelf life from the date of re-verification. Standards can only be re-verified one time.

New Expiration Date:	11/30/18

1st Level Review RK Date: 11/05/18

2nd Level Review _____ Date: _____

QA Review (Re-verification only)		Date:

Acceptance Criteria		
Department	**Standard Analytes**	**Poor Performers* and Esterified Analytes**
GC/HPLC	≤ 15 %D	≤ 35 %D or ≤ 50 %D for dinoseb
GCMS/LCMS	≤ 35 %D	≤ 55 %D
MSVOA	≤ 25 %D	≤ 55 %D
Metals	≤ 8 %D	NA
Wet Chemistry	≤ 5 %D	NA

*See analytical SOP for details on poor performing analytes.

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: RSCN9-2X **Lot No.** 13-66YPX

Description: 1000 µg/mL Simple Cyanide

Matrix: 2% KOH

This Cyanide Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for titrimetric method. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1000 µg/mL ±50 µg/mL

The CRM is prepared gravimetrically using high purity Potassium Cyanide, Lot# K48260367702. See side 2 for details of certification.

Certified By:

Titration with $AgNO_3$ using Rhodanine as indicator. $AgNO_3$ standardized against NaCl NIST SRM #919b.

Uncertified Properties:

Trace Impurities in the Solution (derived from starting material):

Ion	µg/mL	Ion	µg/mL
Cl^-	<0.5	SCN^-	<0.3
$PO4^{-3}$	<0.1	$SO4^{-2}$	<0.3
S^{-2}	<0.01		

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to ±5% of certified concentration for a period of three months from the date of certification. This includes uncertainty components associated with measurements, homogeneity by the most precise method, and short-term and long-term stability. For these solutions, we use high purity reagents, 18 megohm double deionized water, and triple rinsed bottles. All glassware used is Class A. This guarantee is valid only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: JUL - - 2018

Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

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Reagent

DOD_ADD_SURR_00002

o2si
smart solutions®

Quality System Audited & Registered
by NSF-ISR to ISO 9001:2008

2030 Savage Road
Charleston, South Carolina 29407
Phone: 866.272.0932
Fax: 866.509.5146
www.o2si.com

ACCREDITED

ISO 17025 Accredited Chemical Testing Lab
Cert. No. 3031.01

Date Received: _____

Certificate of Analysis

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
116210-03	334026	≤ -10 °C	Methylene Chloride	22-Jan-2020	2-Methylnaphthalene-d10 and Fluoranthene-d10 Solution, 1,000 mg/L, 1 mL

Compound	CAS No.	Purity (%)	Neat Material Lot No.	Concentration	
fluoranthene-d_{10}	93951-69-0	98	1458.12.1P	994.7 +/- 11.26	mg/L
2-methylnaphthalene-d_{10}	7297-45-2	98	1457.18.1P	994.7 +/- 50.01	mg/L

Certified By: Jarrett Howard

Jarrett Howard

Manufacture Date 22-Jan-2018

Follow all storage requirements, keep tightly closed when not in use, and use good laboratory practices when handling.
This Reference Material was manufactured, produced, and/or certified under a quality management system that is accredited to ISO 17034 and ISO/IEC 17025.

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.
The stated uncertainty is the expanded uncertainty with a coverage factor of two to give a 95% confidence level.

Reagent

Hg ICV Stock_00010

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-100PPM
Lot Number:	M2-HG659091
Matrix:	10% (v/v) HCl
Value / Analyte(s):	100 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	05214TX, R307HGA1, 1780
Starting Material Purity:	99.9994%

4964959
ID: Hg ICV Stock_00010
Exp: 06/19/21 Prpd: CDH
Hg ICV Stock Inorganic Ve

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 100.10 ± 0.43 µg/mL

Density: 1.021 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.000171	M	Eu	< 0.000203	O	Na	0.000076	M	Se	< 0.013813	O	Zn	0.000012			
O	Al	0.000016	O	Fe	0.000014	M	Nb	< 0.000203	O	Si	0.000044	M	Zr	< 0.001218			
M	As	< 0.002844	M	Ga	< 0.000203	M	Nd	< 0.000203	M	Sm	< 0.000203						
O	Au	< 0.003219	M	Gd	< 0.000203	O	Ni	< 0.001812	M	Sn	< 0.000203						
O	B	< 0.002478	M	Ge	< 0.000609	M	Os	< 0.000201	O	Sr	< 0.000152						
M	Ba	< 0.000203	M	Hf	< 0.000203	O	P	< 0.010730	M	Ta	< 0.000203						
O	Be	< 0.000321	s	Hg	<	M	Pb	< 0.000203	M	Tb	< 0.000203						
M	Bi	< 0.013001	M	Ho	< 0.000203	M	Pd	< 0.000403	M	Te	< 0.001422						
O	Ca	0.000177	M	In	< 0.004062	M	Pr	< 0.000203	M	Th	< 0.000203						
M	Cd	0.000007	M	Ir	< 0.000201	M	Pt	< 0.000203	O	Ti	< 0.000530						
M	Ce	< 0.000203	M	K	0.000043	M	Rb	< 0.001218	O	Tl	< 0.002787						
M	Co	< 0.000406	M	La	< 0.000203	M	Re	< 0.001015	M	Tm	< 0.000203						
O	Cr	0.000016	O	Li	< 0.000180	M	Rh	< 0.000203	M	U	< 0.000812						
M	Cs	< 0.000203	M	Lu	< 0.000203	M	Ru	< 0.000201	M	V	< 0.000406						
M	Cu	< 0.000406	O	Mg	0.000037	O	S	< 0.023508	M	W	< 0.000609						
M	Dy	< 0.000203	M	Mn	< 0.000203	O	Sb	< 0.009657	M	Y	< 0.000203						
M	Er	< 0.000203	O	Mo	< 0.002152	M	Sc	< 0.000406	M	Yb	< 0.000203						

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

INORGANIC VENTURES
CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-100PPM
Lot Number:	M2-HG659091
Matrix:	10% (v/v) HCl
Value / Analyte(s):	100 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	05214TX, R307HGA1, 1780
Starting Material Purity:	99.9994%

4964959
ID: Hg ICV Stock_00010
Exp: 06/19/21 Prpd: CDH
Hg ICV Stock Inorganic Ve

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 100.10 ± 0.43 µg/mL

Density: 1.021 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Reagent

Hg Ultra Prim_00012

ULTRA SCIENTIFIC
Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: ICP-080
Lot Number: CR-3231

Lot Issue Date: 14-Jul 2017
Expiration Date: 31-Aug 2024

Product Name: Mercury ICP Standard

Description:
This Reference Material (RM) was gravimetrically prepared in accordance with ISO Guide 34 and under ULTRA Scientific's ISO 9001 registered quality system. The neat materials used for this product have been verified by ULTRA's ISO 17025 laboratory and under ULTRA's ISO Guide 34 accreditation. The analyte concentrations were verified by ULTRA's ISO 17025 accredited laboratory. For each analyte, the true value, with its uncertainty value calculated at the 95% confidence level, is reported below.

Analyte	StartingMaterial	Lot Number	Purity (%)	Calculated Value	Traceability & Method
mercury	*mercuric nitrate	RM11214	99.999%	1002 ± 2 µg/mL	NIST SRM 3133; ICP-OES

*light sensitive

Solvent: 2% nitric acid in low TOC water (< 50 ppb)

Non-Certified Values:

Density: 1.0101 g/mL @ 20.00 ± 0.05°C

Trace Metallic Impurities in Solution Standard in µg/mL

*	Al	<0.005 ND	*	Ga	<0.005 ND	n	Nb		n	S				
*	Sb	<0.005 ND	n	Ge		n	Os		n	Ta				
*	As	<0.005 ND	n	Au		*	Pd	<0.005 ND	n	Te				
*	Ba	<0.005 ND	n	Hf		*	P	<0.005 ND	n	Tb				
*	Be	<0.005 ND	n	Ho		*	Pt	<0.005 ND	n	Tl				
*	Bi	<0.005 ND	*	In	<0.005 ND	*	K	<0.005 ND	*	Th	<0.005 ND			
*	B	<0.005 ND	n	Ir		n	Pr		n	Tm				
*	Cd	<0.005 ND	*	Fe	<0.005 ND	n	Re		*	Sn	<0.005 ND			
*	Cs	<0.005 ND	*	La	<0.005 ND	n	Rh		*	Ti	<0.005 ND			
*	Ca	<0.005 ND	*	Pb	<0.005 ND	n	Rb		n	W				
n	Ce		*	Li	<0.005 ND	n	Ru		n	U				
*	Cr	<0.005 ND	n	Lu		n	Sm		*	V	<0.005 ND			
*	Co	<0.005 ND	*	Mg	<0.005 ND	n	Sc		n	Yb				
*	Cu	<0.005 ND	*	Mn	<0.005 ND	*	Se	<0.005 ND	n	Y				
n	Dy		s	Hg		*	Si	<0.005 ND	*	Zn	<0.005 ND			
*	Er	<0.005 ND	*	Mo	<0.005 ND	*	Ag	<0.005 ND	n	Zr				
*	Eu	<0.005 ND	n	Nd		*	Na	<0.005 ND						
*	Gd	<0.005 ND	*	Ni	<0.005 ND	*	Sr	<0.005 ND						

* - element checked; i - spectral interference; n – element not checked; D – element detected; ND – element not detected; s - standard element

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ISO 9001 Registered Quality System – TUV USA

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Analytical Solutions

Certificate of Analysis

ISO Guide 34 Reference Material

Product Number: ICP-080
Lot Number: CR-3231

Lot Issue Date: 14-Jul 2017
Expiration Date: 31-Aug 2024

Storage: Store at Room Temperature (15° to 30°C).

Traceability:
Traceability has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on appropriate physical or chemical measurements, including gravimetric or volumetric dilution, where the mass or volume of a solution before and after dilution is measured. The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1, ISO 9001, ISO 17025, and ISO Guide 34. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 819.

Estimation of Uncertainties:
The true value is reported, with its uncertainty value calculated at the 95% confidence level.

Homogeneity:
This RM was formulated and unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening and should be processed without delay for the true value to be valid within the stated uncertainties. Do not pipet from the bottle. Do not return any material removed for pipetting to the bottle. Tightly cap the bottle after removing any material and store according to the instructions noted above.

Hazards:
Refer to the Safety Data Sheet for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid, within the measurement uncertainty specified, until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
The real-time, long term stability of the RM may be monitored over the lifetime of the certification. If substantive changes occur that affect the certification before the expiration of this certificate, ULTRA Scientific will notify the purchaser.

John Russo
President

Monica Bourgeois
Director of QA/RA

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Reagent

IC Br cal_00015

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Certificate of Analysis

Bromide Standard, 1000 ppm Br^-

Lot Number: 4707D55 **Product Number:** 1180

Manufacture Date: JUL 20, 2017
Expiration Date: JAN 2019

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Bromide	7647-15-6	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Bromide (Br)	995-1005 ppm	1000 ppm

Specification	Reference
Bromide Solution, Standard (1 mL = 1 mg Br^-)	ASTM (D 3869 D)
Standard Bromide Solution, 1000 mg/L	APHA (4110 B)
Bromide Stock Solution (1.00 mL = 1.00 mg Br^-)	EPA (SW-846) (9056)
Sodium Bromide Standard Solution, 1000 mg/L	ASTM (D 1246)
Bromide Stock Solution (1.00 mL = 1.00 mg Br?)	ASTM (D 4327)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1180-16	500 mL natural poly	18 months
1180-4	120 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Jim Gibbs (07/20/2017)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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IC CL cal_00054

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Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: AS-CL9-2X **Lot No.** 4-101CL-2X

Description: 1000 µg/mL Chloride

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 998 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3182*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Sodium Chloride, Lot# 07131A. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 998 µg/mL

Method: Precipitation using Silver Nitrate. Filter, dry and weigh as AgCl.

Instrumental Analysis by Ion Chromatography: 997 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.05	NO_3^-	<0.04
F^-	<0.006	$PO4^{-3}$	<0.06
NO_2^-	<0.03	$SO4^{-2}$	<0.05

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is unopened and stored under ambient laboratory conditions.

Date of Certification: AUG - - 2018

Certifying Officer: Kathleen Cullen

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IC FL cal_00013

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Certificate of Analysis

Fluoride Standard, 1000 ppm F-

Lot Number: 4805C89 **Product Number:** 3173

Manufacture Date: MAY 07, 2018
Expiration Date: OCT 2019

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.
The concentration is confirmed by Fluoride ISE and is certified traceable to NIST SRM 2203.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Fluoride	7681-49-4	High Purity

Test	Specification	Result
Appearance	Colorless liquid	Passed
Fluoride (F)	995-1005 ppm	1000 ppm

Specification	Reference
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5542)
Fluoride Stock Solution (1.00 mL = 1.00 mg F-)	EPA (SW-846) (9056)
Fluoride Calibration Stock Solution (1,000 mg/L F-)	EPA (SW-846) (9214)
Stock Solution, 1.0 mL = 1.0 mg F	EPA (340.3)
Fluoride Solution, Stock (1.00 mL = 1.00 mg F)	ASTM (D 5996)
Fluoride Stock Solution (1.00 mL = 1.00 mg F?)	ASTM (D 4327)
Fluoride Stock Standard Solution (1 mg of F in 1 mL)	ACS (N/A)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
3173-16	500 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Jim Gibbs
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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IC MS/MSD N02_00002

Fisher Scientific

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201.796.1329 fax

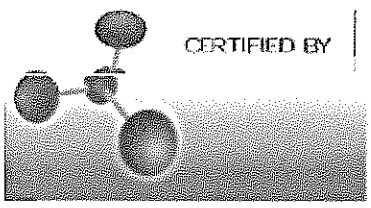
Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0090918

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

Catalog Number	**S347**	**Quality Test / Release Date**	**9/9/2016**
Lot Number	**164254**		
Description	**SODIUM NITRITE, A.C.S.**		
Country of Origin	**India**	*** Suggested Retest Date**	**Sep-2021**
Chemical Origin	**Inorganic-non animal**		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	yELLOW-WHITE CRYSTALS
ASSAY	%	>= 97	98.6
CALCIUM	%	<= 0.01	<0.010
CHLORIDE	%	<= 0.005	<0.005
HEAVY METALS (as Pb)	%	<= 0.001	<0.0010
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.01	<0.010
IRON (Fe)	%	<= 0.001	<0.0010
POTASSIUM (K)	%	<= 0.005	<0.0010
SULFATE (SO4)	%	<= 0.01	<0.010



Teresa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a extension of this catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-6701.
*Based on suggested storage condition.

Reagent

IC MS/MSD N03_00005

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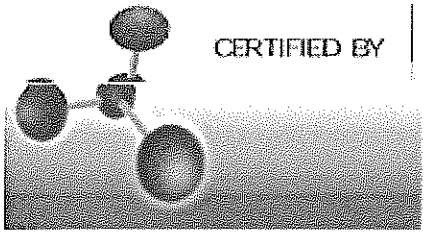
talog Number	**S343**	**Quality Test / Release Date**	**8/23/2017**
t Number	**176192**		
scription	**SODIUM NITRATE, A.C.S.**		
untry of Origin	**Mexico**	*** Suggested Retest Date**	**Aug-2022**
emical Origin	**Inorganic-non animal**		
SE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

sult name	Units	Specifications	Test Value
PEARANCE		REPORT	Clear to white crystals.
SAY	%	>= 99	99.7
LCIUM	%	<= 0.005	0.001
LORIDE	%	<= 0.001	<0.0010
AVY METALS (as Pb)	ppm	<= 5	<5.0
ENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
SOLUBLE MATTER	%	<= 0.005	<0.005
DATE	ppm	<= 5	<5.0
ON (Fe)	ppm	<= 3	<3.0
GNESIUM	%	<= 0.002	0.0002
TRITE (NO2)	%	<= 0.001	<0.0010
5% SOLUTION @ 25 DEG C		Inclusive Between 5.5 - 8.3	6.7
OSPHATE (PO4)	ppm	<= 5	<5.0
LFATE (SO4)	%	<= 0.003	<0.0030



Teresa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

Reagent

IC MS/MSD S04_00005

Fisher Scientific

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201.796.1329 fax

Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0064970

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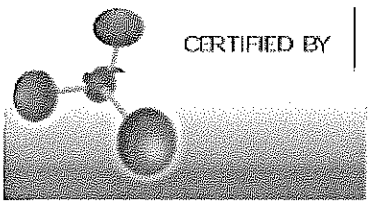
Catalog Number	**P304**	**Quality Test / Release Date**	**3/2/2015**
Lot Number	**147276**		
Description	**POTASSIUM SULFATE, CRYSTAL, CERTIFIED, A.C.S.**		
Country of Origin	**India**	*** Suggested Retest Date**	**Feb-2020**
Chemical Origin	**Inorganic-non animal**		
BSE/TSE Comment	This product is not manufactured from, or with, any type of animal product, nor any derivative of an animal product. As such, this product should not be considered a vector for BSE or TSE.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	FINE WHITE CRYSTALS
ASSAY	%	>= 99	99.4
CALCIUM	%	<= 0.01	<0.010
CHLORIDE	%	<= 0.001	<0.0010
HEAVY METALS (as Pb)	ppm	<= 5	<5.0
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.01	<0.010
IRON (Fe)	ppm	<= 5	<5.0
MAGNESIUM	%	<= 0.005	<0.0050
NITROGEN COMPOUNDS	ppm	<= 5	<5
PH 5% SOLUTION @ 25 DEG C		Inclusive Between 5.5 - 8.5	5.5
SODIUM (Na)	%	<= 0.02	<0.020



Lab Manager Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a extension of this catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-6701.
*Based on suggested storage condition.

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IC N02 CAL_00043

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Certificate of Analysis

Nitrite Nitrogen Standard, 1000 ppm N (3285 ppm NO_2^-)

Lot Number: 4808990 **Product Number:** R5444900

Manufacture Date: AUG 02, 2018
Expiration Date: JAN 2019

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrite	7758-09-0	ACS

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Assay (vs. Potassium Permanganate)	995-1005 ppm N	1005 ppm N	40

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
R5444900-120C	120 mL amber glass	6 months
R5444900-500C	500 mL amber glass	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Jim Gibbs (08/02/2018)
Quality Control Supervisor
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IC N03 cal_00019

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Certificate of Analysis

Nitrate Nitrogen Standard, 1000 ppm N (4427 ppm NO_3)

Lot Number: 2807E96 **Product Number:** 5459

Manufacture Date: JUL 24, 2018
Expiration Date: JAN 2020

The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is based upon the volumetric method of preparation.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Nitrate	7757-79-1	High Purity
Chloroform	67-66-3	

Test	Specification	Result
Appearance	Colorless liquid	Passed
Nitrogen (N)	995-1005 ppm	1000 ppm

Specification	Reference
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 A)
Nitrate Solution, Stock (1.0 mL = 1.0 mg NO3-N)	ASTM (D 3867 B)
Stock Nitrate Solution: 1 mL = 1.0 mg NO3-N	EPA (353.2)
Stock Nitrate Solution: 1.0 mL = 1.00 mg NO3-N	EPA (353.3)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
5459-16	500 mL natural poly	18 months
5459-4	120 mL natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Andy Baumgartner (07/24/2018)
Quality Control Supervisor
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Reagent

IC NO2 ICV_00016

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Nitrite as N (NO_2-N)
CATALOG NUMBER:	053 -125 mL; 990 - 500 mL
LOT NUMBER:	020518
ISSUE DATE:	May 16, 2018
REVISION DATE:	Original
STARTING MATERIAL:	Sodium Nitrite ($NaNO_2$)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	4.7%
MATRIX:	18 megohm deionized water
DENSITY:	1.0004 ± 0.0008 g/mL at 19.2°C and 752 mm Hg
TRACEABILITY[3]:	See Footnote 3
NIST/SRM:	-
VERIFICATION METHOD:	Ion Chromatography
STORAGE:	Store at 20-25°C

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation of the product and includes uncertainty related to the starting material used and the volumetric and gravimetric measurements made. The method of calculating uncertainty is taken from the ISO Guide to the Expression of Uncertainty in Measurement (current version). The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.

3. Traceability ((% Recovery Certified Standard)/(% Recovery NIST SRM))* 100.

   The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs. Where a NIST SRM is not available, the product is metrologically traceable through an unbroken chain of calibrations to NIST weights, each having stated uncertainties and utilizing measurement standards that are appropriate for the physical and/or chemical property being measured.

This standard **expires 5/2020**. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com

Certifying Officer: Brian Miller - Product Line Manager

ISO/IEC GUIDE 34:2009

ACCREDITED

REFERENCE MATERIAL PRODUCER
CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005

ACCREDITED

CHEMICAL TESTING LABORATORY
CERTIFICATE NO. 1539.02

16341 Table Mtn Pkwy, Golden, CO 80403 800-372-0122 fax: 303-421-0159 www.eraqc.com

Reagent

IC NO3 ICV_00012

Certificate of Analysis

PRODUCT:	1000 mg/L Nitrate as N (NO_3-N)
CATALOG NUMBER:	052 -125 mL; 991 - 500 mL
LOT NUMBER:	140616
ISSUE DATE:	June 30, 2016
REVISION DATE:	June 26, 2017
STARTING MATERIAL:	Potassium Nitrate (KNO_3)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	1.0020 ± 0.0008 g/mL at 21.5°C and 762 mm Hg
TRACEABILITY[3]:	102%
NIST/SRM:	3185 Nitrate
VERIFICATION METHOD:	Ion Chromatography
STORAGE:	Store at 20-25°C

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA, multiplied by a coverage factor which is equal to the student t factor at a 95% confidence interval at n-1 degrees of freedom. The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.

3. Traceability Recovery = ((% Recovery certified standard)/(% Recovery NIST SRM))*100.

   The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

This standard **expires 12/2018**. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com

Certifying Officer: Brian Miller

ISO/IEC GUIDE 34:2009
ACCREDITED
REFERENCE MATERIAL PRODUCER
CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005
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CERTIFICATE NO. 1539.02

Reagent

IC P04 cal_00018

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Certificate of Analysis

Phosphorus AA Standard, 1000 ppm P in H_2O

Lot Number: 4711L59 **Product Number:** AP1KW

Manufacture Date: NOV 30, 2017
Expiration Date: NOV 2019

This is a single element solution that was prepared volumetrically to contain the certified value reported. The uncertainty associated with the certifiec value is the sum of the estimated errors due to the purity of the raw material, the volumetric preparation of the solution, and transpiration of the solution through the container wall.
The final solution concentration is confirmed by AA, ICP, or ICP-MS, and is traceable to NIST Standard Reference Material 3139.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Ammonium Dihydrogen Phosphate	7722-76-1	High Purity

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Phosphorus (P)	995-1005 ppm	1000 ppm	3139

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
AP1KW-500	500 mL natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Jim Gibbs (11/30/2017)
Quality Control Supervisor
This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Reagent

IC SO4 ICV_00017

ERA

A Waters Company

Certificate of Analysis

PRODUCT:	1000 mg/L Sulfate (SO_4)
CATALOG NUMBER:	062 -125 mL; 995 - 500 mL
LOT NUMBER:	210617
ISSUE DATE:	June 27, 2017
REVISION DATE:	Original
STARTING MATERIAL:	Potassium Sulfate (K_2SO_4)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	0.6%
MATRIX:	18 megohm deionized water
DENSITY:	0.9987 ± 0.0008 g/mL at 22.5°C and 757 mm Hg
TRACEABILITY[3]:	99.5%
NIST/SRM:	3181 Sulfate
VERIFICATION METHOD:	Ion Chromatography
STORAGE:	Store at 20-25°C

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation of the product and includes uncertainty related to the starting material used and the volumetric and gravimetric measurements made. The method of calculating uncertainty is taken from the ISO Guide to the Expression of Uncertainty in Measurement (current version). The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.

3. Traceability ((% Recovery Certified Standard)/(% Recovery NIST SRM))* 100.

The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs. Where a NIST SRM is not available, the product is metrologically traceable through an unbroken chain of calibrations to NIST weights, each having stated uncertainties and utilizing measurement standards that are appropriate for the physical and/or chemical property being measured.

This standard **expires 6/2019**. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com

Certifying Officer: Brian Miller - Product Line Manager

ISO/IEC GUIDE 34:2009 ACCREDITED
REFERENCE MATERIAL PRODUCER
CERTIFICATE NO. 1539.03

ISO/IEC 17025:2005 ACCREDITED
CHEMICAL TESTING LABORATORY
CERTIFICATE NO. 1539.02

16341 Table Mtn Pkwy, Golden, CO 80403 800-372-0122 fax: 303-421-0159 www.eraqc.com

Reagent

IC sulfatecal_00053

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: AS-SO49-2X **Lot No.** 4-131SO4-2X

Description: 1000 µg/mL Sulfate

Matrix: H_2O

This **Ion Chromatography** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for ion chromatography instrumentation. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Value: 1003 µg/mL ±5 µg/mL

Certified Value is Traceable to: 3181*

* - indicates NIST SRM † - indicates SPEX CertiPrep CRM (when NIST SRM is not available) ‡ - prepared gravimetrically

The CRM is prepared gravimetrically using high purity Potassium Sulfate, Lot# 0713D. The certified value listed is the average of values obtained by classical wet assay and ion chromatography analysis.

Refer to side 2 for details of measurement uncertainties.

Classical Wet Assay: 1002 µg/mL

Method: Precipitation using Barium Chloride. Filter, ignite, and weigh as $BaSO_4$.

Instrumental Analysis by Ion Chromatography: 1004 µg/mL

Uncertified Properties

Trace Ionic Impurities in the Actual Solution via IC Analysis:

Element	µg/mL	Element	µg/mL
Br^-	<0.04	NO_2^-	<0.03
Cl^-	<0.5	NO_3^-	<0.03
F^-	<0.006	$PO4^{-3}$	<0.06

Balances are calibrated regularly with weight sets traceable to NIST #32856, #32867 and others. This CRM is guaranteed stable and accurate to +/- 0.5% of the certified value. This includes uncertainty components due to preparation, homogeneity by the most precise method, and short-term and long-term stability. This guarantee is valid for a period of one year from the date of certification only when the material is kept tightly capped and stored under ambient laboratory conditions.

Date of Certification: AUG - - 2018

Certifying Officer: Katherine Cullinan

Katherine Cullinan, QC Manager

© 2018 SPEX CertiPrep, LLC

Reagent

Icp cal std 3_00018

INORGANIC VENTURES
CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	STLDEN-STD-3B
Lot Number:	M2-MEB663620
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium, 4 000 µg/mL ea: Magnesium, 1 000 µg/mL ea: Calcium, Sodium, 500 µg/mL ea: Iron, 200 µg/mL ea: Lithium, Phosphorus, 100 µg/mL ea: Strontium, Vanadium, Zinc, Manganese, Cadmium, Cobalt, Chromium, Copper, Silver, Aluminum, Boron, Barium, Beryllium, Nickel

4888666
ID: Icp cal std 3_00016
Exp: 12/05/20 Prpd: SJS
ICP CAL STD 3B IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	100.0 ± 0.5 µg/mL	Barium, Ba	100.0 ± 0.5 µg/mL
Beryllium, Be	100.0 ± 0.7 µg/mL	Boron, B	100.0 ± 0.6 µg/mL
Cadmium, Cd	100.0 ± 0.5 µg/mL	Calcium, Ca	1 000 ± 4 µg/mL
Chromium, Cr	100.0 ± 0.6 µg/mL	Cobalt, Co	100.0 ± 0.5 µg/mL
Copper, Cu	100.0 ± 0.4 µg/mL	Iron, Fe	500.0 ± 2.0 µg/mL
Lithium, Li	200.0 ± 0.7 µg/mL	Magnesium, Mg	4 000 ± 16 µg/mL
Manganese, Mn	100.0 ± 0.4 µg/mL	Nickel, Ni	100.0 ± 0.4 µg/mL
Phosphorus, P	200.0 ± 0.9 µg/mL	Potassium, K	10 000.0 ± 40.0 µg/mL
Silver, Ag	100.0 ± 0.4 µg/mL	Sodium, Na	1 000 ± 4 µg/mL
Strontium, Sr	100.0 ± 0.4 µg/mL	Vanadium, V	100.0 ± 0.4 µg/mL
Zinc, Zn	100.0 ± 0.4 µg/mL		

Density: 1.074 g/mL (measured at 20 ± 4 °C)

Assay Information:

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 05, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 05, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
B	ICP Assay	3107	110830
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Reagent

Icp ICVH_00746

HIGH-PURITY STANDARDS
www.high-purity-standards.com
P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

5300282
ID: Icp ICVH_00746
Exp: 09/30/19 Prpd: SJS
ICP ICVH HP

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICVH
Part Number:	**SM-606-125**
Lot Number:	**1824227**
Matrix:	5% HNO_3
Purity:	99.96% - 99.9995%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	4000 ± 24	3101a	140903	Th	300 ± 3	*	
Fe	8000 ± 48	3126a	140812	U	500 ± 3	3164	080521
Na	4000 ± 24	3152a	120715				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **September 2018**
Certificate Issue Date: August 31, 2018

Moven Mututuvari
Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

Icp ICVL A_00014

HIGH PURITY STANDARDS
www.highpuritystandards.com
P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Product Description:

Name:	Intrepid ICVL
Part Number:	**SM-606-062 Solution A**
Lot Number:	**1810602**
Matrix:	5% HNO_3
Purity:	99.5% - 99.9999%

5078624
ID: Icp ICVL A_00014
Exp: 04/17/18 Prpd: SJS
ICP ICVL SOLUTION A H

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Al	25.0 ± 0.1	3101a	140903	Li	25.0 ± 0.2	3129a	100714
As	25.0 ± 0.3	3103a	100818	Mg	1000 ± 5	3131a	140110
Ba	25.0 ± 0.2	3104a	140909	Mn	25.0 ± 0.3	3132	050429
Be	25.0 ± 0.3	3105a	090514	Ni	25.0 ± 0.1	3136	120619
B	25.0 ± 0.1	3107	110830	K	2000 ± 10	3141a	140813
Cd	25.0 ± 0.1	3108	130116	Se	50.0 ± 0.5	3149	100901
Ca	200 ± 1	3109a	130213	Na	200 ± 1	3152a	120715
Cr	25.0 ± 0.1	3112a	030730	Sr	25.0 ± 0.1	*	
Co	25.0 ± 0.1	3113	000630	Tl	50.0 ± 0.3	*	
Cu	25.0 ± 0.1	3114	121207	V	25.0 ± 0.2	3165	160906
Fe	25.0 ± 0.1	3126a	140812	Zn	25.0 ± 0.1	3168a	120629
Pb	25.0 ± 0.2	3128	101026				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **April 2018**

Certificate Issue Date: April 17, 2018

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

Icp ICVL B_00016

HIGH PURITY STANDARDS
www.highpuritystandards.com
P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Certificate of Analysis

Certified Reference Material

Product Description:

Name:	Intrepid ICVL
Part Number:	**SM-606-062 Solution B**
Lot Number:	**1810603**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.92% - 99.999%

5078631
ID: Icp ICVL B_00016
Exp: 04/17/18 Prpd: SJS
ICP ICVL SOLUTION B HP

ISO Guide 34:2009 (RMP) Accreditation Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation Certificate Number AT-1529

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Sb	25.0 ± 0.2	3102a	140911	Ag	25.0 ± 0.2	3151	160729
Mo	25.0 ± 0.2	3134	130418	Sn	50.0 ± 0.3	3161a	140917
P	200 ± 1	3139a	060717	Ti	25.0 ± 0.2	3162a	130925
Si	200 ± 2	3150	130912	Zr	25.0 ± 0.2	3169	130920

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **April 2018**

Certificate Issue Date: April 17, 2018

Moven Mututuvari

Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods. The standard is confirmed homogeneous; therefore, the minimum sample size should be consistent with the end user's measurement capabilities.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibrations of volumetric vessels are verified using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICP ISAB 1B_00011

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICS-AB STD #1
Part Number:	**SM-606-037** Solution B
Lot Number:	**1734922**
Matrix:	2% HNO_3
Purity:	99.99%

4902379
ID: ICP ISAB 1B_00011
Exp: 12/01/18 Prpd: SJS
ICP ICSAB STD 1 SOL B H

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#
Tl	1000 ± 6	*	

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date:	**December 2017**
Expiration Date:	**December 2018**
Certificate Issue Date:	December 15, 2017

Moven Mututuvari

Moven Mututuvari PhD., Laboratory Manager

Preparation Information:

The standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

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The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

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Reagent

ICP ISAB STD1_00010

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Certified Reference Material

Product Description:

Name:	ICS-AB STD#1
Part Number:	**SM-606-037**
	Solution A
Lot Number:	**1734921**
Matrix:	20% HCl
Purity:	99.999% - 99.9999%

4902371
ID: ICP ISAB STD1_00010
Exp: 12/01/18 Prpd: SJS
ICAP ICSAB STD 1 SOL A

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ide 34:2009 (RMP) Accreditation
ertificate Number AR-1436

ilac-MRA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#	Element	(mg/L)	SRM ID	SRM Lot#
Sb	100.0 ± 0.6	3102a	140911	P	200.0 ± 1.2	3139a	060717
As	200 ± 2	3103a	100818	K	5000 ± 25	3141a	140813
B	200.0 ± 1.2	3107	110830	Se	500 ± 5	3149	100901
Li	100.0 ± 0.6	3129a	100714	Na	5000 ± 25	3152a	120715
Mo	100.0 ± 0.6	3134	130418	Sr	100.0 ± 0.5	*	

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

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Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **December 2017**

Expiration Date: **December 2018**

Certificate Issue Date: December 15, 2017

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

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The calibration of volumetric vessels is checked annually using the ASTM method E542.

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Reagent

ICP ISAB STD2_00013

Sample Name: ICP ISAB STD2_00011 Acquired: 7/3/2018 7:25:22 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: rhoadesc Prep Date: Custom ID2: Custom ID3:
Comment: Standard recertification (8%) 20x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**-.00690**	**-.00583**	**-.00005**	**.00046**	**-.00003**	**.00889**	**.04235**	**.00044**
Stddev	.00020	.00053	.00126	.00130	.00003	.00012	.00399	.00007	.00003
%RSD	321.04	7.6209	21.545	2405.4	6.1016	392.14	44.929	.16754	6.0746
#1	.00008	-.00727	-.00494	.00086	.00048	.00005	.01172	.04230	.00042
#2	-.00021	-.00653	-.00672	-.00097	.00044	-.00011	.00607	.04240	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00044**	**.00034**	**.00216**	**.01862**	**-.04392**	**-.00198**	**.00334**	**.00042**	**.00066**
Stddev	.00037	.00042	.00041	.00103	.03980	.00234	.00617	.00010	.00004
%RSD	85.544	124.10	19.108	5.5287	90.616	117.88	184.52	23.313	6.6074
#1	.00017	.00064	.00187	.01935	-.01578	-.00363	.00770	.00049	.00063
#2	.00070	.00004	.00245	.01789	-.07206	-.00033	-.00102	.00035	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02159**	**.00057**	**-.00434**	F **-.00317**	**-.04238**	**-.00080**	**-.00166**	**.00671**	**.01436**
Stddev	.00014	.00044	.00114	.00110	.00159	.00456	.00058	.02387	.05109
%RSD	.64346	76.481	26.343	34.690	3.7552	568.46	34.810	355.63	355.63
#1	-.02149	.00026	-.00514	-.00239	-.04125	-.00403	-.00207	.02359	.05049
#2	-.02169	.00088	-.00353	-.00395	-.04351	.00242	-.00126	-.01017	-.02176
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit				.00900					
Low Limit				-.00300					

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **49.229**	**.00004**	**-.00191**	F **4.9283**	**-.00214**	**.00870**	**-.00054**	**.00342**	**-.00298**
Stddev	.046	.00006	.00139	.0140	.00067	.04390	.00027	.00029	.00057
%RSD	.09407	174.51	73.200	.28319	31.237	504.79	50.451	8.6155	19.050
#1	49.197	-.00001	-.00289	4.9382	-.00166	.03974	-.00074	.00321	-.00258
#2	49.262	.00008	-.00092	4.9185	-.00261	-.02235	-.00035	.00362	-.00338
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.10000			.01000					
Low Limit	-.10000			-.01000					

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2971.1**	**55500.**	**4143.0**
Stddev	4.3	184.	14.9
%RSD	.14605	.33103	.36040
#1	2968.0	55630.	4132.5
#2	2974.2	55370.	4153.6

Sample Name: ICP ISAB STD2_00011 Acquired: 7/2/2018 19:23:25 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: rhoadesc Prep Date: Custom ID2: Custom ID3:
Comment: Standard recertification (8%)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00061**	**-.01595**	**-.02613**	**.00451**	**.00011**	**-.00048**	**.21371**	**.01037**	**.00138**
Stddev	.00113	.00143	.00031	.00000	.00001	.00002	.00145	.00962	.00042
%RSD	186.17	8.9974	1.1694	.04020	11.626	3.3907	.67814	92.772	30.675
#1	-.00141	-.01493	-.02592	.00451	.00011	-.00046	.21269	.00357	.00108
#2	.00019	-.01696	-.02635	.00451	.00010	-.00049	.21474	.01717	.00168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00296**	**.00228**	**.05492**	**.01936**	**.08715**	F **-.02178**	**.00687**	**.00106**	**.00035**
Stddev	.00111	.00004	.00101	.00051	.00382	.00388	.00211	.00012	.00007
%RSD	37.565	1.6037	1.8430	2.6171	4.3864	17.824	30.758	11.120	19.271
#1	-.00217	.00225	.05564	.01900	.08986	-.01904	.00538	.00098	.00040
#2	-.00375	.00230	.05421	.01972	.08445	-.02453	.00836	.00114	.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						25.000			
Low Limit						-.02000			

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02917**	**-.00052**	**-.01876**	**.00406**	**-.10075**	**.07719**	**.00456**	**.02709**	**.05798**
Stddev	.00696	.00044	.00243	.00121	.00935	.00444	.00209	.00419	.00897
%RSD	23.859	83.080	12.962	29.867	9.2760	5.7520	45.870	15.478	15.478
#1	.03409	-.00022	-.01704	.00320	-.09414	.08033	.00308	.02413	.05163
#2	.02425	-.00083	-.02048	.00491	-.10735	.07405	.00604	.03006	.06433
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **619.55**	**.00010**	**.00732**	F **96.343**	**-.01120**	**-.10281**	**-.01118**	**.00211**	**-.00184**
Stddev	4.12	.00010	.00115	.638	.00088	.02135	.00080	.00006	.00099
%RSD	.66567	101.87	15.727	.66246	7.8719	20.768	7.1813	2.6625	53.824
#1	622.47	.00017	.00651	96.794	-.01182	-.08772	-.01175	.00207	-.00114
#2	616.64	.00003	.00814	95.892	-.01057	-.11791	-.01061	.00215	-.00254
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	50.000			10.000					
Low Limit	-.20000			-.02000					

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2883.4**	**51409.**	**4166.8**
Stddev	1.2	118.	2.3
%RSD	.04117	.22890	.05610
#1	2882.6	51326.	4168.5
#2	2884.3	51492.	4165.2

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
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Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	ICS-AB STD #2
Part Number:	**SM-606-038**
Lot Number:	**1721944**
Matrix:	20% HCl
Purity:	99.98% - 99.999%

Certified Values:

Element	(mg/L)	SRM ID	SRM Lot#		Element	(mg/L)	SRM ID	SRM Lot#
Sn	1000 ± 10	3161a	140917		Ti	100 ± 1	3162a	130925

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* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

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Expiration Information:

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Shipped Date: **August 2017**
Expiration Date: **August 2018**
Certificate Issue Date: August 8, 2017

Moven Mutuvari

Moven Mutuvari PhD., Laboratory Manager

P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

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Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICP LLCCV-2a_00008

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.7 ± 0.1
Uranium 235U	0.28 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 14, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 14, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Bi	ICP Assay	3106	991212
Bi	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	000505
Li	Calculated		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	Calculated		See Sec. 4.2
S	Potentiometric	84L	84L
S	ICP Assay	3154	892205
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

INORGANIC VENTURES
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CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICP-LLCCV-4
Lot Number:	N2-MEB670719
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	300 mg/L ea: Potassium, 100 mg/L ea: Sodium, 20 mg/L ea: Magnesium, Calcium, 10 mg/L ea: Bismuth, Aluminum, Iron, Sulfur, 6 mg/L ea: Uranium, 4 mg/L ea: Nickel, 2 mg/L ea: Selenium, Zinc, Lithium, 1.5 mg/L ea: Copper, Arsenic, Thorium, Thallium, 1 mg/L ea: Vanadium, Strontium, Barium, Silver, Cobalt, Chromium, Manganese, 0.9 mg/L ea: Lead, 0.5 mg/L ea: Cadmium, 0.1 mg/L ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	10.00 ± 0.05 mg/L	Arsenic, As	1.500 ± 0.011 mg/L
Barium, Ba	1.000 ± 0.006 mg/L	Beryllium, Be	0.1000 ± 0.0006 mg/L
Bismuth, Bi	10.00 ± 0.07 mg/L	Cadmium, Cd	0.5000 ± 0.0037 mg/L
Calcium, Ca	20.00 ± 0.08 mg/L	Chromium, Cr	1.000 ± 0.007 mg/L
Cobalt, Co	1.000 ± 0.006 mg/L	Copper, Cu	1.500 ± 0.007 mg/L
Iron, Fe	10.00 ± 0.05 mg/L	Lead, Pb	0.900 ± 0.004 mg/L
Lithium, Li	2.001 ± 0.012 mg/L	Magnesium, Mg	19.99 ± 0.12 mg/L
Manganese, Mn	1.000 ± 0.005 mg/L	Nickel, Ni	4.000 ± 0.024 mg/L
Potassium, K	300.1 ± 1.1 mg/L	Selenium, Se	2.000 ± 0.015 mg/L
Silver, Ag	1.000 ± 0.008 mg/L	Sodium, Na	100.0 ± 0.4 mg/L
Strontium, Sr	1.000 ± 0.006 mg/L	Sulfur, S	10.00 ± 0.05 mg/L
Thallium, Tl	1.500 ± 0.012 mg/L	Thorium, Th	1.500 ± 0.009 mg/L
Uranium, U	6.000 ± 0.031 mg/L	Vanadium, V	1.000 ± 0.006 mg/L
Zinc, Zn	2.000 ± 0.012 mg/L		

Density: 1.013 g/mL (measured at 20 ± 4 °C)

Assay Information:

Reagent

ICP LLCCV-4_00008

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\ (u_{char\ a})^2 + (w_b)^2\ (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.7 ± 0.1
Uranium 235U	0.28 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 14, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 14, 2022

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Bi	ICP Assay	3106	991212
Bi	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	000505
Li	Calculated		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	Calculated		See Sec. 4.2
S	Potentiometric	84L	84L
S	ICP Assay	3154	892205
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICP-LLCCV-4
Lot Number:	N2-MEB670719
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	300 mg/L ea: Potassium, 100 mg/L ea: Sodium, 20 mg/L ea: Magnesium, Calcium, 10 mg/L ea: Bismuth, Aluminum, Iron, Sulfur, 6 mg/L ea: Uranium, 4 mg/L ea: Nickel, 2 mg/L ea: Selenium, Zinc, Lithium, 1.5 mg/L ea: Copper, Arsenic, Thorium, Thallium, 1 mg/L ea: Vanadium, Strontium, Barium, Silver, Cobalt, Chromium, Manganese, 0.9 mg/L ea: Lead, 0.5 mg/L ea: Cadmium, 0.1 mg/L ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	10.00 ± 0.05 mg/L	Arsenic, As	1.500 ± 0.011 mg/L
Barium, Ba	1.000 ± 0.006 mg/L	Beryllium, Be	0.1000 ± 0.0006 mg/L
Bismuth, Bi	10.00 ± 0.07 mg/L	Cadmium, Cd	0.5000 ± 0.0037 mg/L
Calcium, Ca	20.00 ± 0.08 mg/L	Chromium, Cr	1.000 ± 0.007 mg/L
Cobalt, Co	1.000 ± 0.006 mg/L	Copper, Cu	1.500 ± 0.007 mg/L
Iron, Fe	10.00 ± 0.05 mg/L	Lead, Pb	0.900 ± 0.004 mg/L
Lithium, Li	2.001 ± 0.012 mg/L	Magnesium, Mg	19.99 ± 0.12 mg/L
Manganese, Mn	1.000 ± 0.005 mg/L	Nickel, Ni	4.000 ± 0.024 mg/L
Potassium, K	300.1 ± 1.1 mg/L	Selenium, Se	2.000 ± 0.015 mg/L
Silver, Ag	1.000 ± 0.008 mg/L	Sodium, Na	100.0 ± 0.4 mg/L
Strontium, Sr	1.000 ± 0.006 mg/L	Sulfur, S	10.00 ± 0.05 mg/L
Thallium, Tl	1.500 ± 0.012 mg/L	Thorium, Th	1.500 ± 0.009 mg/L
Uranium, U	6.000 ± 0.031 mg/L	Vanadium, V	1.000 ± 0.006 mg/L
Zinc, Zn	2.000 ± 0.012 mg/L		

Density: 1.013 g/mL (measured at 20 ± 4 °C)

Assay Information:

Reagent

Icp stk ICSA_00024

11.1 Certification Issue Date

July 01, 2016

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 01, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year from the date of removal from the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being handled and stored in accordance with the instructions given in Sec 7.1.

11.4 Revision Status

- Revision 1 - Wednesday, Apr 26, 2017. Added TMI data

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Joseph Burns
Technical Support Technician

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES

CERTIFICATE OF ANALYSIS

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Email: info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

5108867
ID: icp stk ICSA_00024
Exp: 07/01/20 Prpd: SJS
ICP stock ICSA solution

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-ICS-A
Lot Number:	K2-MEB643109
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Aluminum, Calcium, Magnesium, 2 000 µg/mL ea: Iron

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**5 000 ± 22 µg/mL**	**Calcium, Ca**	**5 000 ± 20 µg/mL**
Iron, Fe	**2 000 ± 8 µg/mL**	**Magnesium, Mg**	**5 000 ± 20 µg/mL**

Certified Density: 1.085 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000400	M	Eu	<	0.000100	O	Na		0.027559	M	Se	<	0.002091	M	Zn		0.008219
s	Al	<		s	Fe	<		M	Nb	<	0.000100	O	Si		0.217000	M	Zr	<	0.001002
M	As	<	0.005613	M	Ga	<	0.000100	M	Nd	<	0.000601	M	Sm	<	0.000100				
M	Au	<	0.000199	M	Gd	<	0.000100	M	Ni	<	0.005613	M	Sn	<	0.000200				
M	B	<	0.008420	M	Ge	<	0.000400	M	Os	<	0.000099	M	Sr		0.043302				
M	Ba	<	0.001603	M	Hf	<	0.000100	O	P	<	0.108500	M	Ta	<	0.000100				
O	Be	<	0.000217	M	Hg	<	0.000597	M	Pb		0.003408	M	Tb	<	0.000100				
M	Bi	<	0.000400	M	Ho	<	0.000100	M	Pd	<	0.000100	M	Te	<	0.003107				
s	Ca	<		M	In	<	0.000400	M	Pr	<	0.000200	M	Th	<	0.000100				
M	Cd	<	0.000100	M	Ir	<	0.000099	M	Pt	<	0.000100	M	Ti	<	0.000801				
M	Ce	<	0.002004	O	K		0.011718	M	Rb	<	0.000100	M	Tl	<	0.000100				
M	Co	<	0.003207	M	La	<	0.000801	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.024658	O	Li		0.005425	M	Rh	<	0.000100	M	U	<	0.000100				
M	Cs	<	0.000601	M	Lu	<	0.000100	M	Ru	<	0.000099	M	V	<	0.000400				
M	Cu	<	0.004610	s	Mg	<		O	S		0.422173	M	W	<	0.000100				
M	Dy	<	0.000100	M	Mn		0.002606	M	Sb	<	0.000200	M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000400	M	Sc	<	0.001403	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag keep cap tightly sealed when not in use. Store and use at 20° ± 4° C. Do not pippette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

Reagent

MS CALSTD-1_00125

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 - 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-CALSTD-1
Lot Number:	M2-MEB660182
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	20 µg/mL ea:

4902218
ID: MS CALSTD-1_00125
Exp: 07/21/20 Prpd: LMT
ICP-MS Cal Std 1 IV

Silver,	Arsenic,	Barium,
Beryllium,	Cadmium,	Cobalt,
Chromium,	Copper,	Manganese,
Nickel,	Lead,	Selenium,
Thorium,	Thallium,	Uranium,
Vanadium,	Zinc	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

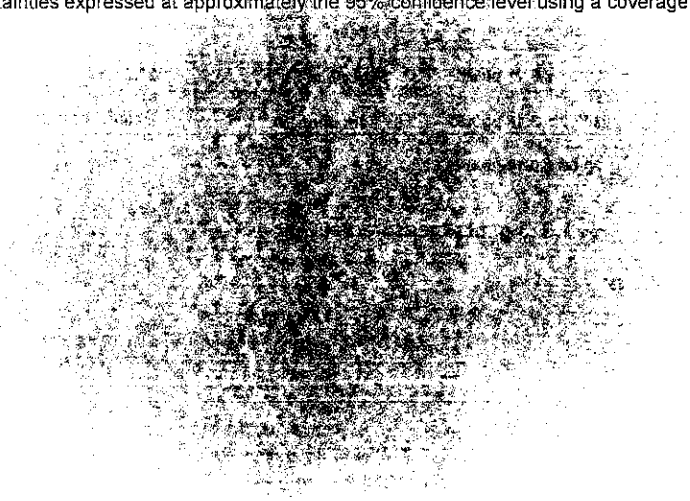
ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	20.00 ± 0.18 µg/mL	Barium, Ba	20.02 ± 0.09 µg/mL
Beryllium, Be	20.01 ± 0.09 µg/mL	Cadmium, Cd	20.01 ± 0.09 µg/mL
Chromium, Cr	20.00 ± 0.13 µg/mL	Cobalt, Co	20.00 ± 0.11 µg/mL
Copper, Cu	20.00 ± 0.10 µg/mL	Lead, Pb	20.00 ± 0.11 µg/mL
Manganese, Mn	20.00 ± 0.10 µg/mL	Nickel, Ni	20.00 ± 0.10 µg/mL
Selenium, Se	20.00 ± 0.13 µg/mL	Silver, Ag	20.01 ± 0.09 µg/mL
Thallium, Tl	20.01 ± 0.11 µg/mL	Thorium, Th	20.01 ± 0.10 µg/mL
Uranium, U	20.00 ± 0.10 µg/mL	Vanadium, V	20.00 ± 0.10 µg/mL
Zinc, Zn	20.00 ± 0.10 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.



Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2\,(u_{char\ a})^2 + (w_b)^2\,(u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.6 ± 0.1
Uranium 235U	0.37 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 21, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 21, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: See TACS

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MS CALSTD-1_00133

INORGANIC VENTURES
300 Technology Drive
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-CALSTD-1
Lot Number:	N2-MEB673086
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	20 µg/mL ea:

Silver, Arsenic, Barium,
Beryllium, Cadmium, Cobalt,
Chromium, Copper, Manganese,
Nickel, Lead, Selenium,
Thorium, Thallium, Uranium,
Vanadium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**20.00 ± 0.16 µg/mL**	**Barium, Ba**	**20.00 ± 0.10 µg/mL**
Beryllium, Be	**20.01 ± 0.12 µg/mL**	**Cadmium, Cd**	**20.00 ± 0.12 µg/mL**
Chromium, Cr	**20.00 ± 0.11 µg/mL**	**Cobalt, Co**	**20.00 ± 0.11 µg/mL**
Copper, Cu	**20.00 ± 0.10 µg/mL**	**Lead, Pb**	**20.00 ± 0.11 µg/mL**
Manganese, Mn	**20.00 ± 0.10 µg/mL**	**Nickel, Ni**	**20.00 ± 0.11 µg/mL**
Selenium, Se	**20.00 ± 0.10 µg/mL**	**Silver, Ag**	**20.00 ± 0.14 µg/mL**
Thallium, Tl	**20.00 ± 0.12 µg/mL**	**Thorium, Th**	**20.00 ± 0.10 µg/mL**
Uranium, U	**20.00 ± 0.10 µg/mL**	**Vanadium, V**	**20.00 ± 0.11 µg/mL**
Zinc, Zn	**20.00 ± 0.11 µg/mL**		

Density: 1.027 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999c	999c
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730Cr3
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.7 ± 0.1
Uranium 235U	0.28 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 26, 2018

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 26, 2022**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control



Certifying Officer:

Paul Gaines
CEO, Senior Technical Director



Reagent

MS CALSTD-2_00094

INORGANIC VENTURES
CERTIFICATE OF ANALYSIS
[illegible]
Christiansburg, VA 24073 USA
[illegible]
tel: 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-CALSTD-2
Lot Number:	M2-MEB664004
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	20 µg/mL ea: Molybdenum, Antimony, Tin

5106413
ID: MS CALSTD-2_00094
Exp: 12/14/20 Prpd: LMT
ICP-MS Cal Std 2 IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**20.00 ± 0.14 µg/mL**	**Molybdenum, Mo**	**20.00 ± 0.12 µg/mL**
Tin, Sn	**20.00 ± 0.15 µg/mL**		

Density: 1.027 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	140917

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 14, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 14, 2020

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: See TAGS

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Reagent

MS ICSA STOCK_00030

INORGANIC VENTURES
[illegible]
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CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	6020ICS-0A
Lot Number:	M2-MEB662772
Matrix:	1% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chloride, 2 000 µg/mL ea: Carbon, 1 000 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur, 20 µg/mL ea: Titanium, Molybdenum

5103134
ID: MS ICSA STOCK_00030
Exp: 11/01/21 Prpd: LMT
ICP-MS ICS-0A STOCK SOLUT

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 001 ± 3 µg/mL	Calcium, Ca	1 001 ± 4 µg/mL
Carbon, C	2 002 ± 4 µg/mL	Chloride, Cl	10 010.0 ± 60.0 µg/mL
Iron, Fe	1 001 ± 4 µg/mL	Magnesium, Mg	1 001 ± 4 µg/mL
Molybdenum, Mo	20.02 ± 0.10 µg/mL	Phosphorus, P	1 001 ± 4 µg/mL
Potassium, K	1 001 ± 4 µg/mL	Sodium, Na	1 001 ± 4 µg/mL
Sulfur, S	1 001 ± 4 µg/mL	Titanium, Ti	20.03 ± 0.12 µg/mL

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cl	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric		traceable to 84L
S	Acidimetric	84L	84L
S	ICP Assay	3154	892205
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods Characterization of CRM by one method

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{½}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.000400	M	Eu	< 0.000100	s	Na	<		M	Se	< 0.003000	M	Zn	0.004001		
s	Al	<	s	Fe	<	M	Nb	< 0.000100		n	Si	<	M	Zr	< 0.000800		
M	As	< 0.030009	M	Ga	< 0.000100	M	Nd	< 0.000100		M	Sm	< 0.000100					
M	Au	< 0.000100	M	Gd	< 0.000100	M	Ni	< 0.006402		M	Sn	< 0.000600					
M	B	< 0.005901	M	Ge	< 0.003000	M	Os	< 0.001000		M	Sr	0.006802					
M	Ba	0.000800	M	Hf	< 0.000100	s	P	<		M	Ta	< 0.000200					
M	Be	< 0.000100	M	Hg	< 0.000100	M	Pb	0.001300		M	Tb	< 0.000100					
M	Bi	< 0.000100	M	Ho	< 0.000100	M	Pd	< 0.000100		M	Te	< 0.006402					
s	Ca	<	M	In	< 0.008802	M	Pr	< 0.000100		M	Th	< 0.000100					
O	Cd	< 0.003102	M	Ir	< 0.000100	M	Pt	< 0.000100		s	Ti	<					
M	Ce	< 0.000400	s	K	<	M	Rb	0.015304		M	Tl	< 0.000100					
O	Co	< 0.007238	M	La	< 0.000100	M	Re	< 0.000400		M	Tm	< 0.000100					
M	Cr	0.002200	O	Li	0.001137	M	Rh	< 0.000100		M	U	< 0.000100					
M	Cs	< 0.000100	M	Lu	< 0.000100	M	Ru	< 0.000100		M	V	< 0.003401					
M	Cu	0.004701	s	Mg	<	s	S	<		M	W	0.001800					
M	Dy	< 0.000100	O	Mn	< 0.010340	M	Sb	< 0.002400		M	Y	< 0.000100					
M	Er	< 0.000100	s	Mo	<	M	Sc	< 0.000800		M	Yb	< 0.000100					

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- November 01, 2021

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

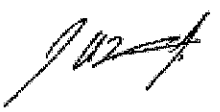
- Sealed TCT Bag Open Date: See TAGS

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

James King Jr
Chemist, Technical Manager



Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael 2 Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MS ICV StockA_00008

HIGH-PURITY STANDARDS
www.high-purity-standards.com
P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

4851656
ID: MS ICV StockA_00007
Exp:11/30/18 Prpd:LMT Opn:11/20/17
ICP-MS ICV STOCK A HP

Product Description:

Name: MS ICV Stock
Part Number: **SM-606-134**
Solution A
Lot Number: **1731407**
Matrix: 2% HNO_3
Purity: 99.97% - 99.9999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Al	2000 ± 12	3101a	140903	Pb	20.0 ± 0.2	3128	101026
As	20.0 ± 0.2	3103a	100818	Mn	20.0 ± 0.3	3132	050429
Ba	20.00 ± 0.12	3104a	140909	Ni	20.00 ± 0.12	3136	120619
Be	20.0 ± 0.2	3105a	090514	Se	20.0 ± 0.2	3149	100901
Cd	20.00 ± 0.12	3108	130116	Tl	20.00 ± 0.12	*	
Cr	20.00 ± 0.12	3112a	030730	Th	20.0 ± 0.2	*	
Co	20.00 ± 0.12	3113	000630	U	20.00 ± 0.12	3164	080521
Cu	20.00 ± 0.12	3114	121207	V	20.0 ± 0.2	*	
Fe	2000 ± 12	3126a	140812	Zn	20.00 ± 0.12	3168a	120629

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **November 2017**
Expiration Date: **November 2018**
Certificate Issue Date: November 10, 2017

Moven Mutuvari
Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MS ICV StockB_00008

HIGH-PURITY STANDARDS
www.high-purity-standards.com
P.O. Box 41727
Charleston, SC 29423
Phone: (843) 767-7900
Fax: (843) 767-7906

4851657
ID: MS ICV StockB_00008
Exp:11/30/18 Prpd:LMT Opn:11/20/17
ICP-MS ICV STOCK B HP

Certificate of Analysis

Certified Reference Material

ISO Guide 34:2009 (RMP) Accreditation
Certificate Number AR-1436

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Product Description:

Name:	MS ICV Stock
Part Number:	**SM-606-134**
	Solution B
Lot Number:	**1731408**
Matrix:	2% HNO_3 + Tr HF
Purity:	99.95% - 99.999%

Certified Values:

Element	(µg/mL)	SRM ID	SRM Lot#	Element	(µg/mL)	SRM ID	SRM Lot#
Sb	20.0 ± 0.2	3102a	140911	Sn	20.0 ± 0.2	3161a	140917
Mo	20.0 ± 0.2	3134	130418	W	20.0 ± 0.3	3163	140606
Ag	20.00 ± 0.12	3151	160729				

Certified values are based on gravimetric and volumetric preparation, and verified against NIST SRM 3100 series when available via inductively coupled plasma optical emission spectrometry (ICP-OES) and/or inductively coupled plasma mass spectrometry (ICP-MS) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor k is about 2.

* Refer to Traceability Information, Section d

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided and is guaranteed through the month of expiration. For this reason, standards from the same lot may have different expiration dates.

Shipped Date: **November 2017**
Expiration Date: **November 2018**
Certificate Issue Date: November 10, 2017

Moven Mutuvari
Moven Mutuvari PhD., Laboratory Manager

Preparation Information:

The Certified Reference Material (CRM) is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials and manufactured under appropriate laboratory conditions using the methods developed at NIST for SRM Spectrometric Standard Solutions. Sub-boiling distilled high-purity acid has been used to place the materials in solution and to stabilize the standard. The matrix is as noted above in 18 megaohm deionized water.

Stability of this product is based upon rigorous short term and long term testing of the solution for the certified value. This testing includes, but is not limited to, the effect of temperature and packaging on the product. If during the period of validity, a recall is instituted due to substantial changes in the stability of this product, the purchaser will be notified.

Homogeneity:

This product is determined to be homogeneous following in-house procedures developed in accordance with the requirements of ISO Guide 34 and ISO Guide 35.

Intended Use:

This product is intended for use as a calibration standard, quality control standard, and/or for the validation of analytical methods.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standard is traceable to SRM 3100 Series Spectrometric Standard Solutions. If a SRM is not available, a second source standard or independent lot is used.

Refer to Safety Datasheet (SDS) for hazardous information.

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

MS LLCCV 2A_00006

INORGANIC VENTURES
[illegible]
Christian [illegible] VA [illegible] USA
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info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	ICPMS-LLCCV-2A
Lot Number:	M2-MEB664006
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 µg/mL ea: Tin, 0.5 µg/mL ea: Tungsten, 0.2 µg/mL ea: Molybdenum, Antimony

5232242
ID: MS LLCCV 2A_00006
Exp: 12/14/20 Prpd: LMT
LOW LEVEL CCV 2A IV

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	0.2000 ± 0.0015 µg/mL	Molybdenum, Mo	0.2000 ± 0.0012 µg/mL
Tin, Sn	1.000 ± 0.006 µg/mL	Tungsten, W	0.5000 ± 0.0046 µg/mL

Density: 1.009 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	061229 Sb
Sb	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Sn	Calculated		See Sec. 4.2
W	ICP Assay	3163	080331
W	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 14, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 14, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: See TMS

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MS LLCCV1_00020

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 - USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

5232240
ID: MS LLCCV1_00020
Exp: 12/15/20 Prpd: LMT
LOW LEVEL CCV1 IV

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution		
Catalog Number:	ICPMS-LLCCV-1		
Lot Number:	M2-MEB664005		
Matrix:	5% (v/v) HNO3		
Value / Analyte(s):	10 µg/mL ea: Potassium,		
	5 µg/mL ea: Magnesium, Sodium,	Iron,	Calcium,
	3 µg/mL ea: Aluminum,		
	1 µg/mL ea: Zinc,		
	0.5 µg/mL ea: Vanadium, Selenium,	Arsenic,	Silver,
	0.2 µg/mL ea: Thorium, Nickel,	Chromium,	Copper,
	0.1 µg/mL ea: Lead, Barium, Uranium,	Cadmium, Beryllium, Manganese	Cobalt, Thallium,

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	3.000 ± 0.015 µg/mL	Arsenic, As	0.5000 ± 0.0037 µg/mL
Barium, Ba	0.1000 ± 0.0006 µg/mL	Beryllium, Be	0.1000 ± 0.0007 µg/mL
Cadmium, Cd	0.1000 ± 0.0007 µg/mL	Calcium, Ca	4.999 ± 0.019 µg/mL
Chromium, Cr	0.1999 ± 0.0012 µg/mL	Cobalt, Co	0.1000 ± 0.0007 µg/mL
Copper, Cu	0.2000 ± 0.0012 µg/mL	Iron, Fe	5.000 ± 0.025 µg/mL
Lead, Pb	0.1000 ± 0.0007 µg/mL	Magnesium, Mg	4.999 ± 0.030 µg/mL
Manganese, Mn	0.1000 ± 0.0007 µg/mL	Nickel, Ni	0.2000 ± 0.0015 µg/mL
Potassium, K	10.00 ± 0.05 µg/mL	Selenium, Se	0.5000 ± 0.0037 µg/mL
Silver, Ag	0.5001 ± 0.0040 µg/mL	Sodium, Na	4.999 ± 0.025 µg/mL
Thallium, Tl	0.1000 ± 0.0008 µg/mL	Thorium, Th	0.2000 ± 0.0012 µg/mL
Uranium, U	0.1000 ± 0.0009 µg/mL	Vanadium, V	0.4999 ± 0.0028 µg/mL
Zinc, Zn	1.000 ± 0.006 µg/mL		

Density: 1.022 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr	ICP Assay	3112a	030730
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Tl	ICP Assay	3158	993012
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	EDTA	928	928
V	ICP Assay	3165	992706
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.21 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 15, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 15, 2020**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: See TAC's

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Michael J Booth

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Paul R Gaines

Reagent

MS-31010_00011

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
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Reference Material Producer
Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31010 **Lot No.:** A0116027

Description : SV Calibration Mix #4

SV Calibration Mix #4 2000 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Hexachloroethane **CAS #** 67-72-1 (Lot 4H3SF) **Purity** 99%	2,002.0 µg/mL	+/- 11.8913 µg/mL +/- 60.6057 µg/mL +/- 60.6057 µg/mL	Gravimetric Unstressed Stressed
2	Nitrobenzene **CAS #** 98-95-3 (Lot 65096APV) **Purity** 99%	2,014.0 µg/mL	+/- 11.9625 µg/mL +/- 60.9690 µg/mL +/- 60.9690 µg/mL	Gravimetric Unstressed Stressed
3	Isophorone **CAS #** 78-59-1 (Lot MKBG2442V) **Purity** 99%	2,002.0 µg/mL	+/- 11.8913 µg/mL +/- 60.6057 µg/mL +/- 60.6057 µg/mL	Gravimetric Unstressed Stressed
4	1,2,4-Trichlorobenzene **CAS #** 120-82-1 (Lot 26896BM) **Purity** 99%	2,014.0 µg/mL	+/- 11.9625 µg/mL +/- 60.9690 µg/mL +/- 60.9690 µg/mL	Gravimetric Unstressed Stressed
5	Hexachlorobutadiene **CAS #** 87-68-3 (Lot J31X013) **Purity** 98%	2,007.0 µg/mL	+/- 11.9212 µg/mL +/- 60.7583 µg/mL +/- 60.7583 µg/mL	Gravimetric Unstressed Stressed
6	2-Methylnaphthalene **CAS #** 91-57-6 (Lot 19399MJV) **Purity** 99%	2,000.0 µg/mL	+/- 11.8794 µg/mL +/- 60.5452 µg/mL +/- 60.5452 µg/mL	Gravimetric Unstressed Stressed
7	Hexachlorocyclopentadiene **CAS #** 77-47-4 (Lot 150909) **Purity** 97%	2,007.9 µg/mL	+/- 11.9263 µg/mL +/- 60.7843 µg/mL +/- 60.7843 µg/mL	Gravimetric Unstressed Stressed

8	2,6-Dinitrotoluene		2,010.0	µg/mL	+/-	11.9388	µg/mL	Gravimetric
	CAS # 606-20-2	(Lot 1437483V)			+/-	60.8479	µg/mL	Unstressed
	Purity 99%				+/-	60.8479	µg/mL	Stressed
9	Dibenzofuran		2,002.0	µg/mL	+/-	11.8913	µg/mL	Gravimetric
	CAS # 132-64-9	(Lot MKBH8392V)			+/-	60.6057	µg/mL	Unstressed
	Purity 99%				+/-	60.6057	µg/mL	Stressed
10	2,4-Dinitrotoluene		2,000.0	µg/mL	+/-	11.8794	µg/mL	Gravimetric
	CAS # 121-14-2	(Lot MKAA0690V)			+/-	60.5452	µg/mL	Unstressed
	Purity 99%				+/-	60.5452	µg/mL	Stressed
11	Diethylphthalate		2,016.0	µg/mL	+/-	11.9744	µg/mL	Gravimetric
	CAS # 84-66-2	(Lot MKBJ3578V)			+/-	61.0295	µg/mL	Unstressed
	Purity 99%				+/-	61.0295	µg/mL	Stressed
12	Hexachlorobenzene		2,018.0	µg/mL	+/-	11.9863	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot LB98981V)			+/-	61.0901	µg/mL	Unstressed
	Purity 99%				+/-	61.0901	µg/mL	Stressed
13	Carbazole		1,999.2	µg/mL	+/-	11.8746	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 3715800)			+/-	60.5210	µg/mL	Unstressed
	Purity 98%				+/-	60.5210	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

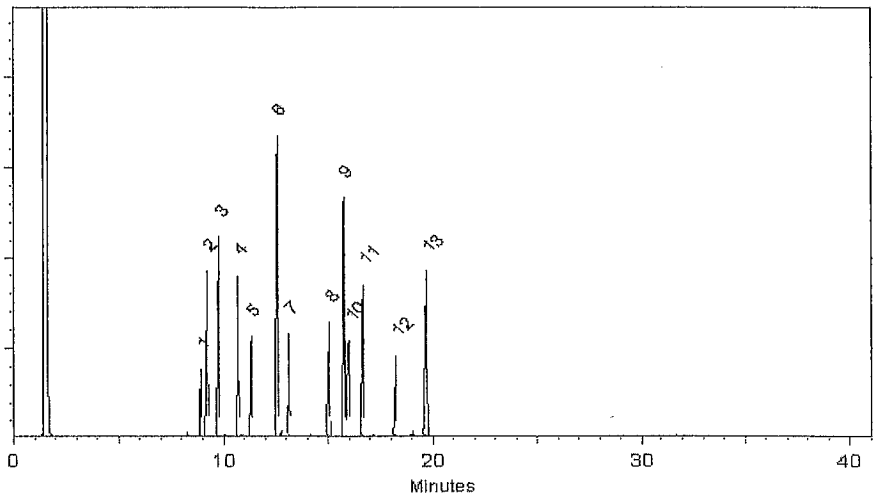
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 17-Dec-2015 **Balance:** B345965662

Jennifer L. Pollino - QC Analyst

Date Passed: 21-Dec-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS-31995_00005

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ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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Catalog No. : 31995 **Lot No.:** A0108907

Description : 8270 Calibration Mix #5, Revised

8270 Calibration Mix #5, Revised 2,000µg/ml, Methylene Chloride, 1ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2021 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

C E R T I F I E D V A L U E S

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Naphthalene		2,000.5 µg/mL	+/- 11.7401	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBH4351V)		+/- 88.8976	µg/mL	Unstressed
	Purity 99%			+/- 97.6678	µg/mL	Stressed
2	2-Methylnaphthalene		2,000.6 µg/mL	+/- 11.7409	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot 19399MJV)		+/- 88.9038	µg/mL	Unstressed
	Purity 96%			+/- 97.6746	µg/mL	Stressed
3	1-Methylnaphthalene		2,000.0 µg/mL	+/- 11.7371	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-10)		+/- 88.8754	µg/mL	Unstressed
	Purity 99%			+/- 97.6434	µg/mL	Stressed
4	Acenaphthylene		2,000.0 µg/mL	+/- 11.7371	µg/mL	Gravimetric
	CAS # 208-96-8	(Lot ER030707-01)		+/- 88.8754	µg/mL	Unstressed
	Purity 99%			+/- 97.6434	µg/mL	Stressed
5	Acenaphthene		2,000.5 µg/mL	+/- 11.7401	µg/mL	Gravimetric
	CAS # 83-32-9	(Lot MKBJ4871V)		+/- 88.8976	µg/mL	Unstressed
	Purity 99%			+/- 97.6678	µg/mL	Stressed
6	Fluorene		2,000.2 µg/mL	+/- 11.7382	µg/mL	Gravimetric
	CAS # 86-73-7	(Lot 10174662)		+/- 88.8834	µg/mL	Unstressed
	Purity 98%			+/- 97.6521	µg/mL	Stressed
7	Phenanthrene		2,000.7 µg/mL	+/- 11.7411	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKBQ8219V)		+/- 88.9051	µg/mL	Unstressed
	Purity 98%			+/- 97.6761	µg/mL	Stressed

8	Anthracene		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBR2268V)			+/-	88.8754	µg/mL	Unstressed
	Purity 99%				+/-	97.6434	µg/mL	Stressed
9	Fluoranthene		2,000.7	µg/mL	+/-	11.7411	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	88.9051	µg/mL	Unstressed
	Purity 98%				+/-	97.6761	µg/mL	Stressed
10	Pyrene		2,001.0	µg/mL	+/-	11.7430	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBL6786V)			+/-	88.9198	µg/mL	Unstressed
	Purity 99%				+/-	97.6922	µg/mL	Stressed
11	Benz(a)anthracene		2,000.5	µg/mL	+/-	11.7401	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot ER031412-01)			+/-	88.8976	µg/mL	Unstressed
	Purity 99%				+/-	97.6678	µg/mL	Stressed
12	Chrysene		2,000.5	µg/mL	+/-	11.7401	µg/mL	Gravimetric
	CAS # 218-01-9	(Lot ER120810-02)			+/-	88.8976	µg/mL	Unstressed
	Purity 99%				+/-	97.6678	µg/mL	Stressed
13	Benzo(b)fluoranthene		2,001.0	µg/mL	+/-	11.7430	µg/mL	Gravimetric
	CAS # 205-99-2	(Lot ER03101401)			+/-	88.9198	µg/mL	Unstressed
	Purity 99%				+/-	97.6922	µg/mL	Stressed
14	Benzo(k)fluoranthene		2,000.5	µg/mL	+/-	11.7401	µg/mL	Gravimetric
	CAS # 207-08-9	(Lot ER041513-01)			+/-	88.8976	µg/mL	Unstressed
	Purity 99%				+/-	97.6678	µg/mL	Stressed
15	Benzo(a)pyrene		2,001.0	µg/mL	+/-	11.7430	µg/mL	Gravimetric
	CAS # 50-32-8	(Lot ER071309-02)			+/-	88.9198	µg/mL	Unstressed
	Purity 99%				+/-	97.6922	µg/mL	Stressed
16	Indeno(1,2,3-cd)pyrene		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 193-39-5	(Lot ER082107-02)			+/-	88.8754	µg/mL	Unstressed
	Purity 99%				+/-	97.6434	µg/mL	Stressed
17	Dibenz(a,h)anthracene		2,001.0	µg/mL	+/-	11.7430	µg/mL	Gravimetric
	CAS # 53-70-3	(Lot ER032211-01)			+/-	88.9198	µg/mL	Unstressed
	Purity 99%				+/-	97.6922	µg/mL	Stressed
18	Benzo(g,h,i)perylene		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 191-24-2	(Lot ER020708-08)			+/-	88.8754	µg/mL	Unstressed
	Purity 99%				+/-	97.6434	µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

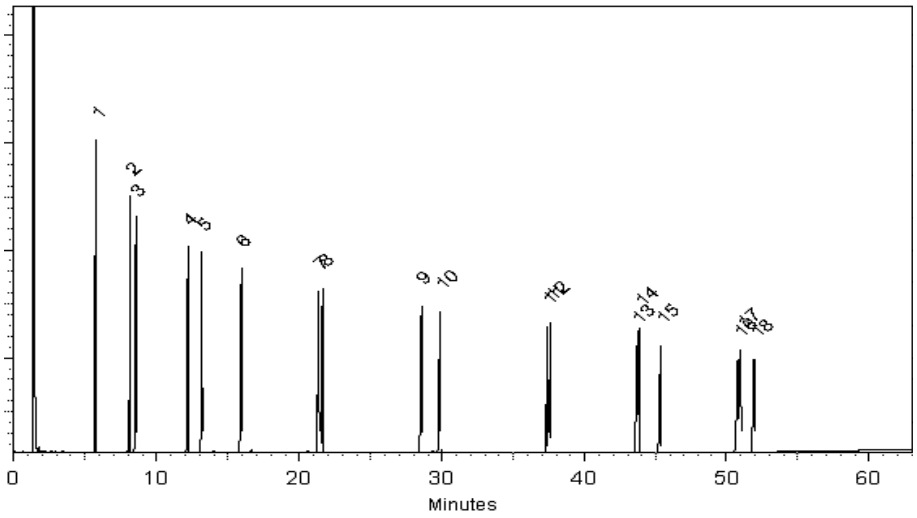
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Connor Flannery - Mix Technician

Date Mixed: 05-Feb-2015 **Balance:** 1128360905

Jennifer L. Pollino - QC Analyst

Date Passed: 09-Feb-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS-47548-U_00015

TraceCERT®
Traceable Certified Reference Materials

SUPELCO
Solutions within.™
595 North Harrison Road · Bellefonte, PA
16823-0048 USA · Phone(814)359-3441

Certificate of Analysis

Description: EPA 8270 GC/MS Tuning Solution II, 1x1ml, 1000µg/ml in methylene chloride

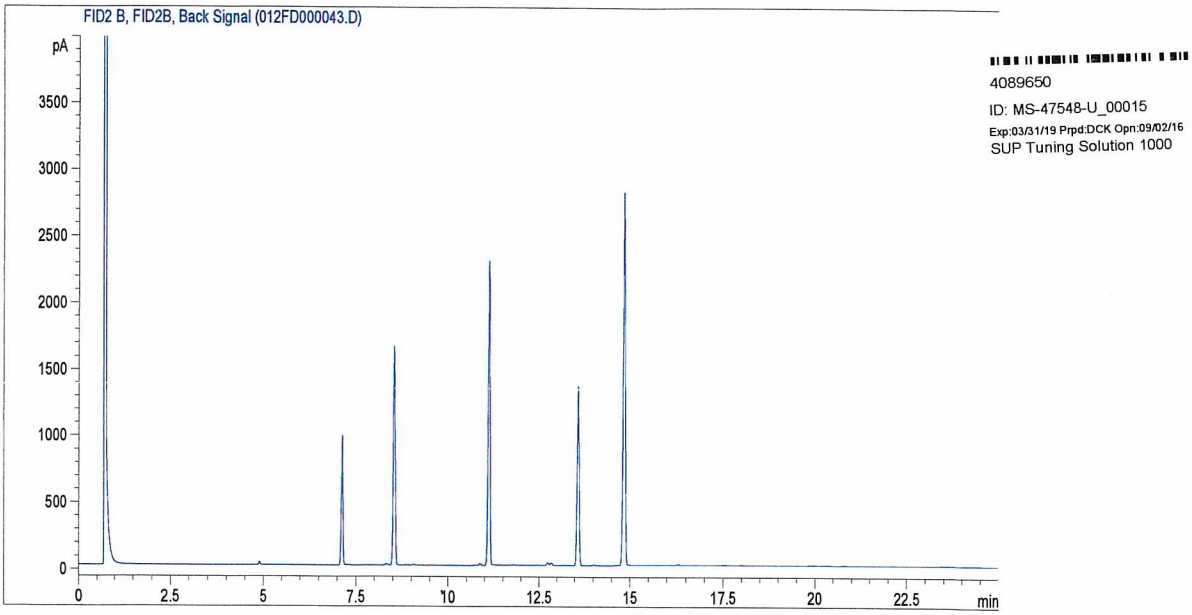
Part Number: 47548-U

Lot Number: XA19099V

Expiration Date: March 2019

Storage: Refrigerate

Analytical Method Parameters:
Column: Equity-5; 30 m x 0.53 mm, 1.5 µm df
150 °C to 280 °C (8.75 min) at 8 °C/min
Detector: FID; 310 °C
Injection Volume: 1µL



Elution	Analyte	Lot Number	CAS Number	Chromatographic Purity %	Certified Gravimetric Conc. µg/mL	Expanded Uncertainty µg/mL	Analytical Conc. µg/mL
1.	Pentachlorophenol	LC17897	87-86-5	97.5	1000.0	±38	945.6
2.	Decafluorotriphenylphosphine	LC14010	5074-71-5	98.6	986.0	±44	961.5
3.	Benzidine	LB83682	92-87-5	99.9	999.0	±38	1009.6
4.	4,4'-DDT	LA83013	50-29-3	98.0	980.8	±36	961.0
	Internal Standard	N/A	N/A	N/A	N/A	N/A	N/A

Reagent

MS-567684_00019

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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

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Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

4101728
ID: MS-567684_00019
Exp: 07/31/20 Prpd: DCK
RES 8270 Internal Std Mix

Catalog No. : 567684 **Lot No.:** A0112833

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2020 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 **Purity** 99%	(Lot PR-18488)	2,014.8 µg/mL	+/- 11.7142 µg/mL +/- 89.5186 µg/mL +/- 98.3528 µg/mL		Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 **Purity** 99%	(Lot M-1452)	2,015.8 µg/mL	+/- 11.7202 µg/mL +/- 89.5645 µg/mL +/- 98.4032 µg/mL		Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 **Purity** 97%	(Lot PR-21070)	2,002.0 µg/mL	+/- 11.6397 µg/mL +/- 88.9491 µg/mL +/- 97.7271 µg/mL		Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 **Purity** 99%	(Lot PR-23065)	2,007.1 µg/mL	+/- 11.6693 µg/mL +/- 89.1750 µg/mL +/- 97.9753 µg/mL		Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 **Purity** 99%	(Lot PR-25081)	2,013.2 µg/mL	+/- 11.7047 µg/mL +/- 89.4460 µg/mL +/- 98.2730 µg/mL		Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 **Purity** 99%	(Lot PR-24113)	2,005.4 µg/mL	+/- 11.6598 µg/mL +/- 89.1024 µg/mL +/- 97.8955 µg/mL		Gravimetric Unstressed Stressed

Reagent

MS-567684_00020

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5035055
ID: MS-567684_00020
Exp: 08/31/22 Prpd: OCK
RES 8270 Internal Std Mix

Catalog No. : 567684 **Lot No.:** A0129635

Description : 8270 Internal Standard

8270 Internal Standard 2,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : August 31, 2022 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-18488) **Purity** 99%	2,014.1 µg/mL	+/- 11.7102 µg/mL +/- 90.7163 µg/mL +/- 100.6609 µg/mL	Gravimetric Unstressed Stressed
2	Naphthalene-d8 **CAS #** 1146-65-2 (Lot M-1452) **Purity** 99%	2,004.1 µg/mL	+/- 11.6520 µg/mL +/- 90.2659 µg/mL +/- 100.1611 µg/mL	Gravimetric Unstressed Stressed
3	Acenaphthene-d10 **CAS #** 15067-26-2 (Lot PR-25444) **Purity** 99%	2,011.1 µg/mL	+/- 11.6927 µg/mL +/- 90.5811 µg/mL +/- 100.5110 µg/mL	Gravimetric Unstressed Stressed
4	Phenanthrene-d10 **CAS #** 1517-22-2 (Lot PR-27621) **Purity** 99%	2,014.5 µg/mL	+/- 11.7125 µg/mL +/- 90.7343 µg/mL +/- 100.6809 µg/mL	Gravimetric Unstressed Stressed
5	Chrysene-d12 **CAS #** 1719-03-5 (Lot PR-27952) **Purity** 99%	2,013.6 µg/mL	+/- 11.7072 µg/mL +/- 90.6938 µg/mL +/- 100.6359 µg/mL	Gravimetric Unstressed Stressed
6	Perylene-d12 **CAS #** 1520-96-3 (Lot PR-27342) **Purity** 99%	2,012.2 µg/mL	+/- 11.6991 µg/mL +/- 90.6307 µg/mL +/- 100.5659 µg/mL	Gravimetric Unstressed Stressed

Reagent

MS-567685_00004

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Catalog No. : 567685 **Lot No.:** A0130500

4941881
ID: MS-567685_00004
Exp: 09/30/22 Prpd: DCK
8270 Surrogates 5000ug/mL

Description : 8270 Surrogate Standard

8270 Surrogate Standard 5,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2022 **Storage:** 10°C or colder

Handling: Sonicate prior to use.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	2-Fluorophenol		5,009.8 µg/mL	+/- 29.1274 µg/mL		Gravimetric
	CAS # 367-12-4	(Lot STBD7945V)		+/- 146.2028 µg/mL		Unstressed
	Purity 99%			+/- 177.4114 µg/mL		Stressed
2	Phenol-d5		5,013.6 µg/mL	+/- 29.1495 µg/mL		Gravimetric
	CAS # 4165-62-2	(Lot X-479)		+/- 146.3137 µg/mL		Unstressed
	Purity 99%			+/- 177.5460 µg/mL		Stressed
3	Nitrobenzene-d5		5,000.0 µg/mL	+/- 29.0704 µg/mL		Gravimetric
	CAS # 4165-60-0	(Lot PR-25462)		+/- 145.9168 µg/mL		Unstressed
	Purity 99%			+/- 177.0644 µg/mL		Stressed
4	2-Fluorobiphenyl		5,001.2 µg/mL	+/- 29.0774 µg/mL		Gravimetric
	CAS # 321-60-8	(Lot B19Z016)		+/- 145.9518 µg/mL		Unstressed
	Purity 99%			+/- 177.1069 µg/mL		Stressed
5	2,4,6-Tribromophenol		5,002.6 µg/mL	+/- 29.0855 µg/mL		Gravimetric
	CAS # 118-79-6	(Lot 29699MJV)		+/- 145.9926 µg/mL		Unstressed
	Purity 99%			+/- 177.1564 µg/mL		Stressed
6	p-Terphenyl-d14		5,004.0 µg/mL	+/- 29.0937 µg/mL		Gravimetric
	CAS # 1718-51-0	(Lot PR-27278)		+/- 146.0335 µg/mL		Unstressed
	Purity 99%			+/- 177.2060 µg/mL		Stressed

Reagent

MS-568023_00043

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5199826
ID: MS-568023_00043
Exp: 06/30/20 Prpd: DCK
RES HSLA Famphur 2000ug/m

Catalog No. : 568023 **Lot No.:** A0139090

Description : 8270 Famphur Standard

8270 Famphur Standard 2,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Famphur	2,014.9 µg/mL	+/- 18.7373	µg/mL	Gravimetric
	CAS # 52-85-7 (Lot 6789600)		+/- 87.6407	µg/mL	Unstressed
	Purity 98%		+/- 87.6775	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Brandon Reish - Mix Technician

Date Mixed: 21-Jun-2018 **Balance:** B345965662

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

MS-568033_00026

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Catalog No. : 568033 **Lot No.:** A0133057

4941894
ID: MS-568033_00026
Exp: 06/30/19 Prpd: DCK
RES HSLA CUSTOM MIX 4000u

Description : Denver 8270 Standard

Denver 8270 Standard 4,000µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2019 **Storage:** 10°C or colder

Handling: Sonicate prior to use. This product is photosensitive.

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2,3-Dichloroaniline	4,000.0 µg/mL	+/- 37.1978 µg/mL	Gravimetric
	CAS # 608-27-5 (Lot FBV01)		+/- 55.9394 µg/mL	Unstressed
	Purity 99%		+/- 81.4485 µg/mL	Stressed
2	3,5-Dimethylphenol	4,016.0 µg/mL	+/- 37.3466 µg/mL	Gravimetric
	CAS # 108-68-9 (Lot 02801LZ)		+/- 56.1632 µg/mL	Unstressed
	Purity 99%		+/- 81.7743 µg/mL	Stressed
3	Alachlor	4,008.0 µg/mL	+/- 37.2722 µg/mL	Gravimetric
	CAS # 15972-60-8 (Lot 6104400)		+/- 56.0513 µg/mL	Unstressed
	Purity 99%		+/- 81.6114 µg/mL	Stressed
4	alpha-Methylstyrene	4,016.0 µg/mL	+/- 37.3466 µg/mL	Gravimetric
	CAS # 98-83-9 (Lot MKBS2502V)		+/- 56.1632 µg/mL	Unstressed
	Purity 99%		+/- 81.7743 µg/mL	Stressed
5	Benzo(e)pyrene	4,004.0 µg/mL	+/- 37.2350 µg/mL	Gravimetric
	CAS # 192-97-2 (Lot NT058329)		+/- 55.9953 µg/mL	Unstressed
	Purity 99%		+/- 81.5299 µg/mL	Stressed

Reagent

MS-569730 HSL_00007

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Catalog No. : 569730 **Lot No.:** A0127472

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000 ug/ml, Methylene Chloride, 5 ml/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2018 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

4941882
ID: MS-569730 AFC_00006
Exp: 11/30/18 Prpd: DCK
HSLA Amine Mix (2015) 200

4941892
ID: MS-569730 HSL_00007
Exp: 11/30/18 Prpd: DCK
HSLA Amine Mix (2015) 200

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzidine	2,003.5 µg/mL	+/- 11.6483 µg/mL	Gravimetric
	CAS # 92-87-5 (Lot 170428KJA)		+/- 23.9496 µg/mL	Unstressed
	Purity 99%		+/- 38.1154 µg/mL	Stressed
2	3,3'-Dichlorobenzidine	2,002.1 µg/mL	+/- 11.6402 µg/mL	Gravimetric
	CAS # 91-94-1 (Lot 170123KJA)		+/- 23.9328 µg/mL	Unstressed
	Purity 99%		+/- 38.0887 µg/mL	Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569730 HSL_00008

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

5306168
ID: MS-569730 AFC_00007
Exp: 10/31/19 Prpd: DCK
HSLA Amine Mix (2015) 200

5306172
ID: MS-569730 HSL_00008
Exp: 10/31/19 Prpd: DCK
HSLA Amine Mix (2015) 200

Catalog No. : 569730 **Lot No.:** A0137351

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2019 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Benzidine		2,000.3 µg/mL	+/- 11.6301	µg/mL	Gravimetric
	CAS # 92-87-5	(Lot 171228KJA)		+/- 23.9121	µg/mL	Unstressed
	Purity 99%			+/- 38.0558	µg/mL	Stressed
2	3,3'-Dichlorobenzidine		2,005.7 µg/mL	+/- 11.6611	µg/mL	Gravimetric
	CAS # 91-94-1	(Lot 180328JNA)		+/- 23.9759	µg/mL	Unstressed
	Purity 99%			+/- 38.1572	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569730SEC_00004

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Catalog No. : 569730.SEC **Lot No.:** A0131614

Description : 8270 List 1 / Std #9

8270 List 1 / Std #9 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2019 **Storage:** 10°C or colder

Handling: Contains carcinogen/reproductive toxin.

5163418
ID: MS-569730SEC_00004
Exp: 04/30/19 Prpd: DCK
RES HSLB Amine Mix 2000ug

5163449
ID: MS-569730SECa_00004
Exp: 04/30/19 Prpd: DCK
RES Benzidine 2000ug/mL

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzidine **CAS #** 92-87-5.SEC (Lot 2715900) **Purity** 99%	2,004.0 µg/mL	+/- 11.7606 µg/mL +/- 24.0092 µg/mL +/- 38.1590 µg/mL	Gravimetric Unstressed Stressed
2	3,3'-Dichlorobenzidine **CAS #** 91-94-1.SEC (Lot 5340500) **Purity** 99%	2,014.0 µg/mL	+/- 11.8193 µg/mL +/- 24.1290 µg/mL +/- 38.3494 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569731.SEC_00003

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5163391
ID: MS-569731.SEC_00003
Exp: 05/31/19 Prpd: DCK
8270 List 1 #10 2,000ug/m

Catalog No. : 569731.SEC **Lot No.:** A0132859

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	2,017.0 µg/mL	+/- 11.7541 µg/mL	Gravimetric
	CAS # 95-13-6.SEC (Lot IG5TI)		+/- 113.0940 µg/mL	Unstressed
	Purity 99%		+/- 115.7401 µg/mL	Stressed
2	Benzoic acid	2,008.5 µg/mL	+/- 11.7046 µg/mL	Gravimetric
	CAS # 65-85-0.SEC (Lot QD3UO)		+/- 112.6174 µg/mL	Unstressed
	Purity 99%		+/- 115.2524 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569731_00079

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4944222
ID: MS-569731_00079
Exp: 03/31/19 Prpd: DCK
HSLA Benzoic Acid (2015)

Catalog No. : 569731 **Lot No.:** A0130477

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : March 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	1,996.3 µg/mL	+/- 11.6064 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 111.9283 µg/mL	Unstressed
	Purity 98%		+/- 114.5473 µg/mL	Stressed
2	Benzoic acid	2,000.8 µg/mL	+/- 11.6328 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 112.1829 µg/mL	Unstressed
	Purity 99%		+/- 114.8078 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-569731_00095

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0132744

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS-569731_00096

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0132744

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS-569731_00097

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CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0132744

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS-569731_00100

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569731 **Lot No.:** A0132744

Description : 8270 List 1 / Std #10

8270 List 1 / Std #10 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Indene	2,013.6 µg/mL	+/- 11.7071 µg/mL	Gravimetric
	CAS # 95-13-6 (Lot MKBT8433V)		+/- 112.8991 µg/mL	Unstressed
	Purity 98%		+/- 115.5408 µg/mL	Stressed
2	Benzoic acid	2,019.3 µg/mL	+/- 11.7406 µg/mL	Gravimetric
	CAS # 65-85-0 (Lot MKBV5544V)		+/- 113.2220 µg/mL	Unstressed
	Purity 99%		+/- 115.8713 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MS-569732 HSL_00006

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0137125

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

5335192
ID: MS-569732 HSL_00006
Exp: 10/31/19 Prpd: DCK
8270 List 1/ Std 11 (2015

5335191
ID: MS-569732 BZH_00008
Exp: 10/31/19 Prpd: DCK
8270 List 1/ Std 11 (2015

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Benzaldehyde CAS # 100-52-7 (Lot SHBG8690V) Purity 99%	2,001.1 µg/mL	+/- 11.6345 µg/mL +/- 64.1460 µg/mL +/- 74.5673 µg/mL	Gravimetric Unstressed Stressed
2	epsilon-Caprolactam CAS # 105-60-2 (Lot I16X016) Purity 99%	2,002.0 µg/mL	+/- 11.6398 µg/mL +/- 64.1754 µg/mL +/- 74.6014 µg/mL	Gravimetric Unstressed Stressed
3	Atrazine CAS # 1912-24-9 (Lot 77P7D) Purity 99%	2,002.6 µg/mL	+/- 11.6432 µg/mL +/- 64.1941 µg/mL +/- 74.6232 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Reagent

MS-571995.SEC_00002

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

4994417
ID: MS-571995.SEC_00002
Exp:03/31/19 Prpd:DCK Opn:03/09/18
RES HSLB Mega Mix (2017)

Catalog No. : 571995.SEC **Lot No.:** A0131190

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : March 31, 2019 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane CAS # 123-91-1.SEC (Lot MUFZH) Purity 99%	1,000.0 µg/mL	+/- 5.8275 µg/mL +/- 11.9606 µg/mL +/- 19.0288 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine CAS # 62-75-9.SEC (Lot 61H72) Purity 99%	1,000.0 µg/mL	+/- 5.8275 µg/mL +/- 11.9606 µg/mL +/- 19.0288 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine CAS # 110-86-1.SEC (Lot QN8DK) Purity 99%	2,000.0 µg/mL	+/- 11.6282 µg/mL +/- 23.9081 µg/mL +/- 38.0494 µg/mL	Gravimetric Unstressed Stressed
4	Phenol CAS # 108-95-2.SEC (Lot EDPYN) Purity 99%	1,000.6 µg/mL	+/- 5.8310 µg/mL +/- 11.9678 µg/mL +/- 19.0402 µg/mL	Gravimetric Unstressed Stressed
5	Aniline CAS # 62-53-3.SEC (Lot ZCD3N) Purity 99%	1,000.4 µg/mL	+/- 5.8299 µg/mL +/- 11.9654 µg/mL +/- 19.0364 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether CAS # 111-44-4.SEC (Lot FA010143) Purity 99%	1,000.6 µg/mL	+/- 5.8310 µg/mL +/- 11.9678 µg/mL +/- 19.0402 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) CAS # 124-18-5.SEC (Lot UCVNN) Purity 99%	1,000.0 µg/mL	+/- 5.8275 µg/mL +/- 11.9606 µg/mL +/- 19.0288 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol CAS # 95-57-8.SEC Purity 99%	(Lot GJ01)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene CAS # 541-73-1.SEC Purity 99%	(Lot FMDFD)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene CAS # 106-46-7.SEC Purity 99%	(Lot 4Y5DC)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol CAS # 100-51-6.SEC Purity 99%	(Lot QZBUO)	1,000.6	µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	(Lot R6QDM)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) CAS # 95-48-7.SEC Purity 99%	(Lot NC7HL)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) CAS # 108-60-1.SEC Purity 99%	(Lot 2-KMW-57-8)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone CAS # 98-86-2.SEC Purity 99%	(Lot NSGTI)	1,000.6	µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) CAS # 108-39-4.SEC Purity 99%	(Lot 6LHTM)	500.0	µg/mL	+/- 2.9138 +/- 5.9803 +/- 9.5144	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylphenol (p-cresol) CAS # 106-44-5.SEC Purity 99%	(Lot 65S2E)	501.0	µg/mL	+/- 2.9196 +/- 5.9923 +/- 9.5334	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine CAS # 621-64-7.SEC Purity 99%	(Lot 4423200)	1,001.4	µg/mL	+/- 5.8357 +/- 11.9773 +/- 19.0555	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane CAS # 67-72-1.SEC Purity 99%	(Lot 10173016)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene CAS # 98-95-3.SEC Purity 99%	(Lot FLYIG)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone CAS # 78-59-1.SEC Purity 99%	(Lot XHGJI)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol CAS # 88-75-5.SEC Purity 99%	(Lot GXJ7J)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol CAS # 105-67-9.SEC Purity 99%	(Lot MKBL3650V)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 111-91-1 *	(Lot 5670100)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
25	2,4-Dichlorophenol		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 120-83-2.SEC	(Lot FHM01)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot OGO01)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
27	Naphthalene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
28	2,6-Dichlorophenol		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 87-65-0.SEC	(Lot SIDBB)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
29	4-Chloroaniline		1,000.2	µg/mL	+/-	5.8287	µg/mL	Gravimetric
	CAS # 106-47-8.SEC	(Lot 10171860)			+/-	11.9630	µg/mL	Unstressed
	Purity 99%				+/-	19.0326	µg/mL	Stressed
30	Hexachlorobutadiene		1,000.5	µg/mL	+/-	5.8302	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 1068200)			+/-	11.9661	µg/mL	Unstressed
	Purity 97%				+/-	19.0375	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 59-50-7.SEC	(Lot FDO02)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
32	2-Methylnaphthalene		1,000.8	µg/mL	+/-	5.8320	µg/mL	Gravimetric
	CAS # 91-57-6.SEC	(Lot 76023-1)			+/-	11.9699	µg/mL	Unstressed
	Purity 98%				+/-	19.0436	µg/mL	Stressed
33	1-Methylnaphthalene		1,000.1	µg/mL	+/-	5.8279	µg/mL	Gravimetric
	CAS # 90-12-0.SEC	(Lot UATSA)			+/-	11.9614	µg/mL	Unstressed
	Purity 97%				+/-	19.0302	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 95-94-3.SEC	(Lot AF02)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 77-47-4.SEC	(Lot 5608400)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,000.6	µg/mL	+/-	5.8309	µg/mL	Gravimetric
	CAS # 88-06-2.SEC	(Lot UUMYM)			+/-	11.9675	µg/mL	Unstressed
	Purity 98%				+/-	19.0399	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,000.1	µg/mL	+/-	5.8279	µg/mL	Gravimetric
	CAS # 95-95-4.SEC	(Lot MKBQ9937V)			+/-	11.9614	µg/mL	Unstressed
	Purity 97%				+/-	19.0302	µg/mL	Stressed
38	2-Chloronaphthalene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 91-58-7.SEC	(Lot LC07783V)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
39	Biphenyl		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 92-52-4.SEC	(Lot 33OQE)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed

40	2-Nitroaniline CAS # 88-74-4.SEC Purity 99%	(Lot T6E7B)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8.SEC Purity 96%	(Lot 0012014)	999.9	µg/mL	+/- 5.8271 +/- 11.9598 +/- 19.0276	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0.SEC Purity 99%	(Lot 3XXLB)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3.SEC Purity 99%	(Lot 483WC)	1,002.0	µg/mL	+/- 5.8392 +/- 11.9845 +/- 19.0669	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2.SEC Purity 99%	(Lot GE01)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline CAS # 99-09-2.SEC Purity 99%	(Lot FGN03)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene CAS # 83-32-9.SEC Purity 99%	(Lot BWZJE)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol CAS # 51-28-5.SEC Purity 99%	(Lot YTR6B)	2,000.0	µg/mL	+/- 11.6282 +/- 23.9081 +/- 38.0494	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran CAS # 132-64-9.SEC Purity 99%	(Lot 27ZGC)	1,000.8	µg/mL	+/- 5.8322 +/- 11.9702 +/- 19.0440	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol CAS # 100-02-7.SEC Purity 99%	(Lot 2J5LB)	2,000.0	µg/mL	+/- 11.6282 +/- 23.9081 +/- 38.0494	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene CAS # 121-14-2.SEC Purity 99%	(Lot SHRSA)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2.SEC Purity 99%	(Lot LC19623V)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7.SEC Purity 99%	(Lot 5027400)	1,000.6	µg/mL	+/- 5.8310 +/- 11.9678 +/- 19.0402	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) CAS # 544-76-3.SEC Purity 99%	(Lot A0328141)	1,000.0	µg/mL	+/- 5.8275 +/- 11.9606 +/- 19.0288	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate CAS # 84-66-2.SEC Purity 99%	(Lot UMBJC)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether CAS # 7005-72-3.SEC Purity 99%	(Lot P31G)	1,000.4	µg/mL	+/- 5.8299 +/- 11.9654 +/- 19.0364	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	4-Nitroaniline		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 100-01-6.SEC	(Lot 5ITRC)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 534-52-1.SEC	(Lot 6333400)			+/-	23.9081	µg/mL	Unstressed
	Purity 99%				+/-	38.0494	µg/mL	Stressed
58	Diphenylamine		850.0	µg/mL	+/-	4.9534	µg/mL	Gravimetric
	CAS # 122-39-4.SEC	(Lot 10164691)			+/-	10.1665	µg/mL	Unstressed
	Purity 99%				+/-	16.1745	µg/mL	Stressed
59	Azobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 103-33-3.SEC	(Lot JUWAG)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 101-55-3.SEC	(Lot 84C6D)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
61	Hexachlorobenzene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 118-74-1.SEC	(Lot G120431)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
62	Pentachlorophenol		2,000.4	µg/mL	+/-	11.6305	µg/mL	Gravimetric
	CAS # 87-86-5.SEC	(Lot 5784900)			+/-	23.9129	µg/mL	Unstressed
	Purity 99%				+/-	38.0570	µg/mL	Stressed
63	n-Octadecane (C18)		1,001.0	µg/mL	+/-	5.8333	µg/mL	Gravimetric
	CAS # 593-45-3.SEC	(Lot G14U045)			+/-	11.9726	µg/mL	Unstressed
	Purity 99%				+/-	19.0478	µg/mL	Stressed
64	Phenanthrene		1,002.0	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 85-01-8.SEC	(Lot 4708400)			+/-	11.9839	µg/mL	Unstressed
	Purity 98%				+/-	19.0660	µg/mL	Stressed
65	Anthracene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 120-12-7.SEC	(Lot WDFNJ)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
66	Carbazole		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 86-74-8.SEC	(Lot LMIZB)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
67	Di-n-butylphthalate		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 84-74-2.SEC	(Lot 42FSG)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
68	Fluoranthene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 206-44-0.SEC	(Lot FREGF)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
69	Pyrene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 129-00-0.SEC	(Lot ROVJC)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 85-68-7.SEC	(Lot GX3GL)			+/-	11.9605	µg/mL	Unstressed
	Purity 98%				+/-	19.0287	µg/mL	Stressed
71	Benz(a)anthracene		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 56-55-3.SEC	(Lot MTENF)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed

72	chrysene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 218-01-9.SEC	(Lot NICZC)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
73	Bis(2-ethylhexyl)phthalate		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 117-81-7.SEC	(Lot MT8AG)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
74	Di-n-octyl phthalate		1,000.8	µg/mL	+/-	5.8322	µg/mL	Gravimetric
	CAS # 117-84-0.SEC	(Lot O8DLD)			+/-	11.9702	µg/mL	Unstressed
	Purity 99%				+/-	19.0440	µg/mL	Stressed
75	Benzo(b)fluoranthene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 205-99-2.SEC	(Lot 022011)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
76	Benzo(k)fluoranthene		1,000.6	µg/mL	+/-	5.8310	µg/mL	Gravimetric
	CAS # 207-08-9.SEC	(Lot ER041513-01)			+/-	11.9678	µg/mL	Unstressed
	Purity 99%				+/-	19.0402	µg/mL	Stressed
77	Benzo(a)pyrene		1,000.5	µg/mL	+/-	5.8302	µg/mL	Gravimetric
	CAS # 50-32-8.SEC	(Lot M8DFD)			+/-	11.9661	µg/mL	Unstressed
	Purity 97%				+/-	19.0375	µg/mL	Stressed
78	Indeno(1,2,3-cd)pyrene		1,000.4	µg/mL	+/-	5.8299	µg/mL	Gravimetric
	CAS # 193-39-5.SEC	(Lot 0012014)			+/-	11.9654	µg/mL	Unstressed
	Purity 99%				+/-	19.0364	µg/mL	Stressed
79	Dibenz(a,h)anthracene		1,000.0	µg/mL	+/-	5.8275	µg/mL	Gravimetric
	CAS # 53-70-3.SEC	(Lot 0012011)			+/-	11.9606	µg/mL	Unstressed
	Purity 99%				+/-	19.0288	µg/mL	Stressed
80	Benzo(g,h,i)perylene		1,000.1	µg/mL	+/-	5.8279	µg/mL	Gravimetric
	CAS # 191-24-2.SEC	(Lot 0022012)			+/-	11.9614	µg/mL	Unstressed
	Purity 97%				+/-	19.0302	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Specific Reference Material Notes:

N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.

Reagent

MS-571995_00002

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 571995 **Lot No.:** A0136052

Description : 8270 List 1 / Std #1 MegaMix (2017)

8270 List 1 / Std #1 MegaMix (2017) 500-2,000µg/mL, Methylene chloride, 5mL/ampul

5163450
ID: MS-571995_00002
Exp: 09/30/19 Prpd: DCK
RES HSLB Mega Mix (2017)

Container Size : 10 mL **Pkg Amt:** > 5 mL

Expiration Date : September 30, 2019 **Storage:** 0°C or colder

Handling: Carcinogen/reproductive toxin. Photosensitive. Sonicate.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,4-Dioxane **CAS #** 123-91-1 (Lot SHBH5677) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
2	N-Nitrosodimethylamine **CAS #** 62-75-9 (Lot 161108JLM) **Purity** 99%	1,002.0 µg/mL	+/- 5.8257 µg/mL +/- 11.9780 µg/mL +/- 19.0628 µg/mL	Gravimetric Unstressed Stressed
3	Pyridine **CAS #** 110-86-1 (Lot SHBC7174V) **Purity** 99%	2,011.2 µg/mL	+/- 11.6933 µg/mL +/- 24.0420 µg/mL +/- 38.2625 µg/mL	Gravimetric Unstressed Stressed
4	Phenol **CAS #** 108-95-2 (Lot SHBF1351V) **Purity** 99%	1,005.1 µg/mL	+/- 5.8439 µg/mL +/- 12.0154 µg/mL +/- 19.1224 µg/mL	Gravimetric Unstressed Stressed
5	Aniline **CAS #** 62-53-3 (Lot K22Z462) **Purity** 99%	1,002.6 µg/mL	+/- 5.8292 µg/mL +/- 11.9851 µg/mL +/- 19.0742 µg/mL	Gravimetric Unstressed Stressed
6	Bis(2-chloroethyl)ether **CAS #** 111-44-4 (Lot SHBD4430V) **Purity** 99%	1,001.4 µg/mL	+/- 5.8222 µg/mL +/- 11.9708 µg/mL +/- 19.0513 µg/mL	Gravimetric Unstressed Stressed
7	n-Decane (C10) **CAS #** 124-18-5 (Lot SHBH3926V) **Purity** 99%	1,000.7 µg/mL	+/- 5.8180 µg/mL +/- 11.9620 µg/mL +/- 19.0374 µg/mL	Gravimetric Unstressed Stressed

8	2-Chlorophenol CAS # 95-57-8 Purity 99%	(Lot STBF2690V)	1,007.1	µg/mL	+/- 5.8552 +/- 12.0385 +/- 19.1592	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBM5751V)	1,001.0	µg/mL	+/- 5.8199 +/- 11.9660 +/- 19.0437	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS4401V)	1,004.4	µg/mL	+/- 5.8397 +/- 12.0067 +/- 19.1084	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benzyl alcohol CAS # 100-51-6 Purity 99%	(Lot SHBC1850V)	1,005.2	µg/mL	+/- 5.8443 +/- 12.0162 +/- 19.1236	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot 68996CMV)	1,001.2	µg/mL	+/- 5.8211 +/- 11.9684 +/- 19.0475	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	2-Methylphenol (o-cresol) CAS # 95-48-7 Purity 99%	(Lot SHBH6379)	1,001.6	µg/mL	+/- 5.8234 +/- 11.9732 +/- 19.0551	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	2,2'-oxybis(1-chloropropane) CAS # 108-60-1 Purity 98%	(Lot 5510800)	1,006.7	µg/mL	+/- 5.8528 +/- 12.0336 +/- 19.1513	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Acetophenone CAS # 98-86-2 Purity 99%	(Lot STBG7113)	1,005.5	µg/mL	+/- 5.8459 +/- 12.0194 +/- 19.1287	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	3-Methylphenol (m-cresol) CAS # 108-39-4 Purity 99%	(Lot SHBD0627V)	501.0	µg/mL	+/- 2.9196 +/- 5.9923 +/- 9.5334	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	4-Methylphenol (p-cresol) CAS # 106-44-5 Purity 99%	(Lot 49396APV)	501.7	µg/mL	+/- 2.9235 +/- 6.0002 +/- 9.5461	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	N-Nitroso-di-n-propylamine CAS # 621-64-7 Purity 99%	(Lot NOPCF)	1,003.1	µg/mL	+/- 5.8323 +/- 11.9915 +/- 19.0843	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Hexachloroethane CAS # 67-72-1 Purity 99%	(Lot 4H3SF)	1,003.4	µg/mL	+/- 5.8339 +/- 11.9947 +/- 19.0894	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Nitrobenzene CAS # 98-95-3 Purity 99%	(Lot SHBG5577V)	1,002.3	µg/mL	+/- 5.8273 +/- 11.9812 +/- 19.0678	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	Isophorone CAS # 78-59-1 Purity 98%	(Lot MKBG2442V)	1,003.3	µg/mL	+/- 5.8334 +/- 11.9938 +/- 19.0879	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	2-Nitrophenol CAS # 88-75-5 Purity 99%	(Lot BCBH7602V)	1,007.7	µg/mL	+/- 5.8587 +/- 12.0457 +/- 19.1706	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	2,4-Dimethylphenol CAS # 105-67-9 Purity 99%	(Lot 10165155)	1,000.9	µg/mL	+/- 5.8191 +/- 11.9644 +/- 19.0412	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	Bis(2-chloroethoxy)methane		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 111-91-1	(Lot 4621000)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
25	2,4-Dichlorophenol		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 120-83-2	(Lot BCBH1617V)			+/-	11.9915	µg/mL	Unstressed
	Purity 99%				+/-	19.0843	µg/mL	Stressed
26	1,2,4-Trichlorobenzene		1,005.0	µg/mL	+/-	5.8432	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	12.0138	µg/mL	Unstressed
	Purity 99%				+/-	19.1198	µg/mL	Stressed
27	Naphthalene		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
28	2,6-Dichlorophenol		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 87-65-0	(Lot MKBP8620V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
29	4-Chloroaniline		1,001.3	µg/mL	+/-	5.8215	µg/mL	Gravimetric
	CAS # 106-47-8	(Lot BCBJ1580V)			+/-	11.9692	µg/mL	Unstressed
	Purity 99%				+/-	19.0488	µg/mL	Stressed
30	Hexachlorobutadiene		1,002.5	µg/mL	+/-	5.8284	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	11.9835	µg/mL	Unstressed
	Purity 99%				+/-	19.0716	µg/mL	Stressed
31	4-Chloro-3-methylphenol		1,006.2	µg/mL	+/-	5.8501	µg/mL	Gravimetric
	CAS # 59-50-7	(Lot STBC7309V)			+/-	12.0282	µg/mL	Unstressed
	Purity 99%				+/-	19.1427	µg/mL	Stressed
32	2-Methylnaphthalene		1,007.7	µg/mL	+/-	5.8587	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBG8884)			+/-	12.0459	µg/mL	Unstressed
	Purity 96%				+/-	19.1708	µg/mL	Stressed
33	1-Methylnaphthalene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 90-12-0	(Lot 525000-9)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
34	1,2,4,5-Tetrachlorobenzene		1,004.3	µg/mL	+/-	5.8389	µg/mL	Gravimetric
	CAS # 95-94-3	(Lot MKBW7717V)			+/-	12.0051	µg/mL	Unstressed
	Purity 99%				+/-	19.1059	µg/mL	Stressed
35	Hexachlorocyclopentadiene		1,007.1	µg/mL	+/-	5.8552	µg/mL	Gravimetric
	CAS # 77-47-4	(Lot 0012017H)			+/-	12.0385	µg/mL	Unstressed
	Purity 99%				+/-	19.1592	µg/mL	Stressed
36	2,4,6-Trichlorophenol		1,003.5	µg/mL	+/-	5.8342	µg/mL	Gravimetric
	CAS # 88-06-2	(Lot STBF3742V)			+/-	11.9955	µg/mL	Unstressed
	Purity 99%				+/-	19.0907	µg/mL	Stressed
37	2,4,5-Trichlorophenol		1,006.4	µg/mL	+/-	5.8513	µg/mL	Gravimetric
	CAS # 95-95-4	(Lot FHN01)			+/-	12.0306	µg/mL	Unstressed
	Purity 99%				+/-	19.1465	µg/mL	Stressed
38	2-Chloronaphthalene		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 91-58-7	(Lot AJ2UI)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
39	Biphenyl		1,001.2	µg/mL	+/-	5.8211	µg/mL	Gravimetric
	CAS # 92-52-4	(Lot MKBV9808V)			+/-	11.9684	µg/mL	Unstressed
	Purity 99%				+/-	19.0475	µg/mL	Stressed

40	2-Nitroaniline CAS # 88-74-4 Purity 99%	(Lot MKBK7597V)	1,004.5	µg/mL	+/- 5.8401 +/- 12.0075 +/- 19.1097	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Acenaphthylene CAS # 208-96-8 Purity 97%	(Lot O03R)	1,006.0	µg/mL	+/- 5.8491 +/- 12.0260 +/- 19.1392	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,3-Dinitrobenzene CAS # 99-65-0 Purity 99%	(Lot BCBN4329V)	1,001.8	µg/mL	+/- 5.8246 +/- 11.9756 +/- 19.0590	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Dimethylphthalate CAS # 131-11-3 Purity 99%	(Lot 10117699)	1,003.7	µg/mL	+/- 5.8358 +/- 11.9987 +/- 19.0957	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	2,6-Dinitrotoluene CAS # 606-20-2 Purity 99%	(Lot BCBB8606V)	1,000.7	µg/mL	+/- 5.8183 +/- 11.9628 +/- 19.0387	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	3-Nitroaniline CAS # 99-09-2 Purity 99%	(Lot MKBX1283V)	1,005.2	µg/mL	+/- 5.8443 +/- 12.0162 +/- 19.1236	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	Acenaphthene CAS # 83-32-9 Purity 99%	(Lot MKCC8329)	1,005.9	µg/mL	+/- 5.8482 +/- 12.0242 +/- 19.1363	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	2,4-Dinitrophenol CAS # 51-28-5 Purity 99%	(Lot STBF9439V)	2,008.3	µg/mL	+/- 11.6766 +/- 24.0077 +/- 38.2080	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Dibenzofuran CAS # 132-64-9 Purity 99%	(Lot MKBW2691V)	1,005.5	µg/mL	+/- 5.8463 +/- 12.0202 +/- 19.1300	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	4-Nitrophenol CAS # 100-02-7 Purity 99%	(Lot MKBV0501V)	2,009.3	µg/mL	+/- 11.6824 +/- 24.0197 +/- 38.2270	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	2,4-Dinitrotoluene CAS # 121-14-2 Purity 99%	(Lot MKAA0690V)	1,003.9	µg/mL	+/- 5.8366 +/- 12.0003 +/- 19.0983	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	2,3,4,6-Tetrachlorophenol CAS # 58-90-2 Purity 99%	(Lot B180305L)	1,001.9	µg/mL	+/- 5.8253 +/- 11.9772 +/- 19.0615	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	Fluorene CAS # 86-73-7 Purity 99%	(Lot 10193329)	1,002.0	µg/mL	+/- 5.8257 +/- 11.9780 +/- 19.0628	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	n-Hexadecane (C16) CAS # 544-76-3 Purity 99%	(Lot SHBG2582V)	1,001.6	µg/mL	+/- 5.8234 +/- 11.9732 +/- 19.0551	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Diethylphthalate CAS # 84-66-2 Purity 99%	(Lot MKBV9622V)	1,003.3	µg/mL	+/- 5.8335 +/- 11.9939 +/- 19.0881	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	4-Chlorophenyl phenyl ether CAS # 7005-72-3 Purity 99%	(Lot MKBX5225V)	1,001.1	µg/mL	+/- 5.8203 +/- 11.9668 +/- 19.0450	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	4-Nitroaniline		1,003.1	µg/mL	+/-	5.8319	µg/mL	Gravimetric
	CAS # 100-01-6	(Lot BCBG4702V)			+/-	11.9907	µg/mL	Unstressed
	Purity 98%				+/-	19.0830	µg/mL	Stressed
57	4,6-Dinitro-2-methylphenol (Dinitro-o-cresol)		2,003.7	µg/mL	+/-	11.6495	µg/mL	Gravimetric
	CAS # 534-52-1	(Lot LC25844V)			+/-	23.9520	µg/mL	Unstressed
	Purity 99%				+/-	38.1192	µg/mL	Stressed
58	Diphenylamine		852.3	µg/mL	+/-	4.9555	µg/mL	Gravimetric
	CAS # 122-39-4	(Lot MKBN8295V)			+/-	10.1888	µg/mL	Unstressed
	Purity 99%				+/-	16.2154	µg/mL	Stressed
59	Azobenzene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 103-33-3	(Lot BCBQ0927V)			+/-	12.0202	µg/mL	Unstressed
	Purity 99%				+/-	19.1300	µg/mL	Stressed
60	4-Bromophenyl phenyl ether		1,022.3	µg/mL	+/-	5.9439	µg/mL	Gravimetric
	CAS # 101-55-3	(Lot STBB9729V)			+/-	12.2210	µg/mL	Unstressed
	Purity 99%				+/-	19.4496	µg/mL	Stressed
61	Hexachlorobenzene		1,002.5	µg/mL	+/-	5.8288	µg/mL	Gravimetric
	CAS # 118-74-1	(Lot 7013600)			+/-	11.9843	µg/mL	Unstressed
	Purity 99%				+/-	19.0729	µg/mL	Stressed
62	Pentachlorophenol		2,002.1	µg/mL	+/-	11.6406	µg/mL	Gravimetric
	CAS # 87-86-5	(Lot 170306KJA)			+/-	23.9336	µg/mL	Unstressed
	Purity 99%				+/-	38.0900	µg/mL	Stressed
63	n-Octadecane (C18)		1,002.9	µg/mL	+/-	5.8308	µg/mL	Gravimetric
	CAS # 593-45-3	(Lot OGCDK)			+/-	11.9883	µg/mL	Unstressed
	Purity 99%				+/-	19.0792	µg/mL	Stressed
64	Phenanthrene		1,001.1	µg/mL	+/-	5.8203	µg/mL	Gravimetric
	CAS # 85-01-8	(Lot MKCB1762V)			+/-	11.9668	µg/mL	Unstressed
	Purity 99%				+/-	19.0450	µg/mL	Stressed
65	Anthracene		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 120-12-7	(Lot MKBV7759V)			+/-	11.9573	µg/mL	Unstressed
	Purity 99%				+/-	19.0298	µg/mL	Stressed
66	Carbazole		1,000.5	µg/mL	+/-	5.8168	µg/mL	Gravimetric
	CAS # 86-74-8	(Lot 6489700)			+/-	11.9596	µg/mL	Unstressed
	Purity 99%				+/-	19.0336	µg/mL	Stressed
67	Di-n-butylphthalate		1,005.7	µg/mL	+/-	5.8470	µg/mL	Gravimetric
	CAS # 84-74-2	(Lot MKBT0244V)			+/-	12.0218	µg/mL	Unstressed
	Purity 99%				+/-	19.1325	µg/mL	Stressed
68	Fluoranthene		1,005.5	µg/mL	+/-	5.8463	µg/mL	Gravimetric
	CAS # 206-44-0	(Lot MKBQ6360V)			+/-	12.0204	µg/mL	Unstressed
	Purity 98%				+/-	19.1302	µg/mL	Stressed
69	Pyrene		1,005.8	µg/mL	+/-	5.8478	µg/mL	Gravimetric
	CAS # 129-00-0	(Lot BCBT5695)			+/-	12.0234	µg/mL	Unstressed
	Purity 99%				+/-	19.1351	µg/mL	Stressed
70	Benzyl butyl phthalate		1,000.3	µg/mL	+/-	5.8156	µg/mL	Gravimetric
	CAS # 85-68-7	(Lot MKBZ4553V)			+/-	11.9571	µg/mL	Unstressed
	Purity 98%				+/-	19.0295	µg/mL	Stressed
71	Benz(a)anthracene		1,003.1	µg/mL	+/-	5.8323	µg/mL	Gravimetric
	CAS # 56-55-3	(Lot 0012012)			+/-	11.9915	µg/mL	Unstressed
	Purity 98%				+/-	19.0842	µg/mL	Stressed

72	Chrysene **CAS #** 218-01-9 **Purity** 99%	(Lot 012015)	1,004.6 µg/mL	+/- 5.8408 +/- 12.0091 +/- 19.1122	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
73	Bis(2-ethylhexyl)phthalate **CAS #** 117-81-7 **Purity** 99%	(Lot MKBZ3868V)	1,002.7 µg/mL	+/- 5.8296 +/- 11.9859 +/- 19.0754	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
74	Di-n-octyl phthalate **CAS #** 117-84-0 **Purity** 99%	(Lot 6016000)	1,007.9 µg/mL	+/- 5.8602 +/- 12.0489 +/- 19.1756	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
75	Benzo(b)fluoranthene **CAS #** 205-99-2 **Purity** 99%	(Lot 012012B)	1,003.6 µg/mL	+/- 5.8350 +/- 11.9971 +/- 19.0932	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
76	Benzo(k)fluoranthene **CAS #** 207-08-9 **Purity** 99%	(Lot 012017K)	1,006.2 µg/mL	+/- 5.8501 +/- 12.0282 +/- 19.1427	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
77	Benzo(a)pyrene **CAS #** 50-32-8 **Purity** 99%	(Lot ER071309-02)	1,002.1 µg/mL	+/- 5.8261 +/- 11.9788 +/- 19.0640	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
78	Indeno(1,2,3-cd)pyrene **CAS #** 193-39-5 **Purity** 99%	(Lot ER082107-02)	1,004.0 µg/mL	+/- 5.8373 +/- 12.0019 +/- 19.1008	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
79	Dibenz(a,h)anthracene **CAS #** 53-70-3 **Purity** 99%	(Lot ER032211-01)	1,001.9 µg/mL	+/- 5.8249 +/- 11.9764 +/- 19.0602	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
80	Benzo(g,h,i)perylene **CAS #** 191-24-2 **Purity** 99%	(Lot ER05121401)	1,000.9 µg/mL	+/- 5.8195 +/- 11.9652 +/- 19.0425	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Specific Reference Material Notes:
N-nitrosodiphenylamine 1000 ug/mL equivalent when used for GC analysis. Actual formulation is diphenylamine 855 ug/mL.
N-Nitrosodiphenylamine is prone to breakdown in the injection port and will be converted to diphenylamine.
N-Nitrosodiphenylamine is also a reactive species that can initiate premature decomposition of other compounds in the mix. For these reasons diphenylamine is used in the preparation of this mixture. When comparing the response of this compound to mixtures manufactured using N-nitrosodiphenylamine, a difference in response will be observed.
This lot was approved even though the %D for 4,6-DN-2-MP was greater than 10%.

Reagent

MV-567650_00027

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0124069

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2022 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane	2,521.2 µg/mL	+/- 14.6582 µg/mL	Gravimetric
	CAS # 1868-53-7 (Lot 0012016)		+/- 141.3584 µg/mL	Unstressed
	Purity 99%		+/- 144.6660 µg/mL	Stressed
2	1,2-Dichloroethane-d4	2,513.8 µg/mL	+/- 14.6157 µg/mL	Gravimetric
	CAS # 17060-07-0 (Lot PR-25433)		+/- 140.9489 µg/mL	Unstressed
	Purity 98%		+/- 144.2469 µg/mL	Stressed
3	Toluene-d8	2,519.4 µg/mL	+/- 14.6480 µg/mL	Gravimetric
	CAS # 2037-26-5 (Lot PR-27311)		+/- 141.2603 µg/mL	Unstressed
	Purity 99%		+/- 144.5656 µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB)	2,520.8 µg/mL	+/- 14.6559 µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 20401KOV)		+/- 141.3360 µg/mL	Unstressed
	Purity 99%		+/- 144.6430 µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

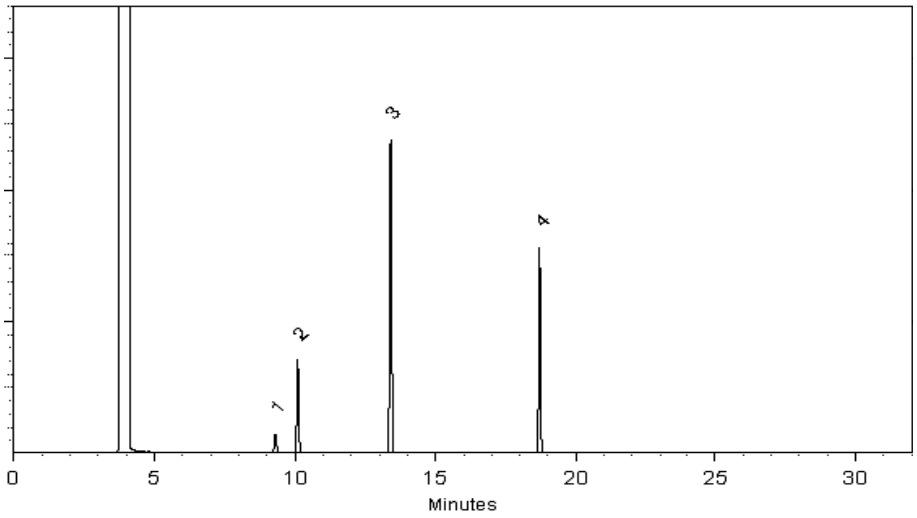
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Isaiah Harrison - Mix Technician

Date Mixed: 09-Jan-2017 **Balance:** 1128342314

Amanda Miller - Operations Tech-ARM QC

Date Passed: 11-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-568718-D_00014

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

rec'd 3/1/18

Catalog No. : 568718 **Lot No.:** A0127975

Description : 8260 Internal Standard 2014

8260 Internal Standard 2014 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol **CAS #** 25725-11-5 (Lot I-201) **Purity** 99%	5,022.1 µg/mL	+/- 29.1976 µg/mL +/- 107.5241 µg/mL +/- 110.6500 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone-d5 **CAS #** 24313-50-6 (Lot M-276) **Purity** 99%	1,257.5 µg/mL	+/- 7.3114 µg/mL +/- 26.9239 µg/mL +/- 27.7067 µg/mL	Gravimetric Unstressed Stressed
3	Fluorobenzene **CAS #** 462-06-6 (Lot BCBK8171V) **Purity** 99%	250.8 µg/mL	+/- 1.4613 µg/mL +/- 5.3699 µg/mL +/- 5.5259 µg/mL	Gravimetric Unstressed Stressed
4	1,4-Dioxane-d8 **CAS #** 17647-74-4 (Lot I-19942) **Purity** 99%	5,009.4 µg/mL	+/- 29.1236 µg/mL +/- 107.2514 µg/mL +/- 110.3694 µg/mL	Gravimetric Unstressed Stressed
5	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-21944) **Purity** 99%	251.7 µg/mL	+/- 1.4666 µg/mL +/- 5.3891 µg/mL +/- 5.5458 µg/mL	Gravimetric Unstressed Stressed
6	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-18488) **Purity** 99%	251.3 µg/mL	+/- 1.4645 µg/mL +/- 5.3813 µg/mL +/- 5.5377 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

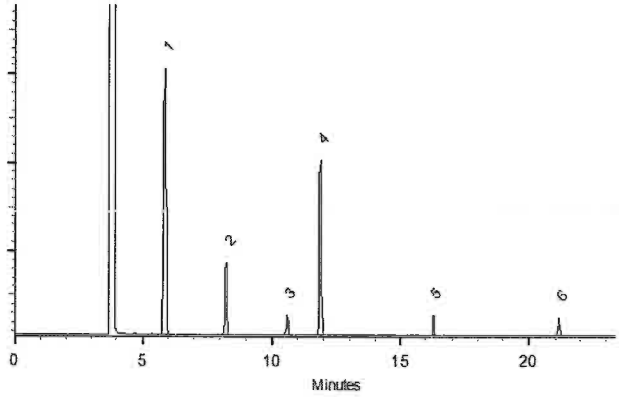
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 30-May-2017 **Balance:** 1128342314

Justine Albertson - Operations Tech-ARM QC

Date Passed: 06-Jun-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-568720_00022

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Certificate #3222.02

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569721.sec **Lot No.:** A0123880

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2020 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,501.6 µg/mL	+/- 73.1996 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot P14A572)		+/- 754.3267 µg/mL	Unstressed
	Purity 99%		+/- 756.1173 µg/mL	Stressed
2	2-Butanone (MEK)	12,503.6 µg/mL	+/- 73.2113 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RA58J)		+/- 754.4473 µg/mL	Unstressed
	Purity 99%		+/- 756.2383 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,506.0 µg/mL	+/- 73.2254 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 754.5921 µg/mL	Unstressed
	Purity 99%		+/- 756.3834 µg/mL	Stressed
4	2-Hexanone	12,504.0 µg/mL	+/- 73.2137 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot V3NRA)		+/- 754.4715 µg/mL	Unstressed
	Purity 99%		+/- 756.2625 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

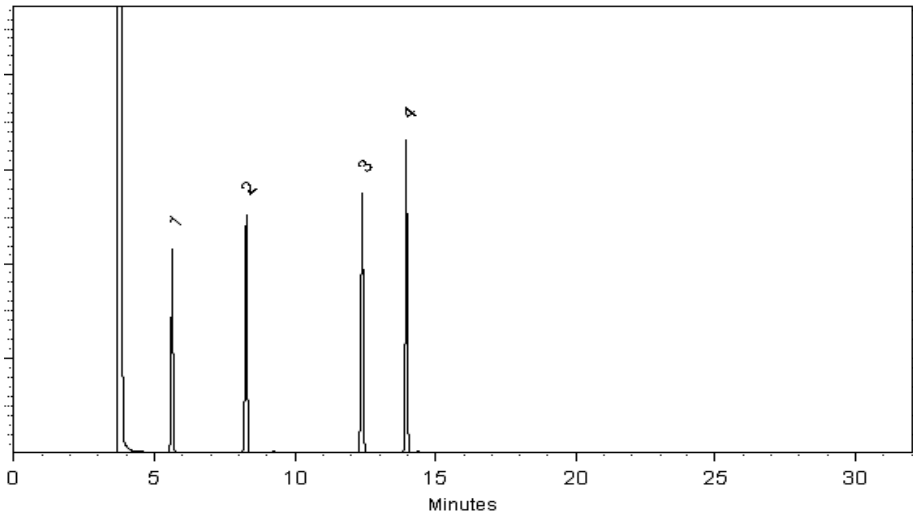
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 03-Jan-2017 **Balance:** 1127510105

Jennifer L Pollino

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 05-Jan-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-569721_00006

Reagent

MV-569722.sec_00005

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.SEC **Lot No.:** A0128832

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,500 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2020 **Storage:** 0°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,505.9 µg/mL	+/- 22.3986 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 23586)		+/- 141.5312 µg/mL	Unstressed
	Purity 99%		+/- 144.7955 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,503.7 µg/mL	+/- 24.8413 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 141.8153 µg/mL	Unstressed
	Purity 99%		+/- 145.0675 µg/mL	Stressed
3	Vinyl chloride	2,503.2 µg/mL	+/- 25.9197 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 141.9813 µg/mL	Unstressed
	Purity 99%		+/- 145.2285 µg/mL	Stressed
4	1,3-Butadiene	2,508.9 µg/mL	+/- 20.6969 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 24033)		+/- 141.4379 µg/mL	Unstressed
	Purity 99%		+/- 144.7121 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,502.6 µg/mL	+/- 26.2540 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/- 142.0076 µg/mL	Unstressed
	Purity 99%		+/- 145.2526 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,510.6 µg/mL	+/- 24.9094 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 142.2038 µg/mL	Unstressed
	Purity 99%		+/- 145.4650 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,510.9 µg/mL	+/- 25.6719 µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/- 142.3575 µg/mL	Unstressed
	Purity 99%		+/- 145.6160 µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,504.9	µg/mL	+/-	18.9312	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 253600)			+/-	140.9660	µg/mL	Unstressed
	Purity 99%				+/-	144.2404	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

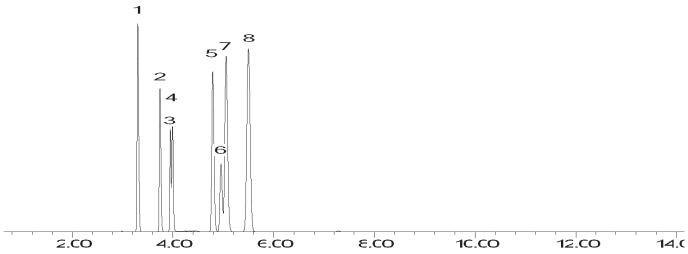
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Brandon Reish - Mix Technician

Date Mixed: 29-Jun-2017 **Balance:** 1127510105

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 24-Jul-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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MV-569724_00016

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MV-569727_00007

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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569727 **Lot No.:** A0124672

Description : 8260 List 2/ Std #3 Cyclohexanone (2015)

8260 List 2/ Std #3 Cyclohexanone (2015) 25,000 µg/ml, Water, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 29, 2020 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Cyclohexanone	25,006.0 µg/mL	+/- 146.4156 µg/mL	Gravimetric
	CAS # 108-94-1 (Lot MKBN5282V)		+/- 1,508.8223 µg/mL	Unstressed
	Purity 99%		+/- 1,512.4040 µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Column:
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

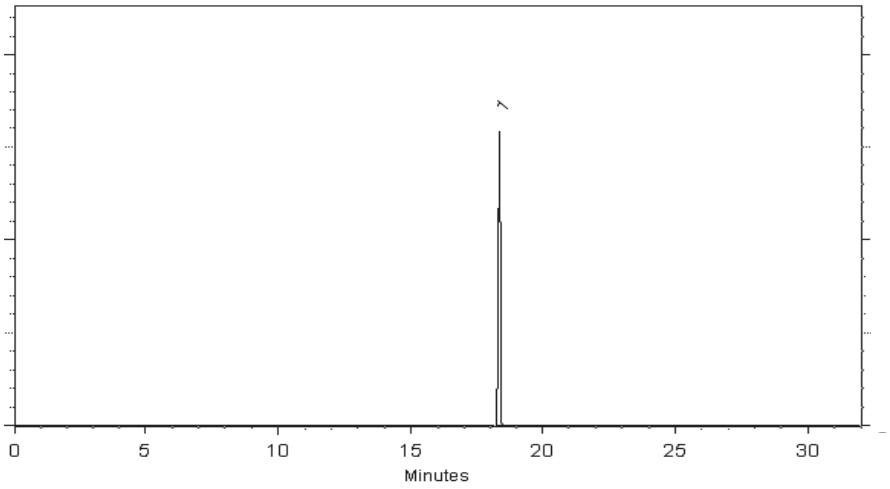
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

Temp. Program:
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Tom Suckar - Mix Technician

Date Mixed: 03-Feb-2017 **Balance:** 1125113331

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 07-Feb-2017

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MV-571992.sec_00001

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MV-571992_00001

Reagent

MV-STS110N1_00066

Certificate of Analysis

4-Bromofluorobenzene Solution

Product Number: STS-110N **Page:** 1 of 1

Lot Number: CH-3248Z **Lot Issue Date:** 31-Aug-2016 **Expiration Date:** 31-Oct-2019

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
4-bromofluorobenzene	000460-00-4	RM03365	2005 ± 10 µg/mL

Matrix: methanol (methyl alcohol)

Storage: Store Frozen (-25° to -10°C).

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Vincent Wang, Ph.D.
Director of QA/RA

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Reagent

OP-569732_00004

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569732 **Lot No.:** A0137125

Description : 8270 List 1 / Std #11

8270 List 1 / Std #11 2,000µg/mL, Methylene chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : October 31, 2019 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	Benzaldehyde		2,001.1 µg/mL	+/- 11.6345	µg/mL	Gravimetric
	CAS # 100-52-7	(Lot SHBG8690V)		+/- 64.1460	µg/mL	Unstressed
	Purity 99%			+/- 74.5673	µg/mL	Stressed
2	epsilon-Caprolactam		2,002.0 µg/mL	+/- 11.6398	µg/mL	Gravimetric
	CAS # 105-60-2	(Lot I16X016)		+/- 64.1754	µg/mL	Unstressed
	Purity 99%			+/- 74.6014	µg/mL	Stressed
3	Atrazine		2,002.6 µg/mL	+/- 11.6432	µg/mL	Gravimetric
	CAS # 1912-24-9	(Lot 77P7D)		+/- 64.1941	µg/mL	Unstressed
	Purity 99%			+/- 74.6232	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

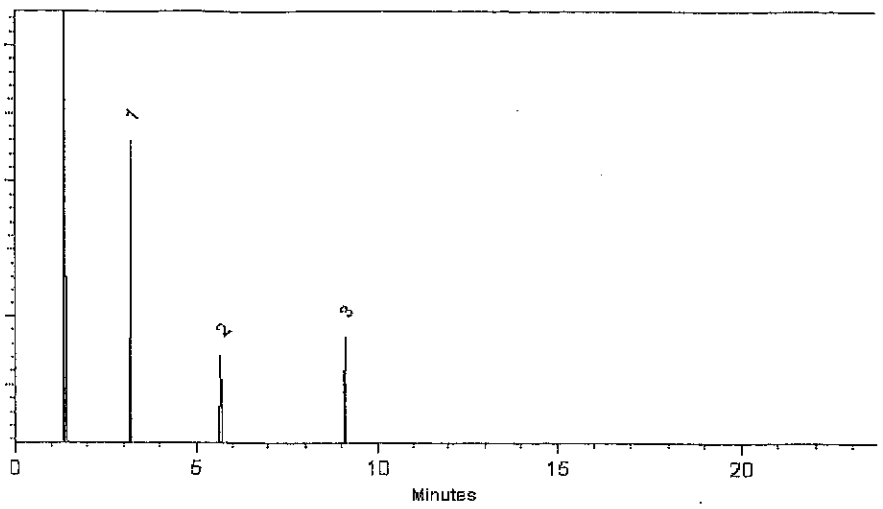
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

F. Joseph Tallon - Mix Technician **Date Mixed:** 12-Apr-2018 **Balance:** B442140311

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 16-Apr-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

OP-572556_00003

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 572556 **Lot No.:** A0127376

Description : Custom Hexachlorocyclopentadiene Standard

Custom Hexachlorocyclopentadiene Standard 4,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Hexachlorocyclopentadiene **CAS #** 77-47-4 (Lot 0012015) **Purity** 99%	4,019.0 µg/mL	+/- 23.585744 µg/mL +/- 225.364148 µg/mL +/- 230.636330 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Rebecca Sawver

Date Mixed: 08-May-2017 **Balance:** B345965662

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

OP-572556_00006

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 572556 **Lot No.:** A0127376

Description : Custom Hexachlorocyclopentadiene Standard

Custom Hexachlorocyclopentadiene Standard 4,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : May 31, 2021 **Storage:** 10°C or colder

CERTIFIED VALUES

Component #	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Hexachlorocyclopentadiene **CAS #** 77-47-4 (Lot 0012015) **Purity** 99%	4,019.0 µg/mL	+/- 23.585744 µg/mL +/- 225.364148 µg/mL +/- 230.636330 µg/mL	Gravimetric Unstressed Stressed

Solvent: Methylene Chloride
CAS # 75-09-2
Purity 99%

Rebecca Sawver

Date Mixed: 08-May-2017 **Balance:** B345965662

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

OP-CustBenz_00022

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ilac-MRA

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Testing Laboratory
Certificate #3222.02

10x 5mL
Received 7/31/18
AMB

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 572555 **Lot No.:** A0139914

Description : Custom Benzidines Standard

Custom Benzidines Standard 4,000µg/mL, Methylene Chloride, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2022 **Storage:** 10°C or colder

CERTIFIED VALUES

Component #	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	3,3'-Dichlorobenzidine		4,016.0 µg/mL	+/- 23.568138 µg/mL	Gravimetric
	CAS # 91-94-1	(Lot 170112KJA)		+/- 121.518984 µg/mL	Unstressed
	Purity 99%			+/- 121.518984 µg/mL	Stressed
2	Benzidine		4,033.0 µg/mL	+/- 23.667904 µg/mL	Gravimetric
	CAS # 92-87-5	(Lot 180406JNA)		+/- 122.033382 µg/mL	Unstressed
	Purity 99%			+/- 122.033382 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Lane Kibe - Mix Technician **Date Mixed:** 24-Jul-2018 **Balance:** 1122030677

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

PicricARestek_00080

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31499 **Lot No.:** A0114009

Description : Picric Acid Standard

1000µg/mL, Methanol, 1mL/ampul *PGI BOX REQUIRED* SHIP FED EX GROUND ONLY

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : September 30, 2020 **Storage:** 10°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Picric Acid **CAS #** 88-89-1 **Purity** 99% (Lot 06130CU)	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 53.9873 µg/mL +/- 58.7028 µg/mL		Gravimetric Unstressed Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Specific Reference Material Notes:
This is a derivatized analysis.

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO Guides 34 and 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Samples should be transferred into deactivated vials for handling and storage. Restek supplies deactivated vials along with most standards packed in 2 mL ampules. Due to space constraints, Restek does not supply vials for larger volume ampules. Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions. Restek will also deactivate larger volume vials from our inventory as a custom ordered item. Contact your Restek sales or customer service representative for details.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

SFD ICV STK_00005

1 Reagent Lane Fair Lawn, NJ 07410

Certificate of Analysis

This is to certify that units of the above mentioned lot number were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Acros Organics expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Unless otherwise stated, these products are not intended for dialysis, parenteral, or injectable use without further processing. The following are the actual analytical results obtained:

Catalog Number	**42442**	**Mfg. Date**	**8/4/2011**
Lot Number	**B0132482**		
Description	**SODIUM SULFIDE NONAHYDRATE, ACS**		
Country of Origin	**United States**		
Declaration of Origin	**Inorganic-non animal**		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	Colorless crystals
AMMONIUM (NH4)	%	<= 0.005	<0.005
ASSAY	%	Inclusive between 98.0 103.0	99.8
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	PASS/FAIL	= PASS TEST	PASS TEST
SULFITE OR THIOSULFATE	%	<= 0.1	<0.10

CERTIFIED BY

Lab Manager Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a extension of this catalog number listed above. If there are any questions with this certificate, please contact your Acros Organics representative.

Reagent

SIM_LVI_SURR_00006

Preliminary Report

TestAmerica Denver

LCS, Lab Control Sample Report

Sample Path: \\ChromNA\Denver\ChromData\SMS_F\20181003-74690.b\F3780.D

Lims ID: SIM_LVI_SURR_00006 Inj. Date: 03-Oct-2018 18:34:30

Worklist ID: 280-0074690-004 Instrument: SMS_F

Method: SMSF_8270SIMX

Compound	Amount Added	Amount Recovered	%Rec	Limits 1 3510C_LVI
$ 4 Nitrobenzene-d5	2000.0	1816.9	90.8	43-120
$ 5 2-Fluorobiphenyl	2000.0	1789.6	89.5	42-120
$ 6 Terphenyl-d14	2000.0	1805.0	90.3	47-120
$ 53 2-methylnaphthalene-d10	2000.0	1964.1	98.2	
$ 54 Fluoranthene-d10	2000.0	1814.7	90.7	

Samples for Limit Group: 1, Lims Prep Method: 3510C_LVI

280-114217-H-1-A

Reagent

HPNQTA_00033

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31602 **Lot No.:** A0139086

Description : Nitroguanidine Standard

Nitroguanidine Standard 1000 µg/mL, Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : June 30, 2023 **Storage:** 10°C or colder

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Nitroguanidine	1,007.0 µg/mL	+/- 5.9813	µg/mL	Gravimetric
	CAS # 556-88-7 (Lot 03708HN)		+/- 55.1665	µg/mL	Unstressed
	Purity 99%		+/- 64.3295	µg/mL	Stressed

Solvent: Methanol
CAS # 67-56-1
Purity 99%

Column:
250mm x 4.6mm
Ultra C18 (cat.# 9174575)

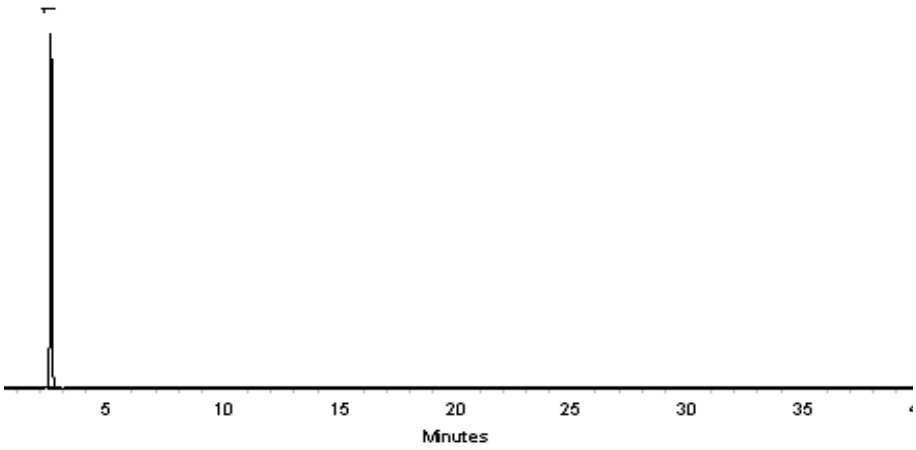
Flow Rate:
1.0 ml/min.

Mobile Phase A:
water:methanol (44:56 V/V)

Mobile Phase B:

Mobile Phase Composition:
100%A

Det. Type:
Wavelength: 210 nm



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fragassi - Mix Technician

Date Mixed: 20-Jun-2018 **Balance:** B345965662

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 25-Jun-2018

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

HPNQTA_00034

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-8330-ADD-6
Description: Nitroguanidine
Lot: 218091193
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*



Signal Word: Danger

Date Certified: Sep 14, 2018
Expiration: Oct 14, 2020
Sample Size: 1 mL
Components: 1
Storage Condition: Freeze (<-10 °C)

Included on ISO/IEC 17025 Scope of Accreditation: Yes

Included on ISO 17034 Scope of Accreditation: Yes

Component	CAS #	Purity % (HPLC)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
Nitroguanidine	556-88-7	100.0	100.4	100.4

A product with a suffix (-1A, -2B, etc or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST. Test No. 684/289871-17

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

Reagent

WC-N02-1000_00091

ERA

A Waters Company

Certificate of Analysis

Scanned 6/20/18

PRODUCT:	1000 mg/L Nitrite as N (NO_2-N)
CATALOG NUMBER:	053 -125 mL; 990 - 500 mL
LOT NUMBER:	011017
ISSUE DATE:	October 30, 2017
REVISION DATE:	Original
STARTING MATERIAL:	Sodium Nitrite ($NaNO_2$)
CERTIFIED CONCENTRATION[1]:	1000 mg/L
UNCERTAINTY[2]:	1.6%
MATRIX:	18 megohm deionized water
DENSITY:	1.0014 ± 0.0008 g/mL at 20.5°C and 761 mm Hg
TRACEABILITY[3]:	See Footnote 3
NIST/SRM:	-
VERIFICATION METHOD:	Ion Chromatography
STORAGE:	Store at 20-25°C

1. The **Certified Concentration** is the actual made-to concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation of the product and includes uncertainty related to the starting material used and the volumetric and gravimetric measurements made. The method of calculating uncertainty is taken from the ISO Guide to the Expression of Uncertainty in Measurement (current version). The uncertainty applies to the product as supplied and does not take into account any required or optional dilutions and/or preparations the laboratory may perform while using this product.

3. Traceability ((% Recovery Certified Standard)/(% Recovery NIST SRM))* 100.

The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs. Where a NIST SRM is not available, the product is metrologically traceable through an unbroken chain of calibrations to NIST weights, each having stated uncertainties and utilizing measurement standards that are appropriate for the physical and/or chemical property being measured.

This standard **expires 10/2019.** The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

This product is intended to be used as either a calibration standard or a quality control check of the entire analytical process for the analytes/matrix included in the standard.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com

Certifying Officer: Brian Miller - Product Line Manager

ISO/IEC GUIDE 34:2009

ACCREDITED

REFERENCE MATERIAL PRODUCER
CERTIFICATE NO. 1502.01

ISO/IEC 17025:2005

ACCREDITED

CHEMICAL TESTING LABORATORY
CERTIFICATE NO. 1502.02

16341 Table Mtn Pkwy, Golden, CO 80403 800-372-0122 fax: 303-421-0159 www.eraqc.com

Reagent

WC-N02-1000_00095

Rec 7/19/18
SC 10/30/18

CERTIFICATE OF ANALYSIS

Ion Chromatography CRM

Product #: Z-G34-062004-01-01

Nitrite (NO_2^- as N) – 1000 µg/mL

Lot #: 162702-20

Matrix: H_2O

Ion	Certified Concentration & Uncertainty
NO_2^- as N	**1000 ± 5 µg/mL**

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for ion chromatography (IC) or techniques using other modes of aqueous ion detection.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 97% pure sodium nitrite ($NaNO_2$) dissolved and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration was determined based upon gravimetric procedures. Secondary verification of the certified concentration was performed using ion chromatography (IC) or inductively coupled plasma optical emission spectroscopy (ICP-OES) that was calibrated and/or referenced against NIST SRM when available. The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored in a refrigerator. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

July 12, 2018
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
5580 Skylane Boulevard P: 707.525.5788
Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
    - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Reagent

WC-N03-1000_00062

Rec 11/6/17 SC. 07/23/18

CERTIFICATE OF ANALYSIS

Ion Chromatography CRM

Product #: Z-G34-062003-01-01

Nitrate (NO_3^- as N) – 1000 µg/mL

Lot #: 119041-8

Matrix: H_2O

Ion	Certified Concentration & Uncertainty
NO_3^- as N	**1000 ± 5 µg/mL**

Intended Use: This solution is intended for use as a certified reference material (CRM) or calibration standard for ion chromatography (IC) or techniques using other modes of aqueous ion detection.

Certification & Traceability: This CRM was manufactured, processed, and certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025.** This CRM was prepared to a nominal concentration of 1000 µg/mL by gravimetric methods using 99% pure sodium nitrate ($NaNO_3$) dissolved and diluted with filtered (0.22 µm), 18 M-ohm deionized water. The balances used in the preparation of this CRM are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration was determined based upon gravimetric procedures. Secondary verification of the certified concentration was performed using ion chromatography (IC) or inductively coupled plasma optical emission spectroscopy (ICP-OES) that was calibrated and/or referenced against **NIST SRM 3185.** The uncertainty associated with the certified concentration represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

Instructions for Use: We recommend that the solution be thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy, the analyst should: (1) use only pre-cleaned containers and transferware, (2) not pipette directly from the RM's original container, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, (5) use a minimum sub-sample size of 500 µL, and (6) dilute with the same matrix as the original RM or other chemically suitable matrix. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight or moisture.

Period of Validity: CPI International ensures the accuracy of this solution for **18 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau

Chuck Goudreau, Certifying Officer

November 3, 2017
Certification Date

CPI International waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

USA
5580 Skylane Boulevard P: 707.525.5788
Santa Rosa, CA 95403 P: 800.878.7654
F: 707.545.7901

Europe
Nieuwe Hemweg 7P P: +31 20 638 05 97
1013BG Amsterdam F: +31 20 420 28 36
The Netherlands

www.cpiinternational.com

Health and Safety Information: Refer to the Safety Data Sheet (SDS).

Homogeneity: This solution was determined to be homogeneous by procedures consistent with the requirements of ISO Guide 34 and ISO Guide 35. Replicate samples of the finished solution were analyzed to confirm its homogeneity, in accordance with QSP 6-13 Assessment of Homogeneity and Stability. To ensure homogeneity, users should not take a smaller sub-sample than specified in the Instructions for Use, as doing so will invalidate the certified values and uncertainties.

Quality Manual Rev: No. 5, 03/01/2013

Further Information: Please contact CPI International for further information about this CRM.

Quality Certifications: This CRM was prepared under a quality management system that is registered/accredited to the following:

- ISO 9001 – Quality Management Systems – Requirements (TUV NORD Cert. No. 44 100 16560231)
- ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories (A2LA Cert. No. 2848.01)
- ISO Guide 34 – General Requirements for the Competence of Reference Material Producers (A2LA Cert. No. 2848.02)
    - ISO Guide 34 references additional requirements specified in ISO Guide 31 and ISO Guide 35.

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 v1 ID: 32 (um)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
SCLmw-001-181001-GW	280-116538-1	98	100	98	97
SCLmw-003-181001-GW	280-116538-2	102	103	101	107
FWGTB-181014-TB	280-116538-3	96	106	97	102
	MB 280-437714/4	100	95	102	98
	LCS 280-437714/5	98	98	102	97

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-119
DCA = 1,2-Dichloroethane-d4 (Surr)	81-118
TOL = Toluene-d8 (Surr)	89-112
BFB = 4-Bromofluorobenzene (Surr)	85-114

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G1775.D

Lab ID: LCS 280-437714/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	5.00	4.73	95	74-131	
1,1,2,2-Tetrachloroethane	5.00	4.93	99	71-121	
1,1,2-Trichloroethane	5.00	5.25	105	80-119	
1,1-Dichloroethane	5.00	4.82	96	77-125	
1,1-Dichloroethene	5.00	4.29	86	71-131	
1,2-Dibromoethane	5.00	5.14	103	77-121	
1,2-Dichloroethane	5.00	4.97	99	73-128	
1,2-Dichloropropane	5.00	5.24	105	78-122	
2-Butanone (MEK)	20.0	19.9	100	56-143	
2-Hexanone	20.0	19.9	100	57-139	
4-Methyl-2-pentanone (MIBK)	20.0	19.9	99	67-130	
Acetone	20.0	16.0	80	39-160	
Benzene	5.00	4.81	96	79-120	
Bromobenzene	5.00	5.05	101	80-120	
Bromochloromethane	5.00	4.92	98	78-123	
Bromodichloromethane	5.00	4.95	99	79-125	
Bromoform	5.00	5.06	101	66-130	
Bromomethane	5.00	4.45	89	53-141	
Carbon disulfide	5.00	4.23	85	64-133	
Carbon tetrachloride	5.00	4.61	92	72-136	
Chlorobenzene	5.00	4.93	99	82-118	
Chloroethane	5.00	4.66	93	60-138	
Chloroform	5.00	4.83	97	79-124	
Chloromethane	5.00	4.21	84	50-139	
cis-1,3-Dichloropropene	5.00	5.38	108	75-124	
Dibromochloromethane	5.00	5.17	103	74-126	
Ethylbenzene	5.00	5.34	107	79-121	
Methylene Chloride	5.00	4.20 J	84	74-124	
Styrene	5.00	5.28	106	78-123	
Tetrachloroethene	5.00	4.74	95	74-129	
Toluene	5.00	4.92	98	80-121	
trans-1,3-Dichloropropene	5.00	4.94	99	73-127	
Trichloroethene	5.00	4.71	94	79-123	
Vinyl chloride	5.00	4.46	89	58-137	
Xylenes, Total	10.0	10.4	104	79-121	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab File ID: G1774.D Lab Sample ID: MB 280-437714/4

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: VMS_G Date Analyzed: 11/15/2018 11:11

GC Column: DB-624 v1 ID: 32(um)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-437714/5	G1775.D	11/15/2018 11:31
SCLmw-001-181001-GW	280-116538-1	G1795.D	11/15/2018 18:15
SCLmw-003-181001-GW	280-116538-2	G1796.D	11/15/2018 18:35
FWGTB-181014-TB	280-116538-3	G1797.D	11/15/2018 18:56

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab File ID: G9554.D BFB Injection Date: 09/28/2018

Instrument ID: VMS_G BFB Injection Time: 10:25

Analysis Batch No.: 431341

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	25.8	
75	30.0 - 60.0 % of mass 95	48.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	67.7	
175	5.0 - 9.0 % of mass 174	4.0	(5.9) 1
176	95.0 - 101.0 % of mass 174	64.5	(95.3) 1
177	5.0 - 9.0 % of mass 176	4.4	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICV 280-431341/24	G9573.D	09/28/2018	17:00

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab File ID: G0940.D BFB Injection Date: 10/29/2018

Instrument ID: VMS_G BFB Injection Time: 19:13

Analysis Batch No.: 435406

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.4	
75	30.0 - 60.0 % of mass 95	47.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	76.9	
175	5.0 - 9.0 % of mass 174	5.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	74.8	(97.3) 1
177	5.0 - 9.0 % of mass 176	4.9	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD005 280-435406/10	G0942.D	10/29/2018	20:00
	STD01 280-435406/11	G0943.D	10/29/2018	20:20
	STD02 280-435406/12	G0944.D	10/29/2018	20:40
	STD05 280-435406/13	G0945.D	10/29/2018	21:01
	ICIS 280-435406/14	G0946.D	10/29/2018	21:21
	STD25 280-435406/15	G0947.D	10/29/2018	21:42
	STD60 280-435406/16	G0948.D	10/29/2018	22:02
	ICV 280-435406/17	G0950.D	10/29/2018	22:43

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab File ID: G1769.D BFB Injection Date: 11/15/2018

Instrument ID: VMS_G BFB Injection Time: 09:15

Analysis Batch No.: 437714

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.4	
75	30.0 - 60.0 % of mass 95	50.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	73.3	
175	5.0 - 9.0 % of mass 174	5.2	(7.2) 1
176	95.0 - 101.0 % of mass 174	71.8	(98.0) 1
177	5.0 - 9.0 % of mass 176	5.0	(7.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-437714/3	G1772.D	11/15/2018	10:30
	CCV 280-437714/2	G1773.D	11/15/2018	10:50
	MB 280-437714/4	G1774.D	11/15/2018	11:11
	LCS 280-437714/5	G1775.D	11/15/2018	11:31
SCLmw-001-181001-GW	280-116538-1	G1795.D	11/15/2018	18:15
SCLmw-003-181001-GW	280-116538-2	G1796.D	11/15/2018	18:35
FWGTB-181014-TB	280-116538-3	G1797.D	11/15/2018	18:56
	CCVC 280-437714/32	G1798.D	11/15/2018	19:16

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: ICIS 280-435406/14 Date Analyzed: 10/29/2018 21:21

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um)

Lab File ID (Standard): G0946.D Heated Purge: (Y/N) N

Calibration ID: 34172

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		98670	4.47	795389	6.47	150141	9.16
UPPER LIMIT		197340	4.97	1590778	6.97	300282	9.66
LOWER LIMIT		49335	3.97	397695	5.97	75071	8.66
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-435406/17		105013	4.46	867672	6.46	162862	9.15
CCV 280-437714/3		70725	4.44	546317	6.45	117588	9.15
CCV 280-437714/2		72030	4.45	597265	6.45	112337	9.14
MB 280-437714/4		74986	4.45	605006	6.45	114402	9.15
LCS 280-437714/5		70045	4.45	610153	6.45	111901	9.15
280-116538-1	SCLmw-001-181001-GW	71919	4.46	610921	6.46	112183	9.15
280-116538-2	SCLmw-003-181001-GW	66527	4.45	596256	6.46	109653	9.15
280-116538-3	FWGTB-181014-TB	66157	4.46	529147	6.46	110150	9.15
CCVC 280-437714/32		73090	4.46	576834	6.45	114310	9.15

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene
CBNZd5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: ICIS 280-435406/14 Date Analyzed: 10/29/2018 21:21

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um)

Lab File ID (Standard): G0946.D Heated Purge: (Y/N) N

Calibration ID: 34172

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		211577	11.29				
UPPER LIMIT		423154	11.79				
LOWER LIMIT		105789	10.79				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-435406/17		222059	11.28				
CCV 280-437714/3		149588	11.27				
CCV 280-437714/2		154439	11.27				
MB 280-437714/4		153060	11.28				
LCS 280-437714/5		157663	11.27				
280-116538-1	SCLmw-001-181001-GW	147905	11.28				
280-116538-2	SCLmw-003-181001-GW	144152	11.28				
280-116538-3	FWGTB-181014-TB	142458	11.28				
CCVC 280-437714/32		156372	11.27				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW | Lab Sample ID: 280-116538-1

Matrix: Water | Lab File ID: G1795.D

Analysis Method: 8260B | Date Collected: 11/02/2018 10:45

Sample wt/vol: 20(mL) | Date Analyzed: 11/15/2018 18:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437714 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.33	J	5.0	0.80	0.32
100-42-5	Styrene	0.40	U Q	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW | Lab Sample ID: 280-116538-1

Matrix: Water | Lab File ID: G1795.D

Analysis Method: 8260B | Date Collected: 11/02/2018 10:45

Sample wt/vol: 20(mL) | Date Analyzed: 11/15/2018 18:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437714 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	98		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1795.D
Lims ID: 280-116538-Q-1
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 15-Nov-2018 18:15:30 ALS Bottle#: 35 Worklist Smp#: 29
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116538-q-1 PH<2
Operator ID: seifertj Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 12:33:14 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: seifertj Date: 16-Nov-2018 12:30:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.458	4.447	0.011	0	71919	250.0	
* 149 1,4-Dioxane-d8	96		4.687				ND	
* 1 Fluorobenzene	96	6.456	6.446	0.010	97	610921	12.5	
* 2 Chlorobenzene-d5	119	9.154	9.144	0.010	92	112183	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.281	11.271	0.010	97	147905	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.876	5.865	0.011	91	169740	9.84	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.171	6.170	0.001	0	128801	10.0	
$ 7 Toluene-d8 (Surr)	98	7.805	7.805	0.000	96	499665	9.83	
$ 8 4-Bromofluorobenzene (Surr	95	10.267	10.256	0.011	86	152645	9.67	
27 Chloromethane	50		3.098				ND	
28 Vinyl chloride	62		3.206				ND	
31 Bromomethane	94		3.521				ND	
32 Chloroethane	64		3.571				ND	
42 Acetone	43		4.161				ND	U
45 1,1-Dichloroethene	96		4.201				ND	
50 Carbon disulfide	76		4.447				ND	
52 Methylene Chloride	84	4.527	4.535	-0.008	95	6165	0.3338	
55 trans-1,2-Dichloroethene	96		4.762				ND	
59 1,1-Dichloroethane	63		5.067				ND	
62 2-Butanone (MEK)	43		5.471				ND	
66 cis-1,2-Dichloroethene	96		5.520				ND	
69 Chlorobromomethane	128		5.717				ND	
70 Chloroform	83		5.737				ND	
73 1,1,1-Trichloroethane	97		5.963				ND	
76 Carbon tetrachloride	117		6.111				ND	
77 1,2-Dichloroethane	62		6.229				ND	
79 Benzene	78		6.259				ND	
81 Trichloroethene	95		6.761				ND	
84 1,2-Dichloropropane	63		6.948				ND	
88 Dichlorobromomethane	83		7.155				ND	
91 cis-1,3-Dichloropropene	75		7.529				ND	
92 4-Methyl-2-pentanone (MIBK	43		7.618				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
93 Toluene	91		7.864				ND	
95 trans-1,3-Dichloropropene	75		7.992				ND	
96 1,1,2-Trichloroethane	97		8.179				ND	
97 2-Hexanone	43		8.356				ND	
99 Tetrachloroethene	164		8.386				ND	
100 Chlorodibromomethane	129		8.582				ND	
102 Ethylene Dibromide	107		8.730				ND	
104 Chlorobenzene	112		9.173				ND	
106 Ethylbenzene	106		9.252				ND	
107 m-Xylene & p-Xylene	106		9.351				ND	
109 Styrene	104		9.754				ND	
108 o-Xylene	106		9.754				ND	
110 Bromoform	173		9.961				ND	
114 1,1,2,2-Tetrachloroethane	83		10.335				ND	
117 Bromobenzene	156		10.434				ND	
S 141 Xylenes, Total	106		0.000				ND	
S 140 1,2-Dichloroethene, Total	1		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

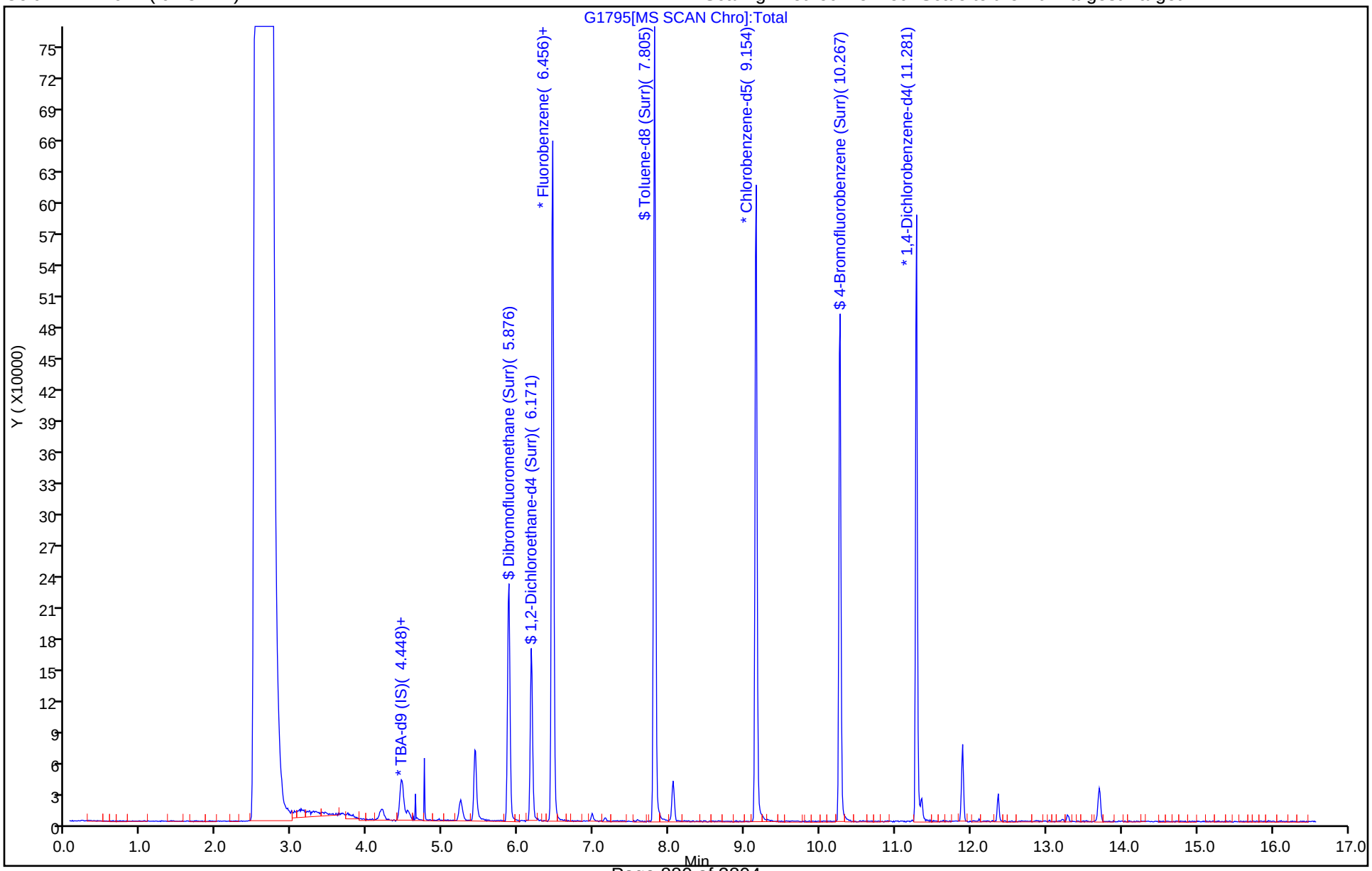
Report Date: 16-Nov-2018 12:34:34 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1795.D

Injection Date:	15-Nov-2018 18:15:30	Instrument ID:	VMS_G	Operator ID:	seifertj
Lims ID:	280-116538-Q-1	Lab Sample ID:	280-116538-1	Worklist Smp#:	29
Client ID:	SCLmw-001-181001-GW				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1795.D
Lims ID: 280-116538-Q-1
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 15-Nov-2018 18:15:30 ALS Bottle#: 35 Worklist Smp#: 29
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116538-q-1 PH<2
Operator ID: seifertj Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 12:33:14 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: seifertj Date: 16-Nov-2018 12:30:26

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	9.84	98.43
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	10.0	100.12
$ 7 Toluene-d8 (Surr)	10.0	9.83	98.28
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.67	96.69

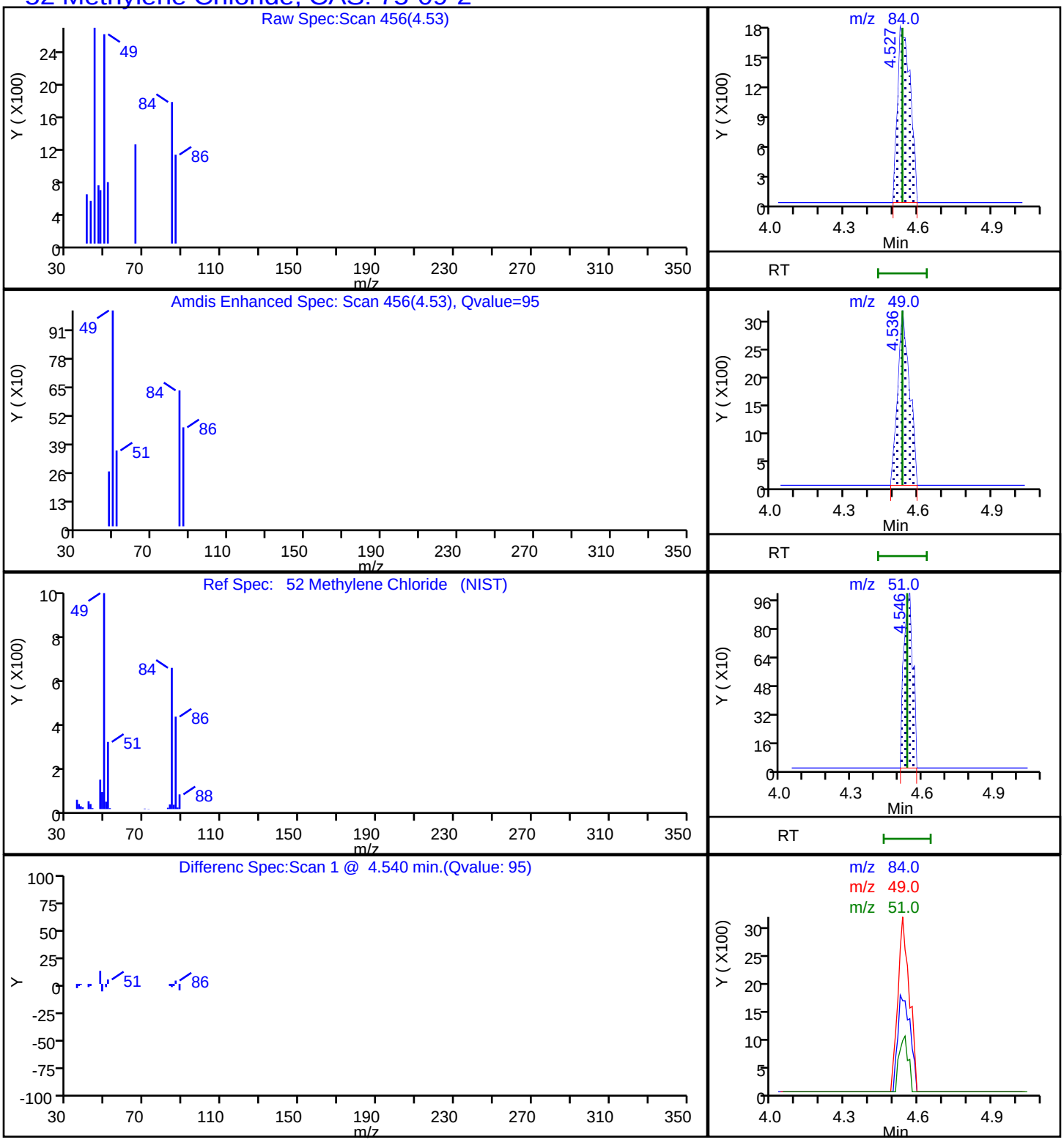
Report Date: 16-Nov-2018 12:34:34 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1795.D

Injection Date:	15-Nov-2018 18:15:30	Instrument ID:	VMS_G
Lims ID:	280-116538-Q-1	Lab Sample ID:	280-116538-1
Client ID:	SCLmw-001-181001-GW		
Operator ID:	seifertj	ALS Bottle#:	35 Worklist Smp#: 29
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (0.25 mm)	Detector	MS SCAN

52 Methylene Chloride, CAS: 75-09-2



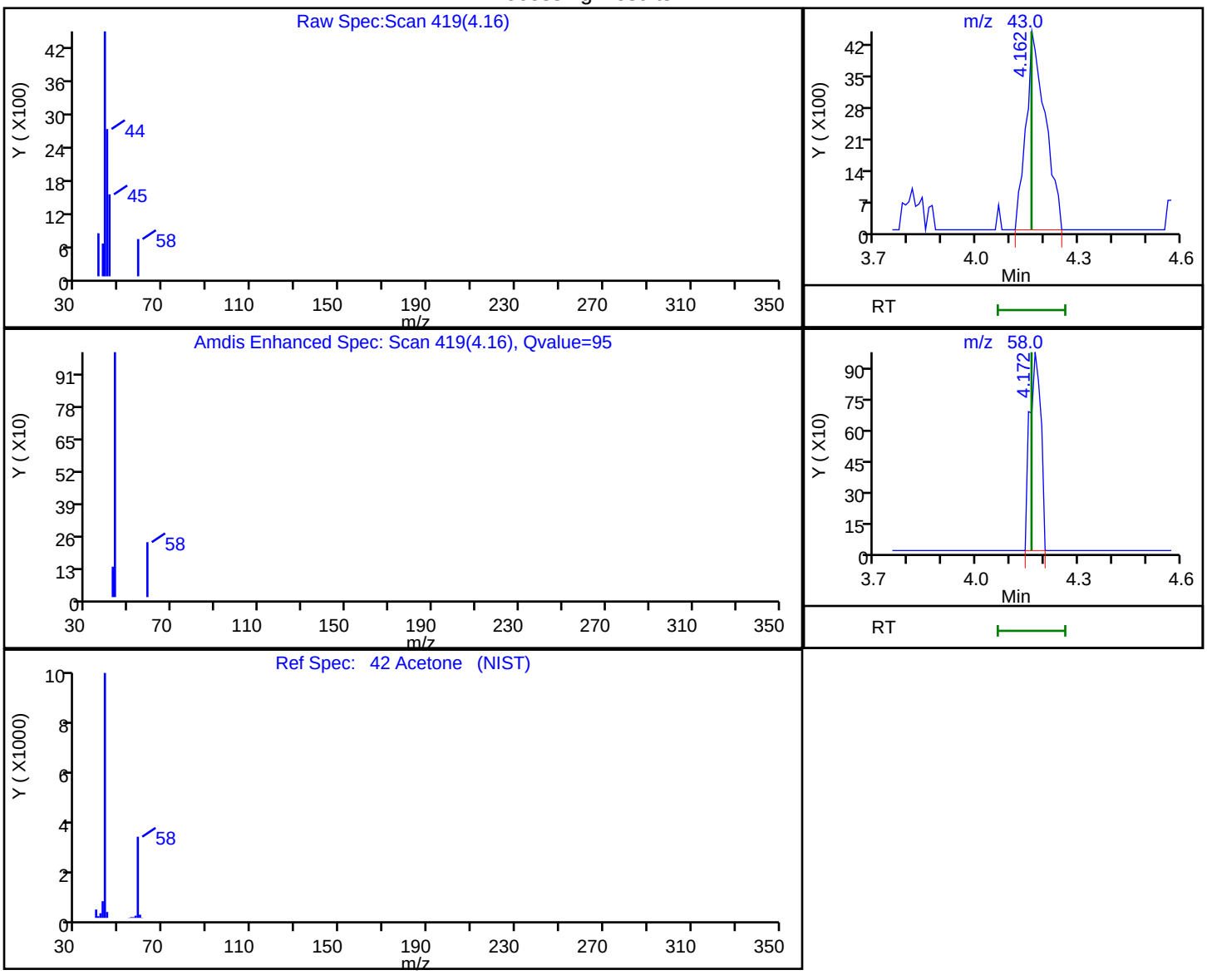
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1795.D				
Injection Date:	15-Nov-2018 18:15:30	Instrument ID:	VMS_G		
Lims ID:	280-116538-Q-1	Lab Sample ID:	280-116538-1		
Client ID:	SCLmw-001-181001-GW				
Operator ID:	seifertj	ALS Bottle#:	35	Worklist Smp#:	29
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

42 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
4.16	43.00	17569	6.226424
4.17	58.00	2236	

Reviewer: seifertj, 16-Nov-2018 12:30:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-003-181001-GW | Lab Sample ID: 280-116538-2

Matrix: Water | Lab File ID: G1796.D

Analysis Method: 8260B | Date Collected: 11/02/2018 11:10

Sample wt/vol: 20(mL) | Date Analyzed: 11/15/2018 18:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437714 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U M	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.85	J	5.0	0.80	0.32
100-42-5	Styrene	0.40	U Q	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-003-181001-GW | Lab Sample ID: 280-116538-2

Matrix: Water | Lab File ID: G1796.D

Analysis Method: 8260B | Date Collected: 11/02/2018 11:10

Sample wt/vol: 20(mL) | Date Analyzed: 11/15/2018 18:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437714 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		81-118
460-00-4	4-Bromofluorobenzene (Surr)	107		85-114
1868-53-7	Dibromofluoromethane (Surr)	102		80-119
2037-26-5	Toluene-d8 (Surr)	101		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1796.D
Lims ID: 280-116538-P-2
Client ID: SCLmw-003-181001-GW
Sample Type: Client
Inject. Date: 15-Nov-2018 18:35:30 ALS Bottle#: 36 Worklist Smp#: 30
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116538-p-2 PH<2
Operator ID: seifertj Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 12:33:14 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: seifertj Date: 16-Nov-2018 12:30:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.447	4.447	0.000	0	66527	250.0	
* 149 1,4-Dioxane-d8	96		4.687				ND	
* 1 Fluorobenzene	96	6.456	6.446	0.010	97	596256	12.5	
* 2 Chlorobenzene-d5	119	9.154	9.144	0.010	91	109653	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.281	11.271	0.010	97	144152	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.875	5.865	0.010	91	171648	10.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.171	6.170	0.001	0	128871	10.3	
$ 7 Toluene-d8 (Surr)	98	7.805	7.805	0.000	96	499516	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.257	10.256	0.001	85	164008	10.7	
27 Chloromethane	50		3.098				ND	
28 Vinyl chloride	62		3.206				ND	
31 Bromomethane	94		3.521				ND	
32 Chloroethane	64		3.571				ND	
42 Acetone	43		4.161				ND	U
45 1,1-Dichloroethene	96		4.201				ND	
50 Carbon disulfide	76		4.447				ND	
52 Methylene Chloride	84	4.536	4.535	0.001	94	15400	0.8543	
55 trans-1,2-Dichloroethene	96		4.762				ND	
59 1,1-Dichloroethane	63		5.067				ND	
62 2-Butanone (MEK)	43		5.471				ND	
66 cis-1,2-Dichloroethene	96		5.520				ND	
69 Chlorobromomethane	128		5.717				ND	
70 Chloroform	83		5.737				ND	
73 1,1,1-Trichloroethane	97		5.963				ND	
76 Carbon tetrachloride	117		6.111				ND	
77 1,2-Dichloroethane	62		6.229				ND	
79 Benzene	78		6.259				ND	
81 Trichloroethene	95		6.761				ND	
84 1,2-Dichloropropane	63		6.948				ND	
88 Dichlorobromomethane	83		7.155				ND	
91 cis-1,3-Dichloropropene	75		7.529				ND	
92 4-Methyl-2-pentanone (MIBK	43		7.618				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
93 Toluene	91		7.864				ND	
95 trans-1,3-Dichloropropene	75		7.992				ND	
96 1,1,2-Trichloroethane	97		8.179				ND	
97 2-Hexanone	43		8.356				ND	
99 Tetrachloroethene	164		8.386				ND	
100 Chlorodibromomethane	129		8.582				ND	
102 Ethylene Dibromide	107		8.730				ND	
104 Chlorobenzene	112		9.173				ND	
106 Ethylbenzene	106		9.252				ND	
107 m-Xylene & p-Xylene	106		9.351				ND	
109 Styrene	104		9.754				ND	
108 o-Xylene	106		9.754				ND	
110 Bromoform	173		9.961				ND	
114 1,1,2,2-Tetrachloroethane	83		10.335				ND	
117 Bromobenzene	156		10.434				ND	
S 141 Xylenes, Total	106		0.000				ND	
S 140 1,2-Dichloroethene, Total	1		0.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

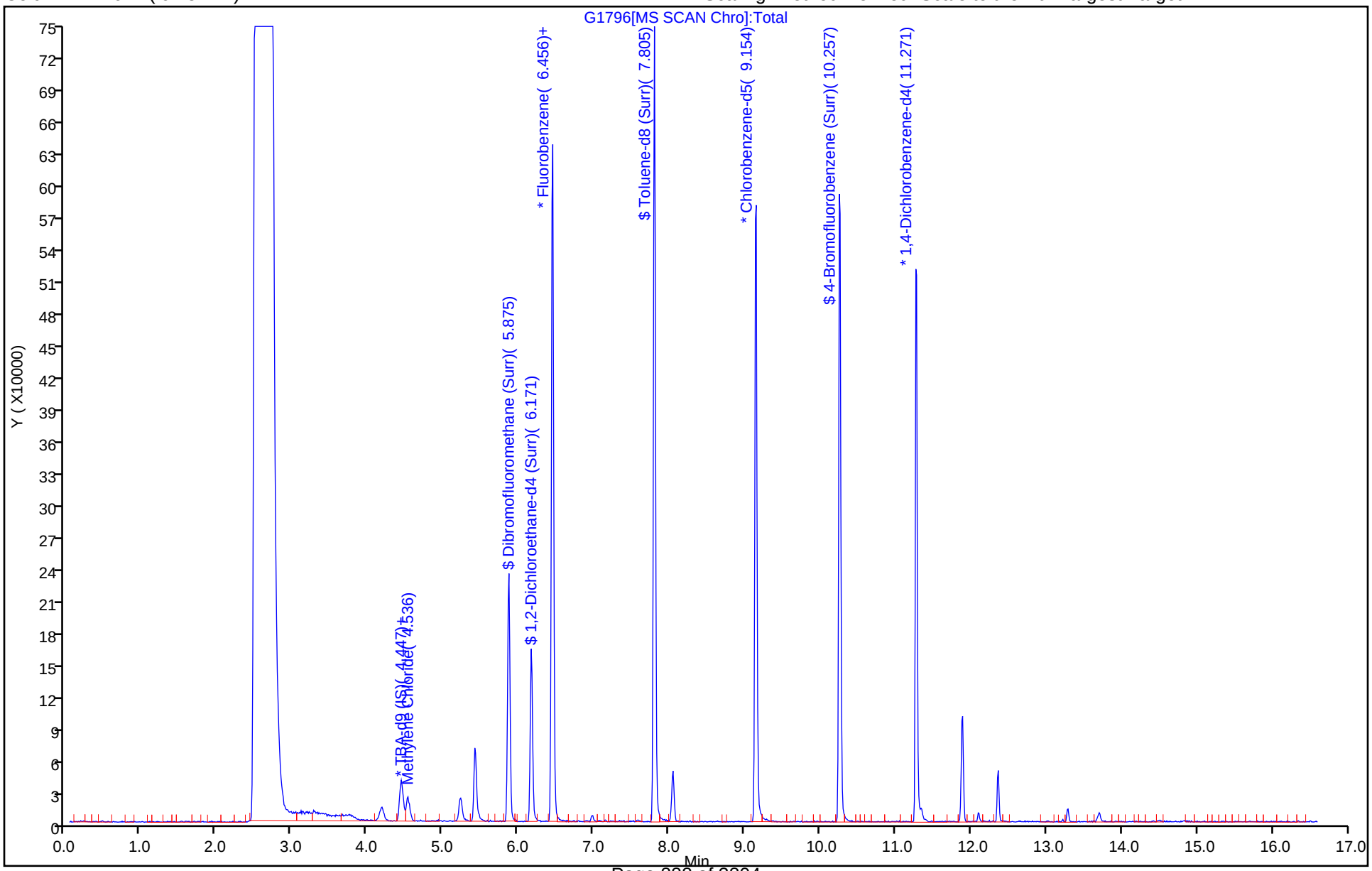
Report Date: 16-Nov-2018 12:34:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1796.D

Injection Date:	15-Nov-2018 18:35:30	Instrument ID:	VMS_G	Operator ID:	seifertj
Lims ID:	280-116538-P-2	Lab Sample ID:	280-116538-2	Worklist Smp#:	30
Client ID:	SCLmw-003-181001-GW				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1796.D				
Lims ID:	280-116538-P-2				
Client ID:	SCLmw-003-181001-GW				
Sample Type:	Client				
Inject. Date:	15-Nov-2018 18:35:30	ALS Bottle#:	36	Worklist Smp#:	30
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116538-p-2 PH<2				
Operator ID:	seifertj	Instrument ID:	VMS_G		
Method:	\\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	16-Nov-2018 12:33:14	Calib Date:	29-Oct-2018 22:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0327				

First Level Reviewer: seifertj Date: 16-Nov-2018 12:30:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	10.2	101.99
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	102.64
$ 7 Toluene-d8 (Surr)	10.0	10.1	100.52
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.7	106.59

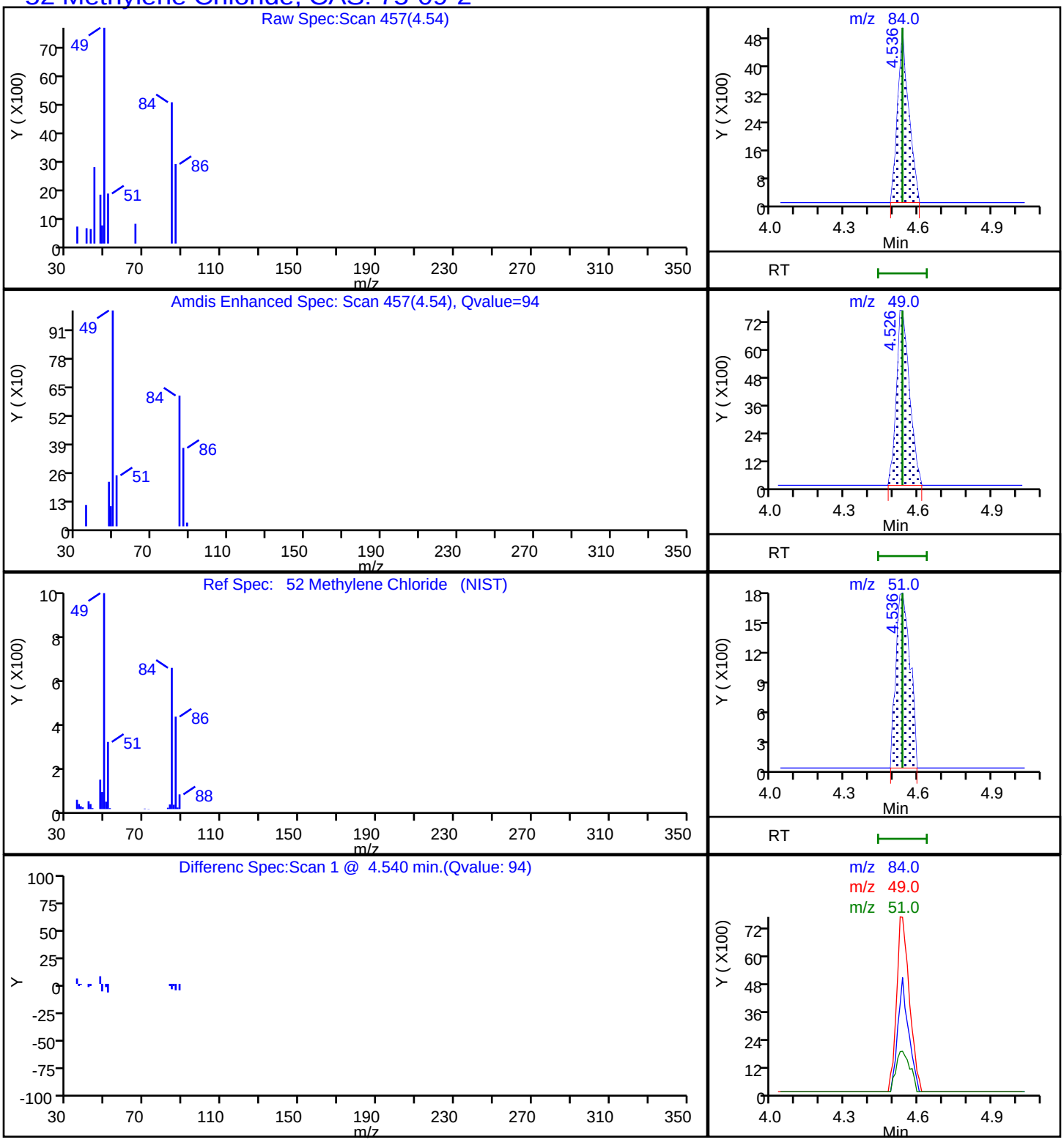
Report Date: 16-Nov-2018 12:34:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1796.D

Injection Date:	15-Nov-2018 18:35:30	Instrument ID:	VMS_G
Lims ID:	280-116538-P-2	Lab Sample ID:	280-116538-2
Client ID:	SCLmw-003-181001-GW		
Operator ID:	seifertj	ALS Bottle#:	36 Worklist Smp#: 30
Purge Vol:	20.000 mL	Dil. Factor:	1.0000
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid
Column:	DB-624 (0.25 mm)	Detector	MS SCAN

52 Methylene Chloride, CAS: 75-09-2



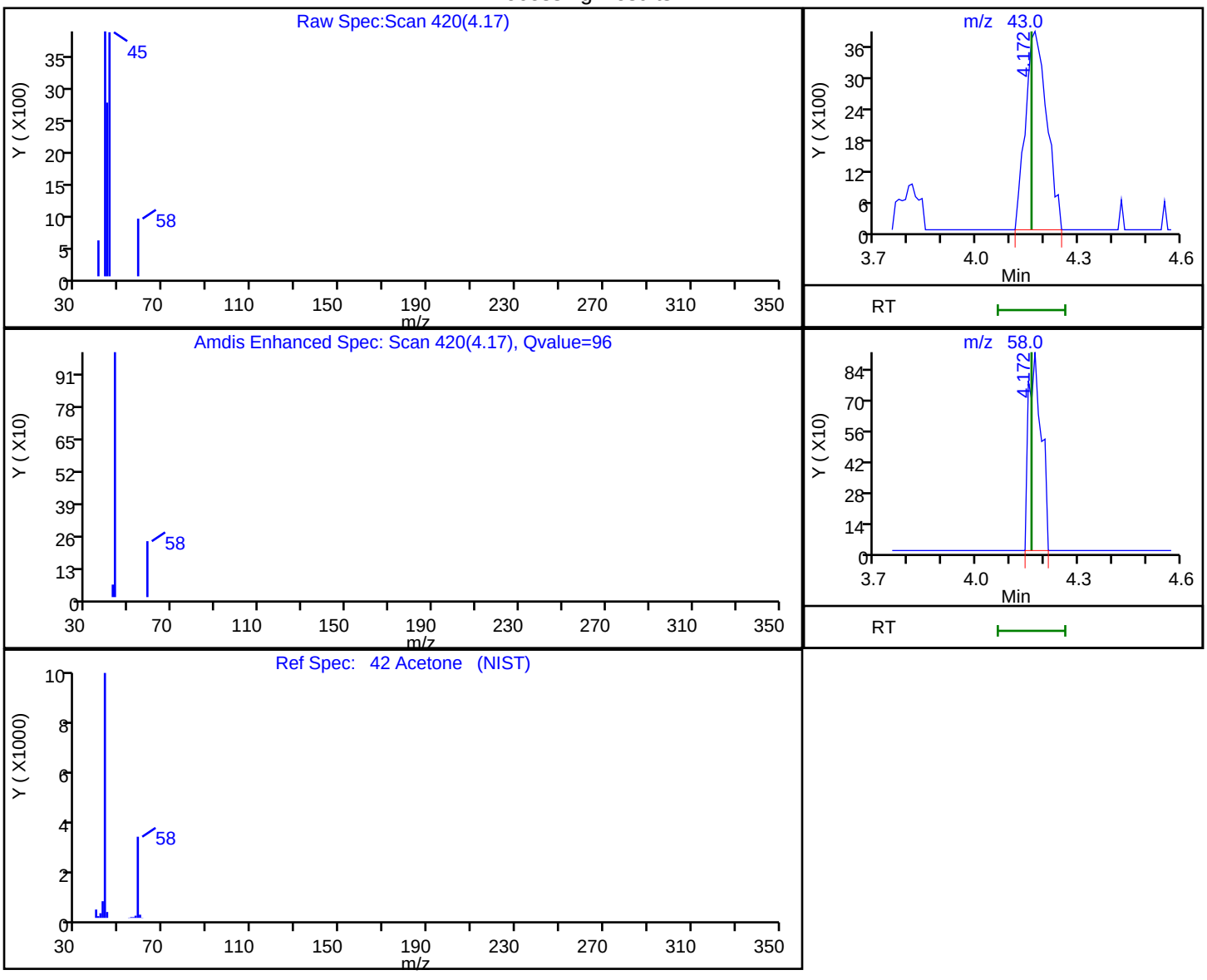
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1796.D				
Injection Date:	15-Nov-2018 18:35:30	Instrument ID:	VMS_G		
Lims ID:	280-116538-P-2	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	seifertj	ALS Bottle#:	36	Worklist Smp#:	30
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

42 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
4.17	43.00	17013	6.163592
4.17	58.00	2385	

Reviewer: seifertj, 16-Nov-2018 12:30:37

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: FWGTB-181014-TB | Lab Sample ID: 280-116538-3

Matrix: Water | Lab File ID: G1797.D

Analysis Method: 8260B | Date Collected: 11/02/2018 10:45

Sample wt/vol: 20(mL) | Date Analyzed: 11/15/2018 18:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437714 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.80	U	5.0	0.80	0.32
100-42-5	Styrene	0.40	U Q	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: FWGTB-181014-TB | Lab Sample ID: 280-116538-3

Matrix: Water | Lab File ID: G1797.D

Analysis Method: 8260B | Date Collected: 11/02/2018 10:45

Sample wt/vol: 20(mL) | Date Analyzed: 11/15/2018 18:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437714 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		81-118
460-00-4	4-Bromofluorobenzene (Surr)	102		85-114
1868-53-7	Dibromofluoromethane (Surr)	96		80-119
2037-26-5	Toluene-d8 (Surr)	97		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1797.D
Lims ID: 280-116538-A-3
Client ID: FWGTB-181014-TB
Sample Type: Client
Inject. Date: 15-Nov-2018 18:56:30 ALS Bottle#: 37 Worklist Smp#: 31
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: 280-116538-a-3 PH<2
Operator ID: seifertj Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 12:33:14 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0327

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.457	4.447	0.010	0	66157	250.0	
* 149 1,4-Dioxane-d8	96		4.687				ND	
* 1 Fluorobenzene	96	6.456	6.446	0.010	96	529147	12.5	
* 2 Chlorobenzene-d5	119	9.154	9.144	0.010	91	110150	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.281	11.271	0.010	97	142458	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.875	5.865	0.010	91	143869	9.63	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.170	6.170	0.000	0	118124	10.6	
$ 7 Toluene-d8 (Surr)	98	7.805	7.805	0.000	96	485995	9.74	
$ 8 4-Bromofluorobenzene (Surr	95	10.257	10.256	0.001	84	154846	10.2	
27 Chloromethane	50		3.098				ND	
28 Vinyl chloride	62		3.206				ND	
31 Bromomethane	94		3.521				ND	
32 Chloroethane	64		3.571				ND	
42 Acetone	43		4.161				ND	
45 1,1-Dichloroethene	96		4.201				ND	
50 Carbon disulfide	76		4.447				ND	
52 Methylene Chloride	84		4.535				ND	
55 trans-1,2-Dichloroethene	96		4.762				ND	
59 1,1-Dichloroethane	63		5.067				ND	
62 2-Butanone (MEK)	43		5.471				ND	
66 cis-1,2-Dichloroethene	96		5.520				ND	
69 Chlorobromomethane	128		5.717				ND	
70 Chloroform	83		5.737				ND	
73 1,1,1-Trichloroethane	97		5.963				ND	
76 Carbon tetrachloride	117		6.111				ND	
77 1,2-Dichloroethane	62		6.229				ND	
79 Benzene	78		6.259				ND	
81 Trichloroethene	95		6.761				ND	
84 1,2-Dichloropropane	63		6.948				ND	
88 Dichlorobromomethane	83		7.155				ND	
91 cis-1,3-Dichloropropene	75		7.529				ND	
92 4-Methyl-2-pentanone (MIBK	43		7.618				ND	
93 Toluene	91		7.864				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
95 trans-1,3-Dichloropropene	75		7.992				ND	
96 1,1,2-Trichloroethane	97		8.179				ND	
97 2-Hexanone	43		8.356				ND	
99 Tetrachloroethene	164		8.386				ND	
100 Chlorodibromomethane	129		8.582				ND	
102 Ethylene Dibromide	107		8.730				ND	
104 Chlorobenzene	112		9.173				ND	
106 Ethylbenzene	106		9.252				ND	
107 m-Xylene & p-Xylene	106		9.351				ND	
109 Styrene	104		9.754				ND	
108 o-Xylene	106		9.754				ND	
110 Bromoform	173		9.961				ND	
114 1,1,2,2-Tetrachloroethane	83		10.335				ND	
117 Bromobenzene	156		10.434				ND	
S 141 Xylenes, Total	106		0.000				ND	
S 140 1,2-Dichloroethene, Total	1		0.000				ND	

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

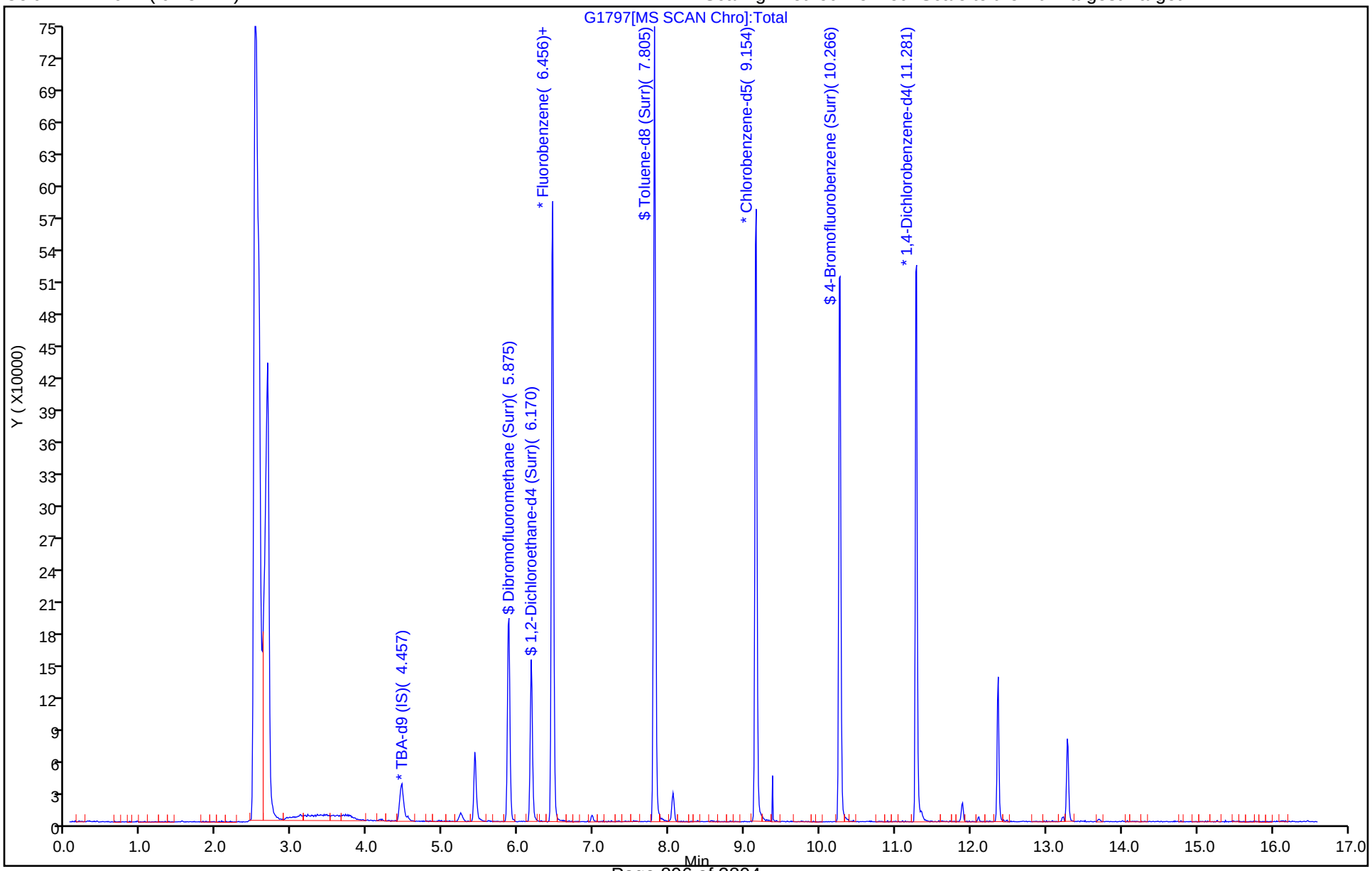
Report Date: 16-Nov-2018 12:34:37 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1797.D

Injection Date:	15-Nov-2018 18:56:30	Instrument ID:	VMS_G	Operator ID:	seifertj
Lims ID:	280-116538-A-3	Lab Sample ID:	280-116538-3	Worklist Smp#:	31
Client ID:	FWGTB-181014-TB				
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1797.D				
Lims ID:	280-116538-A-3				
Client ID:	FWGTB-181014-TB				
Sample Type:	Client				
Inject. Date:	15-Nov-2018 18:56:30	ALS Bottle#:	37	Worklist Smp#:	31
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Sample Info:	280-116538-a-3 PH<2				
Operator ID:	seifertj	Instrument ID:	VMS_G		
Method:	\\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	16-Nov-2018 12:33:14	Calib Date:	29-Oct-2018 22:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0327				

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	9.63	96.32
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	10.6	106.01
$ 7 Toluene-d8 (Surr)	10.0	9.74	97.36
$ 8 4-Bromofluorobenzene (Surr)	10.0	10.2	101.83

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 435406

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 20:00 Calibration End Date: 10/29/2018 22:02 Calibration ID: 34172

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-435406/10	G0942.D
Level 2	STD01 280-435406/11	G0943.D
Level 3	STD02 280-435406/12	G0944.D
Level 4	STD05 280-435406/13	G0945.D
Level 5	ICIS 280-435406/14	G0946.D
Level 6	STD25 280-435406/15	G0947.D
Level 7	STD60 280-435406/16	G0948.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.5189 0.5625	0.5192 0.5472	0.4952	0.4596	0.5696	Ave		0.5246				7.4		15.0			
Chloromethane	0.5888 0.6094	0.6399 0.5838	0.5904	0.5747	0.6225	Ave		0.6014			0.1000	3.9		15.0			
Vinyl chloride	0.4750 0.4885	0.5013 0.4370	0.4768	0.4392	0.5053	Ave		0.4747				5.8		30.0			
Bromomethane	0.3729 0.3122	0.3563 0.2744	0.3236	0.2990	0.3253	Ave		0.3234				10.3		15.0			
Chloroethane	0.2305 0.2311	0.2431 0.2008	0.2290	0.2234	0.2376	Ave		0.2279				5.9		15.0			
Dichlorofluoromethane	0.6257 0.6600	0.6778 0.6050	0.5995	0.6360	0.6764	Ave		0.6401				5.0		15.0			
Trichlorofluoromethane	0.6367 0.6171	0.6476 0.5651	0.5953	0.5753	0.6286	Ave		0.6094				5.2		15.0			
Ethyl ether	0.1418 0.1750	0.1651 0.1603	0.1673	0.1533	0.1747	Ave		0.1625				7.3		15.0			
Acrolein	0.0186 0.0214	0.0211 0.0208	0.0195	0.0192	0.0199	Ave		0.0201				5.3		15.0			
Acetone	0.0842 0.0457	0.0664 0.0444	0.0560	0.0459	0.0486	Lin2	0.0806	0.0448							0.9980		0.9900
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 0.2905	0.3023 0.2769	0.2823	0.2636	0.2957	Ave		0.2852				4.9		15.0			
1,1-Dichloroethene	0.3779 0.3918	0.3808 0.3734	0.3687	0.3509	0.3892	Ave		0.3761				3.7		30.0			
Iodomethane	0.7508 0.7539	0.7574 0.7380	0.7263	0.7241	0.7545	Ave		0.7436				1.9		15.0			
Methyl acetate	+++++ 0.1095	0.1496 0.1094	0.1253	0.1157	0.1137	Lin1	0.0769	0.1086							1.0000		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 435406

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 20:00 Calibration End Date: 10/29/2018 22:02 Calibration ID: 34172

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
3-Chloro-1-propene	0.9487 0.9719	1.0151 0.9400	0.9476	0.9354	0.9646	Ave		0.9605				2.8		15.0			
Carbon disulfide	1.9670 2.0290	2.0038 1.9601	1.9131	1.9000	2.0038	Ave		1.9681				2.5		15.0			
t-Butyl alcohol	+++++ 1.5451	1.6792 1.4999	1.5058	1.4900	1.5641	Ave		1.5473				4.6		15.0			
Methylene Chloride	0.4037 0.3674	0.4193 0.3519	0.3839	0.3581	0.3610	Ave		0.3779				6.7		15.0			
Acrylonitrile	0.0429 0.0480	0.0442 0.0472	0.0455	0.0449	0.0464	Ave		0.0456				3.9		15.0			
Methyl tert-butyl ether	0.3850 0.4352	0.4041 0.4239	0.3898	0.4070	0.4199	Ave		0.4093				4.5		15.0			
trans-1,2-Dichloroethene	0.3565 0.4106	0.4090 0.3978	0.4014	0.4010	0.4136	Ave		0.3985				4.9		15.0			
Hexane	4.0789 3.9976	3.6871 3.8895	3.9642	3.8993	4.0564	Ave		3.9390				3.4		15.0			
Vinyl acetate	+++++ 0.4795	0.4223 0.4570	0.4119	0.4300	0.4376	Ave		0.4397				5.6		15.0			
1,1-Dichloroethane	0.8127 0.8110	0.8048 0.7949	0.7907	0.7729	0.7997	Ave		0.7981			0.1000	1.7		15.0			
2-Butanone (MEK)	+++++ 0.0640	0.0651 0.0661	0.0648	0.0631	0.0612	Ave		0.0640				2.7		15.0			
cis-1,2-Dichloroethene	0.3613 0.3949	0.3931 0.3874	0.3890	0.3841	0.3957	Ave		0.3865				3.1		15.0			
sec-Butyl Alcohol	+++++ 1.5162	1.4273 1.5573	1.3963	1.4382	1.4982	Ave		1.4723				4.2		15.0			
2,2-Dichloropropane	0.5618 0.5552	0.6053 0.5382	0.5674	0.5404	0.5568	Ave		0.5607				4.0		15.0			
Bromochloromethane	0.1129 0.1377	0.1302 0.1342	0.1308	0.1312	0.1359	Ave		0.1304				6.3		15.0			
Chloroform	0.6580 0.6858	0.6807 0.6567	0.6568	0.6553	0.6726	Ave		0.6665				1.9		30.0			
Tetrahydrofuran	+++++ 0.0394	0.0270 0.0377	0.0329	0.0372	0.0365	Ave		0.0351				12.9		15.0			
1,1,1-Trichloroethane	0.5890 0.5959	0.5895 0.5773	0.5773	0.5690	0.5831	Ave		0.5830				1.6		15.0			
Isobutyl alcohol	+++++ 0.6838	0.5992 0.5988	0.5969	0.6091	0.6633	Ave		0.6252				6.1		15.0			
Cyclohexane	0.8621 0.9007	0.8733 0.8537	0.8756	0.8558	0.8993	Ave		0.8743				2.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 435406

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 20:00 Calibration End Date: 10/29/2018 22:02 Calibration ID: 34172

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.5834 0.6325	0.5923 0.5969	0.6097	0.6086	0.6312	Ave		0.6078				3.1		15.0			
Carbon tetrachloride	0.5151 0.5305	0.4840 0.5097	0.5123	0.5075	0.5273	Ave		0.5123				3.0		15.0			
1,2-Dichloroethane	0.2843 0.3317	0.3087 0.3187	0.3069	0.3135	0.3251	Ave		0.3127				4.9		15.0			
Benzene	1.4807 1.5009	1.4874 1.4490	1.4091	1.4512	1.5130	Ave		1.4702				2.4		15.0			
Trichloroethene	0.3979 0.4146	0.3886 0.4019	0.3883	0.3871	0.4141	Ave		0.3989				3.0		15.0			
2-Pentanone	+++++ 0.1027	0.0820 0.1044	0.0841	0.0891	0.0976	Lin1	-0.138	0.1040							0.9990		0.9900
1,2-Dichloropropane	0.3529 0.3844	0.3633 0.3651	0.3763	0.3702	0.3765	Ave		0.3698				2.8		30.0			
Methylcyclohexane	0.7241 0.7442	0.7188 0.7071	0.7073	0.7136	0.7333	Ave		0.7212				1.9		15.0			
1,4-Dioxane	+++++ 0.0010	0.0002 0.0009	0.0007	0.0008	0.0010	Lin2	-0.014	0.0010							0.9960		0.9900
Dibromomethane	0.1329 0.1508	0.1440 0.1493	0.1403	0.1482	0.1482	Ave		0.1448				4.4		15.0			
Bromodichloromethane	0.3738 0.4272	0.3773 0.4214	0.3812	0.3922	0.4208	Ave		0.3991				5.8		15.0			
2-Chloroethyl vinyl ether	+++++ 0.0367	+++++ 0.0438	0.0234	0.0267	0.0300	Lin1	-0.060	0.0424							0.9900		0.9900
cis-1,3-Dichloropropene	1.8622 2.3339	1.8839 2.3351	1.9593	2.1446	2.2649	Ave		2.1120				9.9		15.0			
4-Methyl-2-pentanone (MIBK)	0.1213 0.1495	0.1219 0.1472	0.1272	0.1332	0.1437	Ave		0.1349				8.9		15.0			
Toluene	1.2786 1.3779	1.2811 1.3189	1.3065	1.3487	1.3737	Ave		1.3265				3.1		30.0			
trans-1,3-Dichloropropene	0.2533 0.3220	0.2580 0.3183	0.2698	0.2755	0.3069	Ave		0.2863				10.1		15.0			
Ethyl methacrylate	0.4660 0.9185	0.5867 0.9490	0.7219	0.7797	0.8556	Lin2	-0.231	0.8812							0.9940		0.9900
1,1,2-Trichloroethane	0.1401 0.1599	0.1383 0.1540	0.1414	0.1578	0.1553	Ave		0.1495				6.2		15.0			
1,3-Dichloropropane	1.4192 1.5208	1.3715 1.4715	1.3911	1.4899	1.5239	Ave		1.4554				4.2		15.0			
2-Hexanone	0.3254 0.5031	0.3738 0.4935	0.3912	0.4342	0.4787	Lin2	-0.339	0.4753							0.9950		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 435406

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 20:00 Calibration End Date: 10/29/2018 22:02 Calibration ID: 34172

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Tetrachloroethene	1.4976 1.5095	1.5202 1.4330	1.5056	1.4664	1.5494	Ave		1.4974				2.5		15.0			
Dibromochloromethane	0.9864 1.1681	0.9524 1.1721	1.0615	1.1027	1.1445	Ave		1.0840				8.1		15.0			
1,2-Dibromoethane	0.6891 0.8364	0.7473 0.8343	0.7752	0.7967	0.8293	Ave		0.7869				6.9		15.0			
1-Chlorohexane	2.3593 2.9504	2.7062 2.8419	2.6346	2.8252	2.9842	Ave		2.7574				7.8		15.0			
Chlorobenzene	3.9407 3.8647	4.0467 3.8066	3.9130	3.9543	3.9936	Ave		3.9314			0.3000	2.0		15.0			
1,1,1,2-Tetrachloroethane	1.2671 1.3181	1.2651 1.2598	1.2568	1.3243	1.3266	Ave		1.2882				2.5		15.0			
Ethylbenzene	2.0875 2.1677	2.1304 2.0365	2.1503	2.2333	2.2757	Ave		2.1545				3.8		30.0			
m-Xylene & p-Xylene	2.3726 2.6577	2.4547 2.5717	2.6025	2.6759	2.6831	Ave		2.5740				4.6		15.0			
o-Xylene	2.2164 2.3891	2.3824 2.2270	2.3043	2.4464	2.4786	Ave		2.3492				4.4		15.0			
Styrene	2.7094 3.7180	2.9364 3.5348	3.1880	3.5682	3.7747	Ave		3.3470				12.2		15.0			
Bromoform	+++++ 0.5482	0.4279 0.5720	0.4756	0.5188	0.5334	Ave		0.5127			0.1000	10.3		15.0			
Isopropylbenzene	4.6666 5.2903	4.6513 5.2202	4.9619	5.0422	5.1400	Ave		4.9961				5.1		15.0			
Cyclohexanone	0.0327 0.0422	0.0341 0.0422	0.0364	0.0372	0.0409	Ave		0.0380				10.2		15.0			
1,1,2,2-Tetrachloroethane	0.6462 0.6719	0.6564 0.6758	0.6508	0.6784	0.6552	Ave		0.6621			0.3000	2.0		15.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1579	0.0953 0.1675	0.1114	0.1253	0.1400	Lin2	-0.065	0.1532							0.9910		0.9900
1,2,3-Trichloropropane	+++++ 0.1245	0.1201 0.1278	0.1018	0.1184	0.1212	Ave		0.1190				7.6		15.0			
Bromobenzene	0.9172 1.0661	0.9754 1.0618	0.9767	1.0064	1.0472	Ave		1.0073				5.5		15.0			
N-Propylbenzene	1.0345 1.3111	1.1363 1.2884	1.2573	1.2808	1.2997	Ave		1.2297				8.5		15.0			
2-Chlorotoluene	1.1233 1.1395	1.0608 1.0974	1.1147	1.1145	1.1508	Ave		1.1145				2.6		15.0			
1,3,5-Trimethylbenzene	3.8464 4.1479	3.9518 3.8947	4.0597	4.1351	4.2088	Ave		4.0349				3.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 435406

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 20:00 Calibration End Date: 10/29/2018 22:02 Calibration ID: 34172

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
4-Chlorotoluene	1.0407 1.1107	1.0366 1.0883	1.0971	1.1228	1.1243	Ave		1.0886				3.4		15.0			
tert-Butylbenzene	3.1405 3.8819	3.7070 3.8147	3.7318	3.8757	3.9060	Ave		3.7225				7.2		15.0			
1,2,4-Trimethylbenzene	3.6075 4.0728	3.8989 4.0072	3.8982	3.9746	4.0724	Ave		3.9331				4.1		15.0			
sec-Butylbenzene	0.8604 0.9757	0.9104 0.9448	0.9351	0.9408	0.9725	Ave		0.9342				4.2		15.0			
4-Isopropyltoluene	4.0900 4.4718	4.3049 4.2702	4.3609	4.4617	4.5942	Ave		4.3648				3.8		15.0			
1,3-Dichlorobenzene	2.1650 2.0782	2.1176 2.0042	2.0415	2.0932	2.1108	Ave		2.0872				2.5		15.0			
1,4-Dichlorobenzene	2.1605 2.1419	2.1783 2.0448	2.1821	2.1239	2.0740	Ave		2.1294				2.5		15.0			
n-Butylbenzene	4.9286 5.3336	4.9988 5.3236	5.2043	5.3594	5.3832	Ave		5.2188				3.5		15.0			
1,2-Dichlorobenzene	1.6782 1.7254	1.6298 1.6853	1.6221	1.6933	1.6941	Ave		1.6755				2.2		15.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0791	0.0459 0.0873	0.0516	0.0630	0.0741	Lin1	-0.059	0.0852							0.9960		0.9900
1,2,4-Trichlorobenzene	0.9498 1.1588	0.9642 1.1873	1.0129	1.0936	1.1417	Ave		1.0726				9.0		15.0			
Hexachlorobutadiene	0.9129 0.9254	0.9332 0.9203	0.9315	0.8916	0.9223	Ave		0.9196				1.5		15.0			
Naphthalene	1.0442 1.3915	0.9844 1.4468	1.1304	1.2050	1.3158	Ave		1.2169				14.4		15.0			
1,2,3-Trichlorobenzene	0.9484 0.9106	0.8905 0.9164	0.8722	0.8869	0.8812	Ave		0.9009				2.9		15.0			
Dibromofluoromethane (Surr)	0.3774 0.3638	0.3354 0.3512	0.3468	0.3412	0.3541	Ave		0.3528				4.0		15.0			
1,2-Dichloroethane-d4 (Surr)	+++++ 0.2632	0.2564 0.2563	0.2534	0.2703	0.2797	Ave		0.2632				3.9		15.0			
Toluene-d8 (Surr)	5.6460 5.6977	5.6579 5.5776	5.6019	5.5568	5.9156	Ave		5.6648				2.1		15.0			
4-Bromofluorobenzene (Surr)	1.3508 1.3344	1.3231 1.3500	1.3220	1.3191	1.3403	Ave		1.3342				1.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 435406

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 20:00 Calibration End Date: 10/29/2018 22:02 Calibration ID: 34172

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD005 280-435406/10	G0942.D
Level 2	STD01 280-435406/11	G0943.D
Level 3	STD02 280-435406/12	G0944.D
Level 4	STD05 280-435406/13	G0945.D
Level 5	ICIS 280-435406/14	G0946.D
Level 6	STD25 280-435406/15	G0947.D
Level 7	STD60 280-435406/16	G0948.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	17294 944100	33055 2201431	63354	139187	362413	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloromethane	FB	Ave	19624 1022833	40738 2348854	75526	174028	396078	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl chloride	FB	Ave	15830 819874	31913 1758215	60990	133003	321542	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromomethane	FB	Ave	12427 524053	22682 1103895	41400	90558	206962	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroethane	FB	Ave	7683 387921	15475 807775	29301	67663	151203	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dichlorofluoromethane	FB	Ave	20852 1107704	43148 2434070	76698	192583	430409	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichlorofluoromethane	FB	Ave	21218 1035659	41228 2273426	76155	174225	400011	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl ether	FB	Ave	4724 293713	10512 644914	21405	46427	111153	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrolein	FB	Ave	6198 359580	13433 837071	24982	58037	126350	5.00 250	10.0 600	20.0	50.0	100
Acetone	FB	Lin2	11230 306683	16919 714004	28654	55651	123625	2.00 100	4.00 240	8.00	20.0	40.0
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	+++++ 487591	19246 1113937	36118	79815	188177	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloroethene	FB	Ave	12594 657521	24242 1502214	47165	106249	247671	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Iodomethane	FB	Ave	25020 1265293	48220 2969268	92918	219276	480128	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methyl acetate	FB	Lin1	+++++ 367452	19046 880480	32047	70047	144708	+++++ 50.0	2.00 120	4.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	31616 1631204	64625 3781854	121229	283250	613782	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 435406

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 20:00 Calibration End Date: 10/29/2018 22:02 Calibration ID: 34172

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Carbon disulfide	FB	Ave	65551 3405354	127567 7885623	244744	575368	1275023	0.500 25.0	1.00 60.0	2.00	5.00	10.0
t-Butyl alcohol	TBAd9	Ave	+++++ 166690	6594 389448	11747	28566	61733	+++++ 250	10.0 600	20.0	50.0	100
Methylene Chloride	FB	Ave	13454 616554	26696 1415583	49114	108438	229711	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Acrylonitrile	FB	Ave	14310 806080	28139 1900539	58190	135971	295451	5.00 250	10.0 600	20.0	50.0	100
Methyl tert-butyl ether	FB	Ave	12831 730417	25725 1705233	49863	123239	267198	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,2-Dichloroethene	FB	Ave	11880 689108	26037 1600365	51347	121426	263182	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexane	CBNZ d5	Ave	24878 1310692	44540 2999386	94698	220907	487229	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Vinyl acetate	FB	Ave	+++++ 1609362	53771 3677378	105388	260435	556939	+++++ 50.0	2.00 120	4.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	27083 1361105	51238 3197979	101149	234058	508858	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Butanone (MEK)	FB	Ave	+++++ 429872	16567 1063889	33162	76420	155653	+++++ 100	4.00 240	8.00	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	12040 662740	25025 1558561	49758	116313	251772	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butyl Alcohol	TBAd9	Ave	+++++ 490737	16814 1213043	32680	82723	177391	+++++ 750	30.0 1800	60.0	150	300
2,2-Dichloropropane	FB	Ave	18724 931857	38536 2165163	72588	163633	354297	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromochloromethane	FB	Ave	3762 231122	8288 540017	16732	39720	86484	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chloroform	FB	Ave	21927 1150975	43332 2642141	84022	198447	427971	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Tetrahydrofuran	FB	Ave	+++++ 132248	3432 303191	8426	22524	46435	+++++ 50.0	2.00 120	4.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	19630 1000044	37528 2322546	73856	172322	371046	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Isobutyl alcohol	TBAd9	Ave	+++++ 184437	5882 388705	11641	29194	65444	+++++ 625	25.0 1500	50.0	125	250
Cyclohexane	FB	Ave	28729 1511678	55593 3434488	112012	259166	572213	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1-Dichloropropene	FB	Ave	19444 1061606	37708 2401475	78001	184304	401626	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Carbon tetrachloride	FB	Ave	17166 890309	30811 2050744	65538	153675	335539	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 435406

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 20:00 Calibration End Date: 10/29/2018 22:02 Calibration ID: 34172

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,2-Dichloroethane	FB	Ave	9475 556741	19655 1282258	39267	94931	206859	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Benzene	FB	Ave	49346 2518964	94692 5829470	180268	439450	962759	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Trichloroethene	FB	Ave	13262 695795	24739 1616845	49671	117212	263490	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Pentanone	FB	Lin1	+++++ 689606	20881 1680746	43051	107988	248379	+++++ 100	4.00 240	8.00	20.0	40.0
1,2-Dichloropropane	FB	Ave	11760 645210	23130 1468752	48144	112117	239556	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Methylcyclohexane	FB	Ave	24131 1249033	45761 2844803	90479	216098	466620	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dioxane	FB	Lin2	+++++ 32387	306 75909	1715	4579	12207	+++++ 500	20.0 1200	40.0	100	200
Dibromomethane	FB	Ave	4430 253125	9170 600668	17950	44866	94278	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromodichloromethane	FB	Ave	12457 717048	24019 1695227	48772	118765	267780	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chloroethyl vinyl ether	FB	Lin1	+++++ 61553	+++++ 176324	2994	8071	19062	+++++ 25.0	+++++ 60.0	2.00	5.00	10.0
cis-1,3-Dichloropropene	CBNZ d5	Ave	11358 765214	22758 1800721	46805	121494	272041	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Methyl-2-pentanone (MIBK)	FB	Ave	16167 1003529	31050 2368458	65098	161325	365729	2.00 100	4.00 240	8.00	20.0	40.0
Toluene	FB	Ave	42611 2312568	81555 5306072	167135	408414	874116	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,3-Dichloropropene	FB	Ave	8440 540508	16425 1280670	34511	83416	195305	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethyl methacrylate	CBNZ d5	Lin2	2842 301142	7087 731813	17245	44174	102768	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,2-Trichloroethane	FB	Ave	4670 268342	8803 619437	18091	47776	98799	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichloropropane	CBNZ d5	Ave	8656 498626	16568 1134760	33231	84408	183045	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Hexanone	CBNZ d5	Lin2	7938 659784	18064 1522296	37383	98383	229989	2.00 100	4.00 240	8.00	20.0	40.0
Tetrachloroethene	CBNZ d5	Ave	9134 494911	18364 1105058	35967	83074	186097	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromochloromethane	CBNZ d5	Ave	6016 382971	11505 903891	25357	62472	137471	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromoethane	CBNZ d5	Ave	4203 274242	9027 643353	18519	45134	99612	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 435406

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 20:00 Calibration End Date: 10/29/2018 22:02 Calibration ID: 34172

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1-Chlorohexane	CBNZ d5	Ave	14390 967325	32691 2191537	62936	160054	358435	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Chlorobenzene	CBNZ d5	Ave	24035 1267094	48885 2935465	93476	224021	479677	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	7728 432148	15282 971474	30023	75026	159339	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Ethylbenzene	CBNZ d5	Ave	12732 710703	25736 1570437	51367	126521	273345	0.500 25.0	1.00 60.0	2.00	5.00	10.0
m-Xylene & p-Xylene	CBNZ d5	Ave	14471 871370	29653 1983179	62169	151594	322272	0.500 25.0	1.00 60.0	2.00	5.00	10.0
o-Xylene	CBNZ d5	Ave	13518 783298	28779 1717337	55046	138597	297710	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Styrene	CBNZ d5	Ave	16525 1218992	35472 2725854	76155	202146	453384	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Bromoform	CBNZ d5	Ave	+++++ 179732	5169 441121	11361	29394	64074	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Isopropylbenzene	DCBd 4	Ave	39432 2375776	77682 5346881	163110	395568	870005	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Cyclohexanone	CBNZ d5	Ave	7981 552931	16493 1302693	34747	84219	196637	20.0 1000	40.0 2400	80.0	200	400
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	5460 301722	10962 692250	21394	53220	110892	0.500 25.0	1.00 60.0	2.00	5.00	10.0
trans-1,4-Dichloro-2-butene	DCBd 4	Lin2	+++++ 70921	1591 171577	3661	9832	23696	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichloropropane	DCBd 4	Ave	+++++ 55910	2005 130921	3346	9292	20508	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Bromobenzene	DCBd 4	Ave	7750 478762	16291 1087600	32105	78958	177254	0.500 25.0	1.00 60.0	2.00	5.00	10.0
N-Propylbenzene	DCBd 4	Ave	8741 588769	18977 1319729	41330	100479	219996	0.500 25.0	1.00 60.0	2.00	5.00	10.0
2-Chlorotoluene	DCBd 4	Ave	9492 511732	17717 1124078	36642	87437	194794	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3,5-Trimethylbenzene	DCBd 4	Ave	32502 1862759	65999 3989293	133451	324410	712392	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Chlorotoluene	DCBd 4	Ave	8794 498802	17312 1114689	36065	88086	190303	0.500 25.0	1.00 60.0	2.00	5.00	10.0
tert-Butylbenzene	DCBd 4	Ave	26537 1743280	61912 3907330	122674	304055	661137	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trimethylbenzene	DCBd 4	Ave	30483 1829002	65117 4104525	128144	311818	689309	0.500 25.0	1.00 60.0	2.00	5.00	10.0
sec-Butylbenzene	DCBd 4	Ave	7270 438151	15204 967706	30738	73805	164606	0.500 25.0	1.00 60.0	2.00	5.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 435406

SDG No.:

Instrument ID: VMS_G GC Column: DB-624 v1 ID: 32(um) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2018 20:00 Calibration End Date: 10/29/2018 22:02 Calibration ID: 34172

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Isopropyltoluene	DCBd 4	Ave	34560 2008203	71897 4373881	143353	350030	777623	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,3-Dichlorobenzene	DCBd 4	Ave	18294 933293	35367 2052839	67110	164219	357284	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,4-Dichlorobenzene	DCBd 4	Ave	18256 961899	36381 2094459	71731	166626	351050	0.500 25.0	1.00 60.0	2.00	5.00	10.0
n-Butylbenzene	DCBd 4	Ave	41646 2395194	83486 5452789	171076	420454	911161	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichlorobenzene	DCBd 4	Ave	14181 774851	27219 1726193	53321	132845	286743	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin1	+++++ 35522	767 89433	1695	4946	12540	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
1,2,4-Trichlorobenzene	DCBd 4	Ave	8026 520400	16103 1216076	33297	85792	193241	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Hexachlorobutadiene	DCBd 4	Ave	7714 415593	15586 942693	30619	69950	156112	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Naphthalene	DCBd 4	Ave	8823 624895	16440 1481945	37160	94538	222722	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2,3-Trichlorobenzene	DCBd 4	Ave	8014 408924	14873 938622	28672	69580	149149	0.500 25.0	1.00 60.0	2.00	5.00	10.0
Dibromofluoromethane (Surr)	FB	Ave	12576 610553	21351 1413118	44360	103325	225337	0.500 25.0	1.00 60.0	2.00	5.00	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	+++++ 441724	16323 1030951	32413	81861	177998	+++++ 25.0	1.00 60.0	2.00	5.00	10.0
Toluene-d8 (Surr)	CBNZ d5	Ave	34436 1868080	68348 4301156	133819	314805	710539	0.500 25.0	1.00 60.0	2.00	5.00	10.0
4-Bromofluorobenzene (Surr)	DCBd 4	Ave	11414 599233	22098 1382771	43456	103489	226859	0.500 25.0	1.00 60.0	2.00	5.00	10.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0942.D
Lims ID: STD005
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Oct-2018 20:00:30 ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD005
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub83

Method: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Oct-2018 01:32:48 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0323

First Level Reviewer: newcomer Date: 29-Oct-2018 21:22:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.466	4.466	0.000	0	99482	250.0	250.0	
* 1 Fluorobenzene	96	6.465	6.465	0.000	97	833155	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.163	9.163	0.000	91	152480	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.290	11.290	0.000	97	211247	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.884	5.884	0.000	88	12576	0.5000	0.5348	
$ 6 1,2-Dichloroethane-d4 (Sur	65		6.180				ND	ND	
$ 7 Toluene-d8 (Surr)	98	7.824	7.814	0.010	94	34436	0.5000	0.4983	
$ 8 4-Bromofluorobenzene (Surr	95	10.276	10.276	0.000	81	11414	0.5000	0.5062	
25 Dichlorodifluoromethane	85	2.891	2.891	0.000	97	17294	0.5000	0.4946	
27 Chloromethane	50	3.107	3.098	0.009	97	19624	0.5000	0.4896	
28 Vinyl chloride	62	3.216	3.216	0.000	83	15830	0.5000	0.5003	
31 Bromomethane	94	3.531	3.521	0.010	91	12427	0.5000	0.5765	
32 Chloroethane	64	3.580	3.570	0.010	94	7683	0.5000	0.5057	
33 Dichlorofluoromethane	67	3.718	3.718	0.000	96	20852	0.5000	0.4888	
35 Trichlorofluoromethane	101	3.836	3.826	0.010	95	21218	0.5000	0.5224	
38 Ethyl ether	59	3.954	3.954	0.000	85	4724	0.5000	0.4362	
41 Acrolein	56	4.082	4.072	0.010	42	6198	5.00	4.63	
42 Acetone	43	4.181	4.171	0.010	94	11230	2.00	1.96	
45 1,1-Dichloroethene	96	4.210	4.200	0.010	92	12594	0.5000	0.5024	
44 1,1,2-Trichloro-1,2,2-trif	151		4.200				ND	ND	
47 Iodomethane	142	4.368	4.358	0.010	96	25020	0.5000	0.5048	
48 Methyl acetate	43		4.417				ND	ND	
49 3-Chloro-1-propene	41	4.456	4.456	0.000	65	31616	0.5000	0.4939	
50 Carbon disulfide	76	4.456	4.456	0.000	99	65551	0.5000	0.4997	
51 2-Methyl-2-propanol	59		4.525				ND	ND	U
52 Methylene Chloride	84	4.555	4.545	0.010	95	13454	0.5000	0.5341	
53 Acrylonitrile	53	4.703	4.693	0.010	98	14310	5.00	4.71	
54 Methyl tert-butyl ether	73	4.742	4.742	0.000	95	12831	0.5000	0.4704	
55 trans-1,2-Dichloroethene	96	4.781	4.771	0.010	92	11880	0.5000	0.4472	
56 Hexane	57	4.959	4.959	0.000	94	24878	0.5000	0.5178	
57 Vinyl acetate	43	5.057	5.047	0.010	94	22112	1.00	0.7545	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.087	5.087	0.000	95	27083	0.5000	0.5091	
62 2-Butanone (MEK)	43		5.480				ND	ND	
66 cis-1,2-Dichloroethene	96	5.540	5.530	0.010	86	12040	0.5000	0.4674	
65 sec-Butyl Alcohol	45		5.549				ND	ND	U
67 2,2-Dichloropropane	77	5.569	5.559	0.010	85	18724	0.5000	0.5010	
69 Chlorobromomethane	128	5.727	5.727	0.000	64	3762	0.5000	0.4328	
70 Chloroform	83	5.756	5.756	0.000	97	21927	0.5000	0.4936	
71 Tetrahydrofuran	42		5.766				ND	ND	
73 1,1,1-Trichloroethane	97	5.973	5.973	0.000	95	19630	0.5000	0.5051	
72 Isobutyl alcohol	41		5.992				ND	ND	U
74 Cyclohexane	56	6.061	6.052	0.009	95	28729	0.5000	0.4930	
75 1,1-Dichloropropene	75	6.091	6.091	0.000	93	19444	0.5000	0.4800	
76 Carbon tetrachloride	117	6.130	6.120	0.010	95	17166	0.5000	0.5027	
77 1,2-Dichloroethane	62	6.248	6.248	0.000	46	9475	0.5000	0.4546	M
79 Benzene	78	6.268	6.268	0.000	99	49346	0.5000	0.5036	
13 n-Heptane	43	6.406	6.406	0.000	94	30301	0.5000	0.4582	
81 Trichloroethene	95	6.780	6.770	0.010	93	13262	0.5000	0.4988	
82 2-Pentanone	43		6.829				ND	ND	
84 1,2-Dichloropropane	63	6.967	6.957	0.010	87	11760	0.5000	0.4771	
85 Methylcyclohexane	55	6.987	6.987	0.000	97	24131	0.5000	0.5020	
86 1,4-Dioxane	88		7.036				ND	ND	
87 Dibromomethane	93	7.076	7.066	0.010	91	4430	0.5000	0.4589	
88 Dichlorobromomethane	83	7.174	7.164	0.010	95	12457	0.5000	0.4682	
90 2-Chloroethyl vinyl ether	63		7.361				ND	ND	
91 cis-1,3-Dichloropropene	75	7.548	7.538	0.010	87	11358	0.5000	0.4409	
92 4-Methyl-2-pentanone (MIBK	43	7.637	7.627	0.010	95	16167	2.00	1.80	
93 Toluene	91	7.883	7.873	0.010	96	42611	0.5000	0.4820	
95 trans-1,3-Dichloropropene	75	8.011	8.011	0.000	88	8440	0.5000	0.4424	
94 Ethyl methacrylate	69	8.041	8.031	0.010	15	2842	0.5000	0.5266	
96 1,1,2-Trichloroethane	97	8.198	8.198	0.000	81	4670	0.5000	0.4686	
98 1,3-Dichloropropane	76	8.366	8.366	0.000	89	8656	0.5000	0.4876	
97 2-Hexanone	43	8.375	8.375	0.000	43	7938	2.00	2.08	
99 Tetrachloroethene	164	8.405	8.405	0.000	88	9134	0.5000	0.5001	
100 Chlorodibromomethane	129	8.602	8.592	0.010	87	6016	0.5000	0.4550	
102 Ethylene Dibromide	107	8.750	8.740	0.010	98	4203	0.5000	0.4379	
103 1-Chlorohexane	91	9.104	9.094	0.010	80	14390	0.5000	0.4278	
104 Chlorobenzene	112	9.193	9.193	0.000	91	24035	0.5000	0.5012	
105 1,1,1,2-Tetrachloroethane	131	9.252	9.242	0.010	88	7728	0.5000	0.4918	
106 Ethylbenzene	106	9.271	9.262	0.009	99	12732	0.5000	0.4845	
107 m-Xylene & p-Xylene	106	9.370	9.370	0.000	0	14471	0.5000	0.4609	
109 Styrene	104	9.774	9.764	0.010	76	16525	0.5000	0.4047	
108 o-Xylene	106	9.764	9.764	0.000	87	13518	0.5000	0.4717	
110 Bromoform	173		9.980				ND	ND	
111 Isopropylbenzene	105	10.118	10.108	0.010	97	39432	0.5000	0.4670	
113 Cyclohexanone	55	10.227	10.217	0.010	92	7981	20.0	17.2	
114 1,1,2,2-Tetrachloroethane	83	10.355	10.345	0.010	85	5460	0.5000	0.4880	
115 trans-1,4-Dichloro-2-buten	53		10.404				ND	ND	
116 1,2,3-Trichloropropane	110		10.414				ND	ND	
117 Bromobenzene	156	10.453	10.453	0.000	93	7750	0.5000	0.4553	
118 N-Propylbenzene	120	10.502	10.492	0.010	99	8741	0.5000	0.4206	
120 2-Chlorotoluene	126	10.611	10.601	0.010	96	9492	0.5000	0.5040	
119 1,3,5-Trimethylbenzene	105	10.640	10.630	0.010	93	32502	0.5000	0.4766	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	10.699	10.689	0.010	97	8794	0.5000	0.4780	
122 tert-Butylbenzene	119	10.936	10.926	0.010	95	26537	0.5000	0.4218	
123 1,2,4-Trimethylbenzene	105	10.965	10.965	0.000	95	30483	0.5000	0.4586	
124 sec-Butylbenzene	134	11.113	11.113	0.000	96	7270	0.5000	0.4605	
125 4-Isopropyltoluene	119	11.221	11.221	0.000	96	34560	0.5000	0.4685	
126 1,3-Dichlorobenzene	146	11.241	11.241	0.000	96	18294	0.5000	0.5186	
127 1,4-Dichlorobenzene	146	11.310	11.310	0.000	93	18256	0.5000	0.5073	
129 n-Butylbenzene	91	11.576	11.576	0.000	99	41646	0.5000	0.4722	
130 1,2-Dichlorobenzene	146	11.654	11.644	0.010	94	14181	0.5000	0.5008	
131 1,2-Dibromo-3-Chloropropan	157		12.334				ND	ND	
132 1,2,4-Trichlorobenzene	180	13.200	13.190	0.010	89	8026	0.5000	0.4428	
133 Hexachlorobutadiene	225	13.358	13.348	0.010	91	7714	0.5000	0.4964	
134 Naphthalene	128	13.486	13.486	0.000	1	8823	0.5000	0.4290	M
135 1,2,3-Trichlorobenzene	180	13.762	13.752	0.010	90	8014	0.5000	0.5264	
S 142 1,2-Dichloroethene, Total	96				0		1.00	0.9146	
S 137 Xylenes, Total (URS)	1				0		1.00	0.9326	
S 141 Xylenes, Total	106				0		1.00	0.9326	
S 138 Total BTEX	1				0			2.40	
S 140 1,2-Dichloroethene, Total	1				0		1.00	0.9146	
S 136 Trihalomethanes, Total	1				0		2.00	1.42	
S 139 1,3-Dichloropropene, Total	1				0		1.00	0.8832	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.04	Units: uL
MV-MegaMainA_00002	Amount Added:	0.20	Units: uL

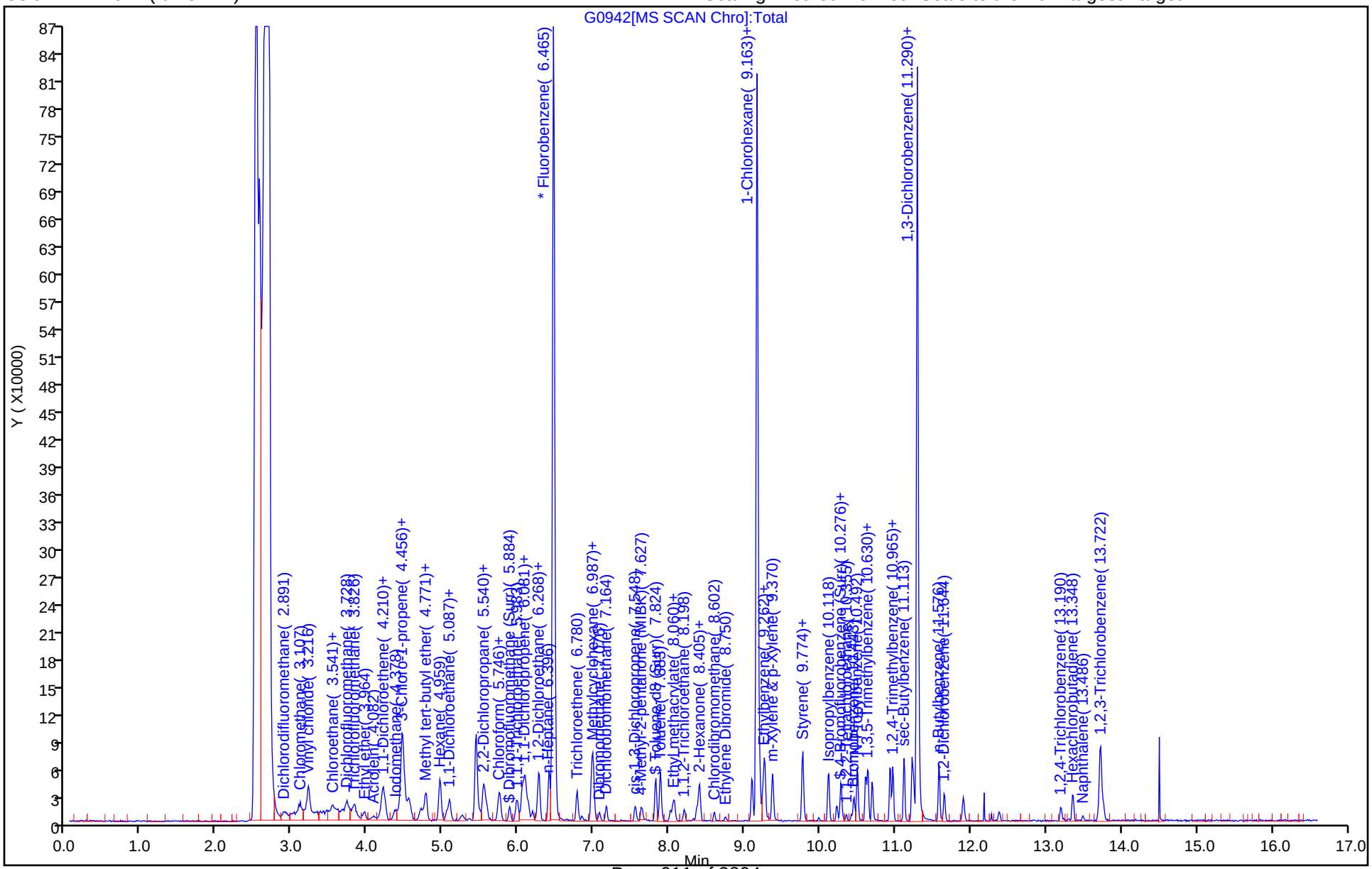
Report Date: 30-Oct-2018 01:32:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0942.D

Injection Date:	29-Oct-2018 20:00:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD005			Worklist Smp#:	10
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

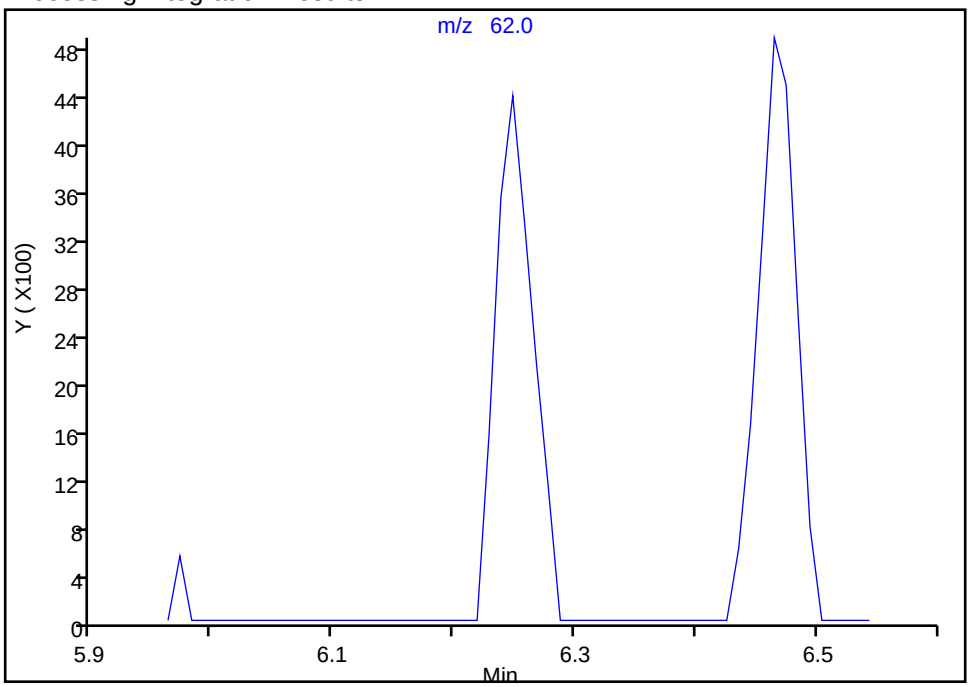
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0942.D
Injection Date: 29-Oct-2018 20:00:30 Instrument ID: VMS_G
Lims ID: STD005
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

77 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

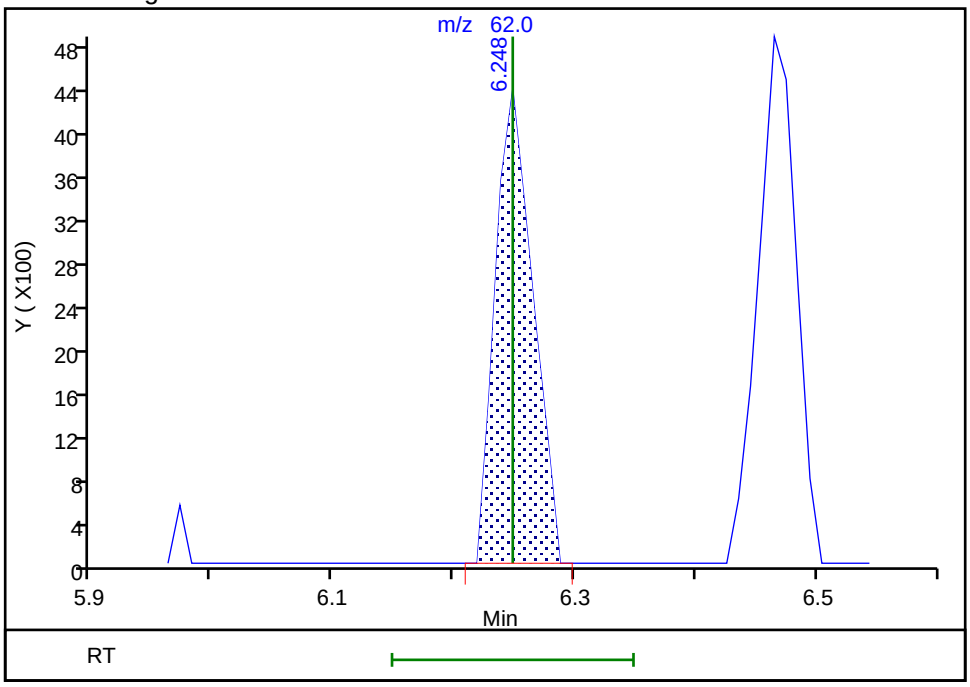
Not Detected
Expected RT: 6.25

Processing Integration Results



Manual Integration Results

RT: 6.25
Area: 9475
Amount: 0.454583
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 21:18:49
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

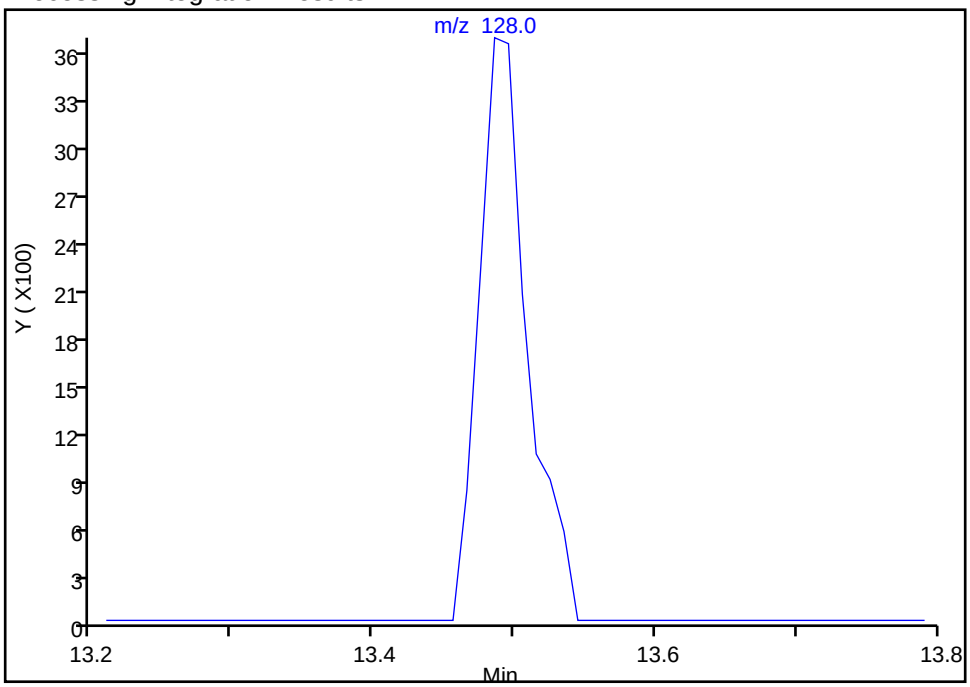
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0942.D
Injection Date: 29-Oct-2018 20:00:30 Instrument ID: VMS_G
Lims ID: STD005
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

134 Naphthalene, CAS: 91-20-3

Signal: 1

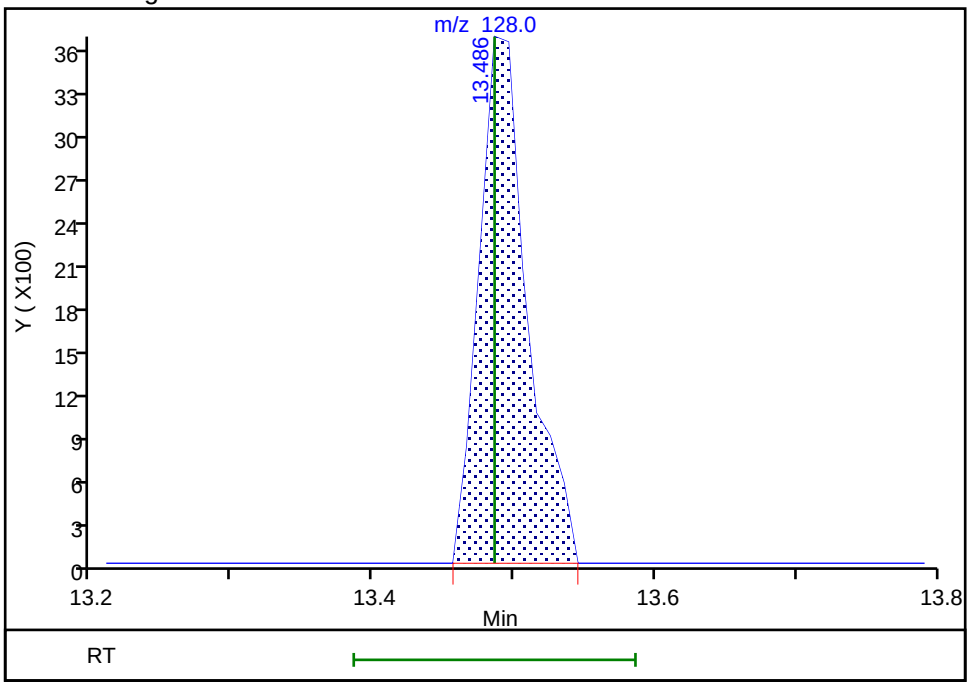
Not Detected
Expected RT: 13.49

Processing Integration Results



Manual Integration Results

RT: 13.49
Area: 8823
Amount: 0.429030
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 21:21:56
Audit Action: Manually Integrated Audit Reason: Assign Peak

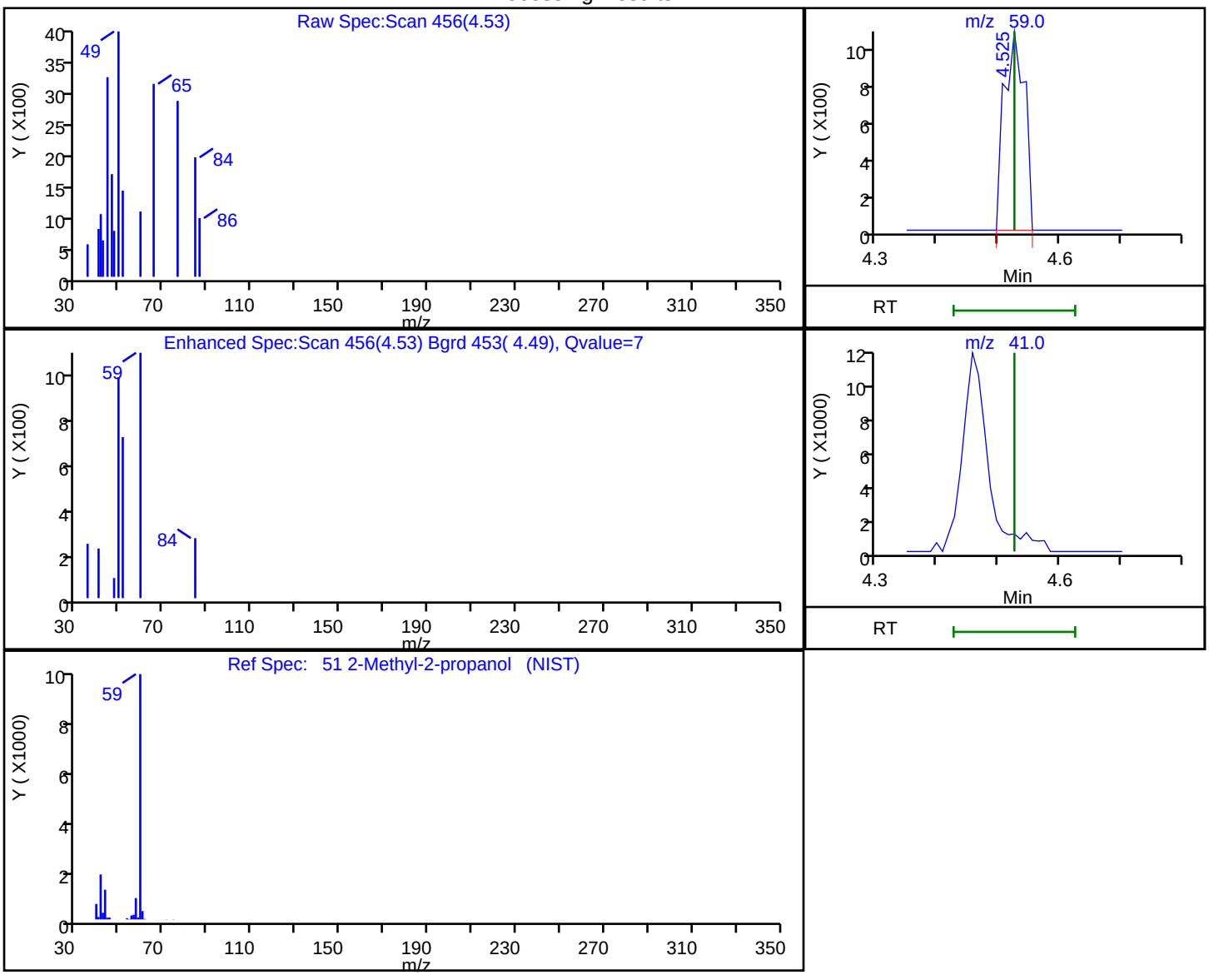
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0942.D				
Injection Date:	29-Oct-2018 20:00:30	Instrument ID:	VMS_G		
Lims ID:	STD005				
Client ID:					
Operator ID:	newcomer	ALS Bottle#:	11	Worklist Smp#:	10
Purge Vol:	20.000 mL	Dil. Factor:	1.0000		
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		
Column:	DB-624 (0.25 mm)	Detector	MS SCAN		

51 2-Methyl-2-propanol, CAS: 75-65-0

Processing Results



RT	Mass	Response	Amount
4.53	59.00	2412	3.976206
4.51	41.00	0	

Reviewer: newcomer, 29-Oct-2018 21:18:11

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

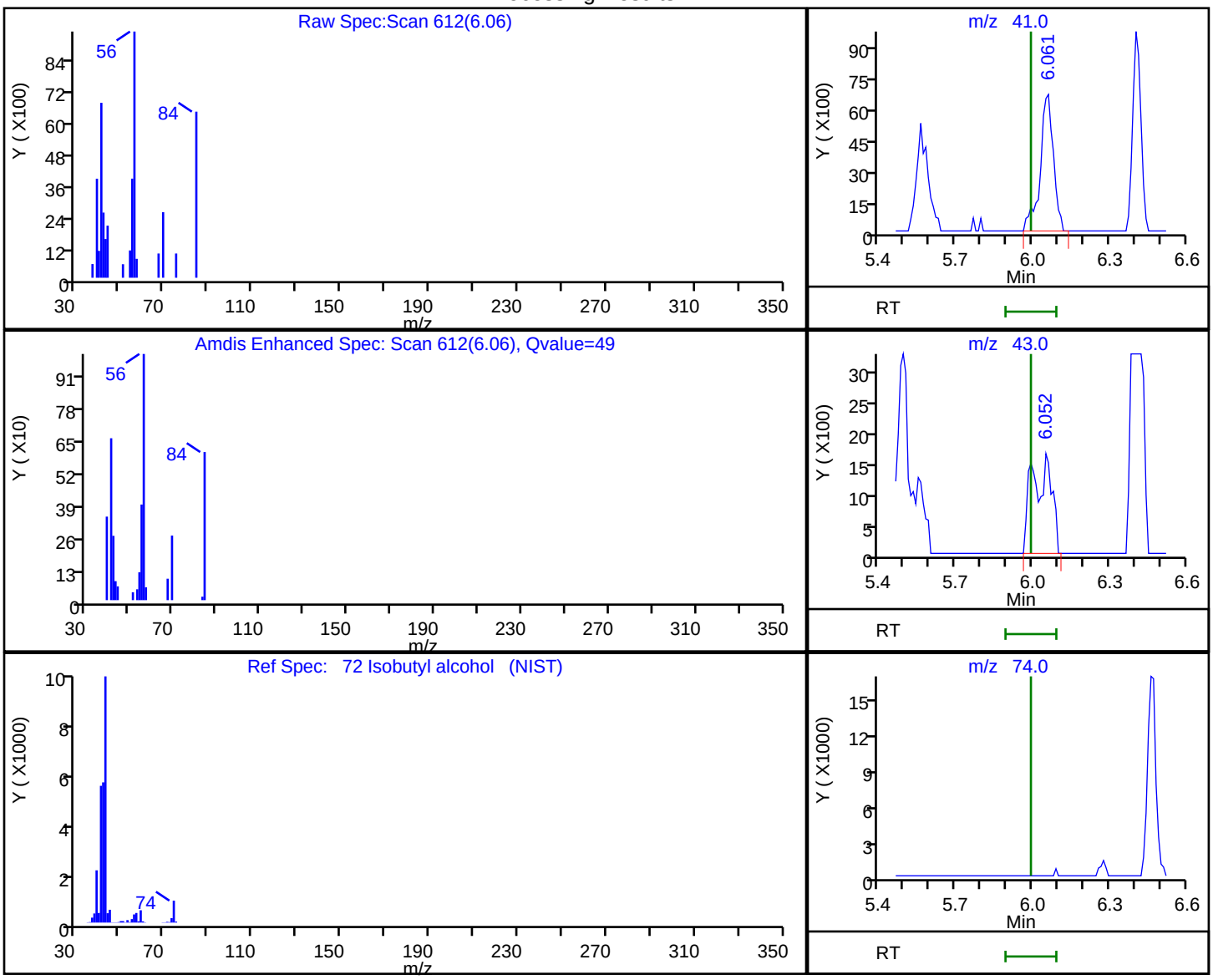
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0942.D
Injection Date: 29-Oct-2018 20:00:30 Instrument ID: VMS_G
Lims ID: STD005
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Processing Results



RT	Mass	Response	Amount
6.06	41.00	24306	97.703856
6.05	43.00	8505	
6.05	74.00	0	

Reviewer: newcomer, 29-Oct-2018 23:08:49
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

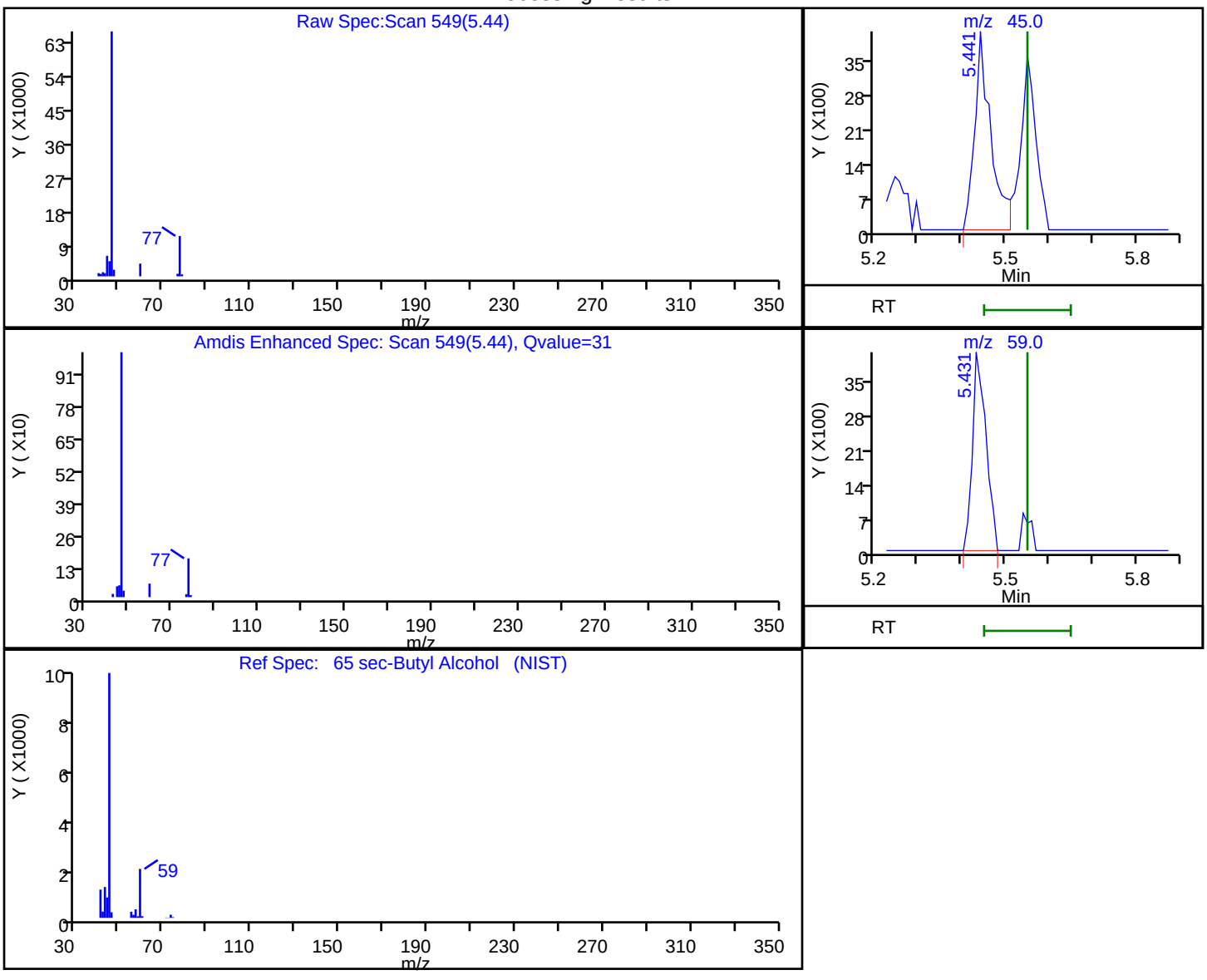
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0942.D
Injection Date: 29-Oct-2018 20:00:30 Instrument ID: VMS_G
Lims ID: STD005
Client ID:
Operator ID: newcomer ALS Bottle#: 11 Worklist Smp#: 10
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

65 sec-Butyl Alcohol, CAS: 78-92-2

Processing Results



RT	Mass	Response	Amount
5.44	45.00	10487	33.305500
5.43	59.00	8845	

Reviewer: newcomer, 29-Oct-2018 21:18:29
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0943.D
Lims ID: STD01
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Oct-2018 20:20:30 ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD01
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub83

Method: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Oct-2018 01:32:53 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0323

First Level Reviewer: newcomer Date: 29-Oct-2018 21:25:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.457	4.466	-0.009	0	98172	250.0	250.0	
* 1 Fluorobenzene	96	6.465	6.465	0.000	97	795776	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.163	9.163	0.000	91	151001	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.290	11.290	0.000	97	208765	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.884	5.884	0.000	89	21351	1.00	0.9505	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.190	6.180	0.010	0	16323	1.00	0.9741	
$ 7 Toluene-d8 (Surr)	98	7.824	7.814	0.010	95	68348	1.00	1.00	
$ 8 4-Bromofluorobenzene (Surr	95	10.276	10.276	0.000	84	22098	1.00	0.99	
25 Dichlorodifluoromethane	85	2.881	2.891	-0.010	97	33055	1.00	0.9897	
27 Chloromethane	50	3.098	3.098	0.000	98	40738	1.00	1.06	
28 Vinyl chloride	62	3.216	3.216	0.000	85	31913	1.00	1.06	
31 Bromomethane	94	3.531	3.521	0.010	94	22682	1.00	1.10	
32 Chloroethane	64	3.580	3.570	0.010	96	15475	1.00	1.07	
33 Dichlorofluoromethane	67	3.718	3.718	0.000	97	43148	1.00	1.06	
35 Trichlorofluoromethane	101	3.826	3.826	0.000	96	41228	1.00	1.06	
38 Ethyl ether	59	3.954	3.954	0.000	93	10512	1.00	1.02	
41 Acrolein	56	4.073	4.072	0.001	97	13433	10.0	10.5	
42 Acetone	43	4.181	4.171	0.010	96	16919	4.00	4.13	
45 1,1-Dichloroethene	96	4.210	4.200	0.010	93	24242	1.00	1.01	
44 1,1,2-Trichloro-1,2,2-trif	151	4.201	4.200	0.001	71	19246	1.00	1.06	
47 Iodomethane	142	4.368	4.358	0.010	97	48220	1.00	1.02	
48 Methyl acetate	43	4.417	4.417	0.000	98	19046	2.00	2.05	
49 3-Chloro-1-propene	41	4.457	4.456	0.001	75	64625	1.00	1.06	
50 Carbon disulfide	76	4.457	4.456	0.001	98	127567	1.00	1.02	
51 2-Methyl-2-propanol	59	4.516	4.525	-0.009	91	6594	10.0	10.9	
52 Methylene Chloride	84	4.555	4.545	0.010	96	26696	1.00	1.11	
53 Acrylonitrile	53	4.703	4.693	0.010	99	28139	10.0	9.69	
54 Methyl tert-butyl ether	73	4.752	4.742	0.010	98	25725	1.00	0.9874	
55 trans-1,2-Dichloroethene	96	4.772	4.771	0.001	94	26037	1.00	1.03	
56 Hexane	57	4.959	4.959	0.000	89	44540	1.00	0.9360	
57 Vinyl acetate	43	5.057	5.047	0.010	96	53771	2.00	1.92	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.087	5.087	0.000	96	51238	1.00	1.01	
62 2-Butanone (MEK)	43	5.481	5.480	0.001	96	16567	4.00	4.06	
66 cis-1,2-Dichloroethene	96	5.540	5.530	0.010	87	25025	1.00	1.02	
65 sec-Butyl Alcohol	45	5.550	5.549	0.001	51	16814	30.0	29.1	M
67 2,2-Dichloropropane	77	5.569	5.559	0.010	88	38536	1.00	1.08	
69 Chlorobromomethane	128	5.737	5.727	0.010	92	8288	1.00	1.00	
70 Chloroform	83	5.756	5.756	0.000	97	43332	1.00	1.02	
71 Tetrahydrofuran	42	5.766	5.766	0.000	1	3432	2.00	1.54	M
73 1,1,1-Trichloroethane	97	5.983	5.973	0.010	96	37528	1.00	1.01	
72 Isobutyl alcohol	41	5.993	5.992	0.001	29	5882	25.0	24.0	M
74 Cyclohexane	56	6.062	6.052	0.010	95	55593	1.00	1.00	
75 1,1-Dichloropropene	75	6.091	6.091	0.000	92	37708	1.00	0.9745	
76 Carbon tetrachloride	117	6.131	6.120	0.011	95	30811	1.00	0.9446	
77 1,2-Dichloroethane	62	6.249	6.248	0.001	95	19655	1.00	0.9873	
79 Benzene	78	6.268	6.268	0.000	97	94692	1.00	1.01	
13 n-Heptane	43	6.406	6.406	0.000	94	63109	1.00	1.00	
81 Trichloroethene	95	6.780	6.770	0.010	94	24739	1.00	0.9741	
82 2-Pentanone	43	6.840	6.829	0.011	95	20881	4.00	4.48	
84 1,2-Dichloropropane	63	6.968	6.957	0.011	93	23130	1.00	0.9824	
85 Methylcyclohexane	55	6.987	6.987	0.000	97	45761	1.00	1.00	
86 1,4-Dioxane	88	7.036	7.036	0.000	14	306	20.0	19.7	M
87 Dibromomethane	93	7.066	7.066	0.000	92	9170	1.00	0.99	
88 Dichlorobromomethane	83	7.164	7.164	0.000	95	24019	1.00	0.9453	
90 2-Chloroethyl vinyl ether	63	7.371	7.361	0.010	1	1248	1.00	1.88	
91 cis-1,3-Dichloropropene	75	7.548	7.538	0.010	88	22758	1.00	0.8920	
92 4-Methyl-2-pentanone (MIBK	43	7.637	7.627	0.010	96	31050	4.00	3.62	
93 Toluene	91	7.883	7.873	0.010	97	81555	1.00	0.9658	
95 trans-1,3-Dichloropropene	75	8.021	8.011	0.010	93	16425	1.00	0.9013	
94 Ethyl methacrylate	69	8.031	8.031	0.000	92	7087	1.00	0.9279	
96 1,1,2-Trichloroethane	97	8.198	8.198	0.000	90	8803	1.00	0.9247	
98 1,3-Dichloropropane	76	8.366	8.366	0.000	96	16568	1.00	0.9423	
97 2-Hexanone	43	8.376	8.375	0.001	54	18064	4.00	3.86	
99 Tetrachloroethene	164	8.405	8.405	0.000	94	18364	1.00	1.02	
100 Chlorodibromomethane	129	8.602	8.592	0.010	90	11505	1.00	0.8786	
102 Ethylene Dibromide	107	8.750	8.740	0.010	98	9027	1.00	0.9496	
103 1-Chlorohexane	91	9.094	9.094	0.000	88	32691	1.00	0.9814	
104 Chlorobenzene	112	9.193	9.193	0.000	91	48885	1.00	1.03	
105 1,1,1,2-Tetrachloroethane	131	9.242	9.242	0.000	94	15282	1.00	0.9820	
106 Ethylbenzene	106	9.272	9.262	0.010	99	25736	1.00	0.9888	
107 m-Xylene & p-Xylene	106	9.370	9.370	0.000	0	29653	1.00	0.9536	
109 Styrene	104	9.774	9.764	0.010	77	35472	1.00	0.8773	
108 o-Xylene	106	9.774	9.764	0.010	88	28779	1.00	1.01	
110 Bromoform	173	9.981	9.980	0.001	83	5169	1.00	0.8346	
111 Isopropylbenzene	105	10.109	10.108	0.001	97	77682	1.00	0.9310	
113 Cyclohexanone	55	10.217	10.217	0.000	94	16493	40.0	36.0	
114 1,1,2,2-Tetrachloroethane	83	10.345	10.345	0.000	87	10962	1.00	0.99	
115 trans-1,4-Dichloro-2-buten	53	10.404	10.404	0.000	1	1591	1.00	1.05	
116 1,2,3-Trichloropropane	110	10.414	10.414	0.000	80	2005	1.00	1.01	
117 Bromobenzene	156	10.453	10.453	0.000	92	16291	1.00	0.9684	
118 N-Propylbenzene	120	10.493	10.492	0.001	99	18977	1.00	0.9240	
120 2-Chlorotoluene	126	10.601	10.601	0.000	95	17717	1.00	0.9519	
119 1,3,5-Trimethylbenzene	105	10.631	10.630	0.000	93	65999	1.00	0.9794	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	10.690	10.689	0.001	98	17312	1.00	0.9522	
122 tert-Butylbenzene	119	10.926	10.926	0.000	94	61912	1.00	1.00	
123 1,2,4-Trimethylbenzene	105	10.965	10.965	0.000	94	65117	1.00	0.99	
124 sec-Butylbenzene	134	11.113	11.113	0.000	96	15204	1.00	0.9745	
125 4-Isopropyltoluene	119	11.221	11.221	0.000	97	71897	1.00	0.9863	
126 1,3-Dichlorobenzene	146	11.241	11.241	0.000	97	35367	1.00	1.01	
127 1,4-Dichlorobenzene	146	11.310	11.310	0.000	92	36381	1.00	1.02	
129 n-Butylbenzene	91	11.576	11.576	0.000	99	83486	1.00	0.9579	
130 1,2-Dichlorobenzene	146	11.645	11.644	0.001	94	27219	1.00	0.9727	
131 1,2-Dibromo-3-Chloropropan	157	12.334	12.334	0.000	1	767	1.00	1.24	M
132 1,2,4-Trichlorobenzene	180	13.201	13.190	0.010	94	16103	1.00	0.8989	
133 Hexachlorobutadiene	225	13.348	13.348	0.000	95	15586	1.00	1.01	
134 Naphthalene	128	13.486	13.486	0.000	95	16440	1.00	0.8089	
135 1,2,3-Trichlorobenzene	180	13.762	13.752	0.010	94	14873	1.00	0.9885	
S 142 1,2-Dichloroethene, Total	96				0		2.00	2.04	
S 137 Xylenes, Total (URS)	1				0		2.00	1.97	
S 141 Xylenes, Total	106				0		2.00	1.97	
S 138 Total BTEX	1				0			4.93	
S 140 1,2-Dichloroethene, Total	1				0		2.00	2.04	
S 136 Trihalomethanes, Total	1				0		4.00	3.68	
S 139 1,3-Dichloropropene, Total	1				0		2.00	1.79	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.08	Units: uL
MV-MegaMainA_00002	Amount Added:	0.40	Units: uL

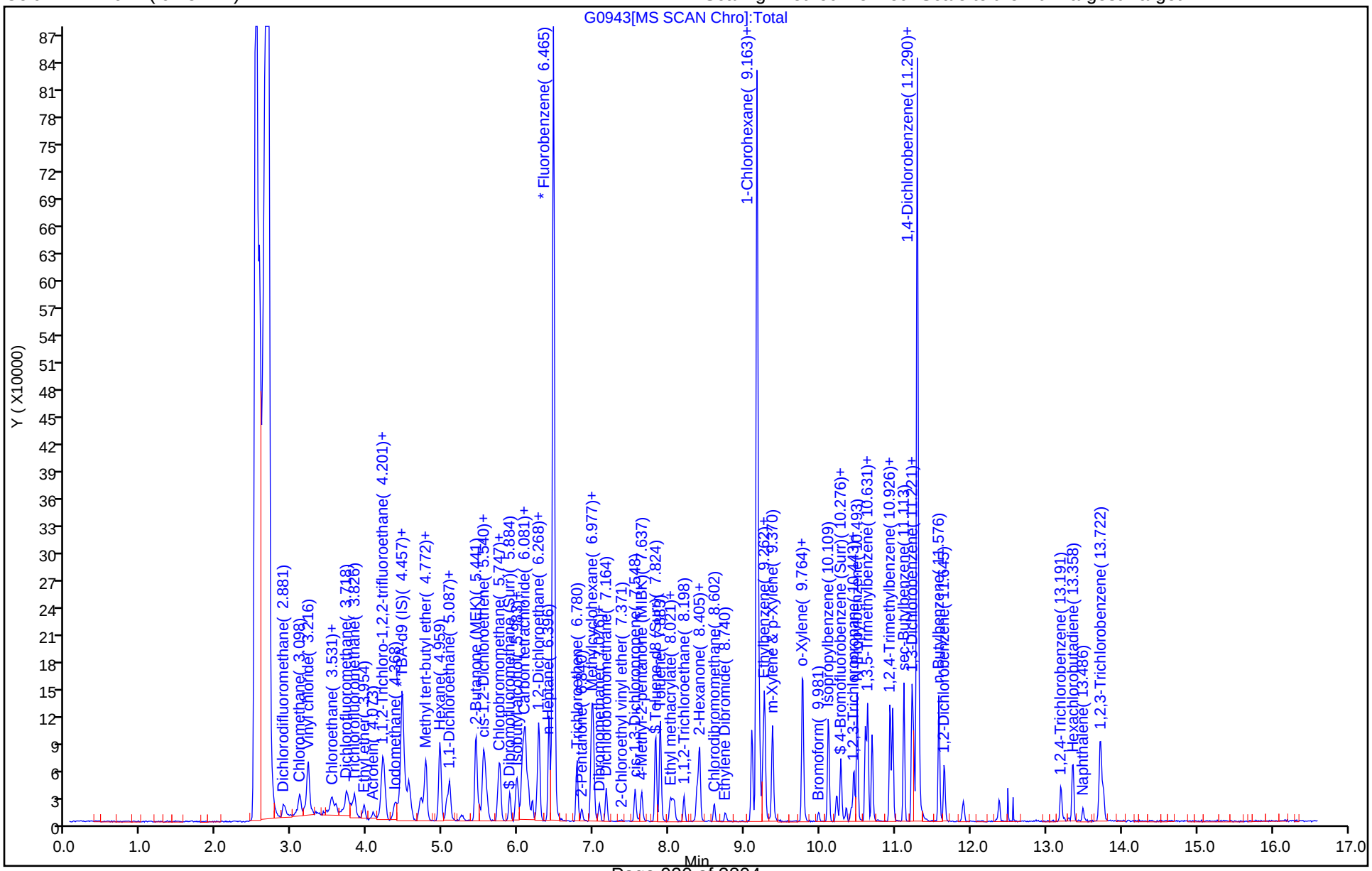
Report Date: 30-Oct-2018 01:32:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0943.D

Injection Date:	29-Oct-2018 20:20:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD01			Worklist Smp#:	11
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

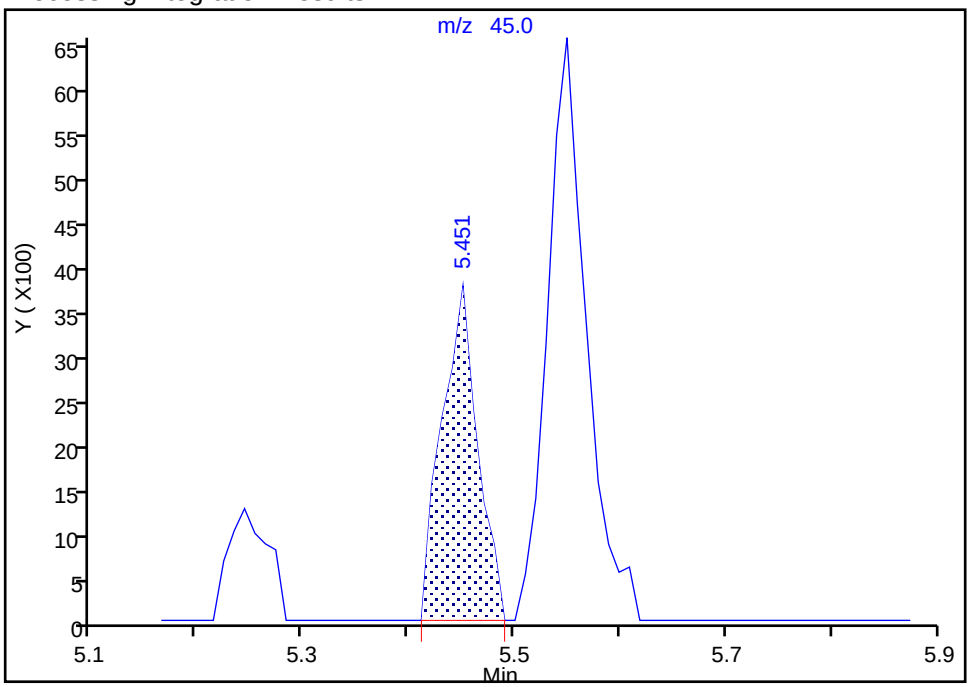
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0943.D
Injection Date: 29-Oct-2018 20:20:30 Instrument ID: VMS_G
Lims ID: STD01
Client ID:
Operator ID: newcomer ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

65 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

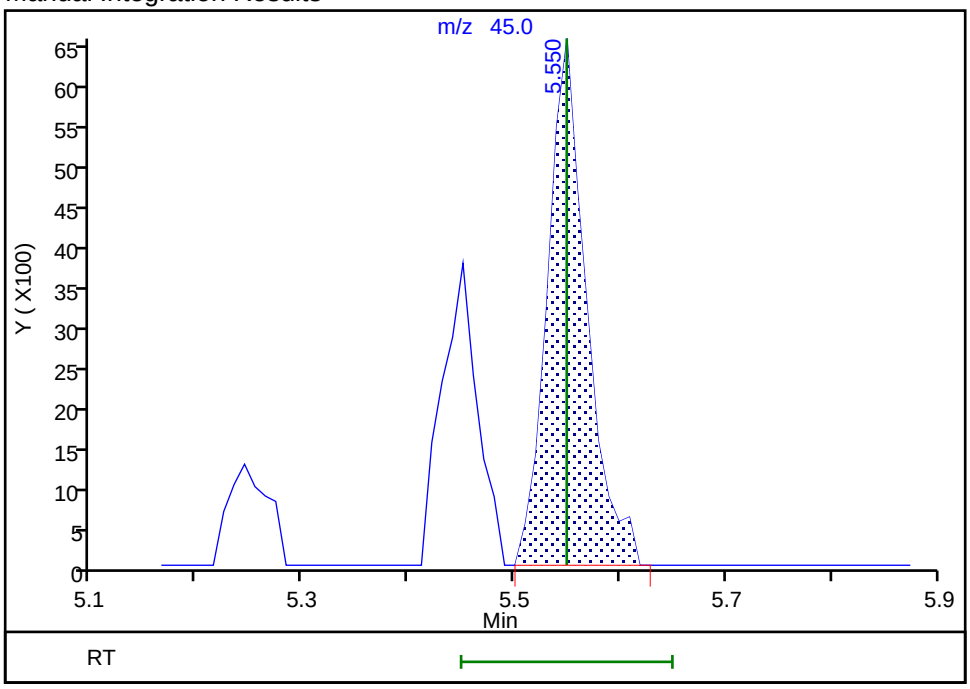
Processing Integration Results

RT: 5.45
Area: 8851
Amount: 38.384312
Amount Units: ug/l



Manual Integration Results

RT: 5.55
Area: 16814
Amount: 29.083074
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 21:24:01
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

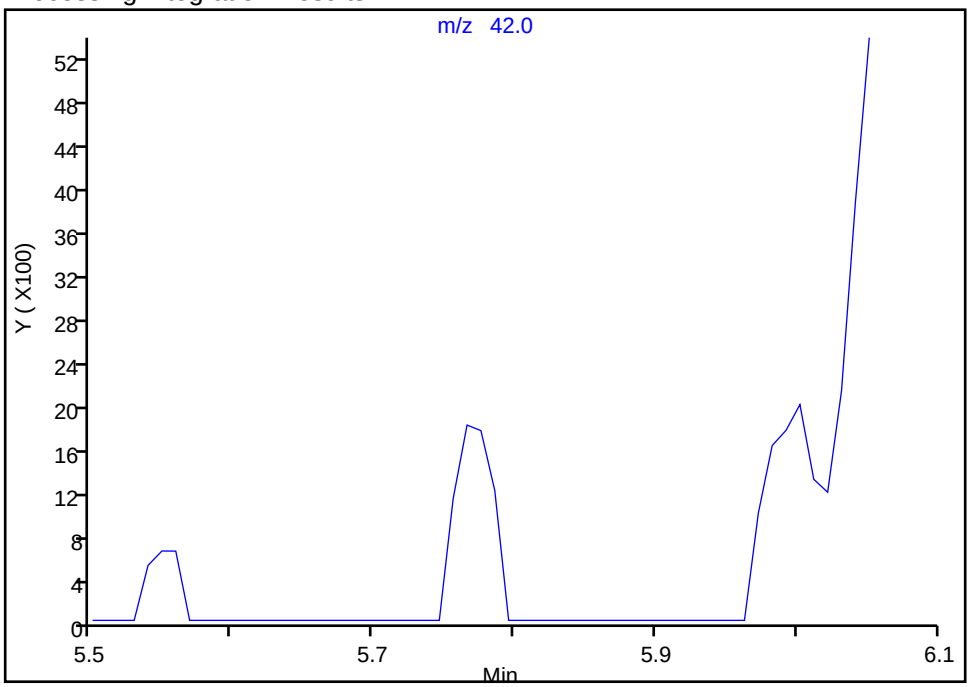
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0943.D
Injection Date: 29-Oct-2018 20:20:30 Instrument ID: VMS_G
Lims ID: STD01
Client ID:
Operator ID: newcomer ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

71 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

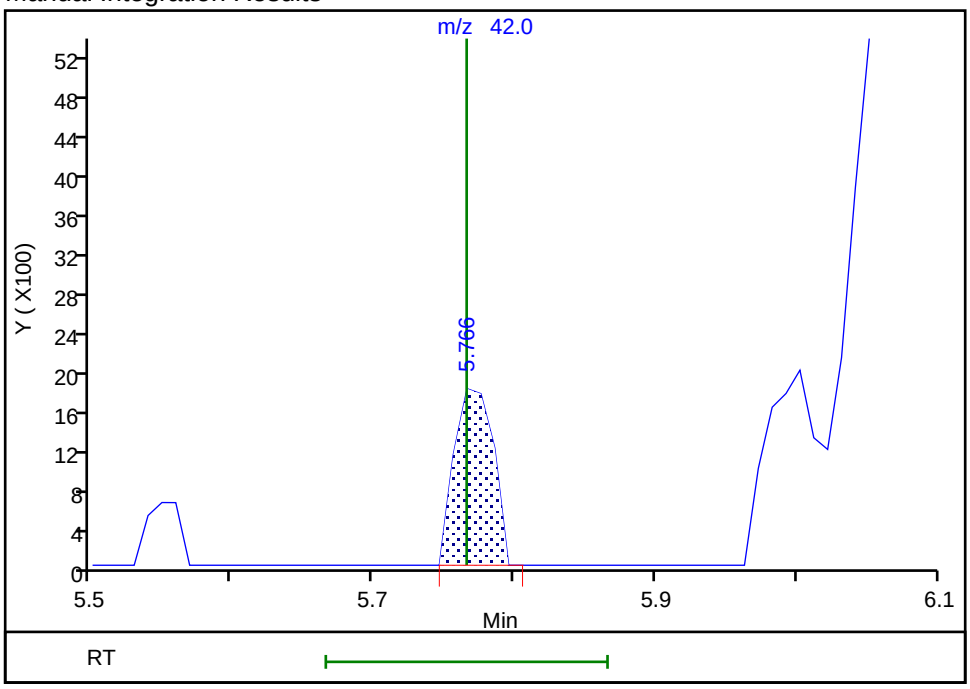
Not Detected
Expected RT: 5.77

Processing Integration Results



Manual Integration Results

RT: 5.77
Area: 3432
Amount: 1.535566
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 21:24:13
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

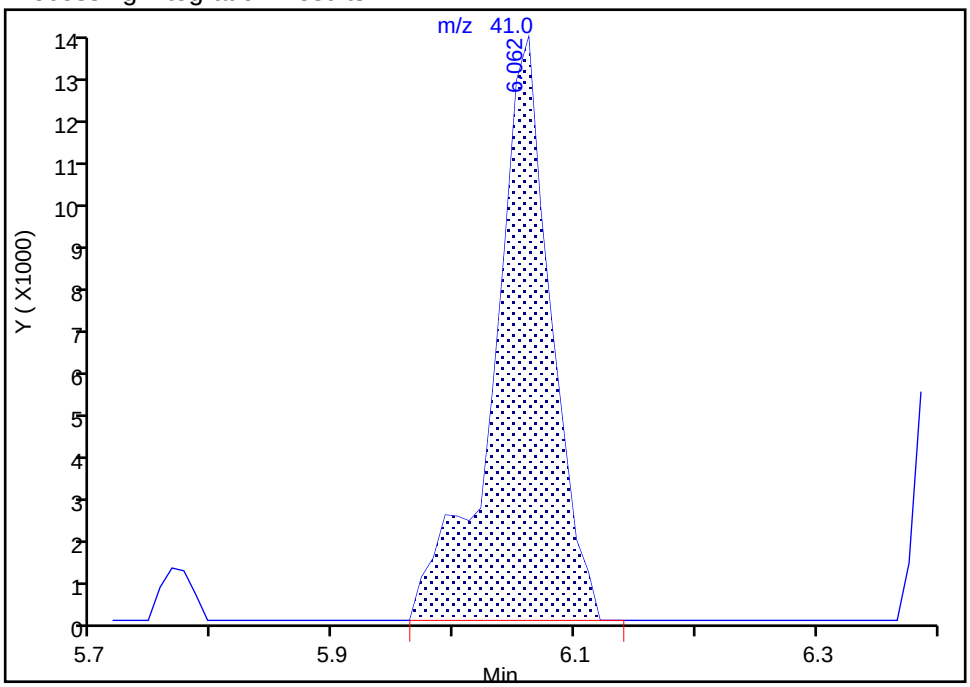
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0943.D
Injection Date: 29-Oct-2018 20:20:30 Instrument ID: VMS_G
Lims ID: STD01
Client ID:
Operator ID: newcomer ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

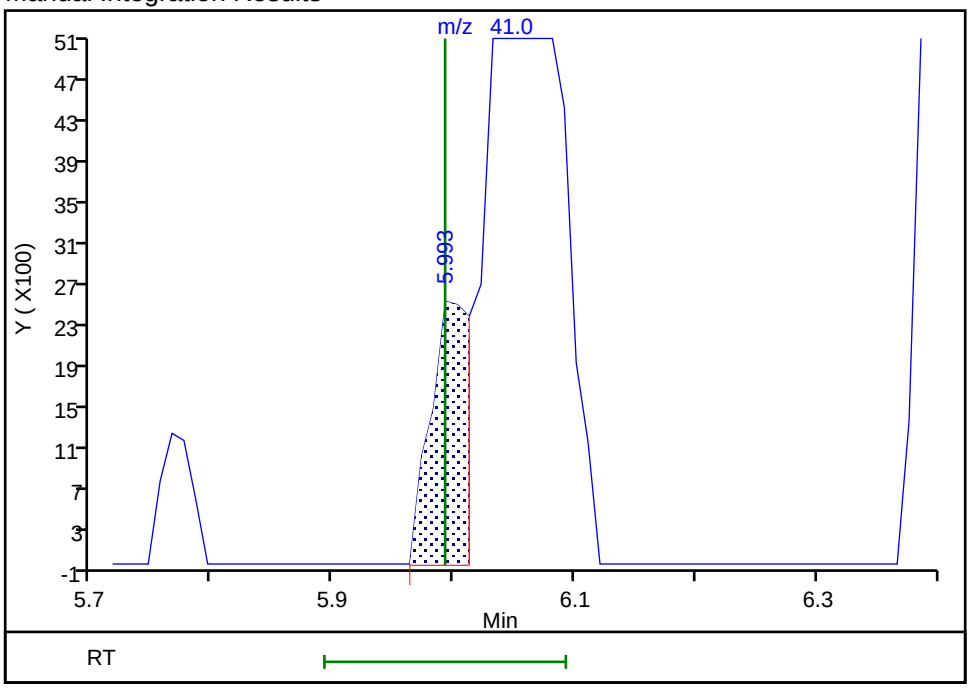
Processing Integration Results

RT: 6.06
Area: 46075
Amount: 48.650592
Amount Units: ug/l



Manual Integration Results

RT: 5.99
Area: 5882
Amount: 23.959629
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 21:24:35
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

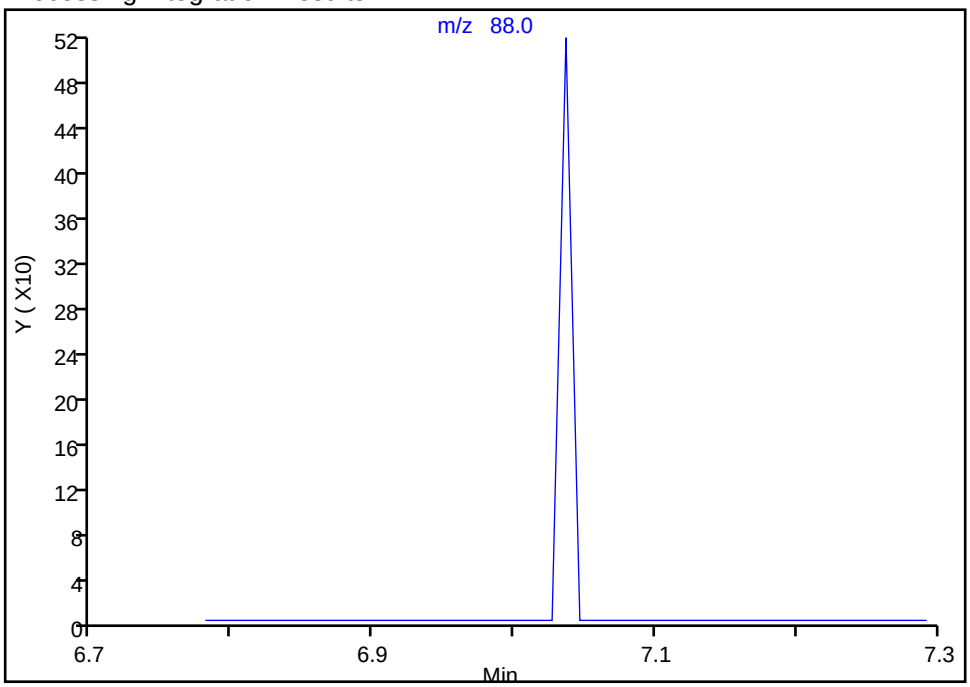
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0943.D
Injection Date: 29-Oct-2018 20:20:30 Instrument ID: VMS_G
Lims ID: STD01
Client ID:
Operator ID: newcomer ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

86 1,4-Dioxane, CAS: 123-91-1

Signal: 1

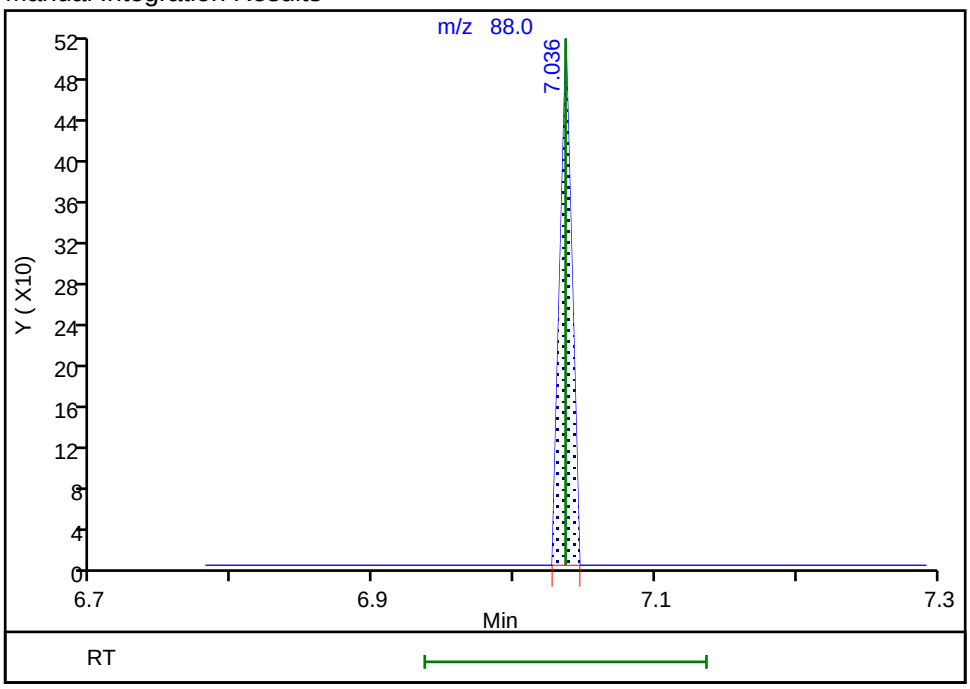
Not Detected
Expected RT: 7.04

Processing Integration Results



Manual Integration Results

RT: 7.04
Area: 306
Amount: 19.676721
Amount Units: ug/l



Reviewer: newcomer, 30-Oct-2018 01:27:43
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

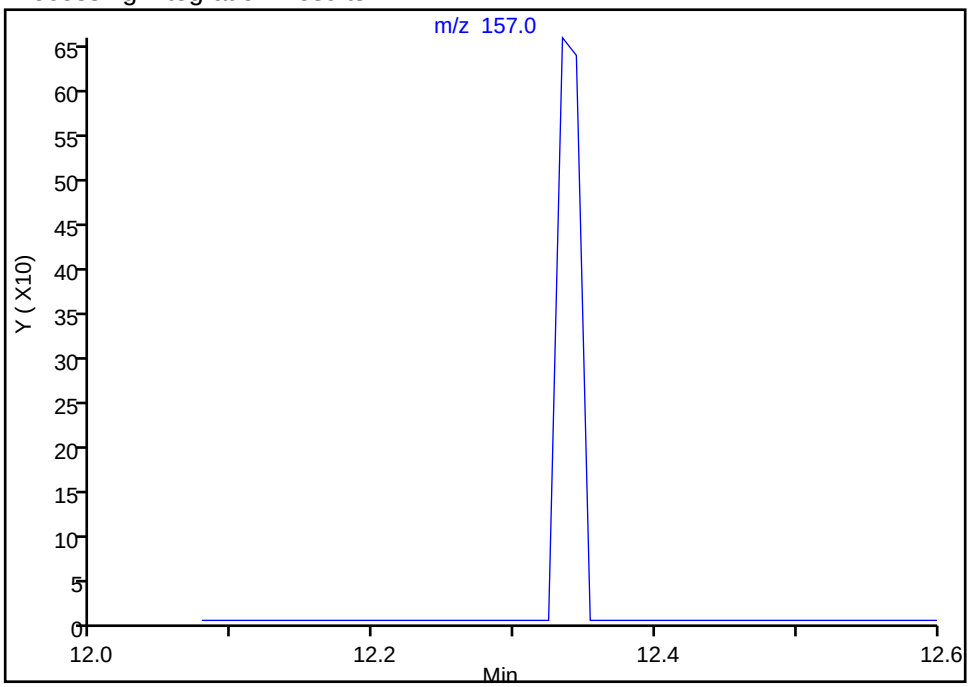
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0943.D
Injection Date: 29-Oct-2018 20:20:30 Instrument ID: VMS_G
Lims ID: STD01
Client ID:
Operator ID: newcomer ALS Bottle#: 12 Worklist Smp#: 11
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

131 1,2-Dibromo-3-Chloropropane, CAS: 96-12-8

Signal: 1

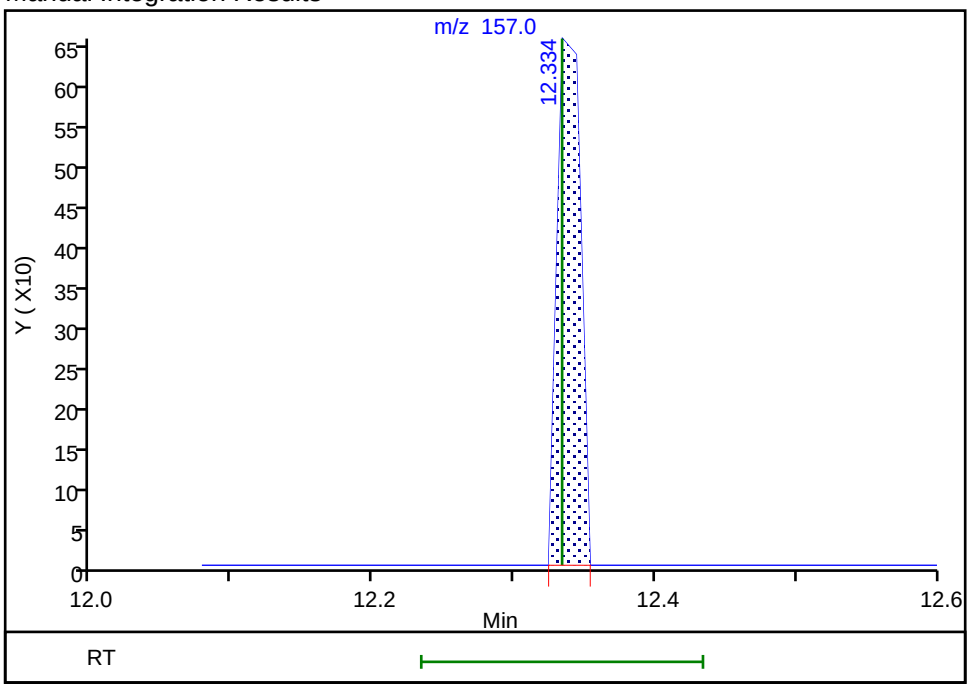
Not Detected
Expected RT: 12.33

Processing Integration Results



Manual Integration Results

RT: 12.33
Area: 767
Amount: 1.235977
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 21:25:26
Audit Action: Manually Integrated Audit Reason: Assign Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0944.D
Lims ID: STD02
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Oct-2018 20:40:30 ALS Bottle#: 13 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD02
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub83

Method: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Oct-2018 01:32:59 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0323

First Level Reviewer: newcomer Date: 29-Oct-2018 21:27:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.457	4.466	-0.009	0	97517	250.0	250.0	
* 1 Fluorobenzene	96	6.465	6.465	0.000	97	799549	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.163	9.163	0.000	90	149302	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.290	11.290	0.000	97	205452	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.884	5.884	0.000	91	44360	2.00	1.97	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.190	6.180	0.010	0	32413	2.00	1.93	
$ 7 Toluene-d8 (Surr)	98	7.824	7.814	0.010	96	133819	2.00	1.98	
$ 8 4-Bromofluorobenzene (Surr	95	10.276	10.276	0.000	87	43456	2.00	1.98	
25 Dichlorodifluoromethane	85	2.891	2.891	0.000	99	63354	2.00	1.89	
27 Chloromethane	50	3.098	3.098	0.000	99	75526	2.00	1.96	
28 Vinyl chloride	62	3.216	3.216	0.000	83	60990	2.00	2.01	
31 Bromomethane	94	3.531	3.521	0.010	94	41400	2.00	2.00	
32 Chloroethane	64	3.580	3.570	0.010	95	29301	2.00	2.01	
33 Dichlorofluoromethane	67	3.718	3.718	0.000	98	76698	2.00	1.87	
35 Trichlorofluoromethane	101	3.836	3.826	0.010	99	76155	2.00	1.95	
38 Ethyl ether	59	3.954	3.954	0.000	94	21405	2.00	2.06	
41 Acrolein	56	4.073	4.072	0.001	96	24982	20.0	19.5	
42 Acetone	43	4.181	4.171	0.010	72	28654	8.00	8.20	
45 1,1-Dichloroethene	96	4.210	4.200	0.010	94	47165	2.00	1.96	
44 1,1,2-Trichloro-1,2,2-trif	151	4.210	4.200	0.010	70	36118	2.00	1.98	
47 Iodomethane	142	4.368	4.358	0.010	98	92918	2.00	1.95	
48 Methyl acetate	43	4.417	4.417	0.000	98	32047	4.00	3.90	
49 3-Chloro-1-propene	41	4.457	4.456	0.001	75	121229	2.00	1.97	
50 Carbon disulfide	76	4.466	4.456	0.010	97	244744	2.00	1.94	
51 2-Methyl-2-propanol	59	4.525	4.525	0.000	28	11747	20.0	19.5	
52 Methylene Chloride	84	4.545	4.545	0.000	98	49114	2.00	2.03	
53 Acrylonitrile	53	4.703	4.693	0.010	100	58190	20.0	19.9	
54 Methyl tert-butyl ether	73	4.742	4.742	0.000	98	49863	2.00	1.90	
55 trans-1,2-Dichloroethene	96	4.772	4.771	0.001	92	51347	2.00	2.01	
56 Hexane	57	4.959	4.959	0.000	94	94698	2.00	2.01	
57 Vinyl acetate	43	5.057	5.047	0.010	96	105388	4.00	3.75	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.087	5.087	0.000	97	101149	2.00	1.98	
62 2-Butanone (MEK)	43	5.490	5.480	0.010	97	33162	8.00	8.10	
66 cis-1,2-Dichloroethene	96	5.530	5.530	0.000	88	49758	2.00	2.01	
65 sec-Butyl Alcohol	45	5.550	5.549	0.001	50	32680	60.0	56.9	M
67 2,2-Dichloropropane	77	5.569	5.559	0.010	88	72588	2.00	2.02	
69 Chlorobromomethane	128	5.737	5.727	0.010	91	16732	2.00	2.01	
70 Chloroform	83	5.756	5.756	0.000	97	84022	2.00	1.97	
71 Tetrahydrofuran	42	5.766	5.766	0.000	37	8426	4.00	3.75	
73 1,1,1-Trichloroethane	97	5.983	5.973	0.010	96	73856	2.00	1.98	
72 Isobutyl alcohol	41	5.993	5.992	0.001	29	11641	50.0	47.7	M
74 Cyclohexane	56	6.062	6.052	0.010	94	112012	2.00	2.00	
75 1,1-Dichloropropene	75	6.091	6.091	0.000	91	78001	2.00	2.01	
76 Carbon tetrachloride	117	6.131	6.120	0.010	96	65538	2.00	2.00	
77 1,2-Dichloroethane	62	6.249	6.248	0.001	95	39267	2.00	1.96	
79 Benzene	78	6.278	6.268	0.010	98	180268	2.00	1.92	
13 n-Heptane	43	6.406	6.406	0.000	95	123110	2.00	1.94	
81 Trichloroethene	95	6.780	6.770	0.010	94	49671	2.00	1.95	
82 2-Pentanone	43	6.839	6.829	0.010	97	43051	8.00	7.80	
84 1,2-Dichloropropane	63	6.967	6.957	0.010	93	48144	2.00	2.04	
85 Methylcyclohexane	55	6.987	6.987	0.000	95	90479	2.00	1.96	
86 1,4-Dioxane	88	7.036	7.036	0.000	11	1715	40.0	42.1	
87 Dibromomethane	93	7.076	7.066	0.010	93	17950	2.00	1.94	
88 Dichlorobromomethane	83	7.164	7.164	0.000	97	48772	2.00	1.91	
90 2-Chloroethyl vinyl ether	63	7.371	7.361	0.010	73	2994	2.00	2.52	
91 cis-1,3-Dichloropropene	75	7.548	7.538	0.010	89	46805	2.00	1.86	
92 4-Methyl-2-pentanone (MIBK	43	7.637	7.627	0.010	96	65098	8.00	7.55	
93 Toluene	91	7.883	7.873	0.010	97	167135	2.00	1.97	
95 trans-1,3-Dichloropropene	75	8.011	8.011	0.000	96	34511	2.00	1.88	
94 Ethyl methacrylate	69	8.041	8.031	0.010	92	17245	2.00	1.90	
96 1,1,2-Trichloroethane	97	8.198	8.198	0.000	90	18091	2.00	1.89	
98 1,3-Dichloropropane	76	8.366	8.366	0.000	91	33231	2.00	1.91	
97 2-Hexanone	43	8.376	8.375	0.001	76	37383	8.00	7.30	
99 Tetrachloroethene	164	8.405	8.405	0.000	93	35967	2.00	2.01	
100 Chlorodibromomethane	129	8.602	8.592	0.010	89	25357	2.00	1.96	
102 Ethylene Dibromide	107	8.750	8.740	0.010	98	18519	2.00	1.97	
103 1-Chlorohexane	91	9.104	9.094	0.010	85	62936	2.00	1.91	
104 Chlorobenzene	112	9.193	9.193	0.000	92	93476	2.00	1.99	
105 1,1,1,2-Tetrachloroethane	131	9.252	9.242	0.010	94	30023	2.00	1.95	
106 Ethylbenzene	106	9.272	9.262	0.010	99	51367	2.00	2.00	
107 m-Xylene & p-Xylene	106	9.370	9.370	0.000	0	62169	2.00	2.02	
109 Styrene	104	9.774	9.764	0.010	79	76155	2.00	1.90	
108 o-Xylene	106	9.774	9.764	0.010	89	55046	2.00	1.96	
110 Bromoform	173	9.981	9.980	0.001	90	11361	2.00	1.86	
111 Isopropylbenzene	105	10.118	10.108	0.010	97	163110	2.00	1.99	
113 Cyclohexanone	55	10.227	10.217	0.010	98	34747	80.0	76.6	
114 1,1,2,2-Tetrachloroethane	83	10.345	10.345	0.000	91	21394	2.00	1.97	
115 trans-1,4-Dichloro-2-buten	53	10.404	10.404	0.000	5	3661	2.00	1.88	
116 1,2,3-Trichloropropane	110	10.414	10.414	0.000	83	3346	2.00	1.71	
117 Bromobenzene	156	10.453	10.453	0.000	94	32105	2.00	1.94	
118 N-Propylbenzene	120	10.493	10.492	0.001	99	41330	2.00	2.04	
120 2-Chlorotoluene	126	10.601	10.601	0.000	95	36642	2.00	2.00	
119 1,3,5-Trimethylbenzene	105	10.630	10.630	0.000	93	133451	2.00	2.01	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	10.690	10.689	0.001	99	36065	2.00	2.02	
122 tert-Butylbenzene	119	10.936	10.926	0.010	93	122674	2.00	2.00	
123 1,2,4-Trimethylbenzene	105	10.965	10.965	0.000	96	128144	2.00	1.98	
124 sec-Butylbenzene	134	11.113	11.113	0.000	97	30738	2.00	2.00	
125 4-Isopropyltoluene	119	11.221	11.221	0.000	97	143353	2.00	2.00	
126 1,3-Dichlorobenzene	146	11.241	11.241	0.000	97	67110	2.00	1.96	
127 1,4-Dichlorobenzene	146	11.310	11.310	0.000	94	71731	2.00	2.05	
129 n-Butylbenzene	91	11.576	11.576	0.000	100	171076	2.00	1.99	
130 1,2-Dichlorobenzene	146	11.645	11.644	0.001	95	53321	2.00	1.94	
131 1,2-Dibromo-3-Chloropropan	157	12.334	12.334	0.000	1	1695	2.00	1.91	
132 1,2,4-Trichlorobenzene	180	13.191	13.190	0.001	93	33297	2.00	1.89	
133 Hexachlorobutadiene	225	13.358	13.348	0.010	95	30619	2.00	2.03	
134 Naphthalene	128	13.486	13.486	0.000	97	37160	2.00	1.86	
135 1,2,3-Trichlorobenzene	180	13.762	13.752	0.010	94	28672	2.00	1.94	
S 142 1,2-Dichloroethene, Total	96				0		4.00	4.03	
S 137 Xylenes, Total (URS)	1				0		4.00	3.98	
S 141 Xylenes, Total	106				0		4.00	3.98	
S 138 Total BTEX	1				0			9.87	
S 140 1,2-Dichloroethene, Total	1				0		4.00	4.03	
S 136 Trihalomethanes, Total	1				0		8.00	7.69	
S 139 1,3-Dichloropropene, Total	1				0		4.00	3.74	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.16	Units: uL
MV-MegaMainA_00002	Amount Added:	0.80	Units: uL

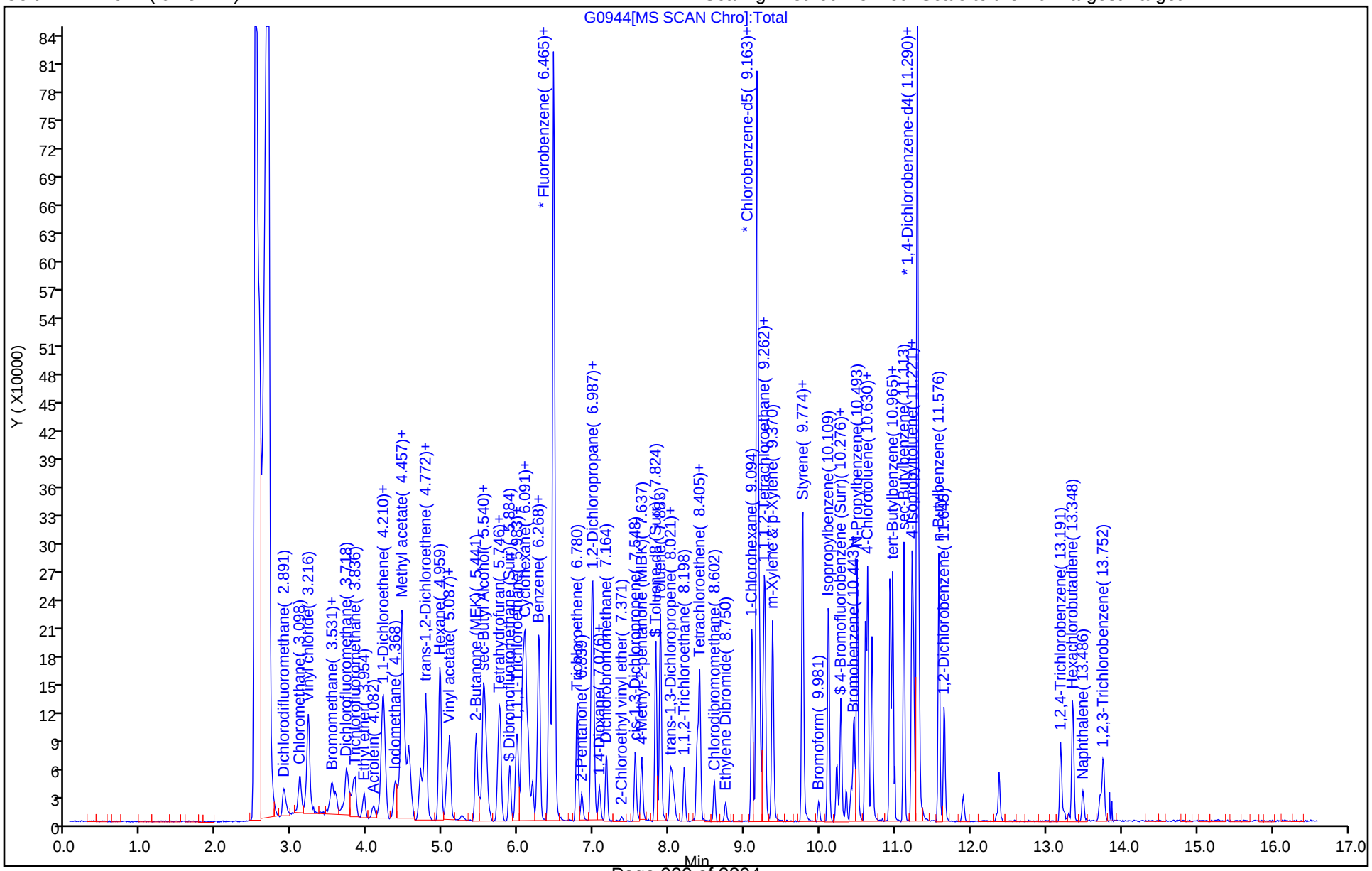
Report Date: 30-Oct-2018 01:33:00 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0944.D

Injection Date:	29-Oct-2018 20:40:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD02			Worklist Smp#:	12
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

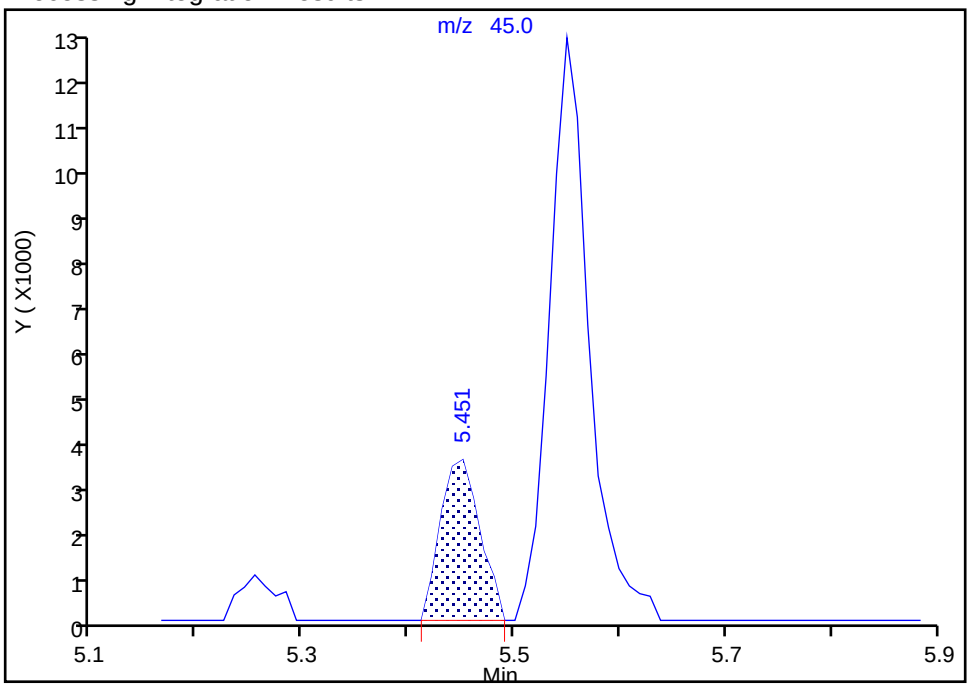
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0944.D
Injection Date: 29-Oct-2018 20:40:30 Instrument ID: VMS_G
Lims ID: STD02
Client ID:
Operator ID: newcomer ALS Bottle#: 13 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

65 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

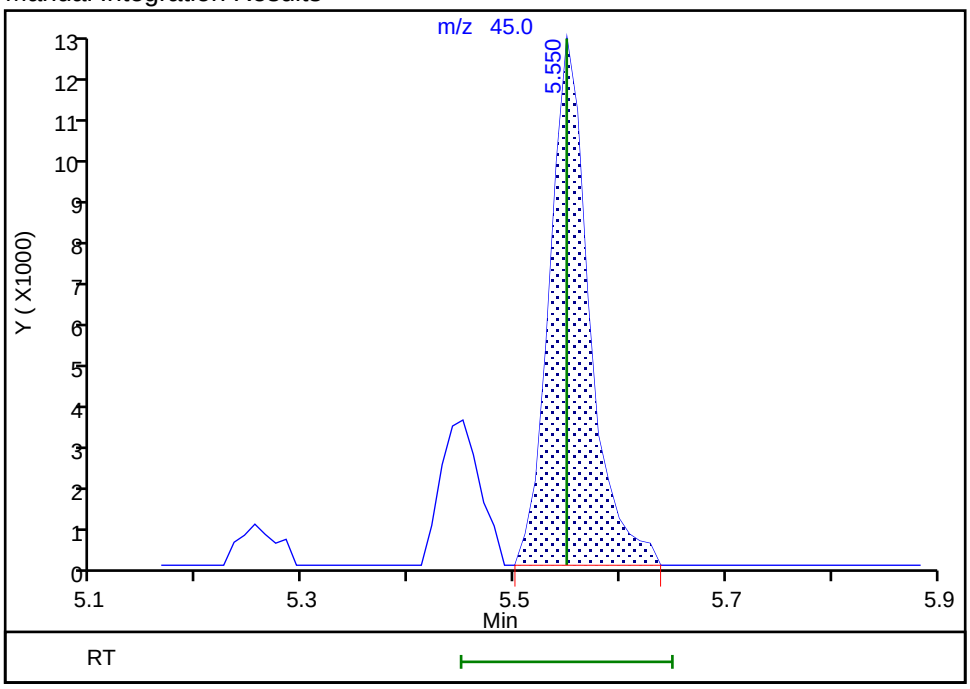
Processing Integration Results

RT: 5.45
Area: 8946
Amount: 31.301173
Amount Units: ug/l



Manual Integration Results

RT: 5.55
Area: 32680
Amount: 56.906074
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 21:26:04
Audit Action: Manually Integrated Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

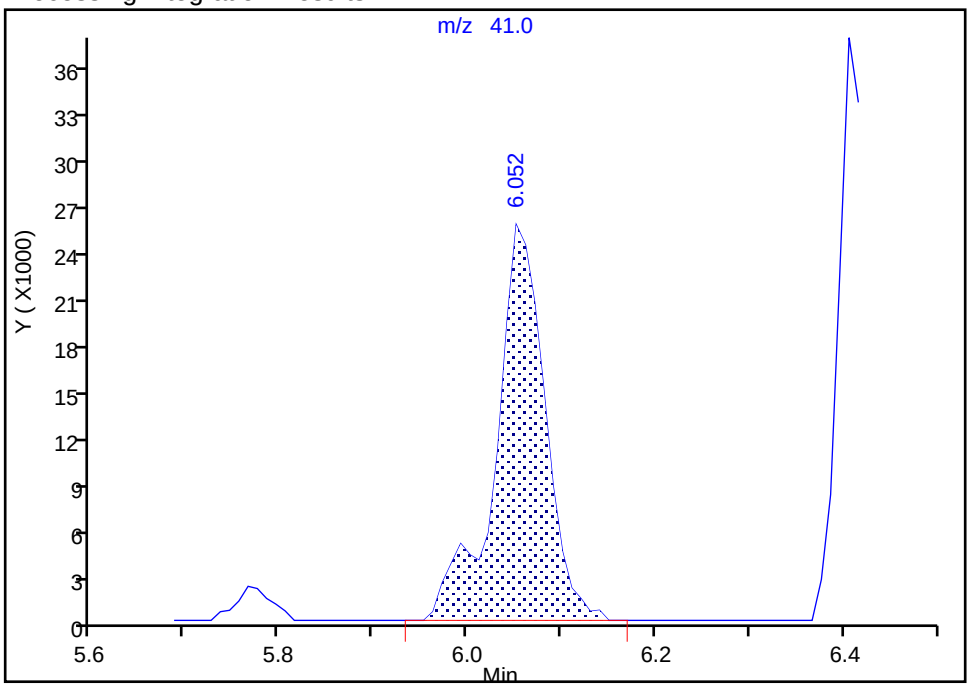
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0944.D
Injection Date: 29-Oct-2018 20:40:30 Instrument ID: VMS_G
Lims ID: STD02
Client ID:
Operator ID: newcomer ALS Bottle#: 13 Worklist Smp#: 12
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

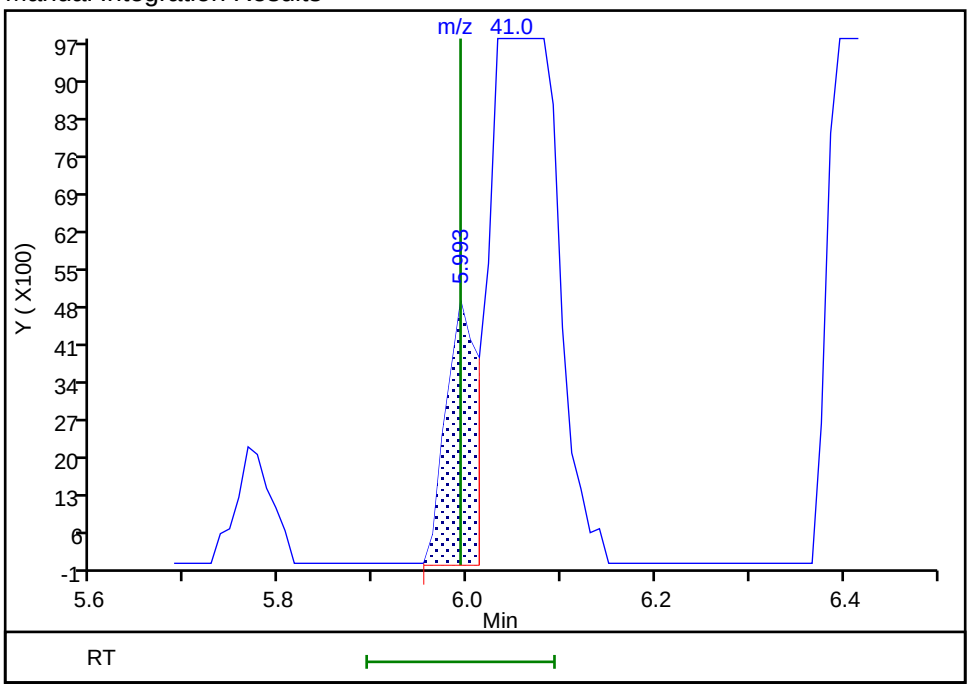
Processing Integration Results

RT: 6.05
Area: 92360
Amount: 129.6101
Amount Units: ug/l



Manual Integration Results

RT: 5.99
Area: 11641
Amount: 47.736731
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 21:26:26
Audit Action: Manually Integrated Audit Reason: Assign Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0945.D
Lims ID: STD05
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Oct-2018 21:01:30 ALS Bottle#: 14 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD05
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub83

Method: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Oct-2018 01:33:05 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0323

First Level Reviewer: newcomer Date: 29-Oct-2018 21:53:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.467	4.466	0.001	0	95862	250.0	250.0	
* 1 Fluorobenzene	96	6.466	6.465	0.001	97	757067	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.164	9.163	0.001	91	141631	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.291	11.290	0.001	96	196130	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.885	5.884	0.001	90	103325	5.00	4.84	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.190	6.180	0.010	0	81861	5.00	5.14	
$ 7 Toluene-d8 (Surr)	98	7.815	7.814	0.001	95	314805	5.00	4.90	
$ 8 4-Bromofluorobenzene (Surr	95	10.277	10.276	0.001	86	103489	5.00	4.94	
25 Dichlorodifluoromethane	85	2.892	2.891	0.001	100	139187	5.00	4.38	
27 Chloromethane	50	3.098	3.098	0.000	100	174028	5.00	4.78	
28 Vinyl chloride	62	3.217	3.216	0.001	79	133003	5.00	4.63	
31 Bromomethane	94	3.522	3.521	0.001	93	90558	5.00	4.62	
32 Chloroethane	64	3.581	3.570	0.011	96	67663	5.00	4.90	
33 Dichlorofluoromethane	67	3.719	3.718	0.001	98	192583	5.00	4.97	
35 Trichlorofluoromethane	101	3.827	3.826	0.001	98	174225	5.00	4.72	
38 Ethyl ether	59	3.955	3.954	0.001	92	46427	5.00	4.72	
41 Acrolein	56	4.073	4.072	0.001	98	58037	50.0	47.8	
42 Acetone	43	4.172	4.171	0.001	97	55651	20.0	18.7	
45 1,1-Dichloroethene	96	4.201	4.200	0.001	93	106249	5.00	4.66	
44 1,1,2-Trichloro-1,2,2-trif	151	4.201	4.200	0.001	95	79815	5.00	4.62	
47 Iodomethane	142	4.369	4.358	0.011	98	219276	5.00	4.87	
48 Methyl acetate	43	4.418	4.417	0.001	98	70047	10.0	9.94	
49 3-Chloro-1-propene	41	4.457	4.456	0.001	87	283250	5.00	4.87	
50 Carbon disulfide	76	4.457	4.456	0.001	97	575368	5.00	4.83	
51 2-Methyl-2-propanol	59	4.526	4.525	0.001	93	28566	50.0	48.1	
52 Methylene Chloride	84	4.546	4.545	0.001	97	108438	5.00	4.74	
53 Acrylonitrile	53	4.694	4.693	0.001	99	135971	50.0	49.2	
54 Methyl tert-butyl ether	73	4.743	4.742	0.001	97	123239	5.00	4.97	
55 trans-1,2-Dichloroethene	96	4.772	4.771	0.001	93	121426	5.00	5.03	
56 Hexane	57	4.959	4.959	0.000	94	220907	5.00	4.95	
57 Vinyl acetate	43	5.048	5.047	0.001	96	260435	10.0	9.78	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.087	5.087	0.000	97	234058	5.00	4.84	
62 2-Butanone (MEK)	43	5.481	5.480	0.001	96	76420	20.0	19.7	
66 cis-1,2-Dichloroethene	96	5.531	5.530	0.000	88	116313	5.00	4.97	
65 sec-Butyl Alcohol	45	5.550	5.549	0.001	96	82723	150.0	146.5	a
67 2,2-Dichloropropane	77	5.570	5.559	0.011	90	163633	5.00	4.82	
69 Chlorobromomethane	128	5.727	5.727	0.000	90	39720	5.00	5.03	
70 Chloroform	83	5.757	5.756	0.001	98	198447	5.00	4.92	
71 Tetrahydrofuran	42	5.767	5.766	0.001	91	22524	10.0	10.6	
73 1,1,1-Trichloroethane	97	5.974	5.973	0.001	96	172322	5.00	4.88	
72 Isobutyl alcohol	41	5.993	5.992	0.001	29	29194	125.0	121.8	M
74 Cyclohexane	56	6.052	6.052	0.000	97	259166	5.00	4.89	
75 1,1-Dichloropropene	75	6.092	6.091	0.001	92	184304	5.00	5.01	
76 Carbon tetrachloride	117	6.131	6.120	0.011	96	153675	5.00	4.95	
77 1,2-Dichloroethane	62	6.249	6.248	0.001	96	94931	5.00	5.01	
79 Benzene	78	6.269	6.268	0.001	98	439450	5.00	4.94	
13 n-Heptane	43	6.407	6.406	0.001	96	299368	5.00	4.98	
81 Trichloroethene	95	6.771	6.770	0.001	94	117212	5.00	4.85	
82 2-Pentanone	43	6.840	6.829	0.011	97	107988	20.0	18.5	
84 1,2-Dichloropropane	63	6.968	6.957	0.011	92	112117	5.00	5.01	
85 Methylcyclohexane	55	6.988	6.987	0.001	96	216098	5.00	4.95	
86 1,4-Dioxane	88	7.037	7.036	0.001	85	4579	100.0	92.0	
87 Dibromomethane	93	7.067	7.066	0.001	90	44866	5.00	5.12	
88 Dichlorobromomethane	83	7.165	7.164	0.001	97	118765	5.00	4.91	
90 2-Chloroethyl vinyl ether	63	7.372	7.361	0.011	86	8071	5.00	4.56	
91 cis-1,3-Dichloropropene	75	7.549	7.538	0.011	90	121494	5.00	5.08	
92 4-Methyl-2-pentanone (MIBK	43	7.628	7.627	0.001	96	161325	20.0	19.8	
93 Toluene	91	7.884	7.873	0.011	97	408414	5.00	5.08	
95 trans-1,3-Dichloropropene	75	8.012	8.011	0.001	97	83416	5.00	4.81	
94 Ethyl methacrylate	69	8.041	8.031	0.010	97	44174	5.00	4.69	
96 1,1,2-Trichloroethane	97	8.199	8.198	0.001	92	47776	5.00	5.28	
98 1,3-Dichloropropane	76	8.366	8.366	0.000	97	84408	5.00	5.12	
97 2-Hexanone	43	8.376	8.375	0.001	96	98383	20.0	19.0	
99 Tetrachloroethene	164	8.406	8.405	0.001	94	83074	5.00	4.90	
100 Chlorodibromomethane	129	8.593	8.592	0.001	89	62472	5.00	5.09	
102 Ethylene Dibromide	107	8.741	8.740	0.001	96	45134	5.00	5.06	
103 1-Chlorohexane	91	9.095	9.094	0.001	85	160054	5.00	5.12	
104 Chlorobenzene	112	9.193	9.193	0.000	90	224021	5.00	5.03	
105 1,1,1,2-Tetrachloroethane	131	9.243	9.242	0.001	95	75026	5.00	5.14	
106 Ethylbenzene	106	9.262	9.262	0.000	99	126521	5.00	5.18	
107 m-Xylene & p-Xylene	106	9.371	9.370	0.001	0	151594	5.00	5.20	
109 Styrene	104	9.774	9.764	0.010	82	202146	5.00	5.33	
108 o-Xylene	106	9.765	9.764	0.001	88	138597	5.00	5.21	
110 Bromoform	173	9.981	9.980	0.001	92	29394	5.00	5.06	
111 Isopropylbenzene	105	10.109	10.108	0.001	97	395568	5.00	5.05	
113 Cyclohexanone	55	10.218	10.217	0.001	97	84219	200.0	195.8	
114 1,1,2,2-Tetrachloroethane	83	10.346	10.345	0.001	92	53220	5.00	5.12	
115 trans-1,4-Dichloro-2-buten	53	10.405	10.404	0.001	66	9832	5.00	4.52	
116 1,2,3-Trichloropropane	110	10.424	10.414	0.010	85	9292	5.00	4.98	
117 Bromobenzene	156	10.454	10.453	0.001	96	78958	5.00	5.00	
118 N-Propylbenzene	120	10.493	10.492	0.001	99	100479	5.00	5.21	
120 2-Chlorotoluene	126	10.602	10.601	0.001	95	87437	5.00	5.00	
119 1,3,5-Trimethylbenzene	105	10.631	10.630	0.001	93	324410	5.00	5.12	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	10.690	10.689	0.001	99	88086	5.00	5.16	
122 tert-Butylbenzene	119	10.927	10.926	0.000	93	304055	5.00	5.21	
123 1,2,4-Trimethylbenzene	105	10.966	10.965	0.001	95	311818	5.00	5.05	
124 sec-Butylbenzene	134	11.114	11.113	0.001	96	73805	5.00	5.04	
125 4-Isopropyltoluene	119	11.222	11.221	0.001	97	350030	5.00	5.11	
126 1,3-Dichlorobenzene	146	11.242	11.241	0.001	96	164219	5.00	5.01	
127 1,4-Dichlorobenzene	146	11.311	11.310	0.001	93	166626	5.00	4.99	
129 n-Butylbenzene	91	11.576	11.576	0.000	99	420454	5.00	5.13	
130 1,2-Dichlorobenzene	146	11.645	11.644	0.001	96	132845	5.00	5.05	
131 1,2-Dibromo-3-Chloropropan	157	12.335	12.334	0.001	83	4946	5.00	4.40	
132 1,2,4-Trichlorobenzene	180	13.191	13.190	0.001	95	85792	5.00	5.10	
133 Hexachlorobutadiene	225	13.349	13.348	0.001	97	69950	5.00	4.85	
134 Naphthalene	128	13.487	13.486	0.001	97	94538	5.00	4.95	
135 1,2,3-Trichlorobenzene	180	13.753	13.752	0.000	93	69580	5.00	4.92	
S 142 1,2-Dichloroethene, Total	96				0		10.0	10.0	
S 137 Xylenes, Total (URS)	1				0		10.0	10.4	
S 141 Xylenes, Total	106				0		10.0	10.4	
S 138 Total BTEX	1				0			25.6	
S 140 1,2-Dichloroethene, Total	1				0		10.0	10.0	
S 136 Trihalomethanes, Total	1				0		20.0	20.0	
S 139 1,3-Dichloropropene, Total	1				0		10.0	9.89	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.40	Units: uL
MV-MegaMainA_00002	Amount Added:	2.00	Units: uL

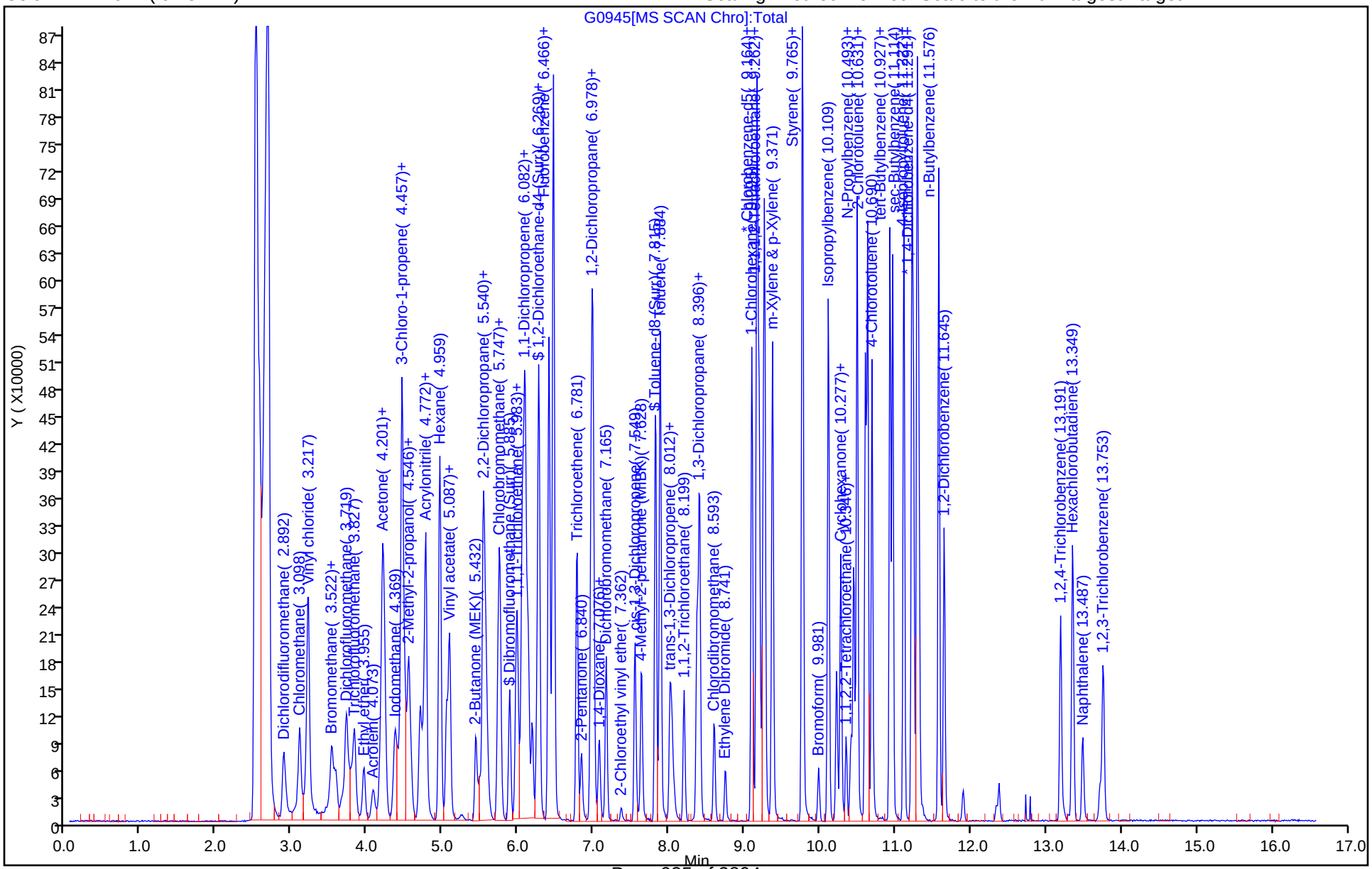
Report Date: 30-Oct-2018 01:33:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0945.D

Injection Date:	29-Oct-2018 21:01:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD05			Worklist Smp#:	13
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

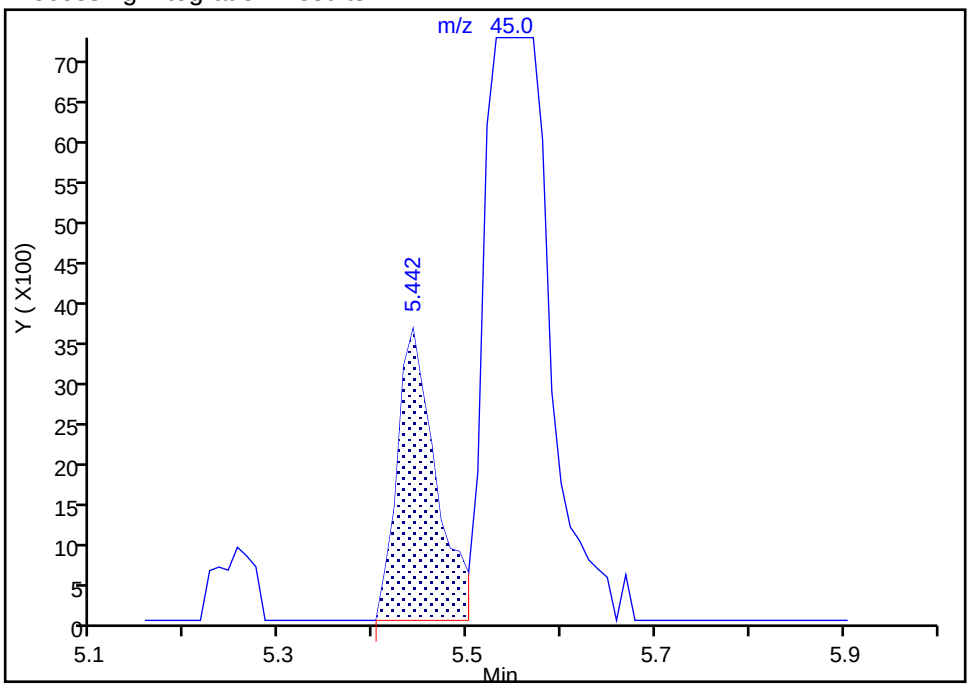
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0945.D
Injection Date: 29-Oct-2018 21:01:30 Instrument ID: VMS_G
Lims ID: STD05
Client ID:
Operator ID: newcomer ALS Bottle#: 14 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

65 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

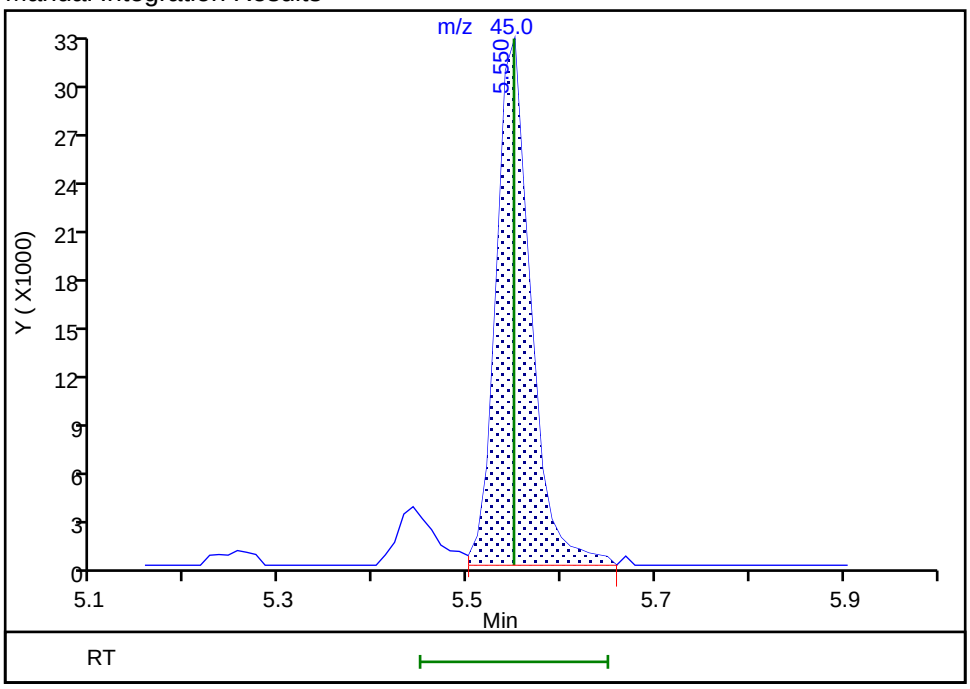
Processing Integration Results

RT: 5.44
Area: 10289
Amount: 55.714609
Amount Units: ug/l



Manual Integration Results

RT: 5.55
Area: 82723
Amount: 146.5334
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 21:31:00
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

Manual Integration/User Assign Peak Report

TestAmerica Denver

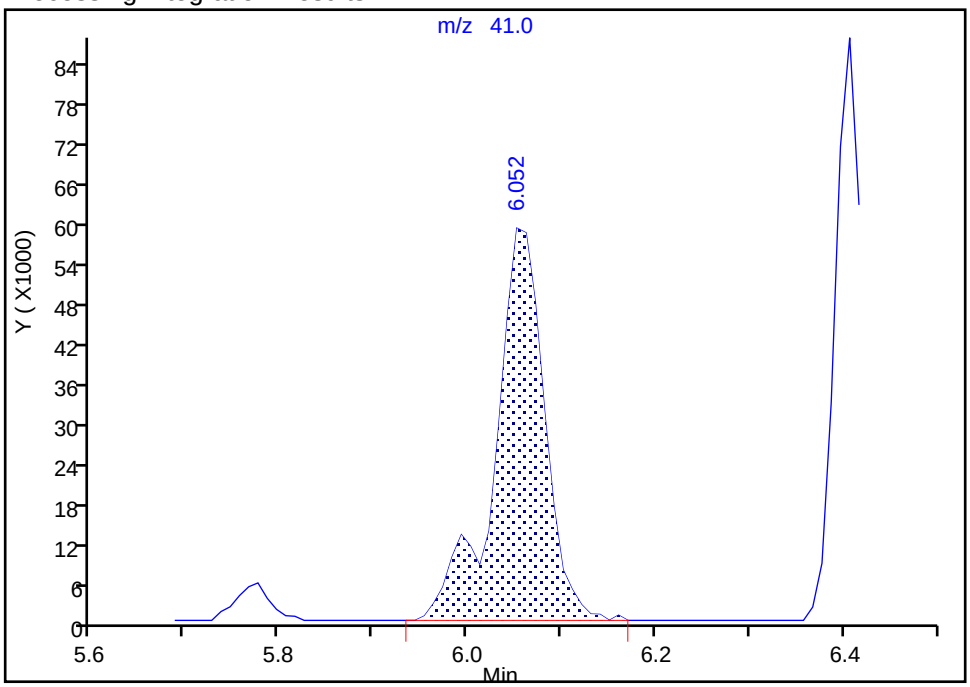
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0945.D
Injection Date: 29-Oct-2018 21:01:30 Instrument ID: VMS_G
Lims ID: STD05
Client ID:
Operator ID: newcomer ALS Bottle#: 14 Worklist Smp#: 13
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

72 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

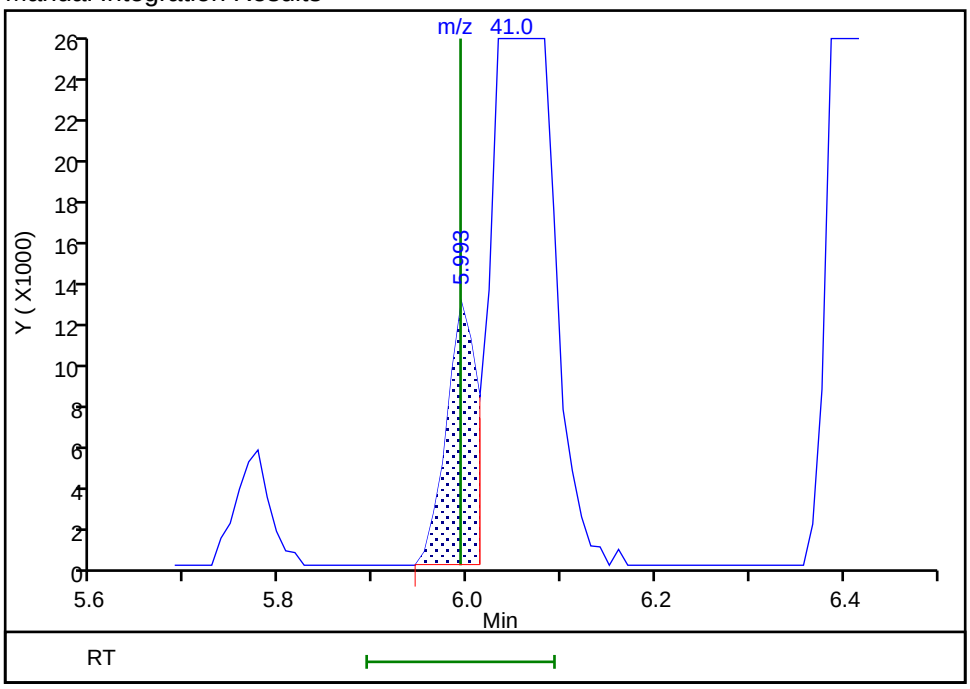
Processing Integration Results

RT: 6.05
Area: 216778
Amount: 317.5217
Amount Units: ug/l



Manual Integration Results

RT: 5.99
Area: 29194
Amount: 121.7839
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 21:31:22
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0946.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 29-Oct-2018 21:21:30 ALS Bottle#: 15 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD10
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub83

Method: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Oct-2018 01:33:12 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0323

First Level Reviewer: newcomer Date: 29-Oct-2018 22:12:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.466	4.466	0.000	0	98670	250.0	250.0	
* 1 Fluorobenzene	96	6.465	6.465	0.000	98	795389	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.163	9.163	0.000	89	150141	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.290	11.290	0.000	96	211577	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.884	5.884	0.000	91	225337	10.0	10.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.180	6.180	0.000	0	177998	10.0	10.6	
$ 7 Toluene-d8 (Surr)	98	7.814	7.814	0.000	95	710539	10.0	10.4	
$ 8 4-Bromofluorobenzene (Surr	95	10.276	10.276	0.000	86	226859	10.0	10.0	
25 Dichlorodifluoromethane	85	2.891	2.891	0.000	99	362413	10.0	10.9	
27 Chloromethane	50	3.098	3.098	0.000	100	396078	10.0	10.4	
28 Vinyl chloride	62	3.216	3.216	0.000	82	321542	10.0	10.6	
31 Bromomethane	94	3.521	3.521	0.000	92	206962	10.0	10.1	
32 Chloroethane	64	3.570	3.570	0.000	97	151203	10.0	10.4	
33 Dichlorofluoromethane	67	3.718	3.718	0.000	98	430409	10.0	10.6	
35 Trichlorofluoromethane	101	3.826	3.826	0.000	99	400011	10.0	10.3	
38 Ethyl ether	59	3.954	3.954	0.000	95	111153	10.0	10.7	
41 Acrolein	56	4.072	4.072	0.000	98	126350	100.0	99.0	
42 Acetone	43	4.171	4.171	0.000	97	123625	40.0	41.6	
45 1,1-Dichloroethene	96	4.200	4.200	0.000	97	247671	10.0	10.3	
44 1,1,2-Trichloro-1,2,2-trif	151	4.200	4.200	0.000	98	188177	10.0	10.4	
47 Iodomethane	142	4.358	4.358	0.000	98	480128	10.0	10.1	
48 Methyl acetate	43	4.417	4.417	0.000	99	144708	20.0	20.2	
49 3-Chloro-1-propene	41	4.456	4.456	0.000	90	613782	10.0	10.0	
50 Carbon disulfide	76	4.456	4.456	0.000	97	1275023	10.0	10.2	
51 2-Methyl-2-propanol	59	4.525	4.525	0.000	94	61733	100.0	101.1	
52 Methylene Chloride	84	4.545	4.545	0.000	97	229711	10.0	9.55	
53 Acrylonitrile	53	4.693	4.693	0.000	97	295451	100.0	101.8	
54 Methyl tert-butyl ether	73	4.742	4.742	0.000	98	267198	10.0	10.3	
55 trans-1,2-Dichloroethene	96	4.771	4.771	0.000	93	263182	10.0	10.4	
56 Hexane	57	4.959	4.959	0.000	94	487229	10.0	10.3	
57 Vinyl acetate	43	5.047	5.047	0.000	96	556939	20.0	19.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.087	5.087	0.000	97	508858	10.0	10.0	
62 2-Butanone (MEK)	43	5.480	5.480	0.000	97	155653	40.0	38.2	
66 cis-1,2-Dichloroethene	96	5.530	5.530	0.000	89	251772	10.0	10.2	
65 sec-Butyl Alcohol	45	5.549	5.549	0.000	51	177391	300.0	305.3	a
67 2,2-Dichloropropane	77	5.559	5.559	0.000	89	354297	10.0	9.93	
69 Chlorobromomethane	128	5.727	5.727	0.000	91	86484	10.0	10.4	
70 Chloroform	83	5.756	5.756	0.000	98	427971	10.0	10.1	
71 Tetrahydrofuran	42	5.766	5.766	0.000	91	46435	20.0	20.8	
73 1,1,1-Trichloroethane	97	5.973	5.973	0.000	97	371046	10.0	10.0	
72 Isobutyl alcohol	41	5.992	5.992	0.000	93	65444	250.0	265.2	
74 Cyclohexane	56	6.052	6.052	0.000	96	572213	10.0	10.3	
75 1,1-Dichloropropene	75	6.091	6.091	0.000	92	401626	10.0	10.4	
76 Carbon tetrachloride	117	6.120	6.120	0.000	97	335539	10.0	10.3	
77 1,2-Dichloroethane	62	6.248	6.248	0.000	96	206859	10.0	10.4	
79 Benzene	78	6.268	6.268	0.000	98	962759	10.0	10.3	
13 n-Heptane	43	6.406	6.406	0.000	96	667293	10.0	10.6	
81 Trichloroethene	95	6.770	6.770	0.000	94	263490	10.0	10.4	
82 2-Pentanone	43	6.829	6.829	0.000	97	248379	40.0	38.9	
84 1,2-Dichloropropane	63	6.957	6.957	0.000	93	239556	10.0	10.2	
85 Methylcyclohexane	55	6.987	6.987	0.000	96	466620	10.0	10.2	
86 1,4-Dioxane	88	7.036	7.036	0.000	93	12207	200.0	210.6	
87 Dibromomethane	93	7.066	7.066	0.000	90	94278	10.0	10.2	
88 Dichlorobromomethane	83	7.164	7.164	0.000	97	267780	10.0	10.5	
90 2-Chloroethyl vinyl ether	63	7.361	7.361	0.000	90	19062	10.0	8.48	
91 cis-1,3-Dichloropropene	75	7.538	7.538	0.000	90	272041	10.0	10.7	
92 4-Methyl-2-pentanone (MIBK	43	7.627	7.627	0.000	96	365729	40.0	42.6	
93 Toluene	91	7.873	7.873	0.000	97	874116	10.0	10.4	
95 trans-1,3-Dichloropropene	75	8.011	8.011	0.000	98	195305	10.0	10.7	
94 Ethyl methacrylate	69	8.031	8.031	0.000	97	102768	10.0	9.97	
96 1,1,2-Trichloroethane	97	8.198	8.198	0.000	92	98799	10.0	10.4	
98 1,3-Dichloropropane	76	8.366	8.366	0.000	97	183045	10.0	10.5	
97 2-Hexanone	43	8.375	8.375	0.000	97	229989	40.0	41.0	
99 Tetrachloroethene	164	8.405	8.405	0.000	97	186097	10.0	10.3	
100 Chlorodibromomethane	129	8.592	8.592	0.000	90	137471	10.0	10.6	
102 Ethylene Dibromide	107	8.740	8.740	0.000	98	99612	10.0	10.5	
103 1-Chlorohexane	91	9.094	9.094	0.000	88	358435	10.0	10.8	
104 Chlorobenzene	112	9.193	9.193	0.000	90	479677	10.0	10.2	
105 1,1,1,2-Tetrachloroethane	131	9.242	9.242	0.000	97	159339	10.0	10.3	
106 Ethylbenzene	106	9.262	9.262	0.000	99	273345	10.0	10.6	
107 m-Xylene & p-Xylene	106	9.370	9.370	0.000	0	322272	10.0	10.4	
109 Styrene	104	9.764	9.764	0.000	79	453384	10.0	11.3	
108 o-Xylene	106	9.764	9.764	0.000	87	297710	10.0	10.6	
110 Bromoform	173	9.980	9.980	0.000	92	64074	10.0	10.4	
111 Isopropylbenzene	105	10.108	10.108	0.000	97	870005	10.0	10.3	
113 Cyclohexanone	55	10.217	10.217	0.000	98	196637	400.0	431.3	
114 1,1,2,2-Tetrachloroethane	83	10.345	10.345	0.000	94	110892	10.0	9.90	
115 trans-1,4-Dichloro-2-buten	53	10.404	10.404	0.000	85	23696	10.0	9.57	
116 1,2,3-Trichloropropane	110	10.414	10.414	0.000	85	20508	10.0	10.2	
117 Bromobenzene	156	10.453	10.453	0.000	96	177254	10.0	10.4	
118 N-Propylbenzene	120	10.492	10.492	0.000	99	219996	10.0	10.6	
120 2-Chlorotoluene	126	10.601	10.601	0.000	95	194794	10.0	10.3	
119 1,3,5-Trimethylbenzene	105	10.630	10.630	0.000	93	712392	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	10.689	10.689	0.000	99	190303	10.0	10.3	
122 tert-Butylbenzene	119	10.926	10.926	0.000	94	661137	10.0	10.5	
123 1,2,4-Trimethylbenzene	105	10.965	10.965	0.000	96	689309	10.0	10.4	
124 sec-Butylbenzene	134	11.113	11.113	0.000	96	164606	10.0	10.4	
125 4-Isopropyltoluene	119	11.221	11.221	0.000	97	777623	10.0	10.5	
126 1,3-Dichlorobenzene	146	11.241	11.241	0.000	97	357284	10.0	10.1	
127 1,4-Dichlorobenzene	146	11.310	11.310	0.000	92	351050	10.0	9.74	
129 n-Butylbenzene	91	11.576	11.576	0.000	99	911161	10.0	10.3	
130 1,2-Dichlorobenzene	146	11.644	11.644	0.000	95	286743	10.0	10.1	
131 1,2-Dibromo-3-Chloropropan	157	12.334	12.334	0.000	80	12540	10.0	9.39	
132 1,2,4-Trichlorobenzene	180	13.190	13.190	0.000	94	193241	10.0	10.6	
133 Hexachlorobutadiene	225	13.348	13.348	0.000	96	156112	10.0	10.0	
134 Naphthalene	128	13.486	13.486	0.000	97	222722	10.0	10.8	
135 1,2,3-Trichlorobenzene	180	13.752	13.752	0.000	94	149149	10.0	9.78	
S 142 1,2-Dichloroethene, Total	96				0		20.0	20.6	
S 137 Xylenes, Total (URS)	1				0		20.0	21.0	
S 141 Xylenes, Total	106				0		20.0	21.0	
S 140 1,2-Dichloroethene, Total	1				0		20.0	20.6	
S 136 Trihalomethanes, Total	1				0		40.0	41.6	
S 139 1,3-Dichloropropene, Total	1				0		20.0	21.4	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL
MV-MegaMainA_00002	Amount Added:	4.00	Units: uL

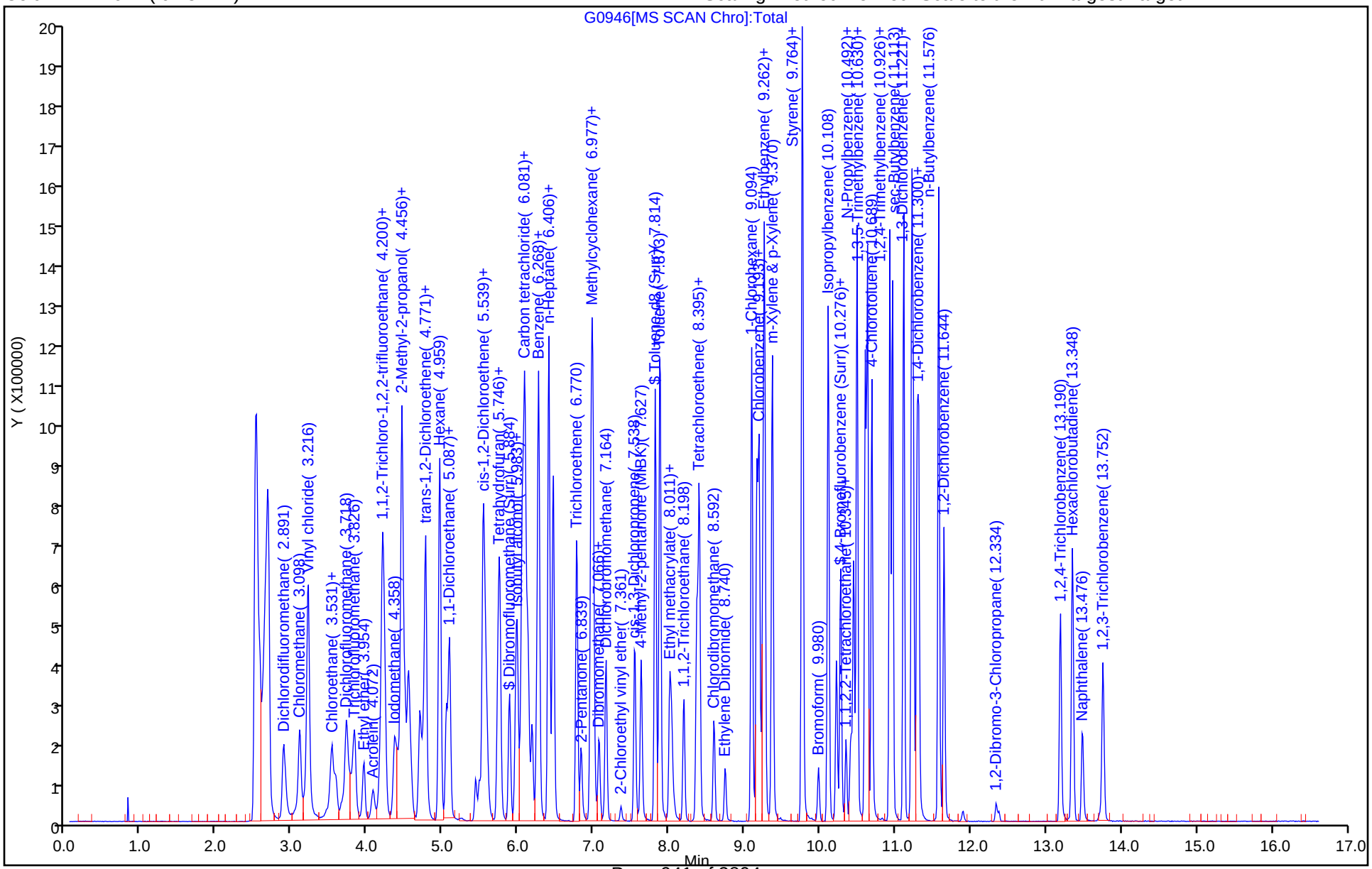
Report Date: 30-Oct-2018 01:33:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0946.D

Injection Date:	29-Oct-2018 21:21:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	ICIS			Worklist Smp#:	14
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

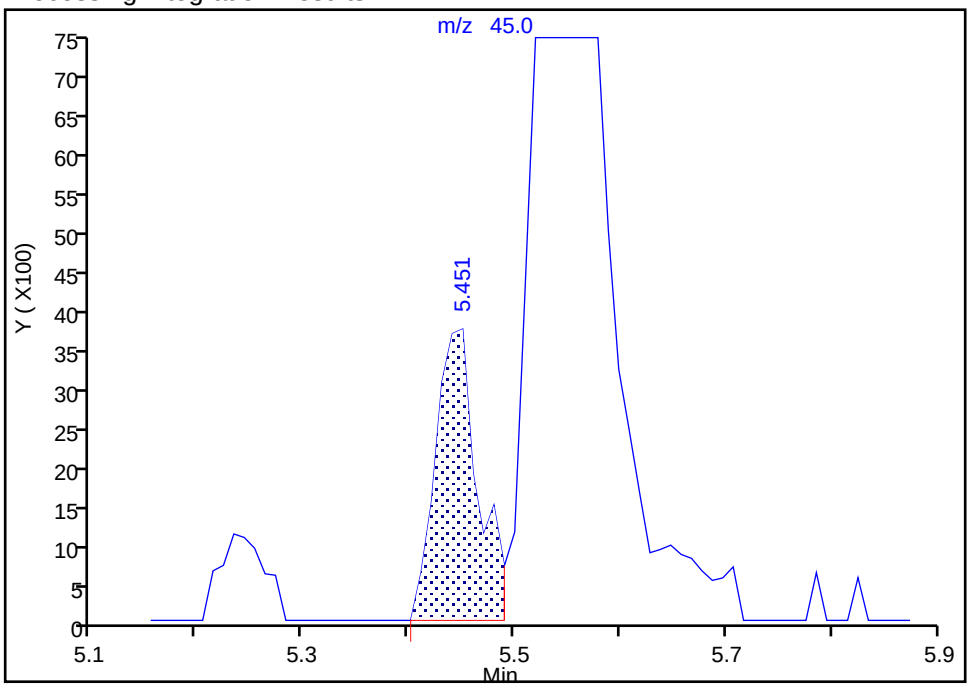
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0946.D
Injection Date: 29-Oct-2018 21:21:30 Instrument ID: VMS_G
Lims ID: ICIS
Client ID:
Operator ID: newcomer ALS Bottle#: 15 Worklist Smp#: 14
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

65 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

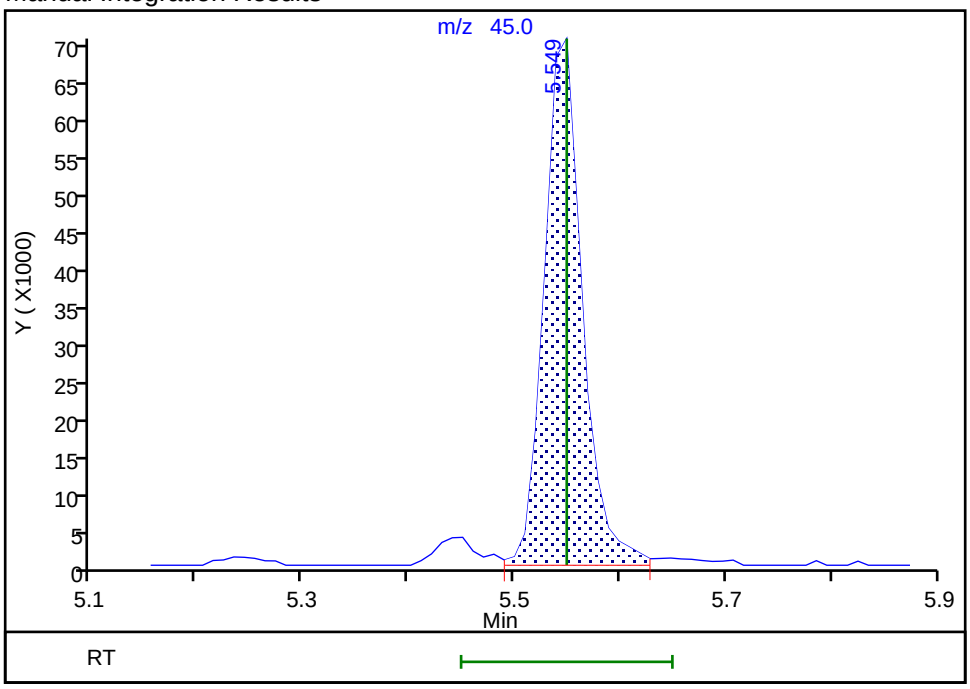
Processing Integration Results

RT: 5.45
Area: 10518
Amount: 658.8197
Amount Units: ug/l



Manual Integration Results

RT: 5.55
Area: 177391
Amount: 305.2835
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 22:15:49
Audit Action: Assigned Compound ID Audit Reason: Assign Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0947.D
Lims ID: STD25
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 29-Oct-2018 21:42:30 ALS Bottle#: 16 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD25
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub83

Method: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Oct-2018 01:33:19 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0323

First Level Reviewer: newcomer Date: 29-Oct-2018 22:17:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.456	4.466	-0.010	0	107885	250.0	250.0	
* 1 Fluorobenzene	96	6.465	6.465	0.000	98	839170	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.163	9.163	0.000	89	163933	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.290	11.290	0.000	96	224540	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.884	5.884	0.000	92	610553	25.0	25.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.180	6.180	0.000	0	441724	25.0	25.0	
$ 7 Toluene-d8 (Surr)	98	7.814	7.814	0.000	95	1868080	25.0	25.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.276	10.276	0.000	86	599233	25.0	25.0	
25 Dichlorodifluoromethane	85	2.891	2.891	0.000	99	944100	25.0	26.8	
27 Chloromethane	50	3.107	3.098	0.009	99	1022833	25.0	25.3	
28 Vinyl chloride	62	3.216	3.216	0.000	77	819874	25.0	25.7	
31 Bromomethane	94	3.531	3.521	0.010	92	524053	25.0	24.1	
32 Chloroethane	64	3.580	3.570	0.010	97	387921	25.0	25.3	
33 Dichlorofluoromethane	67	3.718	3.718	0.000	98	1107704	25.0	25.8	
35 Trichlorofluoromethane	101	3.826	3.826	0.000	98	1035659	25.0	25.3	
38 Ethyl ether	59	3.954	3.954	0.000	94	293713	25.0	26.9	
41 Acrolein	56	4.072	4.072	0.000	99	359580	250.0	266.9	
42 Acetone	43	4.171	4.171	0.000	97	306683	100.0	100.2	
45 1,1-Dichloroethene	96	4.210	4.200	0.010	94	657521	25.0	26.0	
44 1,1,2-Trichloro-1,2,2-trif	151	4.200	4.200	0.000	97	487591	25.0	25.5	
47 Iodomethane	142	4.368	4.358	0.010	98	1265293	25.0	25.3	
48 Methyl acetate	43	4.407	4.417	-0.010	99	367452	50.0	49.7	
49 3-Chloro-1-propene	41	4.456	4.456	0.000	90	1631204	25.0	25.3	
50 Carbon disulfide	76	4.456	4.456	0.000	100	3405354	25.0	25.8	
51 2-Methyl-2-propanol	59	4.525	4.525	0.000	95	166690	250.0	249.6	
52 Methylene Chloride	84	4.545	4.545	0.000	96	616554	25.0	24.3	
53 Acrylonitrile	53	4.693	4.693	0.000	98	806080	250.0	263.3	
54 Methyl tert-butyl ether	73	4.742	4.742	0.000	98	730417	25.0	26.6	
55 trans-1,2-Dichloroethene	96	4.771	4.771	0.000	92	689108	25.0	25.8	
56 Hexane	57	4.959	4.959	-0.001	94	1310692	25.0	25.4	
57 Vinyl acetate	43	5.047	5.047	0.000	96	1609362	50.0	54.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.087	5.087	0.000	97	1361105	25.0	25.4	
62 2-Butanone (MEK)	43	5.480	5.480	0.000	97	429872	100.0	100.0	
66 cis-1,2-Dichloroethene	96	5.530	5.530	0.000	89	662740	25.0	25.5	
65 sec-Butyl Alcohol	45	5.539	5.549	-0.010	99	490737	750.0	772.4	a
67 2,2-Dichloropropane	77	5.569	5.559	0.010	89	931857	25.0	24.8	
69 Chlorobromomethane	128	5.727	5.727	0.000	90	231122	25.0	26.4	
70 Chloroform	83	5.756	5.756	0.000	98	1150975	25.0	25.7	
71 Tetrahydrofuran	42	5.766	5.766	0.000	92	132248	50.0	56.1	
73 1,1,1-Trichloroethane	97	5.973	5.973	0.000	97	1000044	25.0	25.6	
72 Isobutyl alcohol	41	5.992	5.992	0.000	92	184437	625.0	683.6	
74 Cyclohexane	56	6.061	6.052	0.009	96	1511678	25.0	25.8	
75 1,1-Dichloropropene	75	6.091	6.091	0.000	92	1061606	25.0	26.0	
76 Carbon tetrachloride	117	6.130	6.120	0.010	96	890309	25.0	25.9	
77 1,2-Dichloroethane	62	6.239	6.248	-0.009	96	556741	25.0	26.5	
79 Benzene	78	6.268	6.268	0.000	98	2518964	25.0	25.5	
13 n-Heptane	43	6.406	6.406	0.000	96	1747866	25.0	26.2	
81 Trichloroethene	95	6.770	6.770	0.000	94	695795	25.0	26.0	
82 2-Pentanone	43	6.829	6.829	0.000	97	689606	100.0	100.1	
84 1,2-Dichloropropane	63	6.957	6.957	0.000	93	645210	25.0	26.0	
85 Methylcyclohexane	55	6.987	6.987	0.000	96	1249033	25.0	25.8	
86 1,4-Dioxane	88	7.036	7.036	0.000	98	32387	500.0	507.3	
87 Dibromomethane	93	7.066	7.066	0.000	90	253125	25.0	26.0	
88 Dichlorobromomethane	83	7.164	7.164	0.000	98	717048	25.0	26.8	
90 2-Chloroethyl vinyl ether	63	7.361	7.361	0.000	90	61553	25.0	23.0	
91 cis-1,3-Dichloropropene	75	7.538	7.538	0.000	90	765214	25.0	27.6	
92 4-Methyl-2-pentanone (MIBK	43	7.627	7.627	0.000	96	1003529	100.0	110.8	
93 Toluene	91	7.873	7.873	0.000	97	2312568	25.0	26.0	
95 trans-1,3-Dichloropropene	75	8.011	8.011	0.000	99	540508	25.0	28.1	
94 Ethyl methacrylate	69	8.031	8.031	0.000	96	301142	25.0	26.3	
96 1,1,2-Trichloroethane	97	8.188	8.198	-0.010	92	268342	25.0	26.7	
98 1,3-Dichloropropane	76	8.365	8.366	-0.001	96	498626	25.0	26.1	
97 2-Hexanone	43	8.365	8.375	-0.010	97	659784	100.0	106.6	
99 Tetrachloroethene	164	8.395	8.405	-0.010	95	494911	25.0	25.2	
100 Chlorodibromomethane	129	8.592	8.592	0.000	90	382971	25.0	26.9	
102 Ethylene Dibromide	107	8.740	8.740	0.000	98	274242	25.0	26.6	
103 1-Chlorohexane	91	9.094	9.094	0.000	88	967325	25.0	26.7	
104 Chlorobenzene	112	9.193	9.193	0.000	90	1267094	25.0	24.6	
105 1,1,1,2-Tetrachloroethane	131	9.242	9.242	0.000	97	432148	25.0	25.6	
106 Ethylbenzene	106	9.262	9.262	0.000	99	710703	25.0	25.2	
107 m-Xylene & p-Xylene	106	9.370	9.370	0.000	0	871370	25.0	25.8	
109 Styrene	104	9.764	9.764	0.000	80	1218992	25.0	27.8	
108 o-Xylene	106	9.764	9.764	0.000	87	783298	25.0	25.4	
110 Bromoform	173	9.980	9.980	0.000	93	179732	25.0	26.7	
111 Isopropylbenzene	105	10.108	10.108	0.000	97	2375776	25.0	26.5	
113 Cyclohexanone	55	10.217	10.217	0.000	99	552931	1000.0	1110.8	
114 1,1,2,2-Tetrachloroethane	83	10.345	10.345	0.000	93	301722	25.0	25.4	
115 trans-1,4-Dichloro-2-buten	53	10.394	10.404	-0.010	86	70921	25.0	26.2	
116 1,2,3-Trichloropropane	110	10.414	10.414	0.000	87	55910	25.0	26.2	
117 Bromobenzene	156	10.443	10.453	-0.010	96	478762	25.0	26.5	
118 N-Propylbenzene	120	10.492	10.492	0.000	99	588769	25.0	26.7	
120 2-Chlorotoluene	126	10.601	10.601	0.000	95	511732	25.0	25.6	
119 1,3,5-Trimethylbenzene	105	10.630	10.630	0.000	93	1862759	25.0	25.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	10.689	10.689	0.000	99	498802	25.0	25.5	
122 tert-Butylbenzene	119	10.926	10.926	0.000	94	1743280	25.0	26.1	
123 1,2,4-Trimethylbenzene	105	10.965	10.965	0.000	95	1829002	25.0	25.9	
124 sec-Butylbenzene	134	11.113	11.113	0.000	96	438151	25.0	26.1	
125 4-Isopropyltoluene	119	11.211	11.221	-0.010	97	2008203	25.0	25.6	
126 1,3-Dichlorobenzene	146	11.241	11.241	0.000	97	933293	25.0	24.9	
127 1,4-Dichlorobenzene	146	11.310	11.310	0.000	97	961899	25.0	25.1	
129 n-Butylbenzene	91	11.576	11.576	0.000	99	2395194	25.0	25.5	
130 1,2-Dichlorobenzene	146	11.644	11.644	0.000	96	774851	25.0	25.7	
131 1,2-Dibromo-3-Chloropropan	157	12.334	12.334	0.000	76	35522	25.0	23.9	
132 1,2,4-Trichlorobenzene	180	13.190	13.190	0.000	94	520400	25.0	27.0	
133 Hexachlorobutadiene	225	13.348	13.348	0.000	96	415593	25.0	25.2	
134 Naphthalene	128	13.476	13.486	-0.010	97	624895	25.0	28.6	
135 1,2,3-Trichlorobenzene	180	13.752	13.752	0.000	96	408924	25.0	25.3	
S 142 1,2-Dichloroethene, Total	96				0		50.0	51.3	
S 137 Xylenes, Total (URS)	1				0		50.0	51.2	
S 141 Xylenes, Total	106				0		50.0	51.2	
S 138 Total BTEX	1				0			127.9	
S 140 1,2-Dichloroethene, Total	1				0		50.0	51.3	
S 136 Trihalomethanes, Total	1				0		100.0	106.2	
S 139 1,3-Dichloropropene, Total	1				0		50.0	55.8	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	2.00	Units: uL
MV-MegaMainA_00002	Amount Added:	10.00	Units: uL

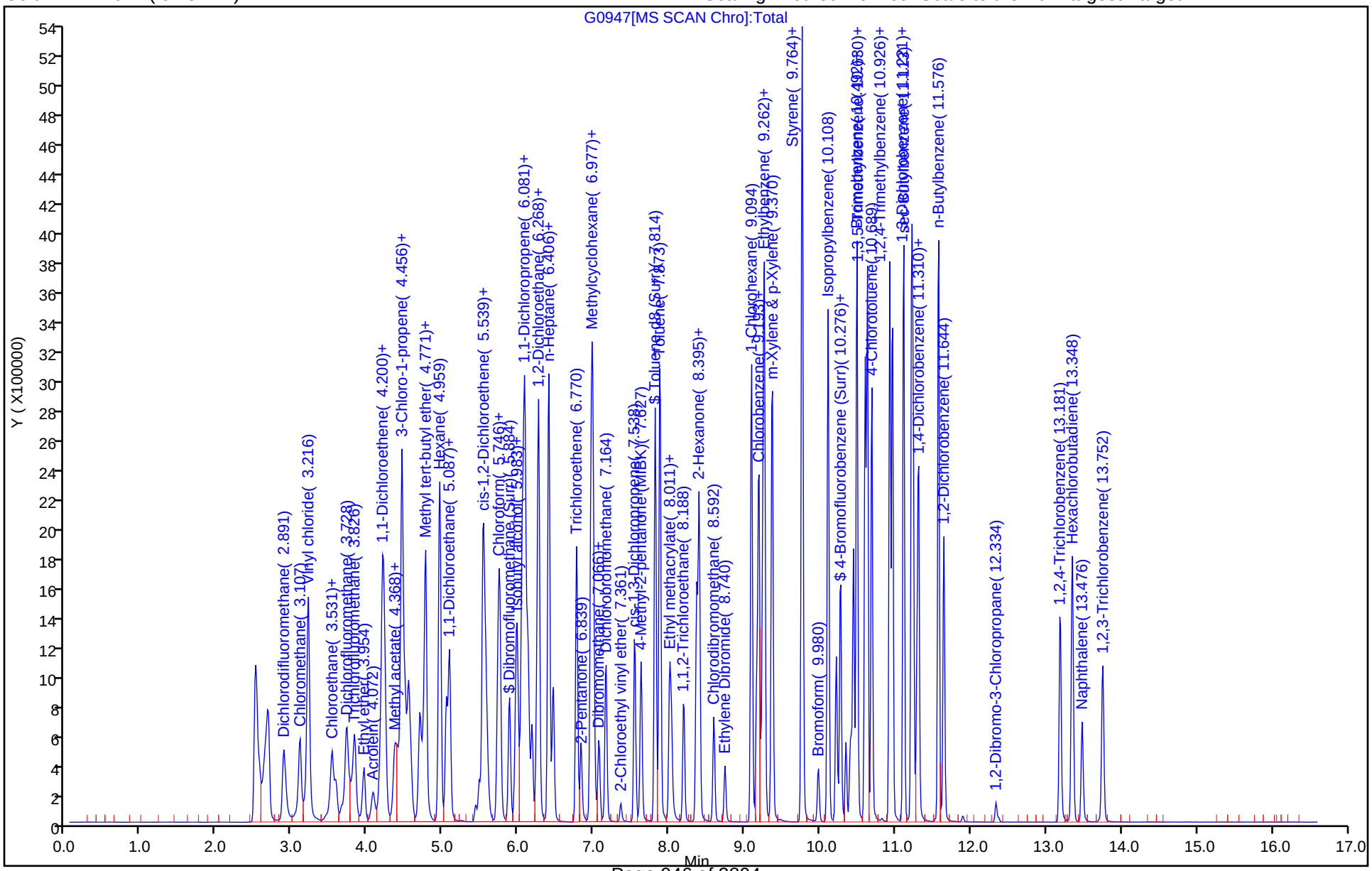
Report Date: 30-Oct-2018 01:33:20 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0947.D

Injection Date:	29-Oct-2018 21:42:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD25			Worklist Smp#:	15
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

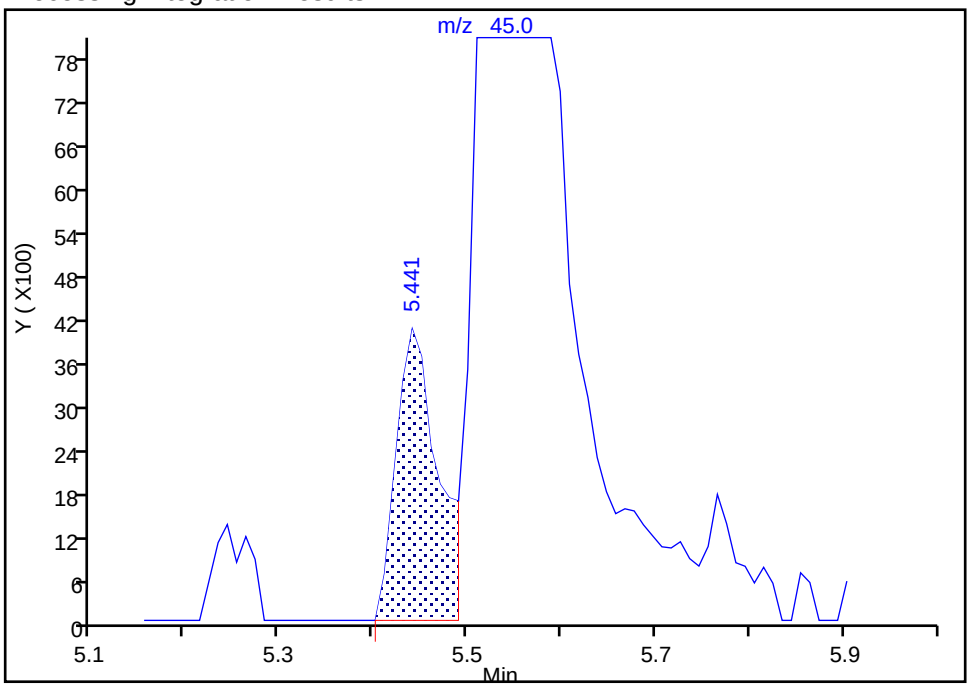
Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0947.D
Injection Date: 29-Oct-2018 21:42:30 Instrument ID: VMS_G
Lims ID: STD25
Client ID:
Operator ID: newcomer ALS Bottle#: 16 Worklist Smp#: 15
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

65 sec-Butyl Alcohol, CAS: 78-92-2

Signal: 1

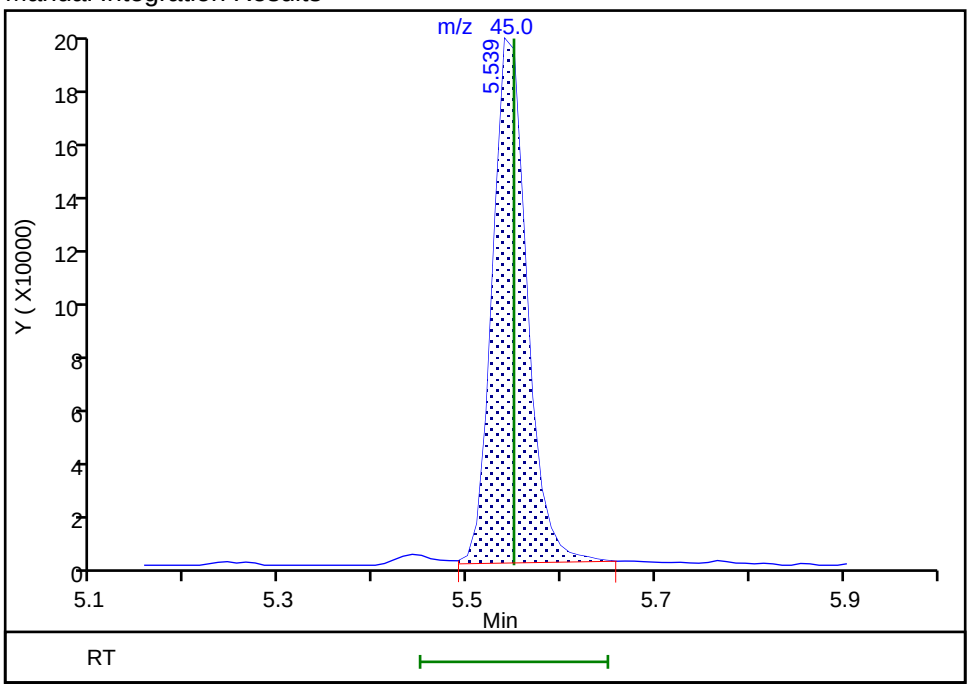
Processing Integration Results

RT: 5.44
Area: 12548
Amount: 23.548149
Amount Units: ug/l



Manual Integration Results

RT: 5.54
Area: 490737
Amount: 772.4042
Amount Units: ug/l



Reviewer: newcomer, 29-Oct-2018 22:16:11
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D
Lims ID: STD60
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Oct-2018 22:02:30 ALS Bottle#: 17 Worklist Smp#: 16
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: STD60
Operator ID: newcomer Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub83

Method: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Oct-2018 01:33:26 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0323

First Level Reviewer: newcomer Date: 29-Oct-2018 23:00:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.457	4.466	-0.009	0	108187	250.0	250.0	
* 1 Fluorobenzene	96	6.456	6.465	-0.009	97	838153	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.154	9.163	-0.009	90	160656	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.281	11.290	-0.009	96	213391	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.875	5.884	-0.009	91	1413118	60.0	59.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.180	6.180	0.000	0	1030951	60.0	58.4	
$ 7 Toluene-d8 (Surr)	98	7.815	7.814	0.001	95	4301156	60.0	59.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.267	10.276	-0.009	86	1382771	60.0	60.7	
25 Dichlorodifluoromethane	85	2.892	2.891	0.001	99	2201431	60.0	62.6	
27 Chloromethane	50	3.098	3.098	0.000	100	2348854	60.0	58.3	
28 Vinyl chloride	62	3.207	3.216	-0.009	95	1758215	60.0	55.2	
31 Bromomethane	94	3.522	3.521	0.001	92	1103895	60.0	50.9	
32 Chloroethane	64	3.571	3.570	0.001	97	807775	60.0	52.8	
33 Dichlorofluoromethane	67	3.709	3.718	-0.009	98	2434070	60.0	56.7	
35 Trichlorofluoromethane	101	3.817	3.826	-0.009	99	2273426	60.0	55.6	
38 Ethyl ether	59	3.945	3.954	-0.009	94	644914	60.0	59.2	
41 Acrolein	56	4.063	4.072	-0.009	100	837071	600.1	622.1	
42 Acetone	43	4.162	4.171	-0.009	97	714004	240.0	235.9	
45 1,1-Dichloroethene	96	4.201	4.200	0.001	94	1502214	60.0	59.6	
44 1,1,2-Trichloro-1,2,2-trif	151	4.201	4.200	0.001	97	1113937	60.0	58.2	
47 Iodomethane	142	4.359	4.358	0.001	98	2969268	60.0	59.6	
48 Methyl acetate	43	4.408	4.417	-0.009	100	880480	120.0	120.2	
49 3-Chloro-1-propene	41	4.447	4.456	-0.009	90	3781854	60.0	58.7	
50 Carbon disulfide	76	4.447	4.456	-0.009	100	7885623	60.0	59.8	
51 2-Methyl-2-propanol	59	4.516	4.525	-0.009	94	389448	600.0	581.6	
52 Methylene Chloride	84	4.536	4.545	-0.009	96	1415583	60.0	55.9	
53 Acrylonitrile	53	4.684	4.693	-0.009	98	1900539	600.0	621.5	
54 Methyl tert-butyl ether	73	4.733	4.742	-0.009	98	1705233	60.0	62.1	
55 trans-1,2-Dichloroethene	96	4.762	4.771	-0.009	92	1600365	60.0	59.9	
56 Hexane	57	4.950	4.959	-0.009	94	2999386	60.0	59.2	
57 Vinyl acetate	43	5.038	5.047	-0.009	96	3677378	120.0	124.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.078	5.087	-0.009	97	3197979	60.0	59.8	
62 2-Butanone (MEK)	43	5.481	5.480	0.001	97	1063889	240.0	247.8	
66 cis-1,2-Dichloroethene	96	5.521	5.530	-0.009	89	1558561	60.0	60.1	
65 sec-Butyl Alcohol	45	5.540	5.549	-0.009	98	1213043	1800.0	1904.0	
67 2,2-Dichloropropane	77	5.560	5.559	0.001	90	2165163	60.0	57.6	
69 Chlorobromomethane	128	5.727	5.727	0.000	90	540017	60.0	61.8	
70 Chloroform	83	5.747	5.756	-0.009	98	2642141	60.0	59.1	
71 Tetrahydrofuran	42	5.767	5.766	0.001	93	303191	120.0	128.8	
73 1,1,1-Trichloroethane	97	5.974	5.973	0.001	97	2322546	60.0	59.4	
72 Isobutyl alcohol	41	5.983	5.992	-0.009	94	388705	1500.0	1436.8	
74 Cyclohexane	56	6.052	6.052	0.000	96	3434488	60.0	58.6	
75 1,1-Dichloropropene	75	6.082	6.091	-0.009	91	2401475	60.0	58.9	
76 Carbon tetrachloride	117	6.121	6.120	0.001	96	2050744	60.0	59.7	
77 1,2-Dichloroethane	62	6.239	6.248	-0.009	96	1282258	60.0	61.2	
79 Benzene	78	6.269	6.268	0.001	98	5829470	60.0	59.1	
13 n-Heptane	43	6.397	6.406	-0.009	96	4037922	60.0	60.7	
81 Trichloroethene	95	6.771	6.770	0.001	94	1616845	60.0	60.4	
82 2-Pentanone	43	6.820	6.829	-0.009	96	1680746	240.0	242.3	
84 1,2-Dichloropropane	63	6.958	6.957	0.001	93	1468752	60.0	59.2	
85 Methylcyclohexane	55	6.978	6.987	-0.009	96	2844803	60.0	58.8	
86 1,4-Dioxane	88	7.027	7.036	-0.009	96	75909	1200.0	1170.5	
87 Dibromomethane	93	7.067	7.066	0.001	90	600668	60.0	61.9	
88 Dichlorobromomethane	83	7.155	7.164	-0.009	98	1695227	60.0	63.3	
90 2-Chloroethyl vinyl ether	63	7.352	7.361	-0.009	90	176324	60.0	63.4	
91 cis-1,3-Dichloropropene	75	7.539	7.538	0.001	90	1800721	60.0	66.3	
92 4-Methyl-2-pentanone (MIBK	43	7.618	7.627	-0.009	96	2368458	240.0	261.9	
93 Toluene	91	7.874	7.873	0.001	96	5306072	60.0	59.7	
95 trans-1,3-Dichloropropene	75	8.002	8.011	-0.009	99	1280670	60.0	66.7	
94 Ethyl methacrylate	69	8.022	8.031	-0.009	95	731813	60.0	64.9	
96 1,1,2-Trichloroethane	97	8.189	8.198	-0.009	91	619437	60.0	61.8	
98 1,3-Dichloropropane	76	8.357	8.366	-0.009	96	1134760	60.0	60.7	
97 2-Hexanone	43	8.366	8.375	-0.009	97	1522296	240.0	249.9	
99 Tetrachloroethene	164	8.396	8.405	-0.009	95	1105058	60.0	57.4	
100 Chlorodibromomethane	129	8.593	8.592	0.001	90	903891	60.0	64.9	
102 Ethylene Dibromide	107	8.731	8.740	-0.009	98	643353	60.0	63.6	
103 1-Chlorohexane	91	9.085	9.094	-0.009	88	2191537	60.0	61.8	
104 Chlorobenzene	112	9.184	9.193	-0.009	90	2935465	60.0	58.1	
105 1,1,1,2-Tetrachloroethane	131	9.233	9.242	-0.009	97	971474	60.0	58.7	
106 Ethylbenzene	106	9.262	9.262	0.000	99	1570437	60.0	56.7	
107 m-Xylene & p-Xylene	106	9.361	9.370	-0.009	0	1983179	60.0	59.9	
109 Styrene	104	9.765	9.764	0.001	82	2725854	60.0	63.4	
108 o-Xylene	106	9.755	9.764	-0.009	86	1717337	60.0	56.9	
110 Bromoform	173	9.971	9.980	-0.009	93	441121	60.0	66.9	
111 Isopropylbenzene	105	10.099	10.108	-0.009	97	5346881	60.0	62.7	
113 Cyclohexanone	55	10.208	10.217	-0.009	98	1302693	2400.0	2670.4	
114 1,1,2,2-Tetrachloroethane	83	10.336	10.345	-0.009	94	692250	60.0	61.2	
115 trans-1,4-Dichloro-2-buten	53	10.395	10.404	-0.009	85	171577	60.0	66.0	
116 1,2,3-Trichloropropane	110	10.414	10.414	0.000	88	130921	60.0	64.5	
117 Bromobenzene	156	10.444	10.453	-0.009	97	1087600	60.0	63.2	
118 N-Propylbenzene	120	10.483	10.492	-0.009	99	1319729	60.0	62.9	
120 2-Chlorotoluene	126	10.602	10.601	0.001	95	1124078	60.0	59.1	
119 1,3,5-Trimethylbenzene	105	10.631	10.630	0.001	93	3989293	60.0	57.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	10.680	10.689	-0.009	99	1114689	60.0	60.0	
122 tert-Butylbenzene	119	10.927	10.926	0.001	94	3907330	60.0	61.5	
123 1,2,4-Trimethylbenzene	105	10.956	10.965	-0.009	95	4104525	60.0	61.1	
124 sec-Butylbenzene	134	11.104	11.113	-0.009	96	967706	60.0	60.7	
125 4-Isopropyltoluene	119	11.212	11.221	-0.009	97	4373881	60.0	58.7	
126 1,3-Dichlorobenzene	146	11.232	11.241	-0.009	96	2052839	60.0	57.6	
127 1,4-Dichlorobenzene	146	11.301	11.310	-0.009	92	2094459	60.0	57.6	
129 n-Butylbenzene	91	11.567	11.576	-0.009	100	5452789	60.0	61.2	
130 1,2-Dichlorobenzene	146	11.645	11.644	0.001	97	1726193	60.0	60.4	
131 1,2-Dibromo-3-Chloropropan	157	12.335	12.334	0.001	80	89433	60.0	62.2	
132 1,2,4-Trichlorobenzene	180	13.181	13.190	-0.009	94	1216076	60.0	66.4	
133 Hexachlorobutadiene	225	13.349	13.348	0.001	97	942693	60.0	60.0	
134 Naphthalene	128	13.477	13.486	-0.009	97	1481945	60.0	71.3	
135 1,2,3-Trichlorobenzene	180	13.753	13.752	0.001	94	938622	60.0	61.0	
S 142 1,2-Dichloroethene, Total	96				0		120.0	120.0	
S 137 Xylenes, Total (URS)	1				0		120.0	116.8	
S 141 Xylenes, Total	106				0		120.0	116.8	
S 138 Total BTEX	1				0			292.3	
S 140 1,2-Dichloroethene, Total	1				0		120.0	120.0	
S 136 Trihalomethanes, Total	1				0		240.0	254.3	
S 139 1,3-Dichloropropene, Total	1				0		120.0	133.1	

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	4.80	Units: uL
MV-MegaMainA_00002	Amount Added:	24.00	Units: uL

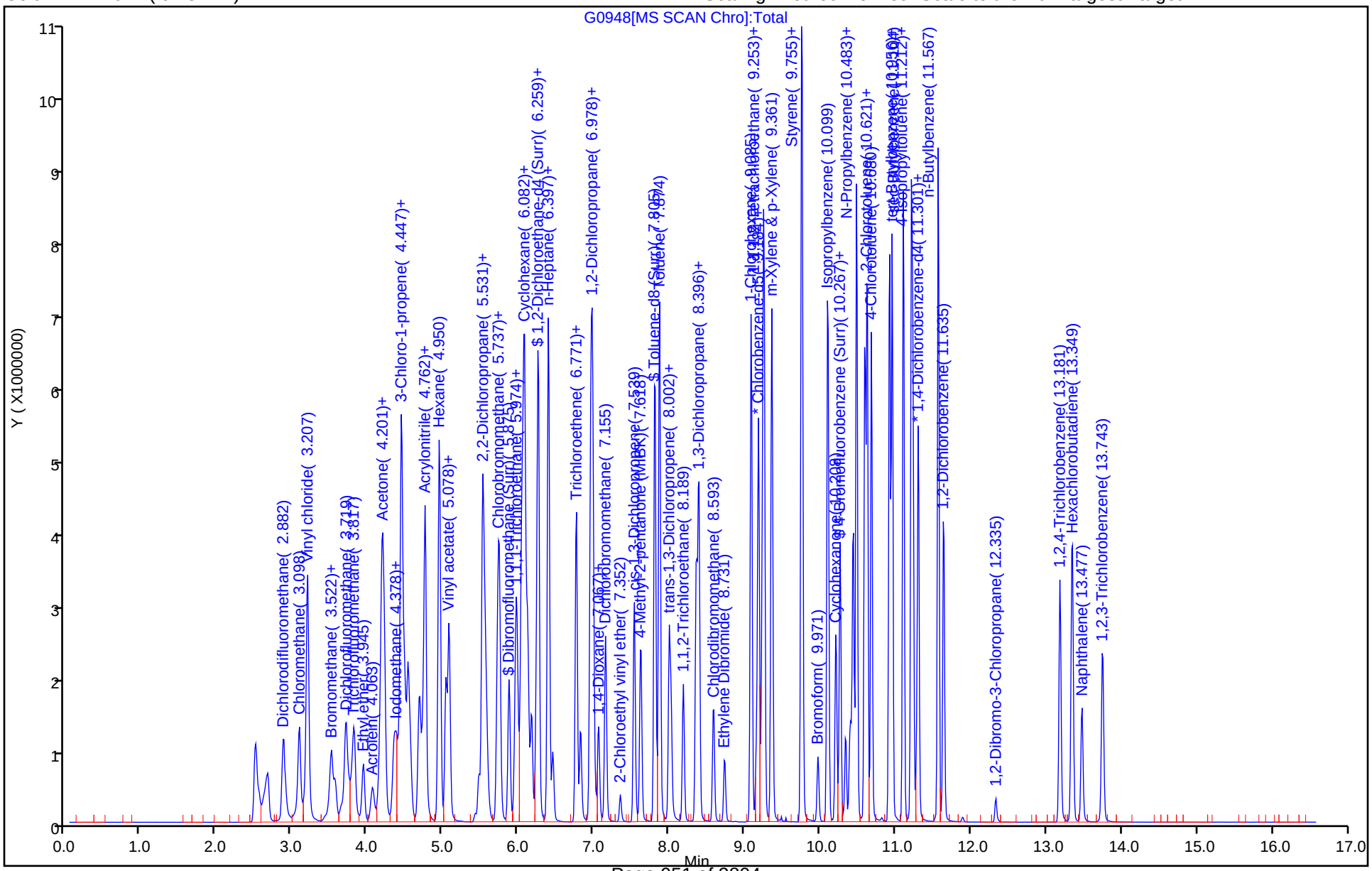
Report Date: 30-Oct-2018 01:33:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Injection Date:	29-Oct-2018 22:02:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	STD60			Worklist Smp#:	16
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-435406/17 Calibration Date: 10/29/2018 22:43

Instrument ID: VMS_G Calib Start Date: 10/29/2018 20:00

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 10/29/2018 22:02

Lab File ID: G0950.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5246	0.5825		11.1	10.0	11.0	20.0
Chloromethane	Ave	0.6014	0.5651	0.1000	9.40	10.0	-6.0	20.0
Vinyl chloride	Ave	0.4747	0.4595		9.68	10.0	-3.2	20.0
Bromomethane	Ave	0.3234	0.3027		9.36	10.0	-6.4	20.0
Chloroethane	Ave	0.2279	0.2227		9.77	10.0	-2.3	20.0
Dichlorofluoromethane	Ave	0.6401	0.6727		10.5	10.0	5.1	20.0
Trichlorofluoromethane	Ave	0.6094	0.6060		9.94	10.0	-0.6	20.0
Ethyl ether	Ave	0.1625	0.1673		10.3	10.0	3.0	20.0
Acrolein	Ave	0.0201	0.0201		100	100	0.0	20.0
Acetone	Lin2		0.0417		35.4	40.0	-11.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2852	0.3002		10.5	10.0	5.2	20.0
1,1-Dichloroethene	Ave	0.3761	0.4022		10.7	10.0	6.9	20.0
Iodomethane	Ave	0.7436	0.7784		10.5	10.0	4.7	20.0
Methyl acetate	Lin1		0.1108		19.7	20.0	-1.5	20.0
3-Chloro-1-propene	Ave	0.9605	0.9758		10.2	10.0	1.6	20.0
Carbon disulfide	Ave	1.968	2.048		10.4	10.0	4.1	20.0
t-Butyl alcohol	Ave	1.547	1.587		103	100	2.6	20.0
Methylene Chloride	Ave	0.3779	0.3542		9.37	10.0	-6.3	20.0
Acrylonitrile	Ave	0.0456	0.0459		101	100	0.7	20.0
Methyl tert-butyl ether	Ave	0.4093	0.4116		10.1	10.0	0.6	20.0
trans-1,2-Dichloroethene	Ave	0.3985	0.4297		10.8	10.0	7.8	20.0
Hexane	Ave	3.939	4.162		10.6	10.0	5.7	20.0
Vinyl acetate	Ave	0.4397	0.4052		18.4	20.0	-7.9	20.0
1,1-Dichloroethane	Ave	0.7981	0.8142	0.1000	10.2	10.0	2.0	20.0
2-Butanone (MEK)	Ave	0.0640	0.0594		37.1	40.0	-7.2	20.0
cis-1,2-Dichloroethene	Ave	0.3865	0.3894		10.1	10.0	0.8	20.0
sec-Butyl Alcohol	Ave	1.472	1.522		248	240	3.3	20.0
2,2-Dichloropropane	Ave	0.5607	0.5682		10.1	10.0	1.3	20.0
Bromochloromethane	Ave	0.1304	0.1305		10.0	10.0	0.0	20.0
Chloroform	Ave	0.6665	0.6817		10.2	10.0	2.3	20.0
Tetrahydrofuran	Ave	0.0351	0.0360		20.5	20.0	2.5	20.0
1,1,1-Trichloroethane	Ave	0.5830	0.5898		10.1	10.0	1.2	20.0
Isobutyl alcohol	Ave	0.6252	0.6115		245	250	-2.2	20.0
Cyclohexane	Ave	0.8743	0.8921		10.2	10.0	2.0	20.0
1,1-Dichloropropene	Ave	0.6078	0.6282		10.3	10.0	3.4	20.0
Carbon tetrachloride	Ave	0.5123	0.5169		10.1	10.0	0.9	20.0
1,2-Dichloroethane	Ave	0.3127	0.3102		9.92	10.0	-0.8	20.0
Benzene	Ave	1.470	1.469		9.99	10.0	-0.0	20.0
Trichloroethene	Ave	0.3989	0.4054		10.2	10.0	1.6	20.0
2-Pentanone	Lin1		0.0902		29.1	32.0	-9.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-435406/17 Calibration Date: 10/29/2018 22:43

Instrument ID: VMS_G Calib Start Date: 10/29/2018 20:00

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 10/29/2018 22:02

Lab File ID: G0950.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.3698	0.3795		10.3	10.0	2.6	20.0
Methylcyclohexane	Ave	0.7212	0.7199		9.98	10.0	-0.2	20.0
1,4-Dioxane	Lin2		0.0008		186	200	-7.2	20.0
Dibromomethane	Ave	0.1448	0.1396		9.64	10.0	-3.6	20.0
Bromodichloromethane	Ave	0.3991	0.4027		10.1	10.0	0.9	20.0
2-Chloroethyl vinyl ether	Lin1		0.0337		9.37	10.0	-6.3	20.0
cis-1,3-Dichloropropene	Ave	2.112	2.347		11.1	10.0	11.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1349	0.1381		41.0	40.0	2.4	20.0
Toluene	Ave	1.326	1.353		10.2	10.0	2.0	20.0
trans-1,3-Dichloropropene	Ave	0.2863	0.2968		10.4	10.0	3.7	20.0
Ethyl methacrylate	Lin2		0.8570		9.99	10.0	-0.1	20.0
1,1,2-Trichloroethane	Ave	0.1495	0.1544		10.3	10.0	3.3	20.0
1,3-Dichloropropane	Ave	1.455	1.479		10.2	10.0	1.6	20.0
2-Hexanone	Lin2		0.4723		40.5	40.0	1.2	20.0
Tetrachloroethene	Ave	1.497	1.559		10.4	10.0	4.1	20.0
Dibromochloromethane	Ave	1.084	1.149		10.6	10.0	6.0	20.0
1,2-Dibromoethane	Ave	0.7869	0.8179		10.4	10.0	3.9	20.0
1-Chlorohexane	Ave	2.757	3.024		8.77	8.00	9.7	20.0
Chlorobenzene	Ave	3.931	3.940	0.3000	10.0	10.0	0.2	20.0
1,1,1,2-Tetrachloroethane	Ave	1.288	1.309		10.2	10.0	1.6	20.0
Ethylbenzene	Ave	2.154	2.224		10.3	10.0	3.2	20.0
m-Xylene & p-Xylene	Ave	2.574	2.653		10.3	10.0	3.1	20.0
o-Xylene	Ave	2.349	2.502		10.7	10.0	6.5	20.0
Styrene	Ave	3.347	3.704		11.1	10.0	10.7	20.0
Bromoform	Ave	0.5127	0.5166	0.1000	10.1	10.0	0.8	20.0
Isopropylbenzene	Ave	4.996	5.348		10.7	10.0	7.0	20.0
Cyclohexanone	Ave	0.0380	0.0320		337	400	-15.6	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6621	0.6658	0.3000	10.1	10.0	0.6	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.1576		10.7	10.0	7.2	20.0
1,2,3-Trichloropropane	Ave	0.1190	0.1252		10.5	10.0	5.3	20.0
Bromobenzene	Ave	1.007	1.070		10.6	10.0	6.2	20.0
N-Propylbenzene	Ave	1.230	1.375		11.2	10.0	11.8	20.0
2-Chlorotoluene	Ave	1.114	1.159		10.4	10.0	4.0	20.0
1,3,5-Trimethylbenzene	Ave	4.035	4.306		10.7	10.0	6.7	20.0
4-Chlorotoluene	Ave	1.089	1.150		10.6	10.0	5.6	20.0
tert-Butylbenzene	Ave	3.723	4.003		10.8	10.0	7.5	20.0
1,2,4-Trimethylbenzene	Ave	3.933	4.073		10.4	10.0	3.6	20.0
sec-Butylbenzene	Ave	0.9342	0.998		10.7	10.0	6.9	20.0
4-Isopropyltoluene	Ave	4.365	4.661		10.7	10.0	6.8	20.0
1,3-Dichlorobenzene	Ave	2.087	2.111		10.1	10.0	1.1	20.0
1,4-Dichlorobenzene	Ave	2.129	2.128		9.99	10.0	-0.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-435406/17 Calibration Date: 10/29/2018 22:43

Instrument ID: VMS_G Calib Start Date: 10/29/2018 20:00

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 10/29/2018 22:02

Lab File ID: G0950.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Butylbenzene	Ave	5.219	5.478		10.5	10.0	5.0	20.0
1,2-Dichlorobenzene	Ave	1.675	1.729		10.3	10.0	3.2	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0738		9.36	10.0	-6.4	20.0
1,2,4-Trichlorobenzene	Ave	1.073	1.233		11.5	10.0	15.0	20.0
Hexachlorobutadiene	Ave	0.9196	0.9760		10.6	10.0	6.1	20.0
Naphthalene	Ave	1.217	1.358		11.2	10.0	11.6	20.0
1,2,3-Trichlorobenzene	Ave	0.9009	0.9389		10.4	10.0	4.2	20.0
Dibromofluoromethane (Surr)	Ave	0.3528	0.3427		9.71	10.0	-2.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2632	0.2428		9.22	10.0	-7.8	20.0
Toluene-d8 (Surr)	Ave	5.665	5.701		10.1	10.0	0.6	20.0
4-Bromofluorobenzene (Surr)	Ave	1.334	1.311		9.83	10.0	-1.7	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0950.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 29-Oct-2018 22:43:30 ALS Bottle#: 19 Worklist Smp#: 17
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Operator ID: newcomer Instrument ID: VMS_G
Sublist:

Method: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 30-Oct-2018 01:34:22 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0323

First Level Reviewer: newcomer Date: 29-Oct-2018 23:13:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.457	4.466	-0.009	0	105013	250.0	250.0	
* 1 Fluorobenzene	96	6.456	6.465	-0.009	97	867672	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.154	9.163	-0.009	89	162862	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.281	11.290	-0.010	96	222059	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.875	5.884	-0.009	91	237895	10.0	9.71	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.170	6.180	-0.010	0	168500	10.0	9.22	
$ 7 Toluene-d8 (Surr)	98	7.805	7.814	-0.009	96	742746	10.0	10.1	
$ 8 4-Bromofluorobenzene (Surr	95	10.266	10.276	-0.010	87	232968	10.0	9.83	
25 Dichlorodifluoromethane	85	2.881	2.891	-0.010	99	404335	10.0	11.1	
27 Chloromethane	50	3.098	3.098	0.000	100	392235	10.0	9.40	
28 Vinyl chloride	62	3.206	3.216	-0.010	76	318922	10.0	9.68	
31 Bromomethane	94	3.521	3.521	0.000	93	210128	10.0	9.36	
32 Chloroethane	64	3.571	3.570	0.001	96	154570	10.0	9.77	
33 Dichlorofluoromethane	67	3.708	3.718	-0.010	98	466912	10.0	10.5	
35 Trichlorofluoromethane	101	3.817	3.826	-0.009	98	420661	10.0	9.94	
38 Ethyl ether	59	3.945	3.954	-0.009	94	116155	10.0	10.3	
41 Acrolein	56	4.063	4.072	-0.009	99	139412	100.0	100.1	
42 Acetone	43	4.171	4.171	0.000	97	115651	40.0	35.4	
45 1,1-Dichloroethene	96	4.211	4.200	0.011	94	279196	10.0	10.7	
44 1,1,2-Trichloro-1,2,2-trif	151	4.201	4.200	0.001	96	208353	10.0	10.5	
47 Iodomethane	142	4.368	4.358	0.010	98	540324	10.0	10.5	
48 Methyl acetate	43	4.407	4.417	-0.010	99	153790	20.0	19.7	
49 3-Chloro-1-propene	41	4.447	4.456	-0.009	89	677316	10.0	10.2	
50 Carbon disulfide	76	4.457	4.456	0.001	100	1421830	10.0	10.4	
51 2-Methyl-2-propanol	59	4.516	4.525	-0.009	93	66677	100.0	102.6	
52 Methylene Chloride	84	4.545	4.545	0.000	97	245827	10.0	9.37	
53 Acrylonitrile	53	4.693	4.693	0.000	98	318719	100.0	100.7	
54 Methyl tert-butyl ether	73	4.742	4.742	0.000	98	285715	10.0	10.1	
55 trans-1,2-Dichloroethene	96	4.762	4.771	-0.009	93	298253	10.0	10.8	
56 Hexane	57	4.949	4.959	-0.010	94	542329	10.0	10.6	
57 Vinyl acetate	43	5.038	5.047	-0.009	96	562475	20.0	18.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.077	5.087	-0.010	96	565191	10.0	10.2	
62 2-Butanone (MEK)	43	5.481	5.480	0.001	96	164992	40.0	37.1	
66 cis-1,2-Dichloroethene	96	5.530	5.530	0.000	89	270293	10.0	10.1	
65 sec-Butyl Alcohol	45	5.540	5.549	-0.009	97	153386	240.0	248.0	
67 2,2-Dichloropropane	77	5.560	5.559	0.001	92	394397	10.0	10.1	
69 Chlorobromomethane	128	5.717	5.727	-0.010	89	90562	10.0	10.0	
70 Chloroform	83	5.747	5.756	-0.009	98	473215	10.0	10.2	
71 Tetrahydrofuran	42	5.756	5.766	-0.010	91	49966	20.0	20.5	
73 1,1,1-Trichloroethane	97	5.973	5.973	0.000	97	409380	10.0	10.1	
72 Isobutyl alcohol	41	5.983	5.992	-0.009	95	64219	250.0	244.5	
74 Cyclohexane	56	6.052	6.052	0.000	95	619216	10.0	10.2	
75 1,1-Dichloropropene	75	6.081	6.091	-0.010	91	436065	10.0	10.3	
76 Carbon tetrachloride	117	6.121	6.120	0.001	96	358821	10.0	10.1	
77 1,2-Dichloroethane	62	6.239	6.248	-0.009	96	215338	10.0	9.92	
79 Benzene	78	6.259	6.268	-0.009	98	1019897	10.0	10.0	
13 n-Heptane	43	6.397	6.406	-0.009	96	713842	10.0	10.4	
81 Trichloroethene	95	6.771	6.770	0.001	95	281389	10.0	10.2	
82 2-Pentanone	43	6.830	6.829	0.001	96	200320	32.0	29.1	
84 1,2-Dichloropropane	63	6.958	6.957	0.001	92	263425	10.0	10.3	
85 Methylcyclohexane	55	6.977	6.987	-0.010	96	499732	10.0	9.98	
86 1,4-Dioxane	88	7.037	7.036	0.001	87	11617	200.0	185.6	
87 Dibromomethane	93	7.066	7.066	0.000	91	96874	10.0	9.64	
88 Dichlorobromomethane	83	7.155	7.164	-0.009	97	279529	10.0	10.1	
90 2-Chloroethyl vinyl ether	63	7.352	7.361	-0.009	89	23407	10.0	9.37	
91 cis-1,3-Dichloropropene	75	7.539	7.538	0.001	90	305771	10.0	11.1	
92 4-Methyl-2-pentanone (MIBK	43	7.618	7.627	-0.009	96	383407	40.0	41.0	
93 Toluene	91	7.874	7.873	0.001	97	938978	10.0	10.2	
95 trans-1,3-Dichloropropene	75	8.002	8.011	-0.009	99	206038	10.0	10.4	
94 Ethyl methacrylate	69	8.031	8.031	0.000	95	111655	10.0	9.99	
96 1,1,2-Trichloroethane	97	8.189	8.198	-0.009	91	107200	10.0	10.3	
98 1,3-Dichloropropane	76	8.356	8.366	-0.010	95	192653	10.0	10.2	
97 2-Hexanone	43	8.366	8.375	-0.009	98	246162	40.0	40.5	
99 Tetrachloroethene	164	8.395	8.405	-0.010	96	203118	10.0	10.4	
100 Chlorodibromomethane	129	8.583	8.592	-0.010	90	149702	10.0	10.6	
102 Ethylene Dibromide	107	8.730	8.740	-0.010	98	106559	10.0	10.4	
103 1-Chlorohexane	91	9.085	9.094	-0.009	87	315228	8.00	8.77	
104 Chlorobenzene	112	9.183	9.193	-0.010	90	513378	10.0	10.0	
105 1,1,1,2-Tetrachloroethane	131	9.232	9.242	-0.010	97	170597	10.0	10.2	
106 Ethylbenzene	106	9.252	9.262	-0.010	99	289710	10.0	10.3	
107 m-Xylene & p-Xylene	106	9.360	9.370	-0.010	0	345657	10.0	10.3	
109 Styrene	104	9.764	9.764	0.000	82	482617	10.0	11.1	
108 o-Xylene	106	9.754	9.764	-0.010	88	325990	10.0	10.7	
110 Bromoform	173	9.971	9.980	-0.009	92	67311	10.0	10.1	
111 Isopropylbenzene	105	10.099	10.108	-0.009	97	950101	10.0	10.7	
113 Cyclohexanone	55	10.207	10.217	-0.010	97	166881	400.0	337.5	
114 1,1,2,2-Tetrachloroethane	83	10.335	10.345	-0.010	93	118281	10.0	10.1	
115 trans-1,4-Dichloro-2-buten	53	10.394	10.404	-0.010	82	27994	10.0	10.7	
116 1,2,3-Trichloropropane	110	10.414	10.414	0.000	86	22246	10.0	10.5	
117 Bromobenzene	156	10.444	10.453	-0.009	93	190020	10.0	10.6	
118 N-Propylbenzene	120	10.483	10.492	-0.009	99	244178	10.0	11.2	
120 2-Chlorotoluene	126	10.591	10.601	-0.010	95	205908	10.0	10.4	
119 1,3,5-Trimethylbenzene	105	10.621	10.630	-0.009	93	764897	10.0	10.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 4-Chlorotoluene	126	10.680	10.689	-0.009	99	204306	10.0	10.6	
122 tert-Butylbenzene	119	10.926	10.926	0.000	94	711196	10.0	10.8	
123 1,2,4-Trimethylbenzene	105	10.956	10.965	-0.009	96	723611	10.0	10.4	
124 sec-Butylbenzene	134	11.103	11.113	-0.010	96	177366	10.0	10.7	
125 4-Isopropyltoluene	119	11.212	11.221	-0.009	97	827936	10.0	10.7	
126 1,3-Dichlorobenzene	146	11.231	11.241	-0.010	97	374989	10.0	10.1	
127 1,4-Dichlorobenzene	146	11.300	11.310	-0.010	96	377993	10.0	10.0	
129 n-Butylbenzene	91	11.566	11.576	-0.010	99	973166	10.0	10.5	
130 1,2-Dichlorobenzene	146	11.635	11.644	-0.009	95	307068	10.0	10.3	
131 1,2-Dibromo-3-Chloropropan	157	12.334	12.334	0.000	81	13112	10.0	9.36	
132 1,2,4-Trichlorobenzene	180	13.181	13.190	-0.009	94	219109	10.0	11.5	
133 Hexachlorobutadiene	225	13.338	13.348	-0.010	96	173382	10.0	10.6	
134 Naphthalene	128	13.476	13.486	-0.010	97	241241	10.0	11.2	
135 1,2,3-Trichlorobenzene	180	13.742	13.752	-0.010	94	166799	10.0	10.4	
S 142 1,2-Dichloroethene, Total	96				0		20.0	20.9	
S 137 Xylenes, Total (URS)	1				0		20.0	21.0	
S 141 Xylenes, Total	106				0		20.0	21.0	
S 140 1,2-Dichloroethene, Total	1				0		20.0	20.9	
S 136 Trihalomethanes, Total	1				0		40.0	41.0	
S 139 1,3-Dichloropropene, Total	1				0		20.0	21.5	

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL
MV-MegaMain B_00002	Amount Added:	4.00	Units: uL
MV-MainBaddon_00001	Amount Added:	4.00	Units: uL

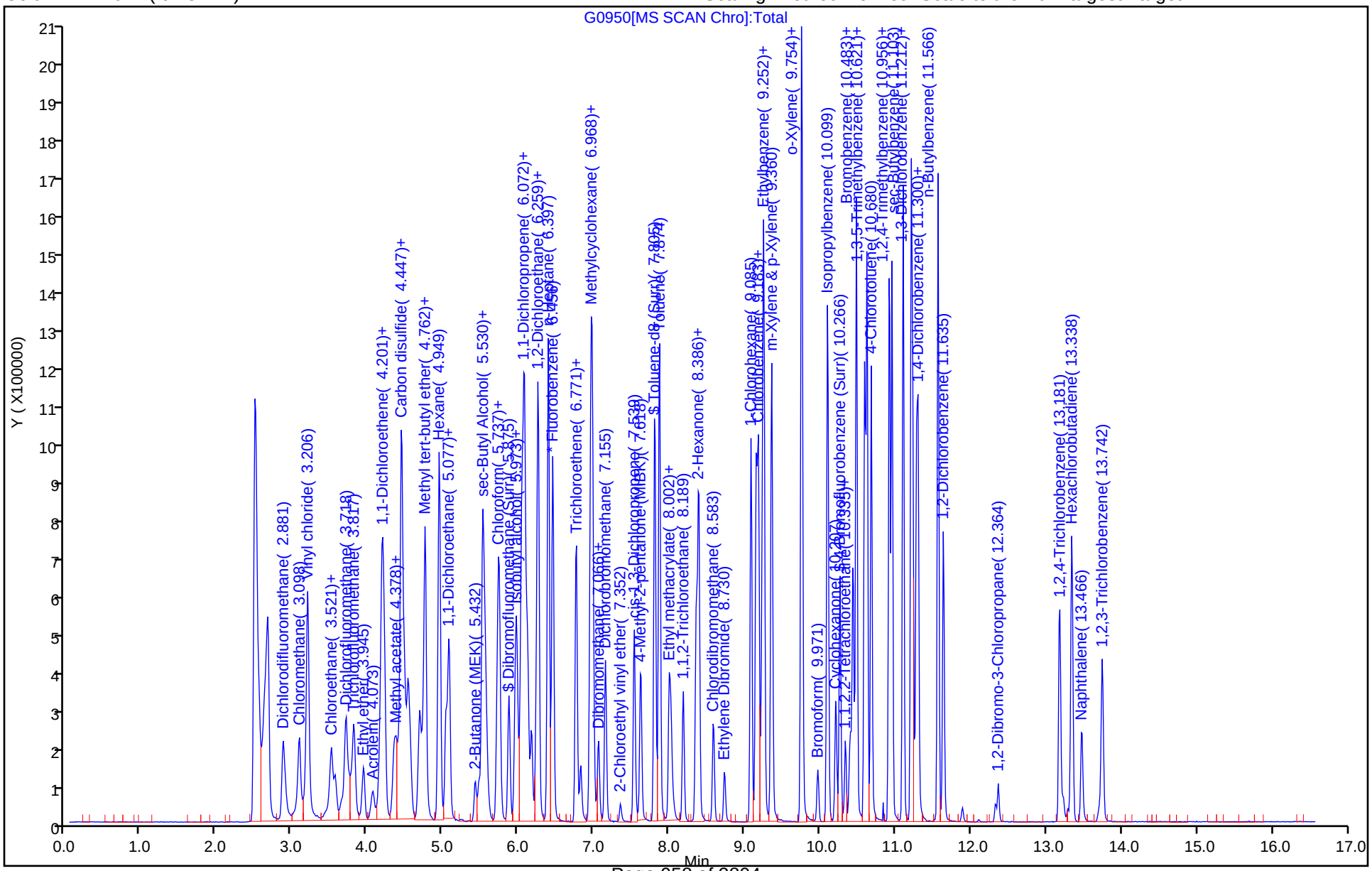
Report Date: 30-Oct-2018 01:34:26 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0950.D

Injection Date:	29-Oct-2018 22:43:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	ICV			Worklist Smp#:	17
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-437714/2 Calibration Date: 11/15/2018 10:50

Instrument ID: VMS_G Calib Start Date: 10/29/2018 20:00

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 10/29/2018 22:02

Lab File ID: G1773.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5246	0.6266		11.9	10.0	19.4	20.0
Chloromethane	Ave	0.6014	0.6738	0.1000	11.2	10.0	12.0	20.0
Vinyl chloride	Ave	0.4747	0.5451		11.5	10.0	14.8	20.0
Bromomethane	Ave	0.3234	0.3475		10.7	10.0	7.5	20.0
Chloroethane	Ave	0.2279	0.2484		10.9	10.0	9.0	20.0
Dichlorofluoromethane	Ave	0.6401	0.7112		11.1	10.0	11.1	20.0
Trichlorofluoromethane	Ave	0.6094	0.6305		10.3	10.0	3.5	20.0
Ethyl ether	Ave	0.1625	0.1642		10.1	10.0	1.0	20.0
Acrolein	Ave	0.0201	0.0170		84.7	100	-15.3	20.0
Acetone	Lin2		0.0439		37.4	40.0	-6.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2852	0.2816		9.87	10.0	-1.3	20.0
1,1-Dichloroethene	Ave	0.3761	0.3711		9.87	10.0	-1.3	20.0
Iodomethane	Ave	0.7436	0.7211		9.70	10.0	-3.0	20.0
Methyl acetate	Lin1		0.1043		18.5	20.0	-7.5	20.0
3-Chloro-1-propene	Ave	0.9605	0.9547		9.94	10.0	-0.6	20.0
Carbon disulfide	Ave	1.968	2.068		10.5	10.0	5.1	20.0
t-Butyl alcohol	Ave	1.547	1.640		106	100	6.0	20.0
Methylene Chloride	Ave	0.3779	0.3563		9.43	10.0	-5.7	20.0
Acrylonitrile	Ave	0.0456	0.0461		101	100	1.0	20.0
Methyl tert-butyl ether	Ave	0.4093	0.4308		10.5	10.0	5.3	20.0
trans-1,2-Dichloroethene	Ave	0.3985	0.4159		10.4	10.0	4.4	20.0
Hexane	Ave	3.939	4.297		10.9	10.0	9.1	20.0
Vinyl acetate	Ave	0.4397	0.4467		20.3	20.0	1.6	20.0
1,1-Dichloroethane	Ave	0.7981	0.8684	0.1000	10.9	10.0	8.8	20.0
2-Butanone (MEK)	Ave	0.0640	0.0614		38.3	40.0	-4.2	20.0
cis-1,2-Dichloroethene	Ave	0.3865	0.4145		10.7	10.0	7.3	20.0
2,2-Dichloropropane	Ave	0.5607	0.6246		11.1	10.0	11.4	20.0
Bromochloromethane	Ave	0.1304	0.1443		11.1	10.0	10.7	20.0
Chloroform	Ave	0.6665	0.7136		10.7	10.0	7.1	20.0
Tetrahydrofuran	Ave	0.0351	0.0374		21.3	20.0	6.6	20.0
1,1,1-Trichloroethane	Ave	0.5830	0.6265		10.7	10.0	7.5	20.0
Isobutyl alcohol	Ave	0.6252	0.6478		259	250	3.6	20.0
Cyclohexane	Ave	0.8743	0.9596		11.0	10.0	9.7	20.0
1,1-Dichloropropene	Ave	0.6078	0.6640		10.9	10.0	9.2	20.0
Carbon tetrachloride	Ave	0.5123	0.5548		10.8	10.0	8.3	20.0
1,2-Dichloroethane	Ave	0.3127	0.3459		11.1	10.0	10.6	20.0
Benzene	Ave	1.470	1.586		10.8	10.0	7.9	20.0
Trichloroethene	Ave	0.3989	0.4302		10.8	10.0	7.8	20.0
1,2-Dichloropropane	Ave	0.3698	0.4001		10.8	10.0	8.2	20.0
Methylcyclohexane	Ave	0.7212	0.7798		10.8	10.0	8.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-437714/2 Calibration Date: 11/15/2018 10:50

Instrument ID: VMS_G Calib Start Date: 10/29/2018 20:00

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 10/29/2018 22:02

Lab File ID: G1773.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0010		226	200	13.0	20.0
Dibromomethane	Ave	0.1448	0.1614		11.1	10.0	11.4	20.0
Bromodichloromethane	Ave	0.3991	0.4667		11.7	10.0	16.9	20.0
2-Chloroethyl vinyl ether	Lin1		0.0545		14.3	10.0	42.7*	20.0
cis-1,3-Dichloropropene	Ave	2.112	2.456		11.6	10.0	16.3	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1349	0.1494		44.3	40.0	10.8	20.0
Toluene	Ave	1.326	1.444		10.9	10.0	8.8	20.0
trans-1,3-Dichloropropene	Ave	0.2863	0.3269		11.4	10.0	14.2	20.0
Ethyl methacrylate	Lin2		0.9088		10.6	10.0	5.8	20.0
1,1,2-Trichloroethane	Ave	0.1495	0.1660		11.1	10.0	11.0	20.0
1,3-Dichloropropane	Ave	1.455	1.609		11.1	10.0	10.6	20.0
2-Hexanone	Lin2		0.4942		42.3	40.0	5.8	20.0
Tetrachloroethene	Ave	1.497	1.567		10.5	10.0	4.6	20.0
Dibromochloromethane	Ave	1.084	1.225		11.3	10.0	13.0	20.0
1,2-Dibromoethane	Ave	0.7869	0.8904		11.3	10.0	13.1	20.0
Chlorobenzene	Ave	3.931	4.234	0.3000	10.8	10.0	7.7	20.0
1,1,1,2-Tetrachloroethane	Ave	1.288	1.416		11.0	10.0	9.9	20.0
Ethylbenzene	Ave	2.154	2.377		11.0	10.0	10.3	20.0
m-Xylene & p-Xylene	Ave	2.574	2.940		11.4	10.0	14.2	20.0
o-Xylene	Ave	2.349	2.713		11.5	10.0	15.5	20.0
Styrene	Ave	3.347	4.105		12.3	10.0	22.6*	20.0
Bromoform	Ave	0.5127	0.5526	0.1000	10.8	10.0	7.8	20.0
Isopropylbenzene	Ave	4.996	5.690		11.4	10.0	13.9	20.0
Cyclohexanone	Ave	0.0380	0.0263		278	400	-30.6*	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6621	0.7172	0.3000	10.8	10.0	8.3	20.0
trans-1,4-Dichloro-2-butene	Lin2		0.1626		11.0	10.0	10.4	20.0
1,2,3-Trichloropropane	Ave	0.1190	0.1384		11.6	10.0	16.3	20.0
Bromobenzene	Ave	1.007	1.136		11.3	10.0	12.8	20.0
N-Propylbenzene	Ave	1.230	1.438		11.7	10.0	16.9	20.0
2-Chlorotoluene	Ave	1.114	1.247		11.2	10.0	11.9	20.0
1,3,5-Trimethylbenzene	Ave	4.035	4.509		11.2	10.0	11.8	20.0
4-Chlorotoluene	Ave	1.089	1.229		11.3	10.0	12.9	20.0
tert-Butylbenzene	Ave	3.723	4.176		11.2	10.0	12.2	20.0
1,2,4-Trimethylbenzene	Ave	3.933	4.498		11.4	10.0	14.4	20.0
sec-Butylbenzene	Ave	0.9342	1.056		11.3	10.0	13.1	20.0
4-Isopropyltoluene	Ave	4.365	5.021		11.5	10.0	15.0	20.0
1,3-Dichlorobenzene	Ave	2.087	2.307		11.1	10.0	10.5	20.0
1,4-Dichlorobenzene	Ave	2.129	2.331		10.9	10.0	9.5	20.0
n-Butylbenzene	Ave	5.219	6.040		11.6	10.0	15.7	20.0
1,2-Dichlorobenzene	Ave	1.675	1.881		11.2	10.0	12.3	20.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0780		9.85	10.0	-1.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-437714/2 Calibration Date: 11/15/2018 10:50

Instrument ID: VMS_G Calib Start Date: 10/29/2018 20:00

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 10/29/2018 22:02

Lab File ID: G1773.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	1.073	1.245		11.6	10.0	16.1	20.0
Hexachlorobutadiene	Ave	0.9196	1.037		11.3	10.0	12.7	20.0
Naphthalene	Ave	1.217	1.435		11.8	10.0	17.9	20.0
1,2,3-Trichlorobenzene	Ave	0.9009	0.9873		11.0	10.0	9.6	20.0
Dibromofluoromethane (Surr)	Ave	0.3528	0.3448		9.77	10.0	-2.3	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2632	0.2455		9.33	10.0	-6.7	20.0
Toluene-d8 (Surr)	Ave	5.665	5.664		10.0	10.0	-0.0	20.0
4-Bromofluorobenzene (Surr)	Ave	1.334	1.273		9.54	10.0	-4.6	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1773.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 15-Nov-2018 10:50:30 ALS Bottle#: 13 Worklist Smp#: 2
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: seifertj Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub136

Method: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 12:34:43 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: seifertj Date: 16-Nov-2018 09:21:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.447	4.447	0.000	0	72030	250.0	250.0	
* 1 Fluorobenzene	96	6.446	6.446	0.000	97	597265	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.144	9.144	0.000	90	112337	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.271	11.271	0.000	97	154439	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.865	5.865	0.000	91	164749	10.0	9.77	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.170	6.170	0.000	0	117295	10.0	9.33	
$ 7 Toluene-d8 (Surr)	98	7.805	7.805	0.000	96	508977	10.0	10.0	
$ 8 4-Bromofluorobenzene (Surr	95	10.256	10.256	0.000	86	157335	10.0	9.54	
25 Dichlorodifluoromethane	85	2.881	2.881	0.000	99	299384	10.0	11.9	
27 Chloromethane	50	3.098	3.098	0.000	100	321931	10.0	11.2	
28 Vinyl chloride	62	3.206	3.206	0.000	98	260468	10.0	11.5	
31 Bromomethane	94	3.521	3.521	0.000	92	166048	10.0	10.7	
32 Chloroethane	64	3.571	3.571	0.000	97	118667	10.0	10.9	
33 Dichlorofluoromethane	67	3.708	3.708	0.000	98	339810	10.0	11.1	
35 Trichlorofluoromethane	101	3.817	3.817	0.000	99	301248	10.0	10.3	
38 Ethyl ether	59	3.935	3.935	0.000	95	78442	10.0	10.1	
41 Acrolein	56	4.053	4.053	0.000	98	81225	100.0	84.7	
42 Acetone	43	4.161	4.161	0.000	97	83919	40.0	37.4	
44 1,1,2-Trichloro-1,2,2-trif	151	4.191	4.191	0.000	96	134536	10.0	9.87	
45 1,1-Dichloroethene	96	4.201	4.201	0.000	93	177316	10.0	9.87	
47 Iodomethane	142	4.358	4.358	0.000	98	344525	10.0	9.70	
48 Methyl acetate	43	4.398	4.398	0.000	99	99696	20.0	18.5	
49 3-Chloro-1-propene	41	4.447	4.447	0.000	82	456165	10.0	9.94	
50 Carbon disulfide	76	4.447	4.447	0.000	100	988094	10.0	10.5	
51 2-Methyl-2-propanol	59	4.506	4.506	0.000	28	47252	100.0	106.0	
52 Methylene Chloride	84	4.535	4.535	0.000	96	170264	10.0	9.43	
53 Acrylonitrile	53	4.683	4.683	0.000	97	220031	100.0	101.0	
54 Methyl tert-butyl ether	73	4.732	4.732	0.000	98	205834	10.0	10.5	
55 trans-1,2-Dichloroethene	96	4.762	4.762	0.000	92	198717	10.0	10.4	
56 Hexane	57	4.939	4.939	0.000	93	386202	10.0	10.9	
57 Vinyl acetate	43	5.028	5.028	0.000	96	426834	20.0	20.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.067	5.067	0.000	96	414950	10.0	10.9	
62 2-Butanone (MEK)	43	5.471	5.471	0.000	97	117289	40.0	38.3	
66 cis-1,2-Dichloroethene	96	5.520	5.520	0.000	89	198070	10.0	10.7	
67 2,2-Dichloropropane	77	5.550	5.550	0.000	91	298447	10.0	11.1	
69 Chlorobromomethane	128	5.717	5.717	0.000	90	68964	10.0	11.1	
70 Chloroform	83	5.737	5.737	0.000	98	340962	10.0	10.7	
71 Tetrahydrofuran	42	5.756	5.756	0.000	92	35757	20.0	21.3	
73 1,1,1-Trichloroethane	97	5.963	5.963	0.000	97	299329	10.0	10.7	
72 Isobutyl alcohol	41	5.973	5.973	0.000	43	46659	250.0	259.0	
74 Cyclohexane	56	6.042	6.042	0.000	95	458501	10.0	11.0	
75 1,1-Dichloropropene	75	6.072	6.072	0.000	90	317256	10.0	10.9	
76 Carbon tetrachloride	117	6.111	6.111	0.000	96	265071	10.0	10.8	
77 1,2-Dichloroethane	62	6.229	6.229	0.000	96	165280	10.0	11.1	
79 Benzene	78	6.259	6.259	0.000	98	757807	10.0	10.8	
13 n-Heptane	43	6.387	6.387	0.000	96	514100	10.0	10.8	
81 Trichloroethene	95	6.761	6.761	0.000	94	205551	10.0	10.8	
84 1,2-Dichloropropane	63	6.948	6.948	0.000	92	191160	10.0	10.8	
85 Methylcyclohexane	55	6.968	6.968	0.000	96	372584	10.0	10.8	
86 1,4-Dioxane	88	7.027	7.027	0.000	85	9888	200.0	226.0	
87 Dibromomethane	93	7.056	7.056	0.000	89	77107	10.0	11.1	
88 Dichlorobromomethane	83	7.155	7.155	0.000	98	222972	10.0	11.7	
90 2-Chloroethyl vinyl ether	63	7.352	7.352	0.000	88	26053	10.0	14.3	
91 cis-1,3-Dichloropropene	75	7.529	7.529	0.000	89	220733	10.0	11.6	
92 4-Methyl-2-pentanone (MIBK	43	7.618	7.618	0.000	96	285471	40.0	44.3	
93 Toluene	91	7.864	7.864	0.000	97	689751	10.0	10.9	
95 trans-1,3-Dichloropropene	75	7.992	7.992	0.000	99	156198	10.0	11.4	
94 Ethyl methacrylate	69	8.021	8.021	0.000	95	81672	10.0	10.6	
96 1,1,2-Trichloroethane	97	8.179	8.179	0.000	92	79325	10.0	11.1	
98 1,3-Dichloropropane	76	8.346	8.346	0.000	96	144605	10.0	11.1	
97 2-Hexanone	43	8.356	8.356	0.000	97	177663	40.0	42.3	
99 Tetrachloroethene	164	8.386	8.386	0.000	93	140822	10.0	10.5	
100 Chlorodibromomethane	129	8.582	8.582	0.000	90	110097	10.0	11.3	
102 Ethylene Dibromide	107	8.730	8.730	0.000	98	80015	10.0	11.3	
104 Chlorobenzene	112	9.173	9.173	0.000	90	380483	10.0	10.8	
105 1,1,1,2-Tetrachloroethane	131	9.232	9.232	0.000	97	127260	10.0	11.0	
106 Ethylbenzene	106	9.252	9.252	0.000	99	213596	10.0	11.0	
107 m-Xylene & p-Xylene	106	9.351	9.351	0.000	0	264201	10.0	11.4	
109 Styrene	104	9.754	9.754	0.000	81	368890	10.0	12.3	
108 o-Xylene	106	9.754	9.754	0.000	86	243803	10.0	11.5	
110 Bromoform	173	9.961	9.961	0.000	92	49658	10.0	10.8	
111 Isopropylbenzene	105	10.099	10.099	0.000	97	702992	10.0	11.4	
113 Cyclohexanone	55	10.207	10.207	0.000	99	94677	400.0	277.6	
114 1,1,2,2-Tetrachloroethane	83	10.335	10.335	0.000	93	88616	10.0	10.8	
115 trans-1,4-Dichloro-2-buten	53	10.384	10.384	0.000	86	20088	10.0	11.0	
116 1,2,3-Trichloropropane	110	10.404	10.404	0.000	86	17100	10.0	11.6	
117 Bromobenzene	156	10.434	10.434	0.000	96	140372	10.0	11.3	
118 N-Propylbenzene	120	10.483	10.483	0.000	99	177617	10.0	11.7	
120 2-Chlorotoluene	126	10.591	10.591	0.000	95	154125	10.0	11.2	
119 1,3,5-Trimethylbenzene	105	10.621	10.621	0.000	93	557153	10.0	11.2	
121 4-Chlorotoluene	126	10.680	10.680	0.000	99	151866	10.0	11.3	
122 tert-Butylbenzene	119	10.916	10.916	0.000	94	515966	10.0	11.2	
123 1,2,4-Trimethylbenzene	105	10.946	10.946	0.000	96	555678	10.0	11.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 sec-Butylbenzene	134	11.103	11.103	0.000	96	130500	10.0	11.3	
125 4-Isopropyltoluene	119	11.202	11.202	0.000	97	620377	10.0	11.5	
126 1,3-Dichlorobenzene	146	11.231	11.231	0.000	97	285013	10.0	11.1	
127 1,4-Dichlorobenzene	146	11.300	11.300	0.000	94	287963	10.0	10.9	
129 n-Butylbenzene	91	11.556	11.556	0.000	99	746251	10.0	11.6	
130 1,2-Dichlorobenzene	146	11.635	11.635	0.000	96	232414	10.0	11.2	
131 1,2-Dibromo-3-Chloropropan	157	12.324	12.324	0.000	76	9638	10.0	9.85	
132 1,2,4-Trichlorobenzene	180	13.171	13.171	0.000	94	153830	10.0	11.6	
133 Hexachlorobutadiene	225	13.338	13.338	0.000	96	128062	10.0	11.3	
134 Naphthalene	128	13.466	13.466	0.000	97	177299	10.0	11.8	
135 1,2,3-Trichlorobenzene	180	13.742	13.742	0.000	94	121981	10.0	11.0	
S 142 1,2-Dichloroethene, Total	96				0		20.0	21.2	
S 137 Xylenes, Total (URS)	1				0		20.0	23.0	
S 141 Xylenes, Total	106				0		20.0	23.0	
S 140 1,2-Dichloroethene, Total	1				0		20.0	21.2	
S 136 Trihalomethanes, Total	1				0		40.0	44.5	
S 139 1,3-Dichloropropene, Total	1				0		20.0	23.0	

Reagents:

MV-MegaMainA_00005	Amount Added:	4.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

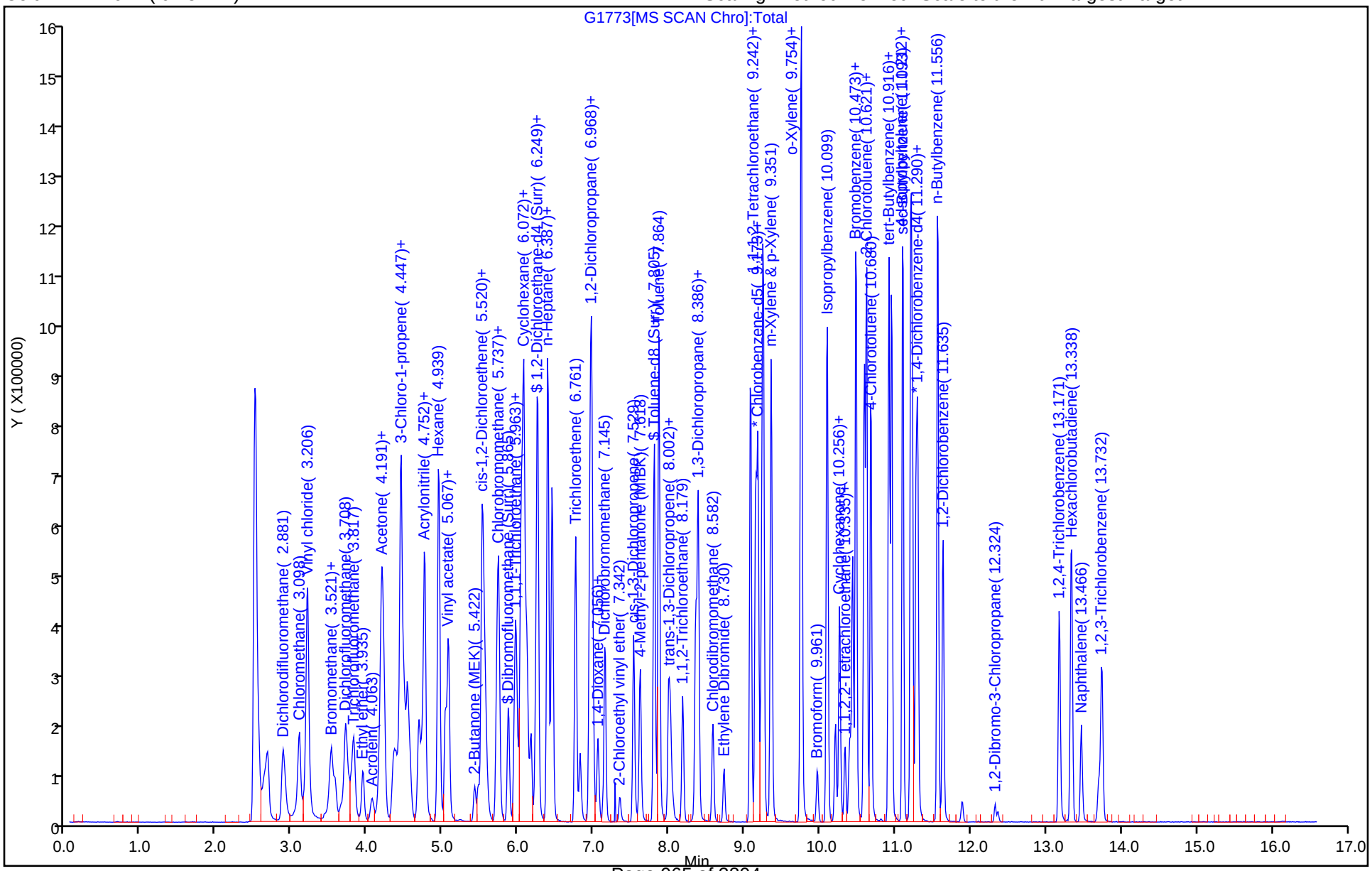
Report Date: 16-Nov-2018 12:34:44 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1773.D

Injection Date:	15-Nov-2018 10:50:30	Instrument ID:	VMS_G	Operator ID:	seifertj
Lims ID:	CCV			Worklist Smp#:	2
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVC 280-437714/32 Calibration Date: 11/15/2018 19:16

Instrument ID: VMS_G Calib Start Date: 10/29/2018 20:00

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 10/29/2018 22:02

Lab File ID: G1798.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5246	0.5383		10.3	10.0	2.6	50.0
Chloromethane	Ave	0.6014	0.5843	0.1000	9.72	10.0	-2.8	50.0
Vinyl chloride	Ave	0.4747	0.4612		9.71	10.0	-2.9	50.0
Bromomethane	Ave	0.3234	0.3144		9.72	10.0	-2.8	50.0
Chloroethane	Ave	0.2279	0.2211		9.70	10.0	-3.0	50.0
Dichlorofluoromethane	Ave	0.6401	0.6635		10.4	10.0	3.7	50.0
Trichlorofluoromethane	Ave	0.6094	0.5688		9.33	10.0	-6.7	50.0
Ethyl ether	Ave	0.1625	0.1589		9.78	10.0	-2.2	50.0
Acrolein	Ave	0.0201	0.0168		83.6	100	-16.4	50.0
Acetone	Lin2		0.0424		36.1	40.0	-9.8	50.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.2852	0.2520		8.84	10.0	-11.6	50.0
1,1-Dichloroethene	Ave	0.3761	0.3521		9.36	10.0	-6.4	50.0
Iodomethane	Ave	0.7436	0.7074		9.51	10.0	-4.9	50.0
Methyl acetate	Lin1		0.1113		19.8	20.0	-1.1	50.0
3-Chloro-1-propene	Ave	0.9605	0.9801		10.2	10.0	2.0	50.0
Carbon disulfide	Ave	1.968	2.032		10.3	10.0	3.3	50.0
t-Butyl alcohol	Ave	1.547	1.599		103	100	3.4	50.0
Methylene Chloride	Ave	0.3779	0.3947		10.4	10.0	4.5	50.0
Acrylonitrile	Ave	0.0456	0.0481		105	100	5.5	50.0
Methyl tert-butyl ether	Ave	0.4093	0.4438		10.8	10.0	8.4	50.0
trans-1,2-Dichloroethene	Ave	0.3985	0.4129		10.4	10.0	3.6	50.0
Hexane	Ave	3.939	3.787		9.61	10.0	-3.9	50.0
Vinyl acetate	Ave	0.4397	0.4643		21.1	20.0	5.6	50.0
1,1-Dichloroethane	Ave	0.7981	0.8604	0.1000	10.8	10.0	7.8	50.0
2-Butanone (MEK)	Ave	0.0640	0.0613		38.3	40.0	-4.3	50.0
cis-1,2-Dichloroethene	Ave	0.3865	0.4066		10.5	10.0	5.2	50.0
2,2-Dichloropropane	Ave	0.5607	0.5657		10.1	10.0	0.9	50.0
Bromochloromethane	Ave	0.1304	0.1423		10.9	10.0	9.1	50.0
Chloroform	Ave	0.6665	0.7243		10.9	10.0	8.7	50.0
Tetrahydrofuran	Ave	0.0351	0.0393		22.4	20.0	11.8	50.0
1,1,1-Trichloroethane	Ave	0.5830	0.6056		10.4	10.0	3.9	50.0
Isobutyl alcohol	Ave	0.6252	0.7053		282	250	12.8	50.0
Cyclohexane	Ave	0.8743	0.8733		9.99	10.0	-0.1	50.0
1,1-Dichloropropene	Ave	0.6078	0.6292		10.4	10.0	3.5	50.0
Carbon tetrachloride	Ave	0.5123	0.5326		10.4	10.0	4.0	50.0
1,2-Dichloroethane	Ave	0.3127	0.3710		11.9	10.0	18.6	50.0
Benzene	Ave	1.470	1.552		10.6	10.0	5.6	50.0
Trichloroethene	Ave	0.3989	0.4019		10.1	10.0	0.8	50.0
1,2-Dichloropropane	Ave	0.3698	0.4027		10.9	10.0	8.9	50.0
Methylcyclohexane	Ave	0.7212	0.7238		10.0	10.0	0.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVC 280-437714/32 Calibration Date: 11/15/2018 19:16

Instrument ID: VMS_G Calib Start Date: 10/29/2018 20:00

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 10/29/2018 22:02

Lab File ID: G1798.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0009		205	200	2.6	50.0
Dibromomethane	Ave	0.1448	0.1642		11.3	10.0	13.4	50.0
Bromodichloromethane	Ave	0.3991	0.4476		11.2	10.0	12.1	50.0
2-Chloroethyl vinyl ether	Lin1		0.0473		12.6	10.0	25.6	50.0
cis-1,3-Dichloropropene	Ave	2.112	2.220		10.5	10.0	5.1	50.0
4-Methyl-2-pentanone (MIBK)	Ave	0.1349	0.1494		44.3	40.0	10.8	50.0
Toluene	Ave	1.326	1.345		10.1	10.0	1.4	50.0
trans-1,3-Dichloropropene	Ave	0.2863	0.3174		11.1	10.0	10.9	50.0
Ethyl methacrylate	Lin2		0.8607		10.0	10.0	0.3	50.0
1,1,2-Trichloroethane	Ave	0.1495	0.1613		10.8	10.0	7.9	50.0
1,3-Dichloropropane	Ave	1.455	1.511		10.4	10.0	3.8	50.0
2-Hexanone	Lin2		0.4678		40.1	40.0	0.2	50.0
Tetrachloroethene	Ave	1.497	1.335		8.92	10.0	-10.8	50.0
Dibromochloromethane	Ave	1.084	1.162		10.7	10.0	7.2	50.0
1,2-Dibromoethane	Ave	0.7869	0.8325		10.6	10.0	5.8	50.0
Chlorobenzene	Ave	3.931	3.799	0.3000	9.66	10.0	-3.4	50.0
1,1,1,2-Tetrachloroethane	Ave	1.288	1.333		10.3	10.0	3.5	50.0
Ethylbenzene	Ave	2.154	2.054		9.53	10.0	-4.7	50.0
m-Xylene & p-Xylene	Ave	2.574	2.442		9.49	10.0	-5.1	50.0
o-Xylene	Ave	2.349	2.311		9.84	10.0	-1.6	50.0
Styrene	Ave	3.347	3.527		10.5	10.0	5.4	50.0
Bromoform	Ave	0.5127	0.5254	0.1000	10.2	10.0	2.5	50.0
Isopropylbenzene	Ave	4.996	4.750		9.51	10.0	-4.9	50.0
Cyclohexanone	Ave	0.0380	0.0214		226	400	-43.6	50.0
1,1,2,2-Tetrachloroethane	Ave	0.6621	0.6858	0.3000	10.4	10.0	3.6	50.0
trans-1,4-Dichloro-2-butene	Lin2		0.1472		10.0	10.0	0.4	50.0
1,2,3-Trichloropropane	Ave	0.1190	0.1220		10.3	10.0	2.6	50.0
Bromobenzene	Ave	1.007	1.020		10.1	10.0	1.2	50.0
N-Propylbenzene	Ave	1.230	1.156		9.40	10.0	-6.0	50.0
2-Chlorotoluene	Ave	1.114	1.079		9.68	10.0	-3.2	50.0
1,3,5-Trimethylbenzene	Ave	4.035	3.751		9.30	10.0	-7.0	50.0
4-Chlorotoluene	Ave	1.089	1.062		9.76	10.0	-2.4	50.0
tert-Butylbenzene	Ave	3.723	3.591		9.65	10.0	-3.5	50.0
1,2,4-Trimethylbenzene	Ave	3.933	3.881		9.87	10.0	-1.3	50.0
sec-Butylbenzene	Ave	0.9342	0.8577		9.18	10.0	-8.2	50.0
4-Isopropyltoluene	Ave	4.365	4.023		9.22	10.0	-7.8	50.0
1,3-Dichlorobenzene	Ave	2.087	2.006		9.61	10.0	-3.9	50.0
1,4-Dichlorobenzene	Ave	2.129	1.966		9.23	10.0	-7.7	50.0
n-Butylbenzene	Ave	5.219	4.699		9.00	10.0	-10.0	50.0
1,2-Dichlorobenzene	Ave	1.675	1.640		9.79	10.0	-2.1	50.0
1,2-Dibromo-3-Chloropropane	Lin1		0.0684		8.72	10.0	-12.8	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVC 280-437714/32 Calibration Date: 11/15/2018 19:16

Instrument ID: VMS_G Calib Start Date: 10/29/2018 20:00

GC Column: DB-624 v1 ID: 32.00(um) Calib End Date: 10/29/2018 22:02

Lab File ID: G1798.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	1.073	0.9823		9.16	10.0	-8.4	50.0
Hexachlorobutadiene	Ave	0.9196	0.7512		8.17	10.0	-18.3	50.0
Naphthalene	Ave	1.217	1.236		10.2	10.0	1.6	50.0
1,2,3-Trichlorobenzene	Ave	0.9009	0.8053		8.94	10.0	-10.6	50.0
Dibromofluoromethane (Surr)	Ave	0.3528	0.3478		9.86	10.0	-1.4	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2632	0.2660		10.1	10.0	1.0	50.0
Toluene-d8 (Surr)	Ave	5.665	5.397		9.53	10.0	-4.7	50.0
4-Bromofluorobenzene (Surr)	Ave	1.334	1.214		9.10	10.0	-9.0	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1798.D
Lims ID: CCVC
Client ID:
Sample Type: CCVC
Inject. Date: 15-Nov-2018 19:16:30 ALS Bottle#: 38 Worklist Smp#: 32
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: seifertj Instrument ID: VMS_G
Sublist: chrom-AQ_VMSG_8260*sub136

Method: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 12:34:38 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: seifertj Date: 16-Nov-2018 12:33:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.458	4.447	0.011	0	73090	250.0	250.0	
* 1 Fluorobenzene	96	6.447	6.446	0.001	97	576834	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.145	9.144	0.001	91	114310	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.272	11.271	0.001	96	156372	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.866	5.865	0.001	91	160475	10.0	9.86	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.171	6.170	0.001	0	122737	10.0	10.1	
$ 7 Toluene-d8 (Surr)	98	7.806	7.805	0.001	96	493507	10.0	9.53	
$ 8 4-Bromofluorobenzene (Surr	95	10.258	10.256	0.002	85	151829	10.0	9.10	
25 Dichlorodifluoromethane	85	2.883	2.881	0.002	99	248423	10.0	10.3	
27 Chloromethane	50	3.099	3.098	0.001	100	269642	10.0	9.72	
28 Vinyl chloride	62	3.208	3.206	0.002	78	212804	10.0	9.71	
31 Bromomethane	94	3.523	3.521	0.002	92	145087	10.0	9.72	
32 Chloroethane	64	3.572	3.571	0.002	96	102023	10.0	9.70	
33 Dichlorofluoromethane	67	3.710	3.708	0.002	98	306173	10.0	10.4	
35 Trichlorofluoromethane	101	3.818	3.817	0.001	98	262459	10.0	9.33	
38 Ethyl ether	59	3.946	3.935	0.011	94	73327	10.0	9.78	
41 Acrolein	56	4.064	4.053	0.011	99	77446	100.0	83.6	
42 Acetone	43	4.163	4.161	0.002	97	78341	40.0	36.1	
44 1,1,2-Trichloro-1,2,2-trif	151	4.192	4.191	0.001	95	116308	10.0	8.84	
45 1,1-Dichloroethene	96	4.212	4.201	0.011	93	162500	10.0	9.36	
47 Iodomethane	142	4.360	4.358	0.002	97	326451	10.0	9.51	
48 Methyl acetate	43	4.409	4.398	0.011	100	102723	20.0	19.8	
49 3-Chloro-1-propene	41	4.448	4.447	0.001	83	452298	10.0	10.2	
50 Carbon disulfide	76	4.448	4.447	0.001	100	937895	10.0	10.3	
51 2-Methyl-2-propanol	59	4.517	4.506	0.011	94	46755	100.0	103.4	
52 Methylene Chloride	84	4.537	4.535	0.002	96	182154	10.0	10.4	
53 Acrylonitrile	53	4.685	4.683	0.002	98	221941	100.0	105.5	
54 Methyl tert-butyl ether	73	4.734	4.732	0.002	97	204792	10.0	10.8	
55 trans-1,2-Dichloroethene	96	4.763	4.762	0.001	92	190524	10.0	10.4	
56 Hexane	57	4.950	4.939	0.011	94	346340	10.0	9.61	
57 Vinyl acetate	43	5.039	5.028	0.011	96	428468	20.0	21.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
59 1,1-Dichloroethane	63	5.078	5.067	0.011	97	397065	10.0	10.8	
62 2-Butanone (MEK)	43	5.472	5.471	0.001	97	113099	40.0	38.3	
66 cis-1,2-Dichloroethene	96	5.522	5.520	0.002	90	187640	10.0	10.5	
67 2,2-Dichloropropane	77	5.551	5.550	0.001	88	261072	10.0	10.1	
69 Chlorobromomethane	128	5.718	5.717	0.001	89	65676	10.0	10.9	
70 Chloroform	83	5.738	5.737	0.001	99	334235	10.0	10.9	
71 Tetrahydrofuran	42	5.758	5.756	0.002	93	36228	20.0	22.4	
73 1,1,1-Trichloroethane	97	5.965	5.963	0.002	96	279458	10.0	10.4	
72 Isobutyl alcohol	41	5.974	5.973	0.001	95	51548	250.0	282.0	
74 Cyclohexane	56	6.043	6.042	0.001	97	403011	10.0	9.99	
75 1,1-Dichloropropene	75	6.073	6.072	0.001	91	290335	10.0	10.4	
76 Carbon tetrachloride	117	6.112	6.111	0.001	96	245793	10.0	10.4	
77 1,2-Dichloroethane	62	6.230	6.229	0.001	96	171183	10.0	11.9	
79 Benzene	78	6.260	6.259	0.001	98	716409	10.0	10.6	
13 n-Heptane	43	6.388	6.387	0.001	96	445435	10.0	9.73	
81 Trichloroethene	95	6.762	6.761	0.001	93	185479	10.0	10.1	
84 1,2-Dichloropropane	63	6.949	6.948	0.001	92	185808	10.0	10.9	
85 Methylcyclohexane	55	6.969	6.968	0.001	96	333995	10.0	10.0	
86 1,4-Dioxane	88	7.018	7.027	-0.009	82	8607	200.0	205.2	
87 Dibromomethane	93	7.058	7.056	0.002	87	75762	10.0	11.3	
88 Dichlorobromomethane	83	7.146	7.155	-0.009	97	206565	10.0	11.2	
90 2-Chloroethyl vinyl ether	63	7.343	7.352	-0.009	88	21809	10.0	12.6	
91 cis-1,3-Dichloropropene	75	7.530	7.529	0.001	89	202997	10.0	10.5	
92 4-Methyl-2-pentanone (MIBK	43	7.619	7.618	0.001	96	275749	40.0	44.3	
93 Toluene	91	7.865	7.864	0.001	96	620896	10.0	10.1	
95 trans-1,3-Dichloropropene	75	7.993	7.992	0.001	97	146486	10.0	11.1	
94 Ethyl methacrylate	69	8.023	8.021	0.002	96	78706	10.0	10.0	
96 1,1,2-Trichloroethane	97	8.180	8.179	0.001	92	74446	10.0	10.8	
98 1,3-Dichloropropane	76	8.348	8.346	0.002	97	138154	10.0	10.4	
97 2-Hexanone	43	8.357	8.356	0.001	96	171123	40.0	40.1	
99 Tetrachloroethene	164	8.387	8.386	0.001	90	122112	10.0	8.92	
100 Chlorodibromomethane	129	8.584	8.582	0.002	90	106240	10.0	10.7	
102 Ethylene Dibromide	107	8.732	8.730	0.002	98	76131	10.0	10.6	
104 Chlorobenzene	112	9.175	9.173	0.002	89	347394	10.0	9.66	
105 1,1,1,2-Tetrachloroethane	131	9.234	9.232	0.002	97	121913	10.0	10.3	
106 Ethylbenzene	106	9.253	9.252	0.001	99	187809	10.0	9.53	
107 m-Xylene & p-Xylene	106	9.352	9.351	0.001	0	223329	10.0	9.49	
109 Styrene	104	9.756	9.754	0.002	80	322555	10.0	10.5	
108 o-Xylene	106	9.756	9.754	0.002	86	211367	10.0	9.84	
110 Bromoform	173	9.962	9.961	0.001	92	48050	10.0	10.2	
111 Isopropylbenzene	105	10.100	10.099	0.001	98	594191	10.0	9.51	
113 Cyclohexanone	55	10.209	10.207	0.002	98	78352	400.0	225.7	
114 1,1,2,2-Tetrachloroethane	83	10.337	10.335	0.002	94	85789	10.0	10.4	
115 trans-1,4-Dichloro-2-buten	53	10.386	10.384	0.002	83	18417	10.0	10.0	
116 1,2,3-Trichloropropane	110	10.405	10.404	0.001	85	15263	10.0	10.3	
117 Bromobenzene	156	10.435	10.434	0.001	96	127538	10.0	10.1	
118 N-Propylbenzene	120	10.484	10.483	0.001	99	144587	10.0	9.40	
120 2-Chlorotoluene	126	10.593	10.591	0.002	95	134995	10.0	9.68	
119 1,3,5-Trimethylbenzene	105	10.622	10.621	0.001	93	469255	10.0	9.30	
121 4-Chlorotoluene	126	10.681	10.680	0.001	99	132905	10.0	9.76	
122 tert-Butylbenzene	119	10.918	10.916	0.002	94	449273	10.0	9.65	
123 1,2,4-Trimethylbenzene	105	10.947	10.946	0.001	98	485491	10.0	9.87	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
124 sec-Butylbenzene	134	11.105	11.103	0.002	97	107292	10.0	9.18	
125 4-Isopropyltoluene	119	11.203	11.202	0.001	97	503297	10.0	9.22	
126 1,3-Dichlorobenzene	146	11.233	11.231	0.002	97	250920	10.0	9.61	
127 1,4-Dichlorobenzene	146	11.302	11.300	0.002	91	245905	10.0	9.23	
129 n-Butylbenzene	91	11.558	11.556	0.002	99	587820	10.0	9.00	
130 1,2-Dichlorobenzene	146	11.636	11.635	0.001	95	205143	10.0	9.79	
131 1,2-Dibromo-3-Chloropropan	157	12.326	12.324	0.002	76	8553	10.0	8.72	
132 1,2,4-Trichlorobenzene	180	13.172	13.171	0.001	94	122889	10.0	9.16	
133 Hexachlorobutadiene	225	13.340	13.338	0.002	96	93969	10.0	8.17	
134 Naphthalene	128	13.468	13.466	0.002	97	154624	10.0	10.2	
135 1,2,3-Trichlorobenzene	180	13.744	13.742	0.002	94	100741	10.0	8.94	
S 142 1,2-Dichloroethene, Total	96				0		20.0	20.9	
S 137 Xylenes, Total (URS)	1				0		20.0	19.3	
S 141 Xylenes, Total	106				0		20.0	19.3	
S 138 Total BTEX	1				0			49.6	
S 140 1,2-Dichloroethene, Total	1				0		20.0	20.9	
S 136 Trihalomethanes, Total	1				0		40.0	43.0	
S 139 1,3-Dichloropropene, Total	1				0		20.0	21.6	

Reagents:

MV-MegaMainA_00005	Amount Added:	4.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

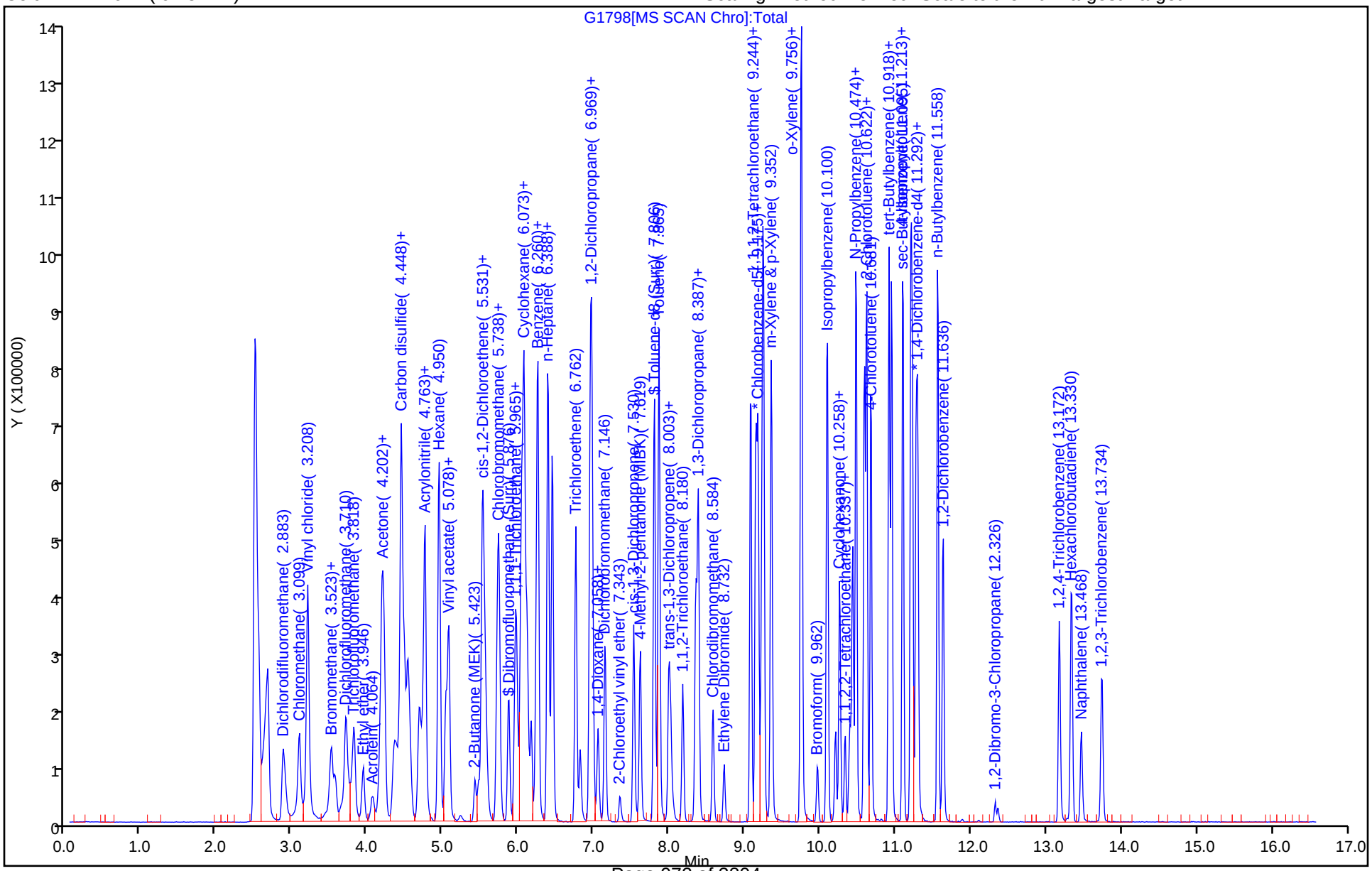
Report Date: 16-Nov-2018 12:34:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1798.D

Injection Date:	15-Nov-2018 19:16:30	Instrument ID:	VMS_G	Operator ID:	seifertj
Lims ID:	CCVC			Worklist Smp#:	32
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180928-74500.b\G9554.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 28-Sep-2018 10:25:30 ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: SEIFERTJ Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20180928-74500.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 29-Sep-2018 09:05:32 Calib Date: 28-Sep-2018 16:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20180928-74500.b\G9571.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0311

First Level Reviewer: seifertj Date: 29-Sep-2018 09:05:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	3.607	3.607	0.000	79	44358	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

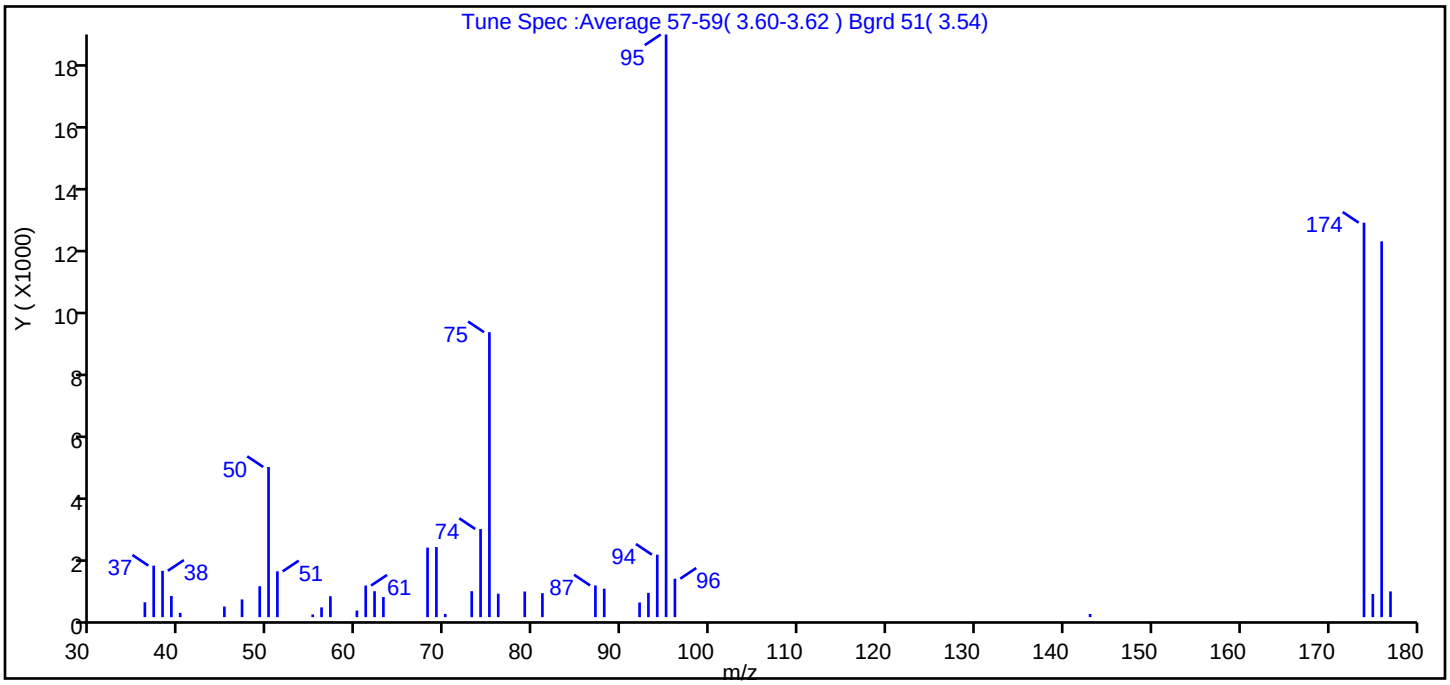
MV-BFB_00026 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180928-74500.b\G9554.D
Injection Date: 28-Sep-2018 10:25:30 Instrument ID: VMS_G
Lims ID: BFB
Client ID:
Operator ID: SEIFERTJ ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	25.8
75	30 to 60% of m/z 95	48.9
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	67.7
175	5 to 9% of m/z 174	4.0 (5.9)
176	Greater than 95% but less than 101% of m/z 174	64.5 (95.3)
177	5 to 9% of m/z 176	4.4 (6.8)

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180928-74500.b\G9554.D\AQ_VMSG_8260.rslt\spectra.d
Injection Date: 28-Sep-2018 10:25:30
Spectrum: Tune Spec :Average 57-59(3.60-3.62) Bgrd 51(3.54)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 38

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	462	55.00	84	73.00	809	94.00	1946
37.00	1605	56.00	304	74.00	2746	95.00	18152
38.00	1445	57.00	652	75.00	8877	96.00	1198
39.00	661	60.00	205	76.00	731	143.00	98
40.00	134	61.00	983	79.00	798	174.00	12289
45.00	330	62.00	808	81.00	746	175.00	722
47.00	552	63.00	625	87.00	988	176.00	11708
49.00	963	68.00	2167	88.00	887	177.00	801
50.00	4678	69.00	2183	92.00	456		
51.00	1427	70.00	100	93.00	756		

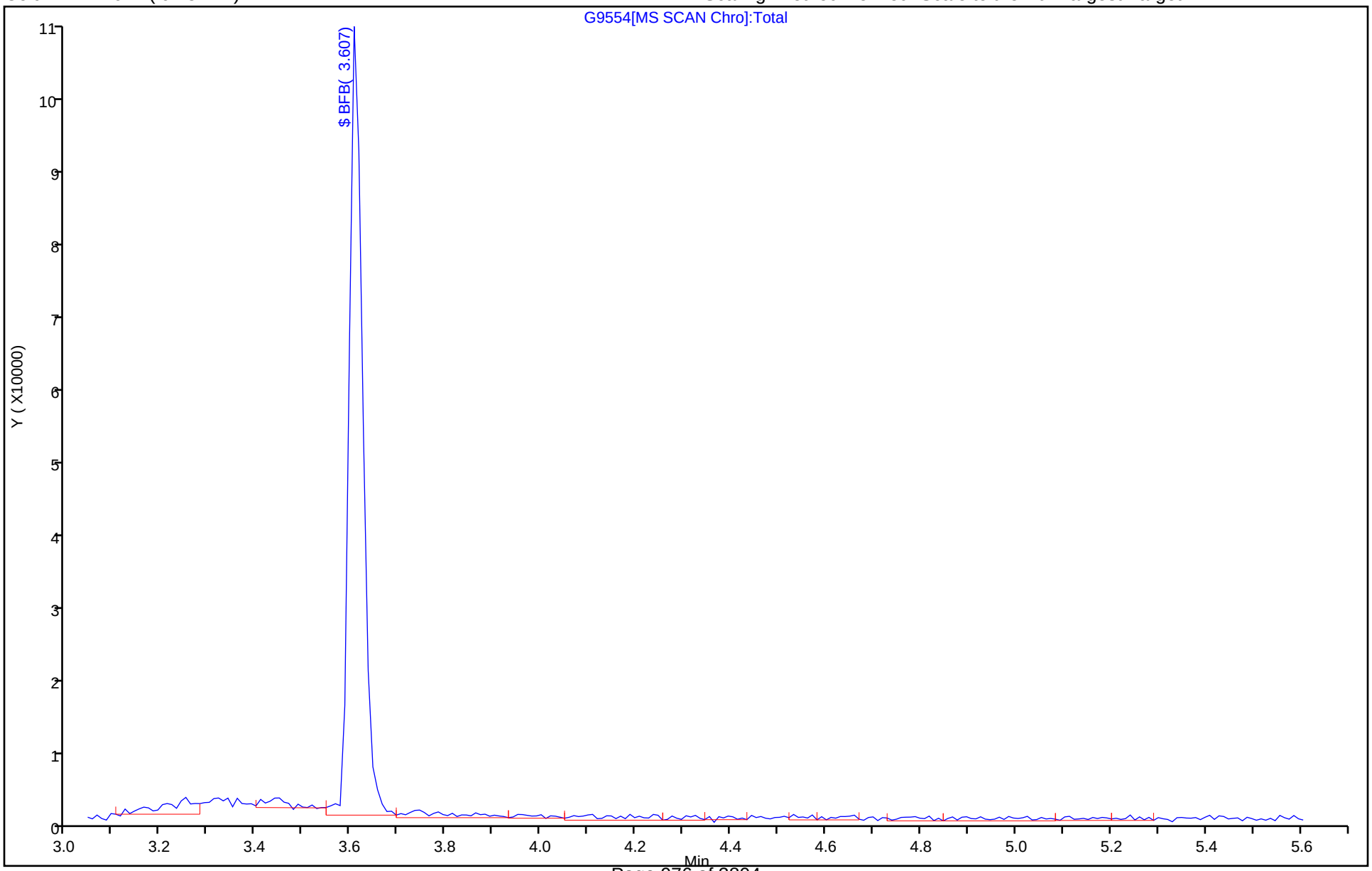
Report Date: 29-Sep-2018 09:05:37 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20180928-74500.b\G9554.D

Injection Date:	28-Sep-2018 10:25:30	Instrument ID:	VMS_G	Operator ID:	SEIFERTJ
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0940.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	29-Oct-2018 19:13:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	newcomer	Instrument ID:	VMS_G		
Method:	\\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\AQ_VMSG_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	30-Oct-2018 01:34:22	Calib Date:	29-Oct-2018 22:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0323				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	3.631	3.631	0.000	84	142007	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

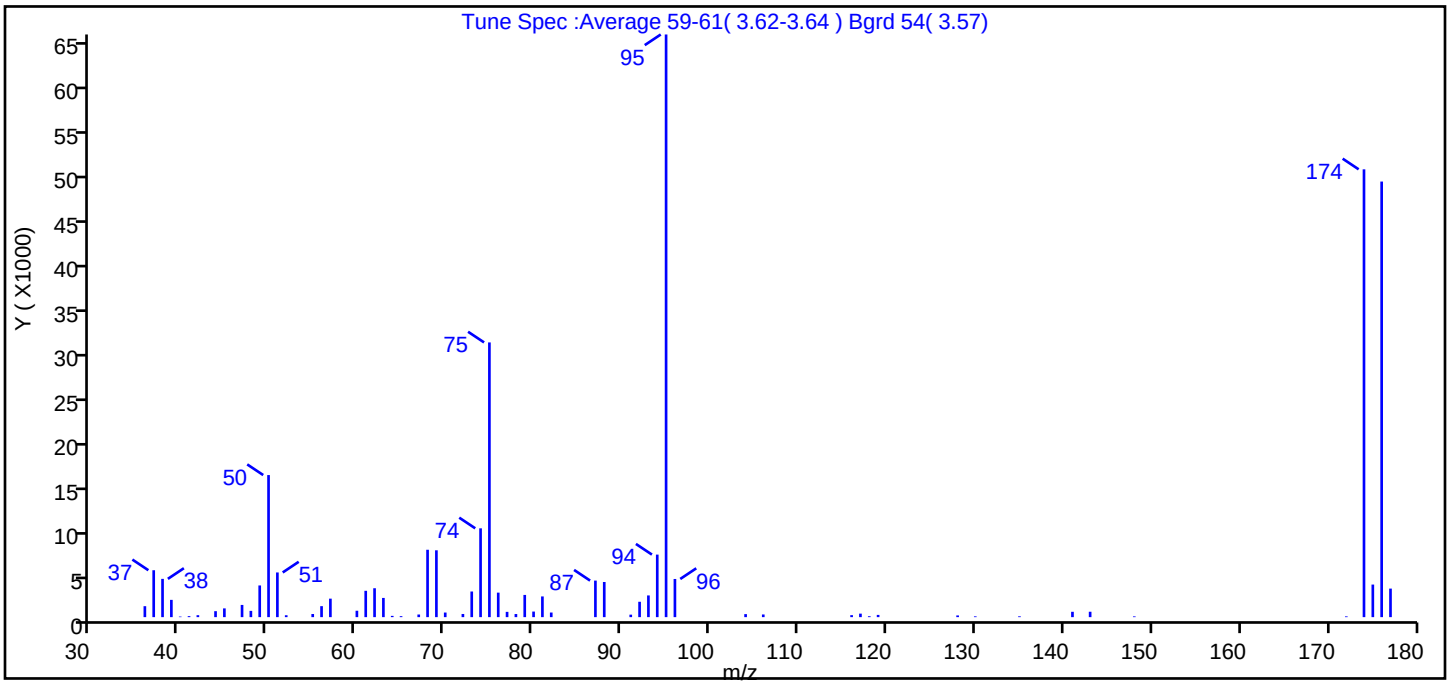
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0940.D
Injection Date: 29-Oct-2018 19:13:30 Instrument ID: VMS_G
Lims ID: BFB
Client ID:
Operator ID: newcomer ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	24.4
75	30 to 60% of m/z 95	47.1
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	76.9
175	5 to 9% of m/z 174	5.6 (7.3)
176	Greater than 95% but less than 101% of m/z 174	74.8 (97.3)
177	5 to 9% of m/z 176	4.9 (6.6)

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0940.D\AQ_VMSG_8260.rslt\spectra.d
Injection Date: 29-Oct-2018 19:13:30
Spectrum: Tune Spec :Average 59-61(3.62-3.64) Bgrd 54(3.57)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 64

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1241	56.00	1244	76.00	2774	106.00	303
37.00	5310	57.00	2093	77.00	598	116.00	226
38.00	4332	60.00	724	78.00	352	117.00	397
39.00	1956	61.00	2980	79.00	2514	118.00	102
40.00	64	62.00	3272	80.00	632	119.00	253
41.00	112	63.00	2175	81.00	2344	128.00	193
42.00	221	64.00	144	82.00	523	130.00	88
44.00	675	65.00	109	87.00	4137	135.00	92
45.00	991	67.00	298	88.00	3978	141.00	606
47.00	1382	68.00	7628	91.00	282	143.00	612
48.00	710	69.00	7566	92.00	1740	148.00	84
49.00	3587	70.00	521	93.00	2457	172.00	86
50.00	16082	72.00	358	94.00	7079	174.00	50688
51.00	5058	73.00	2902	95.00	65952	175.00	3688
52.00	214	74.00	10053	96.00	4320	176.00	49304
55.00	355	75.00	31096	104.00	343	177.00	3231

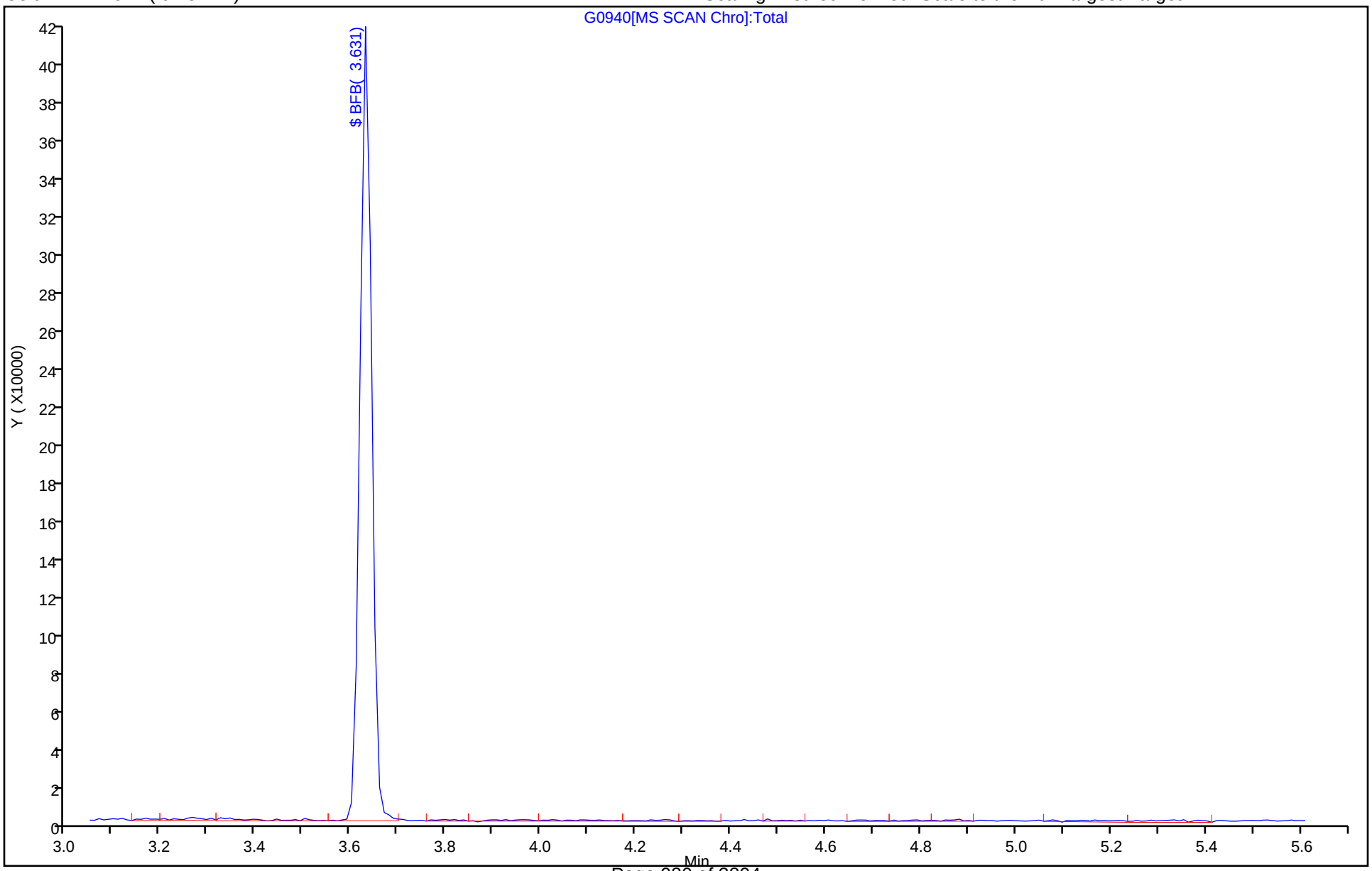
Report Date: 30-Oct-2018 01:34:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0940.D

Injection Date:	29-Oct-2018 19:13:30	Instrument ID:	VMS_G	Operator ID:	newcomer
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1769.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	15-Nov-2018 09:15:30	ALS Bottle#:	100	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Operator ID:	seifertj	Instrument ID:	VMS_G		
Method:	\\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m				
Limit Group:	MSV - 8260B Water and Solid				
Last Update:	16-Nov-2018 12:34:41	Calib Date:	29-Oct-2018 22:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D				
Column 1 :	DB-624 (0.25 mm)		Det: MS SCAN		
Process Host:	CTX0327				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 4 BFB	95	3.612	3.612	0.000	0	76732	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

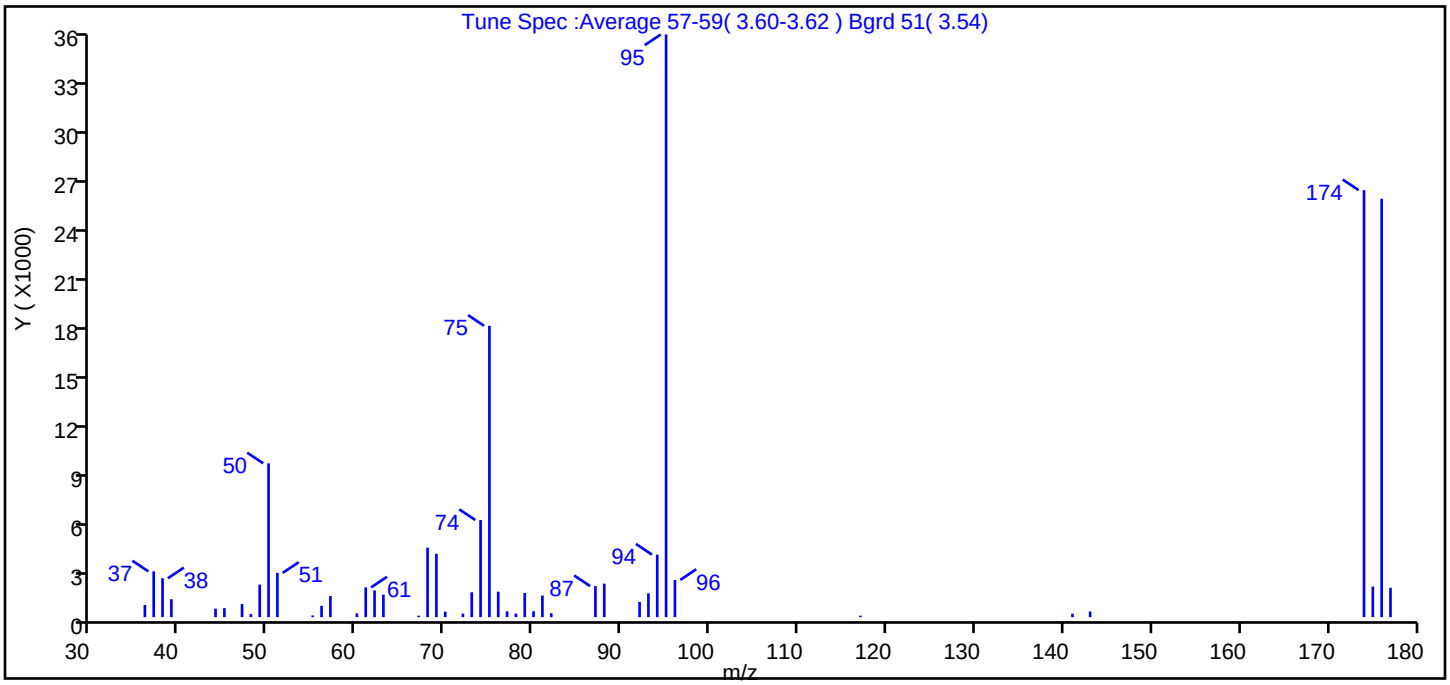
MV-BFB_00027 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1769.D
Injection Date: 15-Nov-2018 09:15:30 Instrument ID: VMS_G
Lims ID: BFB
Client ID:
Operator ID: seifertj ALS Bottle#: 100 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Tune Method: BFB Method 8260

$ 4 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	26.4
75	30 to 60% of m/z 95	50.0
96	5 to 9% of m/z 95	6.4
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	73.3
175	5 to 9% of m/z 174	5.2 (7.2)
176	Greater than 95% but less than 101% of m/z 174	71.8 (98.0)
177	5 to 9% of m/z 176	5.0 (7.0)

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1769.D\AQ_VMSG_8260.rslt\spectra.d
Injection Date: 15-Nov-2018 09:15:30
Spectrum: Tune Spec :Average 57-59(3.60-3.62) Bgrd 51(3.54)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 47

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	742	56.00	689	74.00	5930	93.00	1451
37.00	2793	57.00	1292	75.00	17784	94.00	3818
38.00	2373	60.00	232	76.00	1555	95.00	35568
39.00	1092	61.00	1815	77.00	355	96.00	2272
44.00	519	62.00	1635	78.00	217	117.00	90
45.00	551	63.00	1379	79.00	1474	141.00	206
47.00	804	67.00	92	80.00	357	143.00	347
48.00	190	68.00	4241	81.00	1320	174.00	26064
49.00	1989	69.00	3870	82.00	237	175.00	1866
50.00	9388	70.00	335	87.00	1896	176.00	25536
51.00	2702	72.00	214	88.00	2046	177.00	1790
55.00	103	73.00	1518	92.00	930		

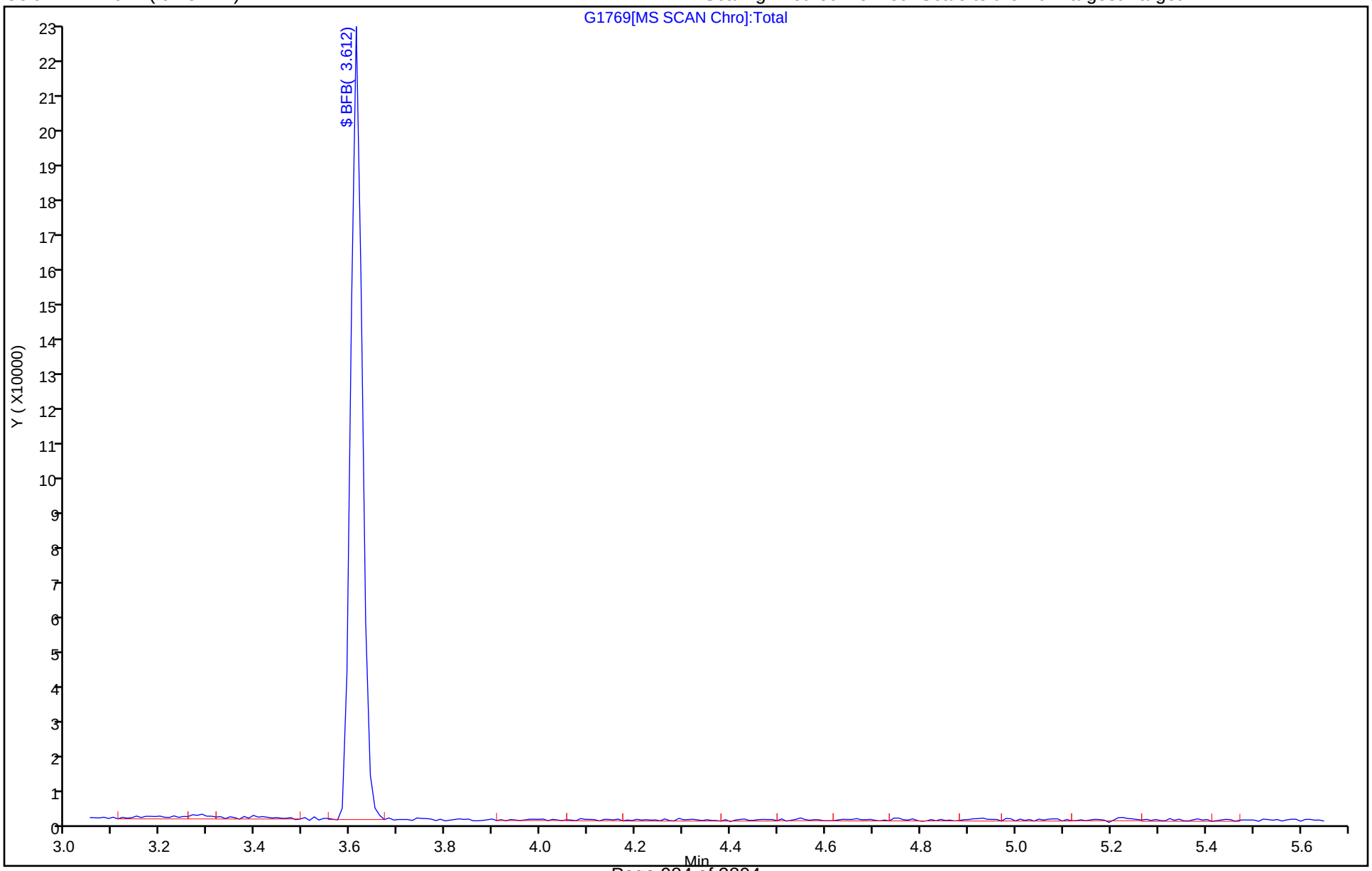
Report Date: 16-Nov-2018 12:34:42 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1769.D

Injection Date:	15-Nov-2018 09:15:30	Instrument ID:	VMS_G	Operator ID:	seifertj
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	100
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-437714/4

Matrix: Water | Lab File ID: G1774.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/15/2018 11:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437714 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	0.40	U	1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	0.80	U	1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	0.80	U	1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	0.80	U	1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	0.80	U	1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	0.40	U	1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	0.40	U	1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	0.20	U	1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	0.40	U	1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	4.0	U	6.0	4.0	2.0
591-78-6	2-Hexanone	4.0	U	5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	U	5.0	3.2	0.98
67-64-1	Acetone	6.4	U	10	6.4	1.9
71-43-2	Benzene	0.40	U	1.0	0.40	0.16
108-86-1	Bromobenzene	0.40	U	1.0	0.40	0.17
74-97-5	Bromochloromethane	0.20	U	1.0	0.20	0.10
75-27-4	Bromodichloromethane	0.40	U	1.0	0.40	0.17
75-25-2	Bromoform	0.40	U	1.0	0.40	0.19
74-83-9	Bromomethane	0.80	U	2.0	0.80	0.21
75-15-0	Carbon disulfide	1.6	U	2.0	1.6	0.45
56-23-5	Carbon tetrachloride	0.40	U	2.0	0.40	0.19
108-90-7	Chlorobenzene	0.40	U	1.0	0.40	0.17
75-00-3	Chloroethane	1.6	U	2.0	1.6	0.41
67-66-3	Chloroform	0.40	U	1.0	0.40	0.16
74-87-3	Chloromethane	0.80	U	2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	0.40	U	1.0	0.40	0.16
124-48-1	Dibromochloromethane	0.40	U	1.0	0.40	0.17
100-41-4	Ethylbenzene	0.40	U	1.0	0.40	0.16
75-09-2	Methylene Chloride	0.80	U M	5.0	0.80	0.32
100-42-5	Styrene	0.40	U	1.0	0.40	0.17
127-18-4	Tetrachloroethene	0.40	U	1.0	0.40	0.20
108-88-3	Toluene	0.40	U	1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	0.40	U	1.0	0.40	0.19
79-01-6	Trichloroethene	0.40	U	1.0	0.40	0.16
75-01-4	Vinyl chloride	0.20	U	1.5	0.20	0.10
1330-20-7	Xylenes, Total	0.80	U	1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-437714/4

Matrix: Water Lab File ID: G1774.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/15/2018 11:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 v1 ID: 32(um)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 437714 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		81-118
460-00-4	4-Bromofluorobenzene (Surr)	98		85-114
1868-53-7	Dibromofluoromethane (Surr)	100		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1774.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 15-Nov-2018 11:11:30 ALS Bottle#: 14 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: seifertj Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 12:34:46 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: seifertj Date: 16-Nov-2018 09:24:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.454	4.447	0.007	0	74986	250.0	250.0	
* 149 1,4-Dioxane-d8	96		4.687					ND	
* 1 Fluorobenzene	96	6.453	6.446	0.007	97	605006	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.151	9.144	0.007	90	114402	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.278	11.271	0.007	97	153060	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.872	5.865	0.007	91	170500	10.0	9.98	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.168	6.170	-0.002	0	121536	10.0	9.54	
$ 7 Toluene-d8 (Surr)	98	7.802	7.805	-0.003	95	528972	10.0	10.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.264	10.256	0.008	86	160319	10.0	9.81	
$ 151 Trifluorotoluene (Surr)	1		0.000					ND	
$ 4 BFB	95		3.612					ND	
25 Dichlorodifluoromethane	85		2.881					ND	
27 Chloromethane	50		3.098					ND	
28 Vinyl chloride	62		3.206					ND	
30 Ethylene oxide	43		3.444					ND	
31 Bromomethane	94		3.521					ND	
32 Chloroethane	64		3.571					ND	
33 Dichlorofluoromethane	67		3.708					ND	
34 Ethanol	45		3.808					ND	
35 Trichlorofluoromethane	101		3.817					ND	
38 Ethyl ether	59		3.935					ND	
24 Chlorotrifluoroethene	116		3.956					ND	
39 Propene oxide	58		4.015					ND	
41 Acrolein	56		4.053					ND	
42 Acetone	43		4.161					ND	
26 1,2-Dichloro-1,1,2,2-tetra	85		4.173					ND	
44 1,1,2-Trichloro-1,2,2-trif	151		4.191					ND	
43 Isopropyl alcohol	45		4.192					ND	
45 1,1-Dichloroethene	96		4.201					ND	
47 Iodomethane	142		4.358					ND	
46 Acetonitrile	41		4.370					ND	
48 Methyl acetate	43		4.398					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
29 2-Chloro-1,1,1-Trifluoroet	118		4.429					ND	
49 3-Chloro-1-propene	41		4.447					ND	
50 Carbon disulfide	76		4.447					ND	
51 2-Methyl-2-propanol	59		4.506					ND	
52 Methylene Chloride	84		4.535					ND	U
53 Acrylonitrile	53		4.683					ND	
54 Methyl tert-butyl ether	73		4.732					ND	
55 trans-1,2-Dichloroethene	96		4.762					ND	
56 Hexane	57		4.939					ND	
57 Vinyl acetate	43		5.028					ND	
58 Isopropyl ether	87		5.059					ND	
59 1,1-Dichloroethane	63		5.067					ND	
60 2-Chloro-1,3-butadiene	53		5.148					ND	
36 1,2-Dichloro-1,1,2-trifluo	117		5.267					ND	
37 1,1,1-Trifluoro-2,2-dichlo	83		5.297					ND	
61 Tert-butyl ethyl ether	59		5.344					ND	
62 2-Butanone (MEK)	43		5.471					ND	
63 Ethyl acetate	43		5.482					ND	
64 Propionitrile	54		5.512					ND	
66 cis-1,2-Dichloroethene	96		5.520					ND	
65 sec-Butyl Alcohol	45		5.550					ND	
67 2,2-Dichloropropane	77		5.550					ND	
68 Methacrylonitrile	41		5.650					ND	
69 Chlorobromomethane	128		5.717					ND	
70 Chloroform	83		5.737					ND	
71 Tetrahydrofuran	42		5.756					ND	
73 1,1,1-Trichloroethane	97		5.963					ND	
72 Isobutyl alcohol	41		5.973					ND	
74 Cyclohexane	56		6.042					ND	
75 1,1-Dichloropropene	75		6.072					ND	
76 Carbon tetrachloride	117		6.111					ND	
77 1,2-Dichloroethane	62		6.229					ND	
79 Benzene	78		6.259					ND	
78 Tert-amyl methyl ether	73		6.280					ND	
13 n-Heptane	43		6.387					ND	
80 n-Butanol	56		6.516					ND	U
81 Trichloroethene	95		6.761					ND	
82 2-Pentanone	43		6.830					ND	
83 Methyl methacrylate	100		6.940					ND	
84 1,2-Dichloropropane	63		6.948					ND	
85 Methylcyclohexane	55		6.968					ND	
86 1,4-Dioxane	88		7.027					ND	
87 Dibromomethane	93		7.056					ND	
88 Dichlorobromomethane	83		7.155					ND	
89 2-Nitropropane	41		7.304					ND	
90 2-Chloroethyl vinyl ether	63		7.352					ND	
91 cis-1,3-Dichloropropene	75		7.529					ND	
92 4-Methyl-2-pentanone (MIBK	43		7.618					ND	
93 Toluene	91		7.864					ND	
95 trans-1,3-Dichloropropene	75		7.992					ND	
94 Ethyl methacrylate	69		8.021					ND	
96 1,1,2-Trichloroethane	97		8.179					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
98 1,3-Dichloropropane	76		8.346					ND	
97 2-Hexanone	43		8.356					ND	
99 Tetrachloroethene	164		8.386					ND	
100 Chlorodibromomethane	129		8.582					ND	
101 Tetrahydrothiophene	60		8.623					ND	
102 Ethylene Dibromide	107		8.730					ND	
103 1-Chlorohexane	91		9.094					ND	
104 Chlorobenzene	112		9.173					ND	
105 1,1,1,2-Tetrachloroethane	131		9.232					ND	
106 Ethylbenzene	106		9.252					ND	
107 m-Xylene & p-Xylene	106		9.351					ND	
109 Styrene	104		9.754					ND	
108 o-Xylene	106		9.754					ND	
110 Bromoform	173		9.961					ND	
111 Isopropylbenzene	105		10.099					ND	
112 cis-1,4-Dichloro-2-butene	53		10.120					ND	
113 Cyclohexanone	55		10.207					ND	
114 1,1,2,2-Tetrachloroethane	83		10.335					ND	
115 trans-1,4-Dichloro-2-buten	53		10.384					ND	
116 1,2,3-Trichloropropane	110		10.404					ND	
117 Bromobenzene	156		10.434					ND	
118 N-Propylbenzene	120		10.483					ND	
120 2-Chlorotoluene	126		10.591					ND	
119 1,3,5-Trimethylbenzene	105		10.621					ND	
121 4-Chlorotoluene	126		10.680					ND	
122 tert-Butylbenzene	119		10.916					ND	
123 1,2,4-Trimethylbenzene	105		10.946					ND	
124 sec-Butylbenzene	134		11.103					ND	
125 4-Isopropyltoluene	119		11.202					ND	
126 1,3-Dichlorobenzene	146		11.231					ND	
127 1,4-Dichlorobenzene	146		11.300					ND	
128 1,2,3-Trimethylbenzene	105		11.321					ND	
129 n-Butylbenzene	91		11.556					ND	
130 1,2-Dichlorobenzene	146		11.635					ND	
131 1,2-Dibromo-3-Chloropropan	157		12.324					ND	
11 1,3,5-Trichlorobenzene	180		12.542					ND	
132 1,2,4-Trichlorobenzene	180		13.171					ND	
133 Hexachlorobutadiene	225		13.338					ND	
134 Naphthalene	128		13.466					ND	
135 1,2,3-Trichlorobenzene	180		13.742					ND	U
158 1-Chlorohexane TIC	1		0.000					ND	
18 3,3-Dimethylpentane	1		0.000					ND	
10 2,2-Dimethylpentane	1		0.000					ND	
19 2,4-Dimethylpentane	1		0.000					ND	
15 3-Ethylpentane	1		0.000					ND	
9 2,2,3-Trimethylbutane	1		0.000					ND	
159 Methyl cyclohexane TIC	1		0.000					ND	
161 1-Chloro-1-fluoroethane TI	1		0.000					ND	
12 n-Nonyl Aldehyde	1		0.000					ND	
16 3-Methylhexane	1		0.000					ND	
143 Pentachloroethane	167		0.000					ND	
14 2,3-Dimethylpentane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
21 2-Methylhexane	1		0.000				ND		
17 Dimethyl disulfide	1		0.000				ND		
160 Cyclohexane TIC	1		0.000				ND		
S 142 1,2-Dichloroethene, Total	96		2.000				ND		
S 137 Xylenes, Total (URS)	1		0.000				ND		
S 141 Xylenes, Total	106		0.000				ND		
S 138 Total BTEX	1		0.000				ND		
S 140 1,2-Dichloroethene, Total	1		0.000				ND		
S 156 TAH	1				0			0	7
S 136 Trihalomethanes, Total	1		0.000				ND		
S 139 1,3-Dichloropropene, Total	1		0.000				ND		

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

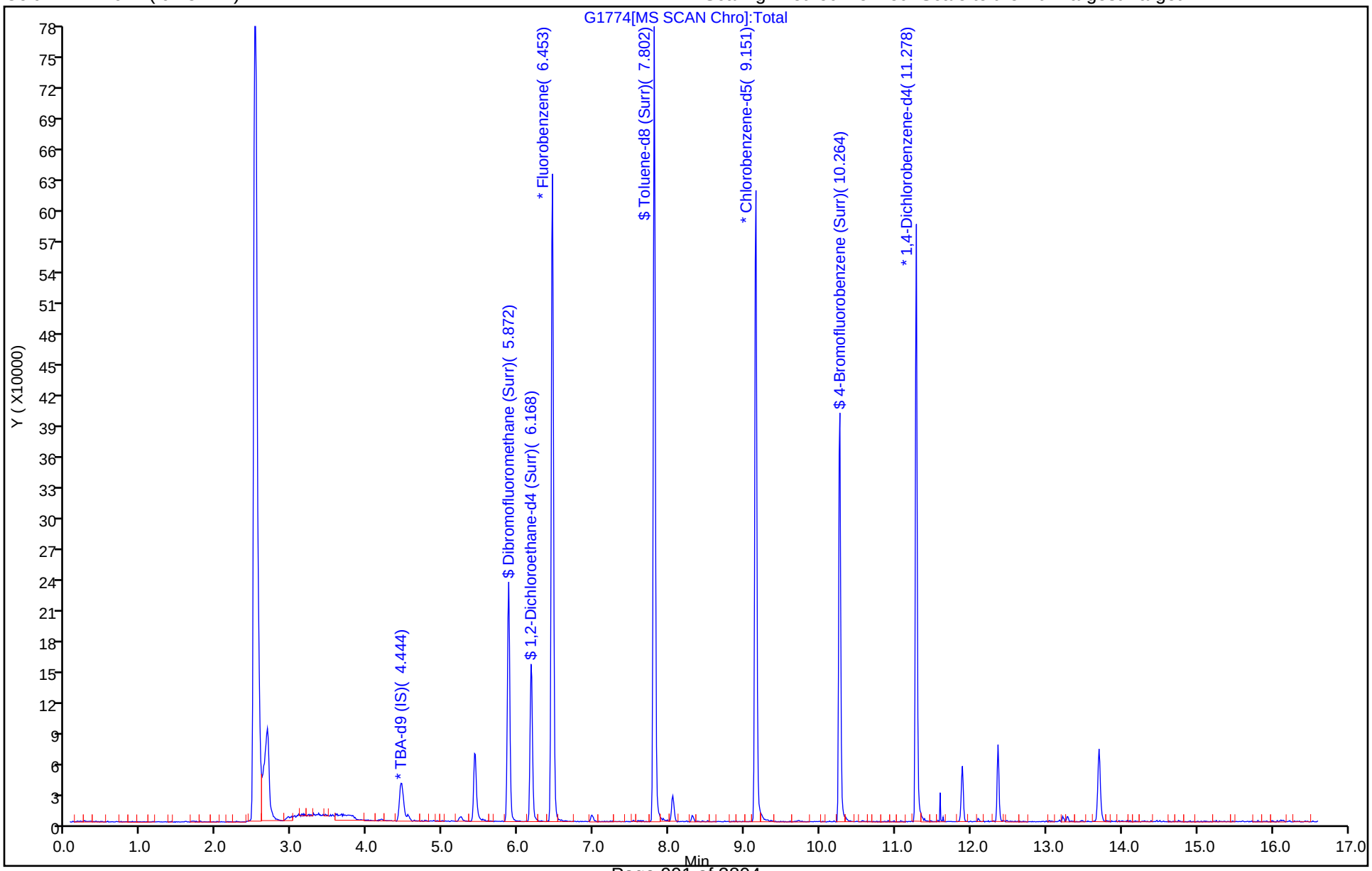
Report Date: 16-Nov-2018 12:34:49 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1774.D

Injection Date:	15-Nov-2018 11:11:30	Instrument ID:	VMS_G	Operator ID:	seifertj
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1774.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 15-Nov-2018 11:11:30 ALS Bottle#: 14 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: MB
Operator ID: seifertj Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 12:34:46 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: seifertj Date: 16-Nov-2018 09:24:33

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	9.98	99.84
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	9.54	95.40
$ 7 Toluene-d8 (Surr)	10.0	10.2	102.03
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.81	98.13

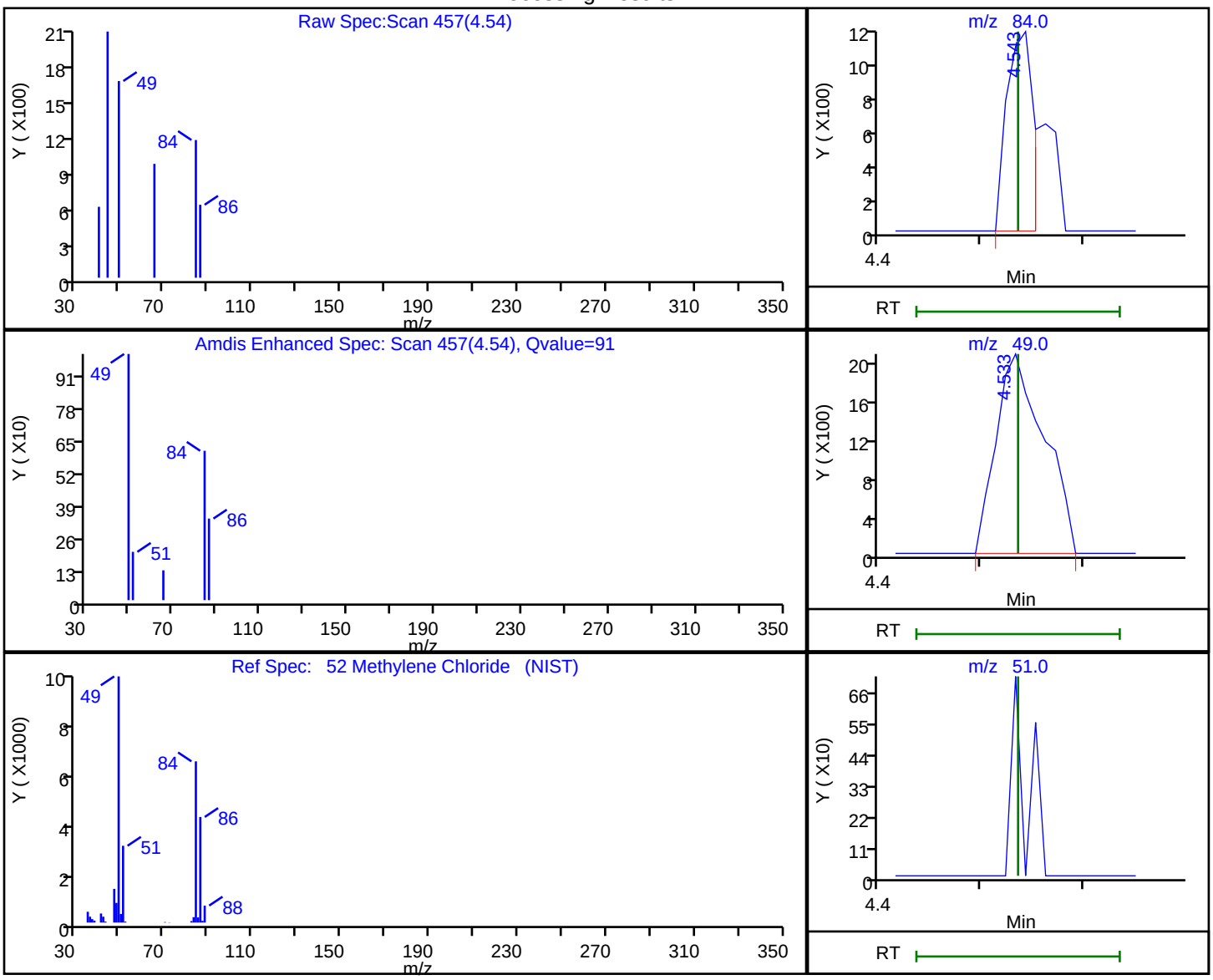
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1774.D
Injection Date: 15-Nov-2018 11:11:30 Instrument ID: VMS_G
Lims ID: MB
Client ID:
Operator ID: seifertj ALS Bottle#: 14 Worklist Smp#: 4
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Method: AQ_VMSG_8260 Limit Group: MSV - 8260B Water and Solid
Column: DB-624 (0.25 mm) Detector MS SCAN

52 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
4.54	84.00	2107	0.115197
4.53	49.00	6740	
4.54	51.00	0	

Reviewer: seifertj, 16-Nov-2018 09:24:14
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-437714/5

Matrix: Water | Lab File ID: G1775.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 20(mL) | Date Analyzed: 11/15/2018 11:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 v1 ID: 32(um)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 437714 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
71-55-6	1,1,1-Trichloroethane	4.73		1.0	0.40	0.16
79-34-5	1,1,2,2-Tetrachloroethane	4.93		1.0	0.80	0.21
79-00-5	1,1,2-Trichloroethane	5.25		1.0	0.80	0.27
75-34-3	1,1-Dichloroethane	4.82		1.0	0.80	0.22
75-35-4	1,1-Dichloroethene	4.29		1.0	0.80	0.23
106-93-4	1,2-Dibromoethane	5.14		1.0	0.40	0.18
107-06-2	1,2-Dichloroethane	4.97		1.0	0.40	0.13
540-59-0	1,2-Dichloroethene, Total	9.23		1.0	0.20	0.24
78-87-5	1,2-Dichloropropane	5.24		1.0	0.40	0.18
78-93-3	2-Butanone (MEK)	19.9		6.0	4.0	2.0
591-78-6	2-Hexanone	19.9		5.0	4.0	1.7
108-10-1	4-Methyl-2-pentanone (MIBK)	19.9		5.0	3.2	0.98
67-64-1	Acetone	16.0		10	6.4	1.9
71-43-2	Benzene	4.81		1.0	0.40	0.16
108-86-1	Bromobenzene	5.05		1.0	0.40	0.17
74-97-5	Bromochloromethane	4.92		1.0	0.20	0.10
75-27-4	Bromodichloromethane	4.95		1.0	0.40	0.17
75-25-2	Bromoform	5.06		1.0	0.40	0.19
74-83-9	Bromomethane	4.45		2.0	0.80	0.21
75-15-0	Carbon disulfide	4.23		2.0	1.6	0.45
56-23-5	Carbon tetrachloride	4.61		2.0	0.40	0.19
108-90-7	Chlorobenzene	4.93		1.0	0.40	0.17
75-00-3	Chloroethane	4.66		2.0	1.6	0.41
67-66-3	Chloroform	4.83		1.0	0.40	0.16
74-87-3	Chloromethane	4.21		2.0	0.80	0.30
10061-01-5	cis-1,3-Dichloropropene	5.38		1.0	0.40	0.16
124-48-1	Dibromochloromethane	5.17		1.0	0.40	0.17
100-41-4	Ethylbenzene	5.34		1.0	0.40	0.16
75-09-2	Methylene Chloride	4.20	J	5.0	0.80	0.32
100-42-5	Styrene	5.28		1.0	0.40	0.17
127-18-4	Tetrachloroethene	4.74		1.0	0.40	0.20
108-88-3	Toluene	4.92		1.0	0.40	0.17
10061-02-6	trans-1,3-Dichloropropene	4.94		1.0	0.40	0.19
79-01-6	Trichloroethene	4.71		1.0	0.40	0.16
75-01-4	Vinyl chloride	4.46		1.5	0.20	0.10
1330-20-7	Xylenes, Total	10.4		1.0	0.80	0.19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-437714/5

Matrix: Water Lab File ID: G1775.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 20(mL) Date Analyzed: 11/15/2018 11:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 v1 ID: 32(um)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 437714 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		81-118
460-00-4	4-Bromofluorobenzene (Surr)	97		85-114
1868-53-7	Dibromofluoromethane (Surr)	98		80-119
2037-26-5	Toluene-d8 (Surr)	102		89-112

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1775.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 15-Nov-2018 11:31:30 ALS Bottle#: 15 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: seifertj Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 12:34:46 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: seifertj Date: 16-Nov-2018 09:25:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
* 150 TBA-d9 (IS)	65	4.449	4.447	0.002	0	70045	250.0	250.0	
* 1 Fluorobenzene	96	6.447	6.446	0.001	97	610153	12.5	12.5	
* 2 Chlorobenzene-d5	119	9.145	9.144	0.001	91	111901	12.5	12.5	
* 3 1,4-Dichlorobenzene-d4	152	11.272	11.271	0.001	97	157663	12.5	12.5	
$ 5 Dibromofluoromethane (Surr	111	5.867	5.865	0.001	91	169410	10.0	9.84	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.172	6.170	0.002	0	126530	10.0	9.85	
$ 7 Toluene-d8 (Surr)	98	7.806	7.805	0.001	96	518176	10.0	10.2	
$ 8 4-Bromofluorobenzene (Surr	95	10.258	10.256	0.002	86	163509	10.0	9.72	
25 Dichlorodifluoromethane	85	2.883	2.881	0.002	99	98518	5.00	3.85	
27 Chloromethane	50	3.090	3.098	-0.008	99	123685	5.00	4.21	
28 Vinyl chloride	62	3.208	3.206	0.002	85	103354	5.00	4.46	
31 Bromomethane	94	3.523	3.521	0.002	92	70239	5.00	4.45	
32 Chloroethane	64	3.562	3.571	-0.008	97	51822	5.00	4.66	
33 Dichlorofluoromethane	67	3.710	3.708	0.002	99	159826	5.00	5.12	
35 Trichlorofluoromethane	101	3.818	3.817	0.001	98	127228	5.00	4.28	
38 Ethyl ether	59	3.937	3.935	0.002	94	36561	5.00	4.61	
41 Acrolein	56	4.055	4.053	0.002	98	39394	50.0	40.2	
42 Acetone	43	4.163	4.161	0.002	97	38982	20.0	16.0	
44 1,1,2-Trichloro-1,2,2-trif	151	4.193	4.191	0.002	97	57096	5.00	4.10	
45 1,1-Dichloroethene	96	4.193	4.201	-0.008	94	78675	5.00	4.29	
47 Iodomethane	142	4.360	4.358	0.002	97	151857	5.00	4.18	
48 Methyl acetate	43	4.399	4.398	0.001	98	48124	10.0	8.37	
49 3-Chloro-1-propene	41	4.449	4.447	0.002	82	197558	5.00	4.21	
50 Carbon disulfide	76	4.449	4.447	0.002	100	406646	5.00	4.23	
51 2-Methyl-2-propanol	59	4.508	4.506	0.002	28	20991	50.0	48.4	
52 Methylene Chloride	84	4.527	4.535	-0.008	96	77491	5.00	4.20	
53 Acrylonitrile	53	4.685	4.683	0.002	98	99095	50.0	44.5	
54 Methyl tert-butyl ether	73	4.734	4.732	0.002	97	90239	5.00	4.52	
55 trans-1,2-Dichloroethene	96	4.764	4.762	0.002	93	85099	5.00	4.37	
56 Hexane	57	4.941	4.939	0.002	93	162683	5.00	4.61	
57 Vinyl acetate	43	5.030	5.028	0.002	96	197745	10.0	9.21	
59 1,1-Dichloroethane	63	5.069	5.067	0.002	96	187824	5.00	4.82	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
62 2-Butanone (MEK)	43	5.473	5.471	0.002	96	62220	20.0	19.9	
66 cis-1,2-Dichloroethene	96	5.522	5.520	0.002	89	91654	5.00	4.86	
67 2,2-Dichloropropane	77	5.551	5.550	0.001	91	133164	5.00	4.87	
69 Chlorobromomethane	128	5.719	5.717	0.002	89	31327	5.00	4.92	
70 Chloroform	83	5.738	5.737	0.001	98	157216	5.00	4.83	
71 Tetrahydrofuran	42	5.758	5.756	0.002	86	16098	10.0	9.39	
73 1,1,1-Trichloroethane	97	5.965	5.963	0.002	96	134575	5.00	4.73	
72 Isobutyl alcohol	41	5.985	5.973	0.012	41	20626	125.0	117.8	
74 Cyclohexane	56	6.044	6.042	0.002	96	200047	5.00	4.69	
75 1,1-Dichloropropene	75	6.073	6.072	0.001	90	140150	5.00	4.72	
76 Carbon tetrachloride	117	6.113	6.111	0.002	97	115270	5.00	4.61	
77 1,2-Dichloroethane	62	6.231	6.229	0.002	97	75912	5.00	4.97	
79 Benzene	78	6.260	6.259	0.001	97	344848	5.00	4.81	
13 n-Heptane	43	6.388	6.387	0.001	96	220860	5.00	4.56	
81 Trichloroethene	95	6.763	6.761	0.002	93	91742	5.00	4.71	
84 1,2-Dichloropropane	63	6.950	6.948	0.002	93	94616	5.00	5.24	
85 Methylcyclohexane	55	6.969	6.968	0.001	96	161652	5.00	4.59	
86 1,4-Dioxane	88	7.019	7.027	-0.008	84	3718	100.0	92.5	
87 Dibromomethane	93	7.058	7.056	0.002	90	34638	5.00	4.90	
88 Dichlorobromomethane	83	7.147	7.155	-0.008	97	96525	5.00	4.95	
90 2-Chloroethyl vinyl ether	63	7.353	7.352	0.001	87	9358	5.00	5.94	
91 cis-1,3-Dichloropropene	75	7.531	7.529	0.002	89	101741	5.00	5.38	
92 4-Methyl-2-pentanone (MIBK	43	7.619	7.618	0.001	95	130725	20.0	19.9	
93 Toluene	91	7.865	7.864	0.001	97	318612	5.00	4.92	
95 trans-1,3-Dichloropropene	75	7.993	7.992	0.001	99	69081	5.00	4.94	
94 Ethyl methacrylate	69	8.023	8.021	0.002	95	36348	5.00	4.87	
96 1,1,2-Trichloroethane	97	8.180	8.179	0.001	92	38283	5.00	5.25	
98 1,3-Dichloropropane	76	8.348	8.346	0.002	94	64163	5.00	4.92	
97 2-Hexanone	43	8.358	8.356	0.002	97	81660	20.0	19.9	
99 Tetrachloroethene	164	8.387	8.386	0.001	92	63587	5.00	4.74	
100 Chlorodibromomethane	129	8.584	8.582	0.002	89	50198	5.00	5.17	
102 Ethylene Dibromide	107	8.732	8.730	0.002	97	36212	5.00	5.14	
104 Chlorobenzene	112	9.175	9.173	0.002	90	173388	5.00	4.93	
105 1,1,1,2-Tetrachloroethane	131	9.234	9.232	0.002	95	60158	5.00	5.22	
106 Ethylbenzene	106	9.254	9.252	0.002	99	102899	5.00	5.34	
107 m-Xylene & p-Xylene	106	9.352	9.351	0.001	0	119772	5.00	5.20	
109 Styrene	104	9.756	9.754	0.002	80	158080	5.00	5.28	
108 o-Xylene	106	9.756	9.754	0.002	87	109019	5.00	5.18	
110 Bromoform	173	9.963	9.961	0.002	92	23200	5.00	5.06	
111 Isopropylbenzene	105	10.101	10.099	0.002	97	316505	5.00	5.02	
113 Cyclohexanone	55	10.209	10.207	0.002	95	68585	200.0	201.8	
114 1,1,2,2-Tetrachloroethane	83	10.327	10.335	-0.008	93	41206	5.00	4.93	
115 trans-1,4-Dichloro-2-buten	53	10.386	10.384	0.002	69	8730	5.00	4.95	
116 1,2,3-Trichloropropane	110	10.406	10.404	0.002	85	7966	5.00	5.31	
117 Bromobenzene	156	10.435	10.434	0.001	96	64139	5.00	5.05	
118 N-Propylbenzene	120	10.475	10.483	-0.008	99	81134	5.00	5.23	
120 2-Chlorotoluene	126	10.593	10.591	0.002	95	70728	5.00	5.03	
119 1,3,5-Trimethylbenzene	105	10.622	10.621	0.001	93	254971	5.00	5.01	
121 4-Chlorotoluene	126	10.682	10.680	0.002	99	71624	5.00	5.22	
122 tert-Butylbenzene	119	10.918	10.916	0.002	94	240122	5.00	5.11	
123 1,2,4-Trimethylbenzene	105	10.947	10.946	0.001	96	253403	5.00	5.11	
124 sec-Butylbenzene	134	11.105	11.103	0.002	96	62389	5.00	5.29	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
125 4-Isopropyltoluene	119	11.203	11.202	0.001	97	281146	5.00	5.11	
126 1,3-Dichlorobenzene	146	11.223	11.231	-0.008	96	127207	5.00	4.83	
127 1,4-Dichlorobenzene	146	11.302	11.300	0.002	94	131298	5.00	4.89	
129 n-Butylbenzene	91	11.558	11.556	0.002	100	333997	5.00	5.07	
130 1,2-Dichlorobenzene	146	11.637	11.635	0.002	96	106905	5.00	5.06	
131 1,2-Dibromo-3-Chloropropan	157	12.326	12.324	0.002	82	4372	5.00	4.76	
132 1,2,4-Trichlorobenzene	180	13.173	13.171	0.002	94	64611	5.00	4.78	
133 Hexachlorobutadiene	225	13.340	13.338	0.002	96	56972	5.00	4.91	
134 Naphthalene	128	13.468	13.466	0.002	97	71456	5.00	4.66	
135 1,2,3-Trichlorobenzene	180	13.744	13.742	0.002	95	53521	5.00	4.71	
S 142 1,2-Dichloroethene, Total	96				0		10.0	9.23	
S 137 Xylenes, Total (URS)	1				0		10.0	10.4	
S 141 Xylenes, Total	106				0		10.0	10.4	
S 140 1,2-Dichloroethene, Total	1				0		10.0	9.23	
S 136 Trihalomethanes, Total	1				0		20.0	20.0	
S 139 1,3-Dichloropropene, Total	1				0		10.0	10.3	

Reagents:

MV-MegaMain B_00003	Amount Added:	2.00	Units: uL	
MV-568718-D_00014	Amount Added:	1.00	Units: uL	Run Reagent
MV-ARCH SS A_00107	Amount Added:	0.80	Units: uL	Run Reagent

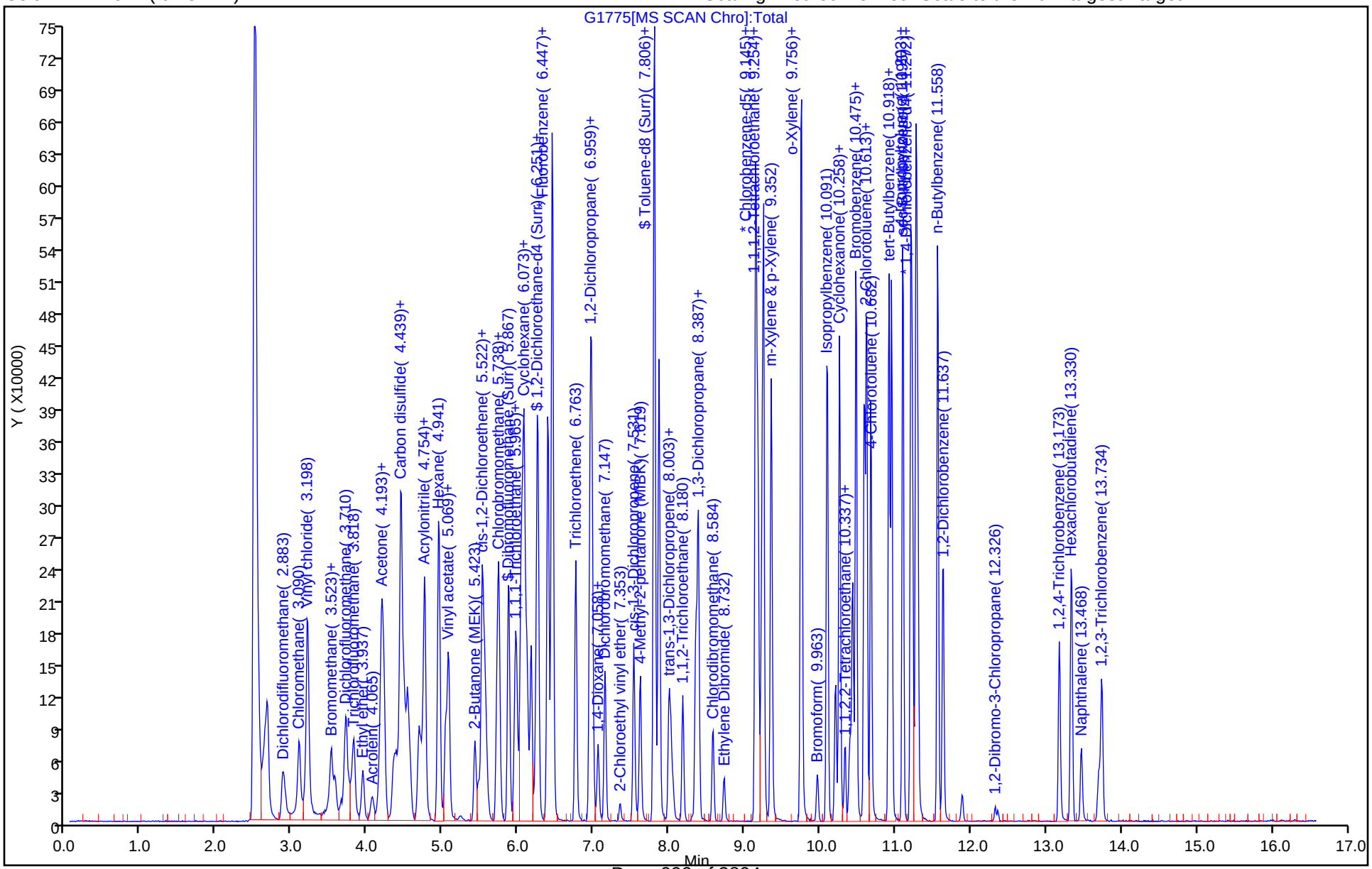
Report Date: 16-Nov-2018 12:34:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1775.D

Injection Date:	15-Nov-2018 11:31:30	Instrument ID:	VMS_G	Operator ID:	seifertj
Lims ID:	LCS			Worklist Smp#:	5
Client ID:					
Purge Vol:	20.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	AQ_VMSG_8260	Limit Group:	MSV - 8260B Water and Solid		

Column: DB-624 (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\G1775.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 15-Nov-2018 11:31:30 ALS Bottle#: 15 Worklist Smp#: 5
Purge Vol: 20.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: seifertj Instrument ID: VMS_G

Method: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b\AQ_VMSG_8260.m
Limit Group: MSV - 8260B Water and Solid
Last Update: 16-Nov-2018 12:34:46 Calib Date: 29-Oct-2018 22:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b\G0948.D

Column 1 : DB-624 (0.25 mm) Det: MS SCAN
Process Host: CTX0327

First Level Reviewer: seifertj Date: 16-Nov-2018 09:25:11

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	10.0	9.84	98.36
$ 6 1,2-Dichloroethane-d4 (Surr)	10.0	9.85	98.48
$ 7 Toluene-d8 (Surr)	10.0	10.2	102.18
$ 8 4-Bromofluorobenzene (Surr)	10.0	9.72	97.16

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: VMS_G Start Date: 09/28/2018 10:25

Analysis Batch Number: 431341 End Date: 09/28/2018 17:00

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-431341/1		09/28/2018 10:25	1	G9554.D	DB-624 v1 32(um)
STD050 280-431341/10 IC		09/28/2018 11:33	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 11:33	1		DB-624 v1 32(um)
STD010 280-431341/11 IC		09/28/2018 11:54	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 11:54	1		DB-624 v1 32(um)
STD020 280-431341/12 IC		09/28/2018 12:14	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 12:14	1		DB-624 v1 32(um)
STD050 280-431341/13 IC		09/28/2018 12:35	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 12:35	1		DB-624 v1 32(um)
STD10 280-431341/14 IC		09/28/2018 12:55	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 12:55	1		DB-624 v1 32(um)
STD25 280-431341/15 IC		09/28/2018 13:15	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 13:15	1		DB-624 v1 32(um)
STD60 280-431341/16 IC		09/28/2018 13:36	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 13:36	1		DB-624 v1 32(um)
ICV 280-431341/17		09/28/2018 14:17	1		DB-624 v1 32(um)
STD010 280-431341/18 IC		09/28/2018 14:37	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 14:37	1		DB-624 v1 32(um)
STD020 280-431341/19 IC		09/28/2018 14:57	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 14:57	1		DB-624 v1 32(um)
STD050 280-431341/20 IC		09/28/2018 15:18	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 15:18	1		DB-624 v1 32(um)
ICIS 280-431341/21		09/28/2018 15:38	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 15:38	1		DB-624 v1 32(um)
STD30 280-431341/22 IC		09/28/2018 15:58	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 15:58	1		DB-624 v1 32(um)
STD60 280-431341/23 IC		09/28/2018 16:19	1		DB-624 v1 32(um)
ZZZZZ		09/28/2018 16:19	1		DB-624 v1 32(um)
ICV 280-431341/24		09/28/2018 17:00	1	G9573.D	DB-624 v1 32(um)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: VMS_G Start Date: 10/29/2018 19:13

Analysis Batch Number: 435406 End Date: 10/30/2018 06:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-435406/1		10/29/2018 19:13	1	G0940.D	DB-624 v1 32(um)
STD005 280-435406/10 IC		10/29/2018 20:00	1	G0942.D	DB-624 v1 32(um)
STD01 280-435406/11 IC		10/29/2018 20:20	1	G0943.D	DB-624 v1 32(um)
STD02 280-435406/12 IC		10/29/2018 20:40	1	G0944.D	DB-624 v1 32(um)
STD05 280-435406/13 IC		10/29/2018 21:01	1	G0945.D	DB-624 v1 32(um)
ICIS 280-435406/14		10/29/2018 21:21	1	G0946.D	DB-624 v1 32(um)
STD25 280-435406/15 IC		10/29/2018 21:42	1	G0947.D	DB-624 v1 32(um)
STD60 280-435406/16 IC		10/29/2018 22:02	1	G0948.D	DB-624 v1 32(um)
CCV 280-435406/3		10/29/2018 22:22	1		DB-624 v1 32(um)
ICV 280-435406/17		10/29/2018 22:43	1	G0950.D	DB-624 v1 32(um)
ZZZZZ		10/29/2018 23:03	1		DB-624 v1 32(um)
ZZZZZ		10/29/2018 23:23	40		DB-624 v1 32(um)
ZZZZZ		10/29/2018 23:43	20		DB-624 v1 32(um)
ZZZZZ		10/30/2018 00:04	1		DB-624 v1 32(um)
ZZZZZ		10/30/2018 00:24	1		DB-624 v1 32(um)
ZZZZZ		10/30/2018 00:44	1		DB-624 v1 32(um)
ZZZZZ		10/30/2018 01:05	1		DB-624 v1 32(um)
ZZZZZ		10/30/2018 01:25	20		DB-624 v1 32(um)
ZZZZZ		10/30/2018 01:45	1		DB-624 v1 32(um)
ZZZZZ		10/30/2018 02:06	1		DB-624 v1 32(um)
ZZZZZ		10/30/2018 02:26	4		DB-624 v1 32(um)
ZZZZZ		10/30/2018 02:46	1		DB-624 v1 32(um)
ZZZZZ		10/30/2018 03:06	1		DB-624 v1 32(um)
ZZZZZ		10/30/2018 03:27	2		DB-624 v1 32(um)
ZZZZZ		10/30/2018 03:47	2		DB-624 v1 32(um)
ZZZZZ		10/30/2018 04:07	2		DB-624 v1 32(um)
ZZZZZ		10/30/2018 04:27	20		DB-624 v1 32(um)
ZZZZZ		10/30/2018 04:48	2		DB-624 v1 32(um)
ZZZZZ		10/30/2018 05:08	20		DB-624 v1 32(um)
ZZZZZ		10/30/2018 05:28	1		DB-624 v1 32(um)
ZZZZZ		10/30/2018 05:48	2		DB-624 v1 32(um)
ZZZZZ		10/30/2018 06:09	20		DB-624 v1 32(um)
CCVC 280-435406/40		10/30/2018 06:29	1		DB-624 v1 32(um)
CCVC 280-435406/41		10/30/2018 06:49	1		DB-624 v1 32(um)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: VMS_G Start Date: 11/15/2018 09:15

Analysis Batch Number: 437714 End Date: 11/15/2018 19:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 280-437714/1		11/15/2018 09:15	1	G1769.D	DB-624 v1 32(um)
CCV 280-437714/3		11/15/2018 10:30	1	G1772.D	DB-624 v1 32(um)
CCV 280-437714/2		11/15/2018 10:50	1	G1773.D	DB-624 v1 32(um)
MB 280-437714/4		11/15/2018 11:11	1	G1774.D	DB-624 v1 32(um)
LCS 280-437714/5		11/15/2018 11:31	1	G1775.D	DB-624 v1 32(um)
ZZZZZ		11/15/2018 11:51	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 12:11	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 12:32	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 12:52	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 13:12	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 13:32	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 13:52	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 14:13	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 14:33	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 14:53	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 15:13	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 15:34	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 15:54	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 16:14	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 16:34	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 16:54	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 17:15	1		DB-624 v1 32(um)
ZZZZZ		11/15/2018 17:35	100		DB-624 v1 32(um)
ZZZZZ		11/15/2018 17:55	1		DB-624 v1 32(um)
280-116538-1		11/15/2018 18:15	1	G1795.D	DB-624 v1 32(um)
280-116538-2		11/15/2018 18:35	1	G1796.D	DB-624 v1 32(um)
280-116538-3		11/15/2018 18:56	1	G1797.D	DB-624 v1 32(um)
CCVC 280-437714/32		11/15/2018 19:16	1	G1798.D	DB-624 v1 32(um)

Sequence Name: C:\HPCHEM\1\SEQUENCE\111518.S
Comment:
Operator: seifertj
Data Path: C:\HPCHEM\1\DATA\111518\
Pre-Seq Cmd:
Post-Seq Cmd:

Test America Denver
Instrument:
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (25mL/5mL/5g) (Circle)
Tune Time: 0915-1856
Lims Batch: 437714

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	G1769	BFBTUN	BFB 0915
2	Sample	10	G1770	8260	Blank
3	Sample	11	G1771	8260	CCV
4	Sample	12	G1772	8260	CCV
5	Sample	13	G1773	8260	CCV g
6	Sample	14	G1774	8260	MB
7	Sample	15	G1775	8260	LCS
8	Sample	16	G1776	8260	280-116690-a-3 PH<2
9	Sample	17	G1777	8260	LCS S
10	Sample	18	G1778	8260	280-116488-I-1 PH<2
11	Sample	19	G1779	8260	280-116488-b-2 pH<2
12	Sample	20	G1780	8260	280-116493-b-1 pH<2
13	Sample	21	G1781	8260	280-116493-a-2 pH<2
14	Sample	22	G1782	8260	280-116690-c-1 pH<2
15	Sample	23	G1783	8260	280-116690-e-2 pH<2
16	Sample	24	G1784	8260	280-116591-f-1 PH<2
17	Sample	25	G1785	8260	280-116591-e-1 MS PH<2
18	Sample	26	G1786	8260	280-116591-e-1 MSD PH<2
19	Sample	27	G1787	8260	280-116591-g-1 MS S PH<2
20	Sample	28	G1788	8260	280-116591-g-1 MSD S PH<2
21	Sample	29	G1789	8260	280-116591-g-2 PH<2
22	Sample	30	G1790	8260	280-116591-c-3 PH<2
23	Sample	31	G1791	8260	280-116591-c-4 PH<2
24	Sample	32	G1792	8260	280-116814-e-5 PH=7
25	Sample	33	G1793	8260	280-116814-f-6 PH=7
26	Sample	34	G1794	8260	280-116814-d-7 PH=7
27	Sample	35	G1795	8260	280-116538-q-1 PH<2
28	Sample	36	G1796	8260	280-116538-p-2 PH<2
29	Sample	37	G1797	8260	280-116538-a-3 PH<2
30	Sample	38	G1798	8260	CCVC

11/16/18

0.2mL ERE 5mL RO 1mL

1856

TestAmerica Laboratories
Worklist Report

Worklist Name: 111518 Worklist Number: 76228
Instrument Name: VMS_G Chrom Method: AQ_VMSG_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G\20181115-76228.b
Upload Directory: \\Corptalsapp16\280-DN-RawData\Organics\MS\VMS_G_T
Run Reagent: MV-568718-D_00014 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00107 Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0076228-001	# 1 BFB	MV-BFB_00027	BFB	voaWater	1.000	uL	1.000
280-0076228-002	# 2 CCV	MV-MegaMainA_00005	CCV	voaWater	20.00	mL	1.000
280-0076228-003	# 3 CCV	MV-568718-D_00014 MV-Supp A_00031	CCV	voaWater	20.00	mL	1.000
280-0076228-004	# 4 MB		MB	voaWater	20.00	mL	1.000
280-0076228-005	# 5 LCS	MV-MegaMain B_00003	LCS	voaWater	20.00	mL	1.000
280-0076228-006	# 6 LCSD	MV-MegaMain B_00003	LCSD	voaWater	20.00	mL	1.000
280-0076228-010	#10 LCS	MV-Supp B_00022	LCS	voaWater	20.00	mL	1.000
280-0076228-007	# 7 280-108595-A-1		Client	voaWater	20.00	mL	1.000
280-0076228-008	# 8 280-108595-A-2		Client	voaWater	20.00	mL	1.000
280-0076228-009	# 9 280-108595-A-3		Client	voaWater	20.00	mL	1.000
280-0076228-011	#11 280-116690-A-3		Client	voaWater	20.00	mL	1.000
280-0076228-012	#12 280-116488-I-1		Client	voaWater	20.00	mL	1.000
280-0076228-013	#13 280-116488-B-2		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0076228-014	#14 280-116493-B-1		Client	voaWater	20.00	mL	1.000
280-0076228-015	#15 280-116493-A-2		Client	voaWater	20.00	mL	1.000
280-0076228-016	#16 280-116690-C-1		Client	voaWater	20.00	mL	1.000
280-0076228-017	#17 280-116690-E-2		Client	voaWater	20.00	mL	1.000
280-0076228-018	#18 280-116591-F-1		Client	voaWater	20.00	mL	1.000
280-0076228-019	#19 280-116591-E-1 MS	MV-MegaMain B_00003	MS	voaWater	20.00	mL	1.000
280-0076228-020	#20 280-116591-E-1 MSD	MV-MegaMain B_00003	MSD	voaWater	20.00	mL	1.000
280-0076228-021	#21 280-116591-G-1 MS	MV-Supp B_00022	MS	voaWater	20.00	mL	1.000
280-0076228-022	#22 280-116591-G-1 MSD	MV-Supp B_00022	MSD	voaWater	20.00	mL	1.000
280-0076228-023	#23 280-116591-G-2		Client	voaWater	20.00	mL	1.000
280-0076228-024	#24 280-116591-C-3		Client	voaWater	20.00	mL	1.000
280-0076228-025	#25 280-116591-C-4		Client	voaWater	20.00	mL	1.000
280-0076228-026	#26 280-116814-E-5		Client	voaWater	20.00	mL	1.000
280-0076228-027	#27 280-116814-F-6		Client	voaWater	20.00	mL	100.0
280-0076228-028	#28 280-116814-D-7		Client	voaWater	20.00	mL	1.000
280-0076228-029	#29 280-116538-Q-1		Client	voaWater	20.00	mL	1.000
280-0076228-030	#30 280-116538-P-2		Client	voaWater	20.00	mL	1.000
280-0076228-031	#31 280-116538-A-3		Client	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0076228-032	#32 CCVC	MV-MegaMainA_00005	CCVC	voaWater	20.00	mL	1.000
280-0076228-033	#33 primer		Client	voaWater	1.000	uL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\092818PM.S
Comment:
Operator: SEIFERTJ
Data Path: C:\HPCHEM\1\DATA\092818I\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Main / Supp

Test America Denver
Instrument: G - Water
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 10:25 - 18:41
Lims Batch: 431341

WL 74500

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	G9551	BFBTUN	BFB
2	Sample	100	G9552	BFBTUN	BFB
3	Sample	100	G9553	BFBTUN	BFB
4	Sample	100	G9554	BFBTUN	BFB 10:25
5	Sample	10	G9555	8260	BLK
6	Sample	11	G9556	8260	CCV
7	Sample	12	G9557	8260	STD005
8	Sample	13	G9558	8260	STD010
9	Sample	14	G9559	8260	STD020
10	Sample	15	G9560	8260	STD050
11	Sample	16	G9561	8260	ICIS
12	Sample	17	G9562	8260	STD25
13	Sample	18	G9563	8260	STD60
14	Sample	19	G9564	8260	BLK
15	Sample	20	G9565	8260	ICV
16	Sample	21	G9566	8260	STD010
17	Sample	22	G9567	8260	STD020
18	Sample	23	G9568	8260	STD050
19	Sample	24	G9569	8260	ICIS
20	Sample	25	G9570	8260	STD30
21	Sample	26	G9571	8260	STD60
22	Sample	27	G9572	8260	BLK
23	Sample	28	G9573	8260	ICV
24	Sample	29	G9574	8260	MDLV .2
25	Sample	30	G9575	8260	MDLV .4
26	Sample	31	G9576	8260	MDLV .8
27	Sample	32	G9577	8260	MDLV 1.6
28	Sample	33	G9578	8260	MDLV 3.2 18:41
29	Sample	34	G9579	8260	BLK

Main Calib: 33838
ICV: 17

Supp Calib: 33839
ICIS: 21 ICV: 24

9/29/18

RSN 9/29/18

2. Clene -24.2%

High Point Hexachlorobutadiene
to 25 ppb

n-Butylbenzene
4-Isopropyl toluene
sec-Butyl benzene

TestAmerica Laboratories
Worklist QC Batch Report

Worklist Name: 092818I Worklist Number: 74500
Instrument Name: VMS_G Chrom Method: AQ_VMSG_8260
Data Directory: \\ChromNA\Denver\ChromData\VMS_G\20180928-74500.b
QC Batching: Disabled Limit Group Batching: Disabled

QC Batch: 1	All Limit Groups Raw Batch: 431341
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 MB	# 6 MB
# 7 280-108595-A-1	# 7 280-108595-A-1
# 8 280-108595-A-2	# 8 280-108595-A-2
# 9 280-108595-A-3	# 9 280-108595-A-3
#10 STD050	#10 STD050
#11 STD010	#11 STD010
#12 STD020	#12 STD020
#13 STD050	#13 STD050
#14 STD10	#14 STD10
#15 STD25	#15 STD25
#16 STD60	#16 STD60
#17 ICV	#17 ICV
#18 STD010	#18 STD010
#19 STD020	#19 STD020
#20 STD050	#20 STD050
#21 ICIS	#21 ICIS
#22 STD30	#22 STD30
#23 STD60	#23 STD60
#24 ICV	#24 ICV
#25 MDLV	#25 MDLV
#26 MDLV	#26 MDLV
#27 MDLV	#27 MDLV
#28 MDLV	#28 MDLV
#29 MDLV	#29 MDLV

TestAmerica Laboratories
Worklist Report

Worklist Name: 092818I
Instrument Name: VMS_G
Purge Volume: 20.00
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G\20180928-74500.b
Upload Directory: \\CorpTALSAPP16\280-DN-RawData\Organics\MS\VMS_G
Run Reagent: MV-568718-D_00014
Run Reagent: MV-ARCH SS A_00097

Worklist Number: 74500
Chrom Method: AQ_VMSG_8260
Units: mL
Amount Added: 1.000, Units: uL
Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074500-001	# 1 BFB	MV-BFB_00026	BFB		voaWater	1.000	uL	1.000
280-0074500-002	# 2 CCV	MV-MegaMainA_00001	CCV		voaWater	20.00	mL	1.000
280-0074500-003	# 3 CCV	MV-568718-D_00014 MV-Supp A_00031	CCV		voaWater	20.00	mL	1.000
280-0074500-004	# 4 LCS	MV-MegaMain B_00001	LCS		voaWater	20.00	mL	1.000
280-0074500-005	# 5 LCSD	MV-MegaMain B_00001	LCSD		voaWater	20.00	mL	1.000
280-0074500-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0074500-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0074500-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0074500-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0074500-010	#10 STD050	MV-568718-D_00014 MV-MegaMainA_00001 MV-ARCH SS A_00105	IC	1	voaWater	20.00	mL	1.000
280-0074500-011	#11 STD010	MV-568718-D_00014 MV-MegaMainA_00001 MV-ARCH SS A_00105	IC	2	voaWater	20.00	mL	1.000
280-0074500-012	#12 STD020	MV-568718-D_00014 MV-MegaMainA_00001 MV-ARCH SS A_00105	IC	3	voaWater	20.00	mL	1.000
280-0074500-013	#13 STD050	MV-568718-D_00014 MV-MegaMainA_00001 MV-ARCH SS A_00105	IC	4	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0074500-014	#14 STD10	MV-568718-D_00014 MV-MegaMainA_00001 MV-ARCH SS A_00105	IC	5	voaWater	20.00	mL	1.000
280-0074500-015	#15 STD25	MV-568718-D_00014 MV-MegaMainA_00001 MV-ARCH SS A_00105	IC	6	voaWater	20.00	mL	1.000
280-0074500-016	#16 STD60	MV-568718-D_00014 MV-MegaMainA_00001 MV-ARCH SS A_00105	IC	7	voaWater	20.00	mL	1.000
280-0074500-017	#17 ICV	MV-568718-D_00014 MV-MegaMain B_00001 MV-ARCH SS A_00105	ICV		voaWater	20.00	mL	1.000
280-0074500-018	#18 STD010	MV-Supp A_00031 MV-568718-D_00014	IC	2	voaWater	20.00	mL	1.000
280-0074500-019	#19 STD020	MV-Supp A_00031 MV-568718-D_00014	IC	3	voaWater	20.00	mL	1.000
280-0074500-020	#20 STD050	MV-Supp A_00031 MV-568718-D_00014	IC	4	voaWater	20.00	mL	1.000
280-0074500-021	#21 ICIS	MV-Supp A_00031 MV-568718-D_00014	ICIS	5	voaWater	20.00	mL	1.000
280-0074500-022	#22 STD30	MV-Supp A_00031 MV-568718-D_00014	IC	6	voaWater	20.00	mL	1.000
280-0074500-023	#23 STD60	MV-Supp A_00031 MV-568718-D_00014	IC	7	voaWater	20.00	mL	1.000
280-0074500-024	#24 ICV	MV-Supp B_00021 MV-568718-D_00014	ICV		voaWater	20.00	mL	1.000
280-0074500-025	#25 MDLV	MV-Supp A_00031 MV-568718-D_00014	MDLV		voaWater	20.00	mL	1.000
280-0074500-026	#26 MDLV	MV-Supp A_00031 MV-568718-D_00014	MDLV		voaWater	20.00	mL	1.000
280-0074500-027	#27 MDLV	MV-Supp A_00031 MV-568718-D_00014	MDLV		voaWater	20.00	mL	1.000
280-0074500-028	#28 MDLV	MV-Supp A_00031 MV-568718-D_00014	MDLV		voaWater	20.00	mL	1.000
280-0074500-029	#29 MDLV	MV-Supp A_00031 MV-568718-D_00014	MDLV		voaWater	20.00	mL	1.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\102818LL.S
Comment:
Operator: newcomer
Data Path: C:\HPCHEM\1\DATA\102818LL\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Main | SS

Test America Denver
Instrument: 5-Soil
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: 11:13-23:11
Lims Batch: 435240
WL 75558

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	G0871	BFBS	BFB 11:13
2	Sample	10	G0872	8260S	Blank
3	Sample	11	G0873	8260S	STD01
4	Sample	12	G0874	8260S	STD02
5	Sample	13	G0875	8260S	STD05
6	Sample	14	G0876	8260S	STD10
7	Sample	15	G0877	8260S	STD20
8	Sample	16	G0878	8260S	ICIS
9	Sample	17	G0879	8260S	STD100
10	Sample	18	G0880	8260S	STD200
11	Sample	19	G0881	8260S	Blank
12	Sample	20	G0882	8260S	ICV
13	Sample	21	G0883	8260S	Blank
14	Sample	22	G0884	8260S	Blank
15	Sample	23	G0885	8260S	LCS 280-435258/1-A
16	Sample	24	G0886	8260S	LCSD 280-435258/2-A
17	Sample	25	G0887	8260S	Blank
18	Sample	26	G0888	8260S	MB 280-435258/3-A
19	Sample	27	G0889	8260S	280-115735-D-37-A
20	Sample	28	G0890	8260S	280-115735-D-38-A
21	Sample	29	G0891	8260S	280-115735-D-39-A
22	Sample	30	G0892	8260S	280-115735-C-34-A
23	Sample	31	G0893	8260S	280-115735-D-35-A
24	Sample	32	G0894	8260S	280-115735-D-36-A
25	Sample	33	G0895	8260S	280-115735-D-19-A
26	Sample	34	G0896	8260S	280-115735-D-19-B MS
27	Sample	35	G0897	8260S	280-115735-D-19-C MSD
28	Sample	36	G0898	8260S	280-115735-D-20-A
29	Sample	37	G0899	8260S	280-115735-D-21-A
30	Sample	38	G0900	8260S	280-115735-D-22-A
31	Sample	39	G0901	8260S	280-115735-D-23-A
32	Sample	40	G0902	8260S	280-115735-D-24-A
33	Sample	41	G0903	8260S	280-115735-D-25-A
34	Sample	42	G0904	8260S	280-115735-D-26-A
35	Sample	43	G0905	8260S	280-115735-D-27-A
36	Sample	44	G0906	8260S	ccvc 23:11

Calib: 34163

ICIS: 15 ICV: 18

2nd Day For Batch for 2-Pent 1-Chlorohexane See-Butyl

~~435944~~ 435294 10/29/18

ICV: 10

10/29/18

RSN 10/29/18

Preliminary Report

TestAmerica Laboratories
Qc Batch Report

Data Path: \\ChromNA\Denver\ChromData\VMS_G\20181028-75558.b

Worklist Name:	102818LL	Worklist Num:	75558
Instrument:	VMS_G	Method:	SO_VMSG_8260
Analysis Type:	VOA	Creator:	Newcome, Robin S
Inj Volume:	5	Inj Vol Units:	mL

QC Batching: Disabled Limit Group Batching: Disabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 435240
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 MB	# 6 MB
# 7 280-108595-A-4	# 7 280-108595-A-4
# 8 280-108595-A-5-A	# 8 280-108595-A-5-A
# 9 280-108595-A-6	# 9 280-108595-A-6
# 10 STD01	# 10 STD01
# 11 STD02	# 11 STD02
# 12 STD05	# 12 STD05
# 13 STD10	# 13 STD10
# 14 STD20	# 14 STD20
# 15 ICIS	# 15 ICIS
# 16 STD100	# 16 STD100
# 17 STD200	# 17 STD200
# 18 ICV	# 18 ICV
# 19 LCS 280-435258/1-A	# 19 LCS 280-435258/1-A
# 20 LCSD 280-435258/2-A	# 20 LCSD 280-435258/2-A
# 21 MB 280-435258/3-A	# 21 MB 280-435258/3-A
# 22 280-115735-D-37-A	# 22 280-115735-D-37-A
# 23 280-115735-D-38-A	# 23 280-115735-D-38-A
# 24 280-115735-D-39-A	# 24 280-115735-D-39-A
# 25 280-115735-C-34-A	# 25 280-115735-C-34-A

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 435240
# 26 280-115735-D-35-A	# 26 280-115735-D-35-A
# 27 280-115735-D-36-A	# 27 280-115735-D-36-A
# 28 280-115735-D-19-A	# 28 280-115735-D-19-A
# 29 280-115735-D-19-B MS	# 29 280-115735-D-19-B MS
# 30 280-115735-D-19-C MSD	# 30 280-115735-D-19-C MSD
# 31 280-115735-D-20-A	# 31 280-115735-D-20-A
# 32 280-115735-D-21-A	# 32 280-115735-D-21-A
# 33 280-115735-D-22-A	# 33 280-115735-D-22-A
# 34 280-115735-D-23-A	# 34 280-115735-D-23-A
# 35 280-115735-D-24-A	# 35 280-115735-D-24-A
# 36 280-115735-D-25-A	# 36 280-115735-D-25-A
# 37 280-115735-D-26-A	# 37 280-115735-D-26-A
# 38 280-115735-D-27-A	# 38 280-115735-D-27-A
# 39 ccvc	# 39 ccvc
# 40 primer	# 40 primer
# 41 primer	# 41 primer

TestAmerica Laboratories
Worklist Report

Worklist Name: 102818LL
Worklist Number: 75558
Instrument Name: VMS_G
Chrom Method: SO_VMSG_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G\20181028-75558.b
Upload Directory: \\Corptalsapp16\280-DN-RawData\Organics\MS\VMS_G_T
Run Reagent: MV-568718-D_00014
Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00107
Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075558-001	# 1 BFB	MV-BFB_00027	BFB		voaSoilLL	1.000	uL	1.000
280-0075558-002	# 2 CCV	MV-MegaMainA_00002	CCV		voaSoilLL	5.000	g	1.000
280-0075558-003	# 3 CCV	MV-568718-D_00014 MV-Supp A_00032	CCV		voaSoilLL	5.000	g	1.000
280-0075558-004	# 4 LCS	MV-MegaMain B_00002 MV-MainBaddon_00001	LCS		voaSoilLL	5.000	g	1.000
280-0075558-005	# 5 LCSD	MV-MegaMain B_00002 MV-MainBaddon_00001	LCSD		voaSoilLL	5.000	g	1.000
280-0075558-006	# 6 MB		MB		voaSoilLL	5.000	g	1.000
280-0075558-007	# 7 280-108595-A-4		Client		voaSoilLL	5.000	g	1.000
280-0075558-008	# 8 280-108595-A-5-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-009	# 9 280-108595-A-6		Client		voaSoilLL	5.000	g	1.000
280-0075558-010	#10 STD01	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	1	voaSoilLL	5.000	g	1.000
280-0075558-011	#11 STD02	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	2	voaSoilLL	5.000	g	1.000
280-0075558-012	#12 STD05	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	3	voaSoilLL	5.000	g	1.000
280-0075558-013	#13 STD10	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	4	voaSoilLL	5.000	g	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075558-014	#14 STD20	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	5	voaSoilLL	5.000	g	1.000
280-0075558-015	#15 ICIS	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	ICIS	6	voaSoilLL	5.000	g	1.000
280-0075558-016	#16 STD100	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	7	voaSoilLL	5.000	g	1.000
280-0075558-017	#17 STD200	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	8	voaSoilLL	5.000	g	1.000
280-0075558-018	#18 ICV	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	ICV		voaSoilLL	5.000	g	1.000
280-0075558-019	#19 LCS 280-435258/1-A	MV-MegaMain B_00002	LCS		voaSoilLL	5.000	g	1.000
280-0075558-020	#20 LCSD 280-435258/2-A	MV-MegaMain B_00002	LCSD		voaSoilLL	5.000	g	1.000
280-0075558-021	#21 MB 280-435258/3-A		MB		voaSoilLL	5.000	g	1.000
280-0075558-022	#22 280-115735-D-37-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-023	#23 280-115735-D-38-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-024	#24 280-115735-D-39-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-025	#25 280-115735-C-34-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-026	#26 280-115735-D-35-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-027	#27 280-115735-D-36-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-028	#28 280-115735-D-19-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-029	#29 280-115735-D-19-B MS	MV-MegaMain B_00002	MS		voaSoilLL	5.000	g	1.000
280-0075558-030	#30 280-115735-D-19-C MSD	MV-MegaMain B_00002	MSD		voaSoilLL	5.000	g	1.000
280-0075558-031	#31 280-115735-D-20-A		Client		voaSoilLL	5.000	g	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075558-032	#32 280-115735-D-21-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-033	#33 280-115735-D-22-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-034	#34 280-115735-D-23-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-035	#35 280-115735-D-24-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-036	#36 280-115735-D-25-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-037	#37 280-115735-D-26-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-038	#38 280-115735-D-27-A		Client		voaSoilLL	5.000	g	1.000
280-0075558-039	#39 ccvc	MV-MegaMainA_00002	CCVC		voaSoilLL	5.000	g	1.000
280-0075558-040	#40 primer		Client		voaSoilLL	5.000	g	1.000
280-0075558-041	#41 primer		Client		voaSoilLL	5.000	g	1.000

Preliminary Report

TestAmerica Laboratories
Qc Batch Report

Needs 2nd dup sequence

Data Path: \\ChromNA\Denver\ChromData\VMS_G\20181029-75568.b

Worklist Name:	102918LL	Worklist Num:	75568
Instrument:	VMS_G	Method:	SO_VMSG_8260
Analysis Type:	VOA	Creator:	Seifert, Judy L
Inj Volume:	5	Inj Vol Units:	mL

QC Batching: Enabled Limit Group Batching: Enabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 435294
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 MB	# 6 MB
# 7 280-108595-A-4	# 7 280-108595-A-4
# 8 280-108595-A-5-A	# 8 280-108595-A-5-A
# 9 280-108595-A-6	# 9 280-108595-A-6
# 10 ICV	# 10 ICV
# 28 CCVC	# 28 CCVC
QC Batch: 2	MSV - 8260B Water and Solid Raw Batch: 435387
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 MB	# 6 MB
# 11 280-115735-E-1-A	# 11 280-115735-E-1-A
# 12 280-115735-D-28-A	# 12 280-115735-D-28-A
# 13 280-115735-D-29-A	# 13 280-115735-D-29-A
# 14 280-115735-D-30-A	# 14 280-115735-D-30-A
# 15 280-115735-D-31-A	# 15 280-115735-D-31-A
# 16 280-115735-D-32-A	# 16 280-115735-D-32-A
# 17 280-115735-D-33-A	# 17 280-115735-D-33-A

QC Batch: 2	MSV - 8260B Water and Solid Raw Batch: 435387
# 18 280-115708-D-2-A	# 18 280-115708-D-2-A
# 19 280-115906-F-1-A	# 19 280-115906-F-1-A
# 20 280-115906-F-2-A	# 20 280-115906-F-2-A
# 21 280-115760-E-1-A	# 21 280-115760-E-1-A
# 22 280-115760-E-2-A	# 22 280-115760-E-2-A
# 23 280-115760-E-3-A	# 23 280-115760-E-3-A
# 24 280-115760-E-4-A	# 24 280-115760-E-4-A
# 25 280-115760-E-5-A	# 25 280-115760-E-5-A
# 26 280-115760-E-6-A	# 26 280-115760-E-6-A
# 27 280-115760-D-7-A	# 27 280-115760-D-7-A
# 28 CCVC	# 28 CCVC
QC Batch: 3	MSV - 8260B Water and Solid Raw Batch: 435388
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 MB	# 6 MB
# 28 CCVC	# 28 CCVC
# 29 580-81153-D-2-A	# 29 580-81153-D-2-A
QC Batch: 4	MSV - 8260B Water and Solid Raw Batch: 435389
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 MB	# 6 MB
# 28 CCVC	# 28 CCVC
# 30 280-115782-B-1-B	# 30 280-115782-B-1-B
# 31 280-115782-B-1-C MS	# 31 280-115782-B-1-C MS
# 32 280-115782-B-1-D MSD	# 32 280-115782-B-1-D MSD

TestAmerica Laboratories
Worklist Report

Worklist Name: 102918LL
Worklist Number: 75568
Instrument Name: VMS_G
Chrom Method: SO_VMSG_8260
Purge Volume: 5.000
Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G\20181029-75568.b
Upload Directory: \\Corptalsapp16\280-DN-RawData\Organics\MS\VMS_G_T
Run Reagent: MV-568718-D_00014
Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00107
Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075568-001	# 1 BFB	MV-BFB_00027	BFB	voaSoilLL	1.000	uL	1.000
280-0075568-002	# 2 CCV	MV-MegaMainA_00002	CCV	voaSoilLL	5.000	g	1.000
280-0075568-003	# 3 CCV	MV-568718-D_00014 MV-Supp A_00032	CCV	voaSoilLL	5.000	g	1.000
280-0075568-004	# 4 LCS	MV-MegaMain B_00002 MV-MainBaddon_00001	LCS	voaSoilLL	5.000	g	1.000
280-0075568-005	# 5 LCSD	MV-MegaMain B_00002 MV-MainBaddon_00001	LCSD	voaSoilLL	5.000	g	1.000
280-0075568-006	# 6 MB		MB	voaSoilLL	5.000	g	1.000
280-0075568-007	# 7 280-108595-A-4		Client	voaSoilLL	5.000	g	1.000
280-0075568-008	# 8 280-108595-A-5-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-009	# 9 280-108595-A-6		Client	voaSoilLL	5.000	g	1.000
280-0075568-010	#10 ICV	MV-MainBaddon_00001	ICV	voaSoilLL	5.000	g	1.000
280-0075568-011	#11 280-115735-E-1-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-012	#12 280-115735-D-28-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-013	#13 280-115735-D-29-A		Client	voaSoilLL	5.000	g	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075568-014	#14 280-115735-D-30-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-015	#15 280-115735-D-31-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-016	#16 280-115735-D-32-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-017	#17 280-115735-D-33-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-018	#18 280-115708-D-2-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-019	#19 280-115906-F-1-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-020	#20 280-115906-F-2-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-021	#21 280-115760-E-1-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-022	#22 280-115760-E-2-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-023	#23 280-115760-E-3-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-024	#24 280-115760-E-4-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-025	#25 280-115760-E-5-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-026	#26 280-115760-E-6-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-027	#27 280-115760-D-7-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-028	#28 CCVC	MV-MegaMainA_00002	CCVC	voaSoilLL	5.000	g	1.000
280-0075568-029	#29 580-81153-D-2-A		Client	voaSoilLL	5.000	g	1.000
280-0075568-030	#30 280-115782-B-1-B		Client	voaSoilLL	5.000	g	5.000
280-0075568-031	#31 280-115782-B-1-C MS	MV-MegaMain B_00002	MS	voaSoilLL	5.000	g	5.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075568-032	#32 280-115782-B-1-D MSD	MV-MegaMain B_00002	MSD	voaSoilLL	5.000	g	5.000

Sequence Name: C:\HPCHEM\1\SEQUENCE\102918pm.S
Comment:
Operator: newcomer
Data Path: C:\HPCHEM\1\DATA\102918pm\
Pre-Seq Cmd:
Post-Seq Cmd:

Test America Denver
Instrument: G
DV-MS-0010 (8260B/624) (Circle)
Purge Volume: (20mL/5mL/5g) (Circle)
Tune Time: A13-0649
Lims Batch: 435406

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	100	G0940	BFBTUN	BFB 0713pm
2	Sample	10	G0941	8260	Blank
3	Sample	11	G0942	8260	STD005
4	Sample	12	G0943	8260	STD01
5	Sample	13	G0944	8260	STD02
6	Sample	14	G0945	8260	STD05
7	Sample	15	G0946	8260	STD10
8	Sample	16	G0947	8260	STD25
9	Sample	17	G0948	8260	STD60
10	Sample	18	G0949	8260	CCV
11	Sample	19	G0950	8260	ICV
12	Sample	20	G0951	8260	280-115635-A-11 pH<2
13	Sample	21	G0952	8260	280-115606-R-1 pH 7! 0.5mL
14	Sample	22	G0953	8260	280-115606-R-2 pH 7! 1mL
15	Sample	23	G0954	8260	LCS
16	Sample	24	G0955	8260	MB
17	Sample	25	G0956	8260	LCS Supp
18	Sample	26	G0957	8260	LCSD Supp
19	Sample	27	G0958	8260	280-115658-D-1 pH<2 1mL E
20	Sample	28	G0959	8260	280-115658-D-2 pH<2
21	Sample	29	G0960	8260	280-115658-C-3 pH<2 E
22	Sample	30	G0961	8260	280-115658-G-7 pH<2 5mL
23	Sample	31	G0962	8260	280-115705-B-1 pH<2 HS
24	Sample	32	G0963	8260	280-115705-A-2 pH<2
25	Sample	33	G0964	8260	280-115705-B-3 pH<2 10mL E
26	Sample	34	G0965	8260	280-115705-B-3 MS pH<2 10mL E
27	Sample	35	G0966	8260	280-115705-B-3 MSD pH<2 10mL
28	Sample	36	G0967	8260	280-115705-B-3 pH<2 1mL
29	Sample	37	G0968	8260	280-115705-A-4 pH<2 10mL E
30	Sample	38	G0969	8260	280-115705-A-4 pH<2 1mL
31	Sample	39	G0970	8260	280-115705-A-5 pH<2
32	Sample	40	G0971	8260	280-115705-A-6 pH<2 10mL E
~~33~~	~~Sample~~	~~41~~	~~G0972~~	~~8260~~	~~280-115705-A-6 pH<2 1mL~~
34	Sample	42	G0973	8260	CCVC
35	Sample	43	G0974	8260	CCVC 0649 am

RSN 10/30/18

Main. Surr ICAL

WL: 75598

Calib ID: 34172

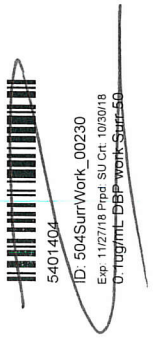
ICIS: 14

ICV: 17

10/31/18

Last Modified: Tue Oct 30 00:28:59 2018

Page: 1



Preliminary Report

TestAmerica Laboratories
Qc Batch Report

Data Path: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b

Worklist Name:	102918pm	Worklist Num:	75598
Instrument:	VMS_G	Method:	AQ_VMSG_8260
Analysis Type:	VOA	Creator:	Newcome, Robin S
Inj Volume:	20	Inj Vol Units:	mL
QC Batching:	Disabled	Limit Group Batching:	Disabled

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 435406
# 1 BFB	# 1 BFB
# 2 CCV	# 2 CCV
# 3 CCV	# 3 CCV
# 4 LCS	# 4 LCS
# 5 LCSD	# 5 LCSD
# 6 MB	# 6 MB
# 7 280-108595-A-1	# 7 280-108595-A-1
# 8 280-108595-A-2	# 8 280-108595-A-2
# 9 280-108595-A-3	# 9 280-108595-A-3
# 10 STD005	# 10 STD005
# 11 STD01	# 11 STD01
# 12 STD02	# 12 STD02
# 13 STD05	# 13 STD05
# 14 ICIS	# 14 ICIS
# 15 STD25	# 15 STD25
# 16 STD60	# 16 STD60
# 17 ICV	# 17 ICV
# 18 LCS	# 18 LCS
# 19 MB	# 19 MB
# 20 LCS	# 20 LCS
# 21 LCSD	# 21 LCSD
# 22 280-115635-A-11	# 22 280-115635-A-11
# 23 280-115606-R-1	# 23 280-115606-R-1
# 24 280-115606-R-2	# 24 280-115606-R-2
# 25 280-115658-D-1	# 25 280-115658-D-1

QC Batch: 1	MSV - 8260B Water and Solid Raw Batch: 435406
# 26 280-115658-D-2	# 26 280-115658-D-2
# 27 280-115658-C-3	# 27 280-115658-C-3
# 28 280-115658-G-7	# 28 280-115658-G-7
# 29 280-115705-B-1	# 29 280-115705-B-1
# 30 280-115705-A-2	# 30 280-115705-A-2
# 31 280-115705-B-3	# 31 280-115705-B-3
# 32 280-115705-B-3 MS	# 32 280-115705-B-3 MS
# 33 280-115705-B-3 MSD	# 33 280-115705-B-3 MSD
# 34 280-115705-B-3	# 34 280-115705-B-3
# 35 280-115705-A-4	# 35 280-115705-A-4
# 36 280-115705-A-4	# 36 280-115705-A-4
# 37 280-115705-A-5	# 37 280-115705-A-5
# 38 280-115705-A-6	# 38 280-115705-A-6
# 39 280-115705-A-6	# 39 280-115705-A-6
# 40 CCVC	# 40 CCVC
# 41 CCVC	# 41 CCVC
# 42 Samp 42	# 42 Samp 42

TestAmerica Laboratories
Worklist Report

Worklist Name: 102918pm Worklist Number: 75598
Instrument Name: VMS_G Chrom Method: AQ_VMSG_8260
Purge Volume: 20.00 Units: mL
Analysis Type: VOA
Batch Directory: \\ChromNA\Denver\ChromData\VMS_G\20181029-75598.b
Upload Directory: \\Corptalsapp16\280-DN-RawData\Organics\MS\VMS_G_T
Run Reagent: MV-568718-D_00014 Amount Added: 1.000, Units: uL
Run Reagent: MV-ARCH SS A_00107 Amount Added: 0.800, Units: uL

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075598-001	# 1 BFB	MV-BFB_00027	BFB		voaWater	1.000	uL	1.000
280-0075598-002	# 2 CCV	MV-MegaMainA_00002	CCV		voaWater	20.00	mL	1.000
280-0075598-003	# 3 CCV	MV-568718-D_00014 MV-Supp A_00031	CCV		voaWater	20.00	mL	1.000
280-0075598-004	# 4 LCS	MV-MegaMain B_00002	LCS		voaWater	20.00	mL	1.000
280-0075598-005	# 5 LCSD	MV-MegaMain B_00002	LCSD		voaWater	20.00	mL	1.000
280-0075598-006	# 6 MB		MB		voaWater	20.00	mL	1.000
280-0075598-007	# 7 280-108595-A-1		Client		voaWater	20.00	mL	1.000
280-0075598-008	# 8 280-108595-A-2		Client		voaWater	20.00	mL	1.000
280-0075598-009	# 9 280-108595-A-3		Client		voaWater	20.00	mL	1.000
280-0075598-010	#10 STD005	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	1	voaWater	20.00	mL	1.000
280-0075598-011	#11 STD01	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	2	voaWater	20.00	mL	1.000
280-0075598-012	#12 STD02	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	3	voaWater	20.00	mL	1.000
280-0075598-013	#13 STD05	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	4	voaWater	20.00	mL	1.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075598-014	#14 ICIS	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	ICIS	5	voaWater	20.00	mL	1.000
280-0075598-015	#15 STD25	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	6	voaWater	20.00	mL	1.000
280-0075598-016	#16 STD60	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMainA_00002	IC	7	voaWater	20.00	mL	1.000
280-0075598-017	#17 ICV	MV-568718-D_00014 MV-ARCH SS A_00107 MV-MegaMain B_00002 MV-MainBaddon_00001	ICV		voaWater	20.00	mL	1.000
280-0075598-018	#18 LCS	MV-MegaMain B_00002 MV-MainBaddon_00001	LCS		voaWater	20.00	mL	1.000
280-0075598-019	#19 MB		MB		voaWater	20.00	mL	1.000
280-0075598-020	#20 LCS	MV-Supp B_00022	LCS		voaWater	20.00	mL	1.000
280-0075598-021	#21 LCSD	MV-Supp B_00022	LCSD		voaWater	20.00	mL	1.000
280-0075598-022	#22 280-115635-A-11		Client		voaWater	20.00	mL	1.000
280-0075598-023	#23 280-115606-R-1		Client		voaWater	20.00	mL	40.00
280-0075598-024	#24 280-115606-R-2		Client		voaWater	20.00	mL	20.00
280-0075598-025	#25 280-115658-D-1		Client		voaWater	20.00	mL	20.00
280-0075598-026	#26 280-115658-D-2		Client		voaWater	20.00	mL	1.000
280-0075598-027	#27 280-115658-C-3		Client		voaWater	20.00	mL	1.000
280-0075598-028	#28 280-115658-G-7		Client		voaWater	20.00	mL	4.000
280-0075598-029	#29 280-115705-B-1		Client		voaWater	20.00	mL	1.000
280-0075598-030	#30 280-115705-A-2		Client		voaWater	20.00	mL	1.000
280-0075598-031	#31 280-115705-B-3		Client		voaWater	20.00	mL	2.000

Worklist ID	Lims ID	Sample Reagents	Smp Type	Cal Lvl	Fract	Initial Vol/Wt	Vol/Wt Units	Dil Fact
280-0075598-032	#32 280-115705-B-3 MS	MV-MegaMain B_00002 MV-MainBaddon_00001	MS		voaWater	20.00	mL	2.000
280-0075598-033	#33 280-115705-B-3 MSD	MV-MegaMain B_00002 MV-MainBaddon_00001	MSD		voaWater	20.00	mL	2.000
280-0075598-034	#34 280-115705-B-3		Client		voaWater	20.00	mL	20.00
280-0075598-035	#35 280-115705-A-4		Client		voaWater	20.00	mL	2.000
280-0075598-036	#36 280-115705-A-4		Client		voaWater	20.00	mL	20.00
280-0075598-037	#37 280-115705-A-5		Client		voaWater	20.00	mL	1.000
280-0075598-038	#38 280-115705-A-6		Client		voaWater	20.00	mL	2.000
280-0075598-039	#39 280-115705-A-6		Client		voaWater	20.00	mL	20.00
280-0075598-040	#40 CCVC	MV-MegaMainA_00002	CCVC		voaWater	20.00	mL	1.000
280-0075598-041	#41 CCVC	MV-Supp A_00031	CCVC		voaWater	20.00	mL	1.000
280-0075598-042	#42 Samp 42		Client		voaWater	20.00	mL	1.000

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 431341 Batch Start Date: 09/28/18 10:25 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00014	MV-BFB 00026	MV-Supp B 00021	
BFB 280-431341/1		8260B		1 uL	1 uL		1 uL		
ICV 280-431341/24		8260B		20 mL	20 mL	1 uL		5 uL	

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 435406 Batch Start Date: 10/29/18 19:13 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00014	MV-ARCH SS A 00107	MV-BFB 00027	MV-MainBaddon 00001
BFB 280-435406/1		8260B		1 uL	1 uL			1 uL	
STD005 280-435406/10 IC		8260B		20 mL	20 mL	1 uL	0.04 uL		
STD01 280-435406/11 IC		8260B		20 mL	20 mL	1 uL	0.08 uL		
STD02 280-435406/12 IC		8260B		20 mL	20 mL	1 uL	0.16 uL		
STD05 280-435406/13 IC		8260B		20 mL	20 mL	1 uL	0.4 uL		
ICIS 280-435406/14		8260B		20 mL	20 mL	1 uL	0.8 uL		
STD25 280-435406/15 IC		8260B		20 mL	20 mL	1 uL	2 uL		
STD60 280-435406/16 IC		8260B		20 mL	20 mL	1 uL	4.8 uL		
ICV 280-435406/17		8260B		20 mL	20 mL	1 uL	0.8 uL		4 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00002	MV-MegaMainA 00002				
BFB 280-435406/1		8260B							
STD005 280-435406/10 IC		8260B			0.2 uL				
STD01 280-435406/11 IC		8260B			0.4 uL				
STD02 280-435406/12 IC		8260B			0.8 uL				
STD05 280-435406/13 IC		8260B			2 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 435406 Batch Start Date: 10/29/18 19:13 Batch Analyst: Newcome, Robin S

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMain B 00002	MV-MegaMainA 00002				
ICIS 280-435406/14		8260B			4 uL				
STD25 280-435406/15 IC		8260B			10 uL				
STD60 280-435406/16 IC		8260B			24 uL				
ICV 280-435406/17		8260B		4 uL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437714 Batch Start Date: 11/15/18 09:15 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MV-568718-D 00014	MV-ARCH SS A 00107	MV-BFB 00027	MV-MegaMain B 00003
BFB 280-437714/1		8260B		1 uL	1 uL			1 uL	
CCV 280-437714/2		8260B		20 mL	20 mL	1 uL	0.8 uL		
CCV 280-437714/3		8260B		20 mL	20 mL	1 uL			
MB 280-437714/4		8260B		20 mL	20 mL	1 uL	0.8 uL		
LCS 280-437714/5		8260B		20 mL	20 mL	1 uL	0.8 uL		2 uL
280-116538-Q-1	SCLmw-001-181001-GW	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-116538-P-2	SCLmw-003-181001-GW	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
280-116538-A-3	FWGTB-181014-TB	8260B	T	20 mL	20 mL	1 uL	0.8 uL		
CCVC 280-437714/32		8260B		20 mL	20 mL	1 uL	0.8 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MV-MegaMainA 00005	MV-Supp A 00031				
BFB 280-437714/1		8260B							
CCV 280-437714/2		8260B		4 uL					
CCV 280-437714/3		8260B			5 uL				
MB 280-437714/4		8260B							
LCS 280-437714/5		8260B							
280-116538-Q-1	SCLmw-001-181001-GW	8260B	T						
280-116538-P-2	SCLmw-003-181001-GW	8260B	T						
280-116538-A-3	FWGTB-181014-TB	8260B	T						
CCVC 280-437714/32		8260B		4 uL					

Batch Notes	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437714 Batch Start Date: 11/15/18 09:15 Batch Analyst: Seifert, Judy L

Batch Method: 8260B Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8270D_DOD5

Semivolatile Organic Compounds (GC/MS)

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rxi-5Sil MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPHL #
SCLmw-001-181001-GW	280-116538-1	91	92	91	83	89	95
SCLmw-003-181001-GW	280-116538-2	77	80	77	71	84	97
	MB 280-436342/1-A	98	102	99	86	85	99
	LCS 280-436342/2-A	100	94	99	92	96	86

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	19-119
PHL = Phenol-d5 (Surr)	10-115
NBZ = Nitrobenzene-d5 (Surr)	44-120
FBP = 2-Fluorobiphenyl	44-119
TBP = 2,4,6-Tribromophenol (Surr)	43-140
TPHL = Terphenyl-d14 (Surr)	50-134

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27571.D

Lab ID: LCS 280-436342/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,2,4-Trichlorobenzene	80.0	62.3	78	29-116	
1,2-Dichlorobenzene	80.0	60.5	76	32-111	
1,3-Dichlorobenzene	80.0	58.3	73	28-110	
1,4-Dichlorobenzene	80.0	59.3	74	29-112	
1,4-Dioxane	80.0	71.6	89	47-120	
2,4,5-Trichlorophenol	80.0	75.0	94	53-123	
2,4,6-Trichlorophenol	80.0	78.5	98	50-125	
2,4-Dichlorophenol	80.0	72.5	91	47-121	
2,4-Dimethylphenol	80.0	68.7	86	31-124	
2,4-Dinitrophenol	160	140	87	23-143	
2,4-Dinitrotoluene	80.0	78.1	98	57-128	
2,6-Dinitrotoluene	80.0	75.7	95	57-124	
2-Chloronaphthalene	80.0	71.6	89	40-116	
2-Chlorophenol	80.0	76.4	96	38-117	
2-Methylphenol	80.0	77.5	97	30-117	
2-Nitroaniline	80.0	78.8	99	55-127	
2-Nitrophenol	80.0	77.3	97	47-123	
3 & 4 Methylphenol	80.0	75.9	95	29-110	
3,3'-Dichlorobenzidine	160	139	87	27-129	
3-Nitroaniline	80.0	65.5	82	41-128	
4-Bromophenyl phenyl ether	80.0	74.5	93	55-124	
4-Chloro-3-methylphenol	80.0	74.7	93	52-119	
4-Chloroaniline	80.0	65.4	82	33-117	
4-Chlorophenyl phenyl ether	80.0	72.0	90	53-121	
4-Nitroaniline	80.0	73.5	92	70-120	
4-Nitrophenol	160	135	84	59-129	
Benzoic acid	80.0	49.6 J	62	41-120	
Benzyl alcohol	80.0	79.7	100	31-112	
bis (2-chloroisopropyl) ether	80.0	93.1	116	37-130	
Bis(2-chloroethoxy)methane	80.0	79.1	99	48-120	
Bis(2-chloroethyl)ether	80.0	87.8	110	43-118	
Bis(2-ethylhexyl) phthalate	80.0	68.0	85	55-135	
Butyl benzyl phthalate	80.0	73.6	92	53-134	
Carbazole	80.0	76.9	96	60-122	
Dibenzofuran	80.0	72.2	90	53-118	
Diethyl phthalate	80.0	74.2	93	56-125	
Dimethyl phthalate	80.0	74.7	93	45-127	
Di-n-butyl phthalate	80.0	75.9	95	59-127	
Di-n-octyl phthalate	80.0	66.8	83	51-140	
Hexachlorobenzene	80.0	75.6	94	53-125	
Hexachlorobutadiene	80.0	55.6	69	22-124	
Hexachloroethane	80.0	54.7	68	21-115	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: K27571.D

Lab ID: LCS 280-436342/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isophorone	80.0	77.2	97	42-124	
Nitrobenzene	80.0	78.5	98	45-121	
N-Nitrosodi-n-propylamine	80.0	78.1	98	49-119	
N-Nitrosodiphenylamine	80.0	76.2	95	51-123	
Pentachlorophenol	160	147	92	35-138	
Phenol	80.0	71.3	89	61-120	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab File ID: K27570.D Lab Sample ID: MB 280-436342/1-A

Matrix: Water Date Extracted: 11/05/2018 12:30

Instrument ID: SMS_K Date Analyzed: 11/14/2018 17:21

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-436342/2-A	K27571.D	11/14/2018 17:50
SCLmw-003-181001-GW	280-116538-2	K27579.D	11/14/2018 21:42
SCLmw-001-181001-GW	280-116538-1	K27587.D	11/15/2018 01:34

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab File ID: K27515.D DFTPP Injection Date: 11/12/2018

Instrument ID: SMS_K DFTPP Injection Time: 14:10

Analysis Batch No.: 437249

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	53.5	
68	Less than 2.0 % of mass 69	0.4	(1.0) 1
69	Mass 69 relative abundance	40.7	
70	Less than 2.0 % of mass 69	0.4	(1.1) 1
127	40.0 - 60.0 % of mass 198	48.5	
197	Less than 1.0 % of mass 198	0.4	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	7.2	
275	10.0 - 30.0 % of mass 198	21.2	
365	Greater than 1.0 % of mass 198	2.0	
441	Present but less than mass 443	7.8	(83.6) 3
442	Greater than 40.0 % of mass 198	51.0	
443	17.0 - 23.0 % of mass 442	9.3	(18.2) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICIS 280-437249/4	K27517.D	11/12/2018	14:56
	STD004 280-437249/5	K27518.D	11/12/2018	15:25
	STD010 280-437249/6	K27519.D	11/12/2018	15:54
	STD020 280-437249/7	K27520.D	11/12/2018	16:23
	STD050 280-437249/8	K27521.D	11/12/2018	16:52
	STD120 280-437249/9	K27522.D	11/12/2018	17:21
	STD160 280-437249/10	K27523.D	11/12/2018	17:50
	STD200 280-437249/11	K27524.D	11/12/2018	18:19
	ICV 280-437249/12	K27525.D	11/12/2018	18:48
	ICV 280-437249/13	K27526.D	11/12/2018	19:17
	ICV 280-437249/14	K27527.D	11/12/2018	19:45

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab File ID: K27563.D DFTPP Injection Date: 11/14/2018

Instrument ID: SMS_K DFTPP Injection Time: 14:13

Analysis Batch No.: 437601

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	55.0	
68	Less than 2.0 % of mass 69	0.5	(1.1) 1
69	Mass 69 relative abundance	39.7	
70	Less than 2.0 % of mass 69	0.2	(0.5) 1
127	40.0 - 60.0 % of mass 198	49.4	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	6.8	
275	10.0 - 30.0 % of mass 198	20.8	
365	Greater than 1.0 % of mass 198	2.1	
441	Present but less than mass 443	8.4	(77.6) 3
442	Greater than 40.0 % of mass 198	56.8	
443	17.0 - 23.0 % of mass 442	10.8	(19.0) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-437601/3	K27564.D	11/14/2018	14:26
	CCV 280-437601/4	K27565.D	11/14/2018	14:55
	CCV 280-437601/5	K27566.D	11/14/2018	15:24
	MB 280-436342/1-A	K27570.D	11/14/2018	17:21
	LCS 280-436342/2-A	K27571.D	11/14/2018	17:50
SCLmw-003-181001-GW	280-116538-2	K27579.D	11/14/2018	21:42
SCLmw-001-181001-GW	280-116538-1	K27587.D	11/15/2018	01:34
	CCVC 280-437601/52	K27590.D	11/15/2018	03:02

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: ICIS 280-437249/4 Date Analyzed: 11/12/2018 14:56

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): K27517.D Heated Purge: (Y/N) N

Calibration ID: 34294

		DCBd4		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		166997	4.39	665671	5.61	304707	7.35
UPPER LIMIT		333994	4.89	1331342	6.11	609414	7.85
LOWER LIMIT		83499	3.89	332836	5.11	152354	6.85
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-437249/12		151819	4.39	599282	5.61	289647	7.35
ICV 280-437249/13		146718	4.39	596980	5.61	303592	7.34
ICV 280-437249/14		156641	4.39	625209	5.61	319777	7.34
CCV 280-437601/3		151575	4.38	600002	5.60	271804	7.34
CCV 280-437601/4		175757	4.38	700701	5.60	328477	7.34
CCV 280-437601/5		187188	4.38	730992	5.60	364851	7.34
MB 280-436342/1-A		142392	4.38	575266	5.60	298040	7.34
LCS 280-436342/2-A		151240	4.38	620917	5.60	294625	7.34
280-116538-2	SCLmw-003-181001-GW	142405	4.38	590073	5.60	296880	7.34
280-116538-1	SCLmw-001-181001-GW	170806	4.38	694555	5.60	346892	7.34
CCVC 280-437601/52		160495	4.38	657262	5.60	312303	7.34

DCBd4 = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: ICIS 280-437249/4 Date Analyzed: 11/12/2018 14:56

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): K27517.D Heated Purge: (Y/N) N

Calibration ID: 34294

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		453315	8.82	327432	12.59	278577	16.30
UPPER LIMIT		906630	9.32	654864	13.09	557154	16.80
LOWER LIMIT		226658	8.32	163716	12.09	139289	15.80
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-437249/12		435099	8.82	321061	12.58	278701	16.30
ICV 280-437249/13		481837	8.82	316595	12.58	246216	16.30
ICV 280-437249/14		503254	8.82	305863	12.58	225829	16.30
CCV 280-437601/3		416041	8.81	309128	12.56	260932	16.27
CCV 280-437601/4		470947	8.81	362240	12.56	291646	16.27
CCV 280-437601/5		563140	8.81	343700	12.56	259680	16.27
MB 280-436342/1-A		476391	8.81	314310	12.56	234941	16.27
LCS 280-436342/2-A		440132	8.81	325291	12.56	263727	16.27
280-116538-2	SCLmw-003-181001-GW	494132	8.81	323275	12.56	259697	16.27
280-116538-1	SCLmw-001-181001-GW	546708	8.81	348806	12.56	280714	16.27
CCVC 280-437601/52		464039	8.81	342371	12.56	290110	16.27

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW | Lab Sample ID: 280-116538-1

Matrix: Water | Lab File ID: K27587.D

Analysis Method: 8270D | Date Collected: 11/02/2018 10:45

Extract. Method: 3520C | Date Extracted: 11/05/2018 12:30

Sample wt/vol: 865.2(mL) | Date Analyzed: 11/15/2018 01:34

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437601 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	1.2	U	12	1.2	0.32
95-50-1	1,2-Dichlorobenzene	0.58	U	12	0.58	0.27
541-73-1	1,3-Dichlorobenzene	1.2	U	12	1.2	0.35
106-46-7	1,4-Dichlorobenzene	1.2	U	12	1.2	0.37
123-91-1	1,4-Dioxane	5.1	U	21	5.1	2.0
95-95-4	2,4,5-Trichlorophenol	1.2	U	23	1.2	0.52
88-06-2	2,4,6-Trichlorophenol	1.2	U	23	1.2	0.34
120-83-2	2,4-Dichlorophenol	2.3	U	12	2.3	0.74
105-67-9	2,4-Dimethylphenol	2.3	U	12	2.3	0.67
51-28-5	2,4-Dinitrophenol	35	U	92	35	12
121-14-2	2,4-Dinitrotoluene	5.1	U	23	5.1	1.9
606-20-2	2,6-Dinitrotoluene	5.1	U	23	5.1	2.2
91-58-7	2-Chloronaphthalene	1.2	U	12	1.2	0.30
95-57-8	2-Chlorophenol	5.1	U	12	5.1	2.3
95-48-7	2-Methylphenol	2.3	U	12	2.3	1.1
88-74-4	2-Nitroaniline	5.1	U	58	5.1	2.0
88-75-5	2-Nitrophenol	1.2	U	23	1.2	0.45
15831-10-4	3 & 4 Methylphenol	0.58	U	23	0.58	0.29
91-94-1	3,3'-Dichlorobenzidine	5.1	U	58	5.1	2.3
99-09-2	3-Nitroaniline	5.1	U	58	5.1	2.3
534-52-1	4,6-Dinitro-2-methylphenol	10	U	92	10	4.6
101-55-3	4-Bromophenyl phenyl ether	1.2	U	12	1.2	0.50
59-50-7	4-Chloro-3-methylphenol	5.8	U	23	5.8	2.8
106-47-8	4-Chloroaniline	5.1	U	29	5.1	2.5
7005-72-3	4-Chlorophenyl phenyl ether	5.1	U	12	5.1	1.9
100-01-6	4-Nitroaniline	5.1	U	58	5.1	2.3
100-02-7	4-Nitrophenol	4.6	U	58	4.6	1.4
65-85-0	Benzoic acid	35	U	92	35	12
100-51-6	Benzyl alcohol	0.58	U	29	0.58	0.27
108-60-1	bis (2-chloroisopropyl) ether	1.2	U	12	1.2	0.32
111-91-1	Bis(2-chloroethoxy)methane	2.3	U	12	2.3	1.1
111-44-4	Bis(2-chloroethyl)ether	1.2	U	23	1.2	0.47
117-81-7	Bis(2-ethylhexyl) phthalate	2.3	U	12	2.3	0.65
85-68-7	Butyl benzyl phthalate	2.3	U	23	2.3	1.2

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW | Lab Sample ID: 280-116538-1

Matrix: Water | Lab File ID: K27587.D

Analysis Method: 8270D | Date Collected: 11/02/2018 10:45

Extract. Method: 3520C | Date Extracted: 11/05/2018 12:30

Sample wt/vol: 865.2(mL) | Date Analyzed: 11/15/2018 01:34

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437601 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	1.2	U	12	1.2	0.50
132-64-9	Dibenzofuran	1.2	U	12	1.2	0.34
84-66-2	Diethyl phthalate	1.2	U	23	1.2	0.44
131-11-3	Dimethyl phthalate	0.58	U	23	0.58	0.24
84-74-2	Di-n-butyl phthalate	5.1	U	23	5.1	1.3
117-84-0	Di-n-octyl phthalate	1.2	U	23	1.2	0.40
118-74-1	Hexachlorobenzene	2.3	U	12	2.3	0.76
87-68-3	Hexachlorobutadiene	12	U	35	12	3.8
77-47-4	Hexachlorocyclopentadiene	35	U	58	35	12
67-72-1	Hexachloroethane	5.1	U	12	5.1	2.4
78-59-1	Isophorone	0.58	U	12	0.58	0.24
98-95-3	Nitrobenzene	2.3	U	23	2.3	0.94
621-64-7	N-Nitrosodi-n-propylamine	1.2	U	23	1.2	0.40
86-30-6	N-Nitrosodiphenylamine	1.2	U	12	1.2	0.51
87-86-5	Pentachlorophenol	69	U	92	69	23
108-95-2	Phenol	5.1	U	12	5.1	2.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	89		43-140
321-60-8	2-Fluorobiphenyl	83		44-119
367-12-4	2-Fluorophenol (Surr)	91		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	91		44-120
4165-62-2	Phenol-d5 (Surr)	92		10-115
1718-51-0	Terphenyl-d14 (Surr)	95		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27587.D
Lims ID: 280-116538-B-1-A
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 15-Nov-2018 01:34:30 ALS Bottle#: 25 Worklist Smp#: 49
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116538-B-1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 15-Nov-2018 09:21:10 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: kiekeld Date: 15-Nov-2018 09:15:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.382	4.382	0.000	97	170806	40.0	
* 2 Naphthalene-d8	136	5.604	5.604	0.000	100	694555	40.0	
* 3 Acenaphthene-d10	164	7.337	7.337	0.000	95	346892	40.0	
* 4 Phenanthrene-d10	188	8.812	8.812	0.000	97	546708	40.0	
* 5 Chrysene-d12	240	12.555	12.555	0.000	99	348806	40.0	
* 6 Perylene-d12	264	16.268	16.268	0.000	98	280714	40.0	
$ 7 2-Fluorophenol	112	3.189	3.189	0.000	94	575736	91.3	
$ 8 Phenol-d5	99	4.018	4.018	0.000	95	665393	92.2	
$ 9 Nitrobenzene-d5	82	4.893	4.899	-0.006	94	559845	90.7	
$ 11 2-Fluorobiphenyl	172	6.662	6.662	0.000	100	1002573	82.5	
$ 12 2,4,6-Tribromophenol	330	8.119	8.125	-0.006	91	103811	89.1	
$ 13 Terphenyl-d14	244	10.628	10.628	0.000	100	830541	95.4	
19 1,4-Dioxane	88		1.779				ND	
32 Phenol	94		4.035				ND	
36 Bis(2-chloroethyl)ether	93		4.112				ND	
39 2-Chlorophenol	128		4.188				ND	
40 1,3-Dichlorobenzene	146		4.329				ND	
42 1,4-Dichlorobenzene	146		4.399				ND	
43 Benzyl alcohol	108		4.499				ND	
44 1,2-Dichlorobenzene	146		4.546				ND	
45 2-Methylphenol	108		4.599				ND	
46 2,2'-oxybis[1-chloropropan	45		4.629				ND	
49 3 & 4 Methylphenol	108		4.746				ND	
52 N-Nitrosodi-n-propylamine	70		4.746				ND	
58 Hexachloroethane	117		4.869				ND	
59 Nitrobenzene	77		4.916				ND	
63 Isophorone	82		5.146				ND	
64 2-Nitrophenol	139		5.228				ND	
65 2,4-Dimethylphenol	107		5.263				ND	
68 Benzoic acid	105		5.369				ND	
69 Bis(2-chloroethoxy)methane	93		5.345				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
74 2,4-Dichlorophenol	162		5.463				ND	
76 1,2,4-Trichlorobenzene	180		5.551				ND	
80 4-Chloroaniline	127		5.669				ND	
83 Hexachlorobutadiene	225		5.757				ND	
89 4-Chloro-3-methylphenol	107		6.144				ND	
97 Hexachlorocyclopentadiene	237		6.473				ND	
100 2,4,6-Trichlorophenol	196		6.585				ND	
102 2,4,5-Trichlorophenol	196		6.620				ND	
106 2-Chloronaphthalene	162		6.785				ND	
108 2-Nitroaniline	65		6.873				ND	
111 Dimethyl phthalate	163		7.055				ND	
113 2,6-Dinitrotoluene	165		7.114				ND	
115 3-Nitroaniline	138		7.278				ND	
118 2,4-Dinitrophenol	184		7.384				ND	
119 4-Nitrophenol	109		7.449				ND	
122 2,4-Dinitrotoluene	165		7.513				ND	
123 Dibenzofuran	168		7.543				ND	
130 Diethyl phthalate	149		7.754				ND	
134 4-Chlorophenyl phenyl ethe	204		7.872				ND	
138 4-Nitroaniline	138		7.884				ND	
139 4,6-Dinitro-2-methylphenol	198		7.925				ND	
141 N-Nitrosodiphenylamine	169		7.989				ND	
156 4-Bromophenyl phenyl ether	248		8.360				ND	
157 Hexachlorobenzene	284		8.442				ND	
163 Pentachlorophenol	266		8.630				ND	
170 Carbazole	167		9.041				ND	
173 Di-n-butyl phthalate	149		9.376				ND	
190 Butyl benzyl phthalate	149		11.450				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.731				ND	
197 3,3'-Dichlorobenzidine	252		12.508				ND	
201 Di-n-octyl phthalate	149		14.435				ND	

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

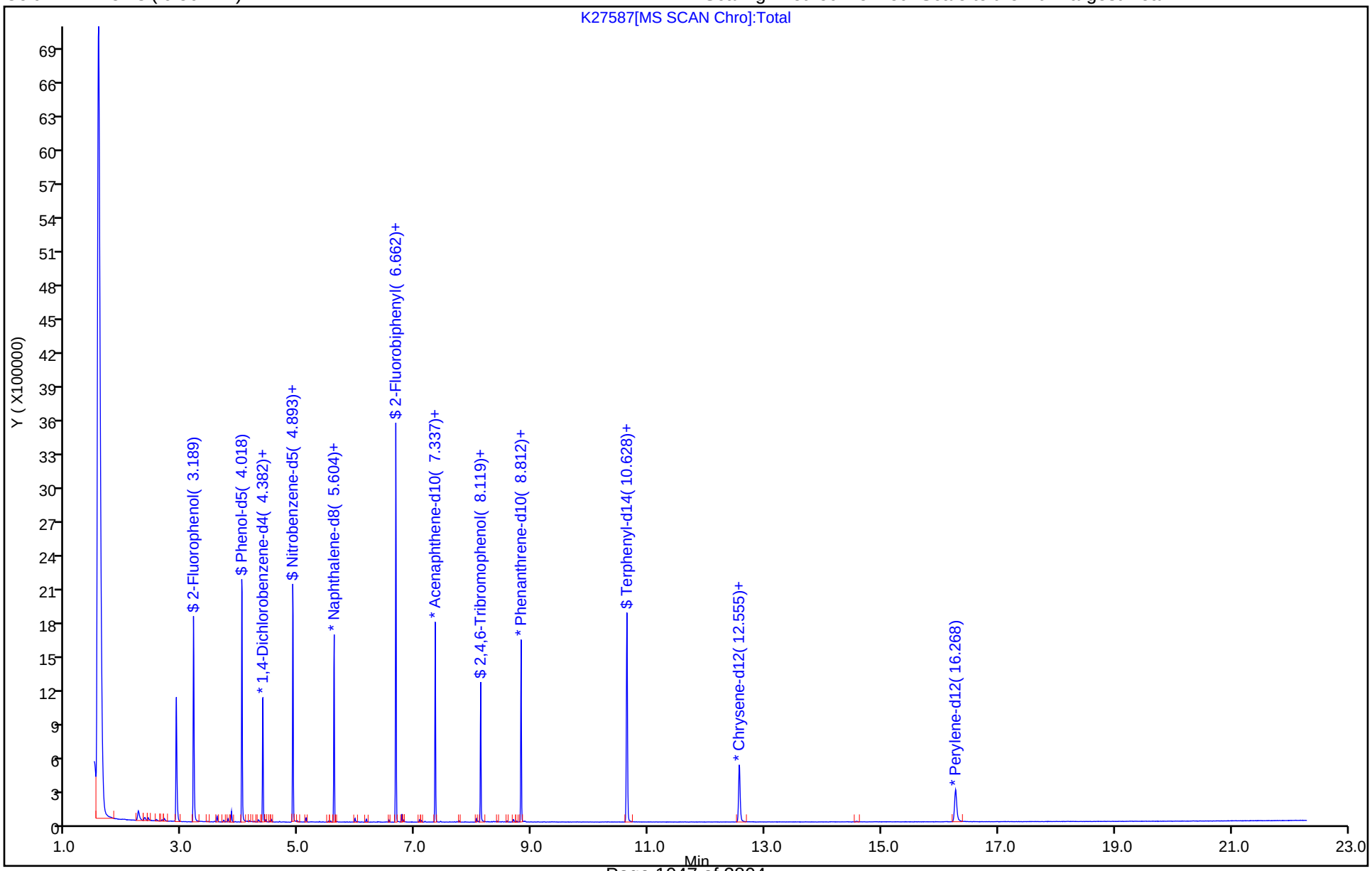
Report Date: 15-Nov-2018 10:15:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27587.D

Injection Date:	15-Nov-2018 01:34:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-116538-B-1-A	Lab Sample ID:	280-116538-1	Worklist Smp#:	49
Client ID:	SCLmw-001-181001-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27587.D
Lims ID: 280-116538-B-1-A
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 15-Nov-2018 01:34:30 ALS Bottle#: 25 Worklist Smp#: 49
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116538-B-1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 15-Nov-2018 09:21:10 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: kiekeld Date: 15-Nov-2018 09:15:54

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	91.3	91.30
$ 8 Phenol-d5	100.0	92.2	92.24
$ 9 Nitrobenzene-d5	100.0	90.7	90.70
$ 11 2-Fluorobiphenyl	100.0	82.5	82.50
$ 12 2,4,6-Tribromophenol	100.0	89.1	89.13
$ 13 Terphenyl-d14	100.0	95.4	95.41

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-003-181001-GW | Lab Sample ID: 280-116538-2

Matrix: Water | Lab File ID: K27579.D

Analysis Method: 8270D | Date Collected: 11/02/2018 11:10

Extract. Method: 3520C | Date Extracted: 11/05/2018 12:30

Sample wt/vol: 942.2(mL) | Date Analyzed: 11/14/2018 21:42

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437601 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	1.1	U	11	1.1	0.30
95-50-1	1,2-Dichlorobenzene	0.53	U	11	0.53	0.24
541-73-1	1,3-Dichlorobenzene	1.1	U	11	1.1	0.32
106-46-7	1,4-Dichlorobenzene	1.1	U	11	1.1	0.34
123-91-1	1,4-Dioxane	4.7	U	19	4.7	1.8
95-95-4	2,4,5-Trichlorophenol	1.1	U	21	1.1	0.48
88-06-2	2,4,6-Trichlorophenol	1.1	U	21	1.1	0.31
120-83-2	2,4-Dichlorophenol	2.1	U	11	2.1	0.68
105-67-9	2,4-Dimethylphenol	2.1	U	11	2.1	0.62
51-28-5	2,4-Dinitrophenol	32	U	85	32	11
121-14-2	2,4-Dinitrotoluene	4.7	U	21	4.7	1.8
606-20-2	2,6-Dinitrotoluene	4.7	U	21	4.7	2.0
91-58-7	2-Chloronaphthalene	1.1	U	11	1.1	0.28
95-57-8	2-Chlorophenol	4.7	U	11	4.7	2.1
95-48-7	2-Methylphenol	2.1	U	11	2.1	1.0
88-74-4	2-Nitroaniline	4.7	U	53	4.7	1.8
88-75-5	2-Nitrophenol	1.1	U	21	1.1	0.41
15831-10-4	3 & 4 Methylphenol	0.53	U	21	0.53	0.27
91-94-1	3,3'-Dichlorobenzidine	4.7	U	53	4.7	2.1
99-09-2	3-Nitroaniline	4.7	U	53	4.7	2.1
534-52-1	4,6-Dinitro-2-methylphenol	9.3	U	85	9.3	4.2
101-55-3	4-Bromophenyl phenyl ether	1.1	U	11	1.1	0.46
59-50-7	4-Chloro-3-methylphenol	5.3	U	21	5.3	2.6
106-47-8	4-Chloroaniline	4.7	U	27	4.7	2.3
7005-72-3	4-Chlorophenyl phenyl ether	4.7	U	11	4.7	1.8
100-01-6	4-Nitroaniline	4.7	U	53	4.7	2.1
100-02-7	4-Nitrophenol	4.2	U	53	4.2	1.3
65-85-0	Benzoic acid	32	U	85	32	11
100-51-6	Benzyl alcohol	0.53	U	27	0.53	0.24
108-60-1	bis (2-chloroisopropyl) ether	1.1	U	11	1.1	0.30
111-91-1	Bis(2-chloroethoxy)methane	2.1	U	11	2.1	1.0
111-44-4	Bis(2-chloroethyl)ether	1.1	U	21	1.1	0.44
117-81-7	Bis(2-ethylhexyl) phthalate	2.1	U	11	2.1	0.59
85-68-7	Butyl benzyl phthalate	2.1	U	21	2.1	1.1

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-003-181001-GW | Lab Sample ID: 280-116538-2

Matrix: Water | Lab File ID: K27579.D

Analysis Method: 8270D | Date Collected: 11/02/2018 11:10

Extract. Method: 3520C | Date Extracted: 11/05/2018 12:30

Sample wt/vol: 942.2(mL) | Date Analyzed: 11/14/2018 21:42

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437601 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	1.1	U	11	1.1	0.46
132-64-9	Dibenzofuran	1.1	U	11	1.1	0.31
84-66-2	Diethyl phthalate	1.1	U	21	1.1	0.40
131-11-3	Dimethyl phthalate	0.53	U	21	0.53	0.22
84-74-2	Di-n-butyl phthalate	4.7	U	21	4.7	1.2
117-84-0	Di-n-octyl phthalate	1.1	U	21	1.1	0.37
118-74-1	Hexachlorobenzene	2.1	U	11	2.1	0.70
87-68-3	Hexachlorobutadiene	11	U	32	11	3.5
77-47-4	Hexachlorocyclopentadiene	32	U	53	32	11
67-72-1	Hexachloroethane	4.7	U	11	4.7	2.2
78-59-1	Isophorone	0.53	U	11	0.53	0.22
98-95-3	Nitrobenzene	2.1	U	21	2.1	0.86
621-64-7	N-Nitrosodi-n-propylamine	1.1	U	21	1.1	0.37
86-30-6	N-Nitrosodiphenylamine	1.1	U	11	1.1	0.47
87-86-5	Pentachlorophenol	64	U	85	64	21
108-95-2	Phenol	4.7	U	11	4.7	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	84		43-140
321-60-8	2-Fluorobiphenyl	71		44-119
367-12-4	2-Fluorophenol (Surr)	77		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	77		44-120
4165-62-2	Phenol-d5 (Surr)	80		10-115
1718-51-0	Terphenyl-d14 (Surr)	97		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27579.D
Lims ID: 280-116538-C-2-A
Client ID: SCLmw-003-181001-GW
Sample Type: Client
Inject. Date: 14-Nov-2018 21:42:30 ALS Bottle#: 17 Worklist Smp#: 41
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116538-C-2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 15-Nov-2018 09:19:54 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: kiekeld Date: 15-Nov-2018 09:03:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.382	4.382	0.000	96	142405	40.0	
* 2 Naphthalene-d8	136	5.604	5.604	0.000	100	590073	40.0	
* 3 Acenaphthene-d10	164	7.337	7.337	0.000	94	296880	40.0	
* 4 Phenanthrene-d10	188	8.812	8.812	0.000	97	494132	40.0	
* 5 Chrysene-d12	240	12.555	12.555	0.000	98	323275	40.0	
* 6 Perylene-d12	264	16.268	16.268	0.000	97	259697	40.0	
$ 7 2-Fluorophenol	112	3.189	3.189	0.000	94	404476	76.9	
$ 8 Phenol-d5	99	4.017	4.018	-0.001	95	479918	79.8	
$ 9 Nitrobenzene-d5	82	4.893	4.899	-0.006	94	405771	77.4	
$ 11 2-Fluorobiphenyl	172	6.661	6.662	-0.001	100	739587	71.1	
$ 12 2,4,6-Tribromophenol	330	8.119	8.125	-0.006	89	84165	84.4	
$ 13 Terphenyl-d14	244	10.627	10.628	-0.001	99	782879	97.0	
19 1,4-Dioxane	88		1.779				ND	
32 Phenol	94		4.035				ND	
36 Bis(2-chloroethyl)ether	93		4.112				ND	
39 2-Chlorophenol	128		4.188				ND	
40 1,3-Dichlorobenzene	146		4.329				ND	
42 1,4-Dichlorobenzene	146		4.399				ND	
43 Benzyl alcohol	108		4.499				ND	
44 1,2-Dichlorobenzene	146		4.546				ND	
45 2-Methylphenol	108		4.599				ND	
46 2,2'-oxybis[1-chloropropan	45		4.629				ND	
49 3 & 4 Methylphenol	108		4.746				ND	
52 N-Nitrosodi-n-propylamine	70		4.746				ND	
58 Hexachloroethane	117		4.869				ND	
59 Nitrobenzene	77		4.916				ND	
63 Isophorone	82		5.146				ND	
64 2-Nitrophenol	139		5.228				ND	
65 2,4-Dimethylphenol	107		5.263				ND	
68 Benzoic acid	105		5.369				ND	
69 Bis(2-chloroethoxy)methane	93		5.345				ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	Flags
74 2,4-Dichlorophenol	162		5.463				ND	
76 1,2,4-Trichlorobenzene	180		5.551				ND	
80 4-Chloroaniline	127		5.669				ND	
83 Hexachlorobutadiene	225		5.757				ND	
89 4-Chloro-3-methylphenol	107		6.144				ND	
97 Hexachlorocyclopentadiene	237		6.473				ND	
100 2,4,6-Trichlorophenol	196		6.585				ND	
102 2,4,5-Trichlorophenol	196		6.620				ND	
106 2-Chloronaphthalene	162		6.785				ND	
108 2-Nitroaniline	65		6.873				ND	
111 Dimethyl phthalate	163		7.055				ND	
113 2,6-Dinitrotoluene	165		7.114				ND	
115 3-Nitroaniline	138		7.278				ND	
118 2,4-Dinitrophenol	184		7.384				ND	
119 4-Nitrophenol	109		7.449				ND	
122 2,4-Dinitrotoluene	165		7.513				ND	
123 Dibenzofuran	168		7.543				ND	
130 Diethyl phthalate	149		7.754				ND	
134 4-Chlorophenyl phenyl ethe	204		7.872				ND	
138 4-Nitroaniline	138		7.884				ND	
139 4,6-Dinitro-2-methylphenol	198		7.925				ND	
141 N-Nitrosodiphenylamine	169		7.989				ND	
156 4-Bromophenyl phenyl ether	248		8.360				ND	
157 Hexachlorobenzene	284		8.442				ND	
163 Pentachlorophenol	266		8.630				ND	
170 Carbazole	167		9.041				ND	
173 Di-n-butyl phthalate	149		9.376				ND	
190 Butyl benzyl phthalate	149		11.450				ND	
195 Bis(2-ethylhexyl) phthalat	149		12.731				ND	
197 3,3'-Dichlorobenzidine	252		12.508				ND	
201 Di-n-octyl phthalate	149		14.435				ND	

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

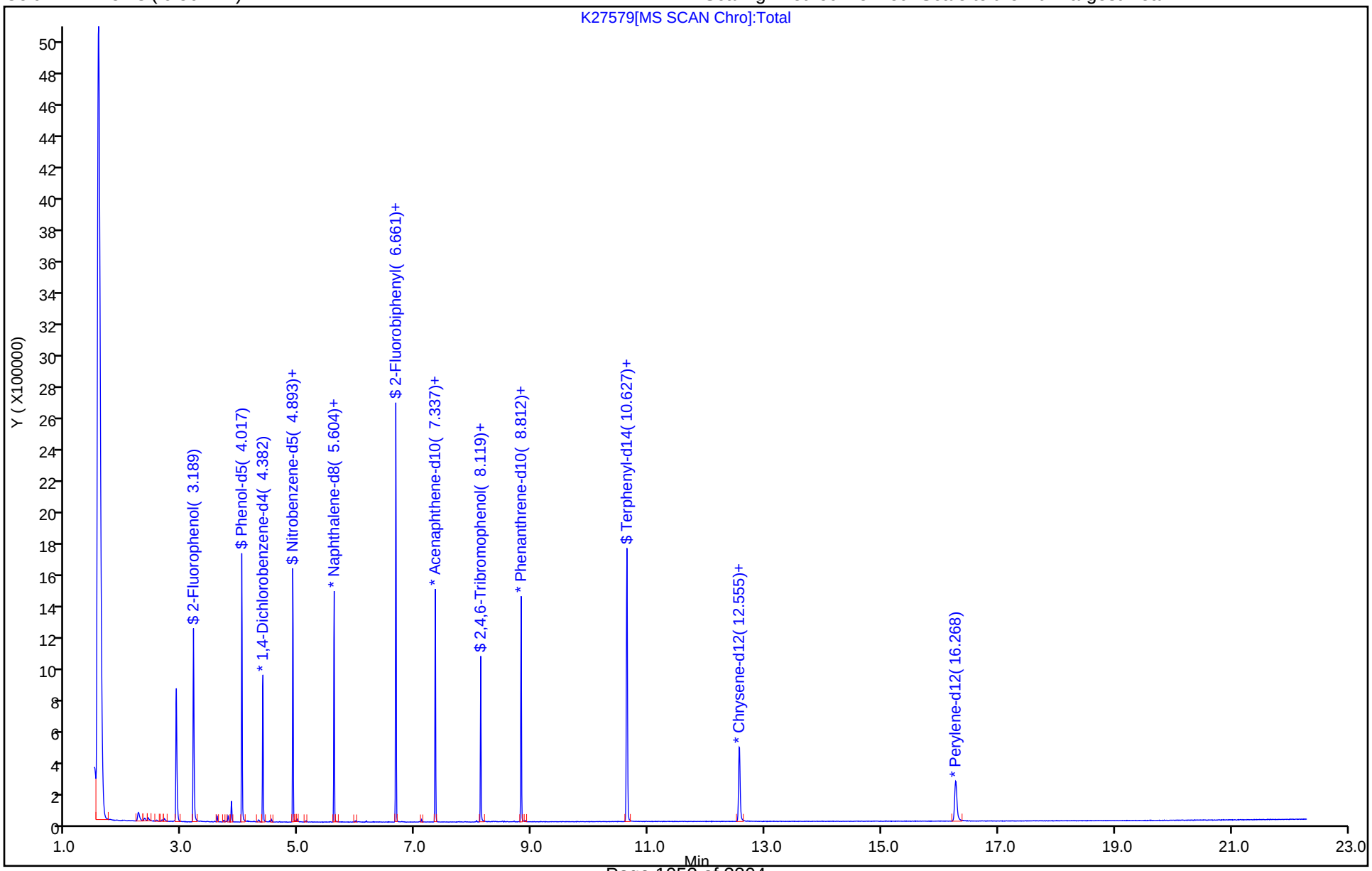
Report Date: 15-Nov-2018 09:20:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27579.D

Injection Date:	14-Nov-2018 21:42:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	280-116538-C-2-A	Lab Sample ID:	280-116538-2	Worklist Smp#:	41
Client ID:	SCLmw-003-181001-GW				
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27579.D
Lims ID: 280-116538-C-2-A
Client ID: SCLmw-003-181001-GW
Sample Type: Client
Inject. Date: 14-Nov-2018 21:42:30 ALS Bottle#: 17 Worklist Smp#: 41
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: 280-116538-C-2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 15-Nov-2018 09:19:54 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: kiekeld Date: 15-Nov-2018 09:03:12

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	76.9	76.93
$ 8 Phenol-d5	100.0	79.8	79.80
$ 9 Nitrobenzene-d5	100.0	77.4	77.38
$ 11 2-Fluorobiphenyl	100.0	71.1	71.11
$ 12 2,4,6-Tribromophenol	100.0	84.4	84.44
$ 13 Terphenyl-d14	100.0	97.0	97.04

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-437249/5	K27518.D
Level 2	STD010 280-437249/6	K27519.D
Level 3	STD020 280-437249/7	K27520.D
Level 4	STD050 280-437249/8	K27521.D
Level 5	ICIS 280-437249/4	K27517.D
Level 6	STD120 280-437249/9	K27522.D
Level 7	STD160 280-437249/10	K27523.D
Level 8	STD200 280-437249/11	K27524.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	0.6982 0.6548	0.6442 0.6410	0.6603 0.6311	0.6495	0.6546	Ave		0.6542				3.1		15.0			
N-Nitrosodimethylamine	1.0281 0.9801	0.9310 0.9696	0.9584 0.9449	0.9815	0.9801	Ave		0.9717				3.0		15.0			
Pyridine	1.7429 1.5659	1.6011 1.5267	1.5838 1.4781	1.5829	1.5896	Ave		1.5839				4.8		15.0			
Phenol	1.9450 1.6951	1.7924 1.6247	1.8510 1.5785	1.8083	1.7876	Ave		1.7603				6.9		15.0			
Aniline	1.9823 2.0753	2.0250 2.0560	2.1863 2.0194	2.2144	2.1679	Ave		2.0908				4.2		15.0			
Bis(2-chloroethyl)ether	1.5593 1.2374	1.4727 1.1718	1.4472 1.0712	1.3886	1.3089	Ave		1.3321				12.4		15.0			
2-Chlorophenol	1.5542 1.4345	1.4716 1.3974	1.5335 1.3454	1.5094	1.5046	Ave		1.4688				4.9		15.0			
1,3-Dichlorobenzene	1.7789 1.5596	1.6856 1.5072	1.6960 1.4407	1.6334	1.6043	Ave		1.6132				6.8		15.0			
1,4-Dichlorobenzene	1.7746 1.5598	1.6721 1.5189	1.6991 1.4259	1.6559	1.6154	Ave		1.6152				6.8		15.0			
Benzyl alcohol	0.9963 0.9180	0.9348 0.9119	0.9833 0.8854	0.9812	0.9839	Ave		0.9494				4.4		15.0			
1,2-Dichlorobenzene	1.6950 1.4782	1.5763 1.4507	1.6114 1.3786	1.5603	1.5379	Ave		1.5361				6.4		15.0			
2-Methylphenol	1.4823 1.2891	1.4098 1.2368	1.3856 1.2015	1.3809	1.3593	Ave		1.3432				7.0		15.0			
bis (2-chloroisopropyl) ether	2.9339 2.1047	2.7857 1.9738	2.7262 1.7896	2.4943	2.3099	Qua	2.7185	2.6074	-0.004149						1.0000		0.9900
3 & 4 Methylphenol	1.4699 1.1275	1.4099 1.0750	1.3849 0.9918	1.3619	1.2569	Ave		1.2597				14.0		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
N-Nitrosodi-n-propylamine	1.0282 0.7974	1.0068 0.7689	1.0040 0.7264	0.9347	0.8610	Ave		0.8909			0.0500	13.3		15.0			
Acetophenone	2.2089 1.5746	2.0284 1.4798	1.9919 1.3746	1.8711	1.7380	Qua	2.2791	1.9135	-0.002777						1.0000		0.9900
Hexachloroethane	0.6869 0.5944	0.6023 0.5659	0.6107 0.5348	0.6268	0.6093	Ave		0.6039				7.4		15.0			
Nitrobenzene	0.3662 0.3414	0.3714 0.3447	0.3685 0.3299	0.3620	0.3646	Ave		0.3561				4.3		15.0			
Isophorone	0.6853 0.5942	0.6598 0.6004	0.6446 0.5687	0.6432	0.6280	Ave		0.6280				6.1		15.0			
2-Nitrophenol	0.1610 0.1857	0.1808 0.1890	0.1815 0.1820	0.1975	0.1941	Ave		0.1839				6.0		15.0			
2,4-Dimethylphenol	0.3626 0.3193	0.3670 0.3163	0.3519 0.3015	0.3509	0.3380	Ave		0.3384				7.0		15.0			
Bis(2-chloroethoxy)methane	0.4202 0.3652	0.4205 0.3641	0.4159 0.3466	0.4063	0.3870	Ave		0.3907				7.5		15.0			
Benzoic acid	+++++ 0.2333	0.1609 0.2407	0.1871 0.2467	0.2148	0.2469	Lin2	-1.815	0.2448							0.9980		0.9900
2,4-Dichlorophenol	0.2825 0.2690	0.2846 0.2663	0.2908 0.2493	0.2889	0.2847	Ave		0.2770				5.1		15.0			
1,2,4-Trichlorobenzene	0.3458 0.2928	0.3343 0.2868	0.3270 0.2741	0.3172	0.3061	Ave		0.3105				8.0		15.0			
Naphthalene	1.1136 0.8933	1.0558 0.8747	1.0278 0.8148	0.9857	0.9549	Ave		0.9651				10.4		15.0			
4-Chloroaniline	0.3934 0.3810	0.3865 0.3814	0.4132 0.3636	0.4175	0.4150	Ave		0.3939				5.0		15.0			
2,6-Dichlorophenol	0.2928 0.2537	0.2841 0.2555	0.2764 0.2427	0.2769	0.2701	Ave		0.2691				6.3		15.0			
Hexachlorobutadiene	0.1854 0.1562	0.1812 0.1590	0.1720 0.1482	0.1711	0.1675	Ave		0.1676				7.5		15.0			
Caprolactam	0.1456 0.1578	0.1528 0.1629	0.1535 0.1711	0.1595	0.1526	Ave		0.1570				4.9		15.0			
4-Chloro-3-methylphenol	0.2810 0.2577	0.2844 0.2594	0.2765 0.2518	0.2746	0.2673	Ave		0.2691				4.4		15.0			
2-Methylnaphthalene	0.7763 0.6193	0.7605 0.6130	0.7103 0.5748	0.7005	0.6575	Ave		0.6765				10.7		15.0			
1-Methylnaphthalene	0.7144 0.5880	0.6940 0.5761	0.6675 0.5379	0.6539	0.6192	Ave		0.6314				9.7		15.0			
Hexachlorocyclopentadiene	0.2971 0.3527	0.3207 0.3473	0.3526 0.3224	0.3736	0.3850	Ave		0.3439			0.0500	8.5		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,2,4,5-Tetrachlorobenzene	0.3285 0.2442	0.3080 0.2425	0.2959 0.2270	0.2786	0.2622	Ave		0.2734				13.0		15.0			
2,4,6-Trichlorophenol	0.3507 0.3410	0.3697 0.3355	0.3791 0.3118	0.3684	0.3673	Ave		0.3529				6.4		15.0			
2,4,5-Trichlorophenol	0.4080 0.3909	0.3983 0.3900	0.4054 0.3788	0.4090	0.4117	Ave		0.3990				2.9		15.0			
1,1'-Biphenyl	1.8071 1.4978	1.6898 1.4649	1.6789 1.3522	1.6566	1.6359	Ave		1.5979				9.2		15.0			
2-Chloronaphthalene	1.3170 1.1412	1.3294 1.1141	1.2606 1.0465	1.2430	1.2385	Ave		1.2113				8.3		15.0			
2-Nitroaniline	0.3096 0.3522	0.3256 0.3534	0.3387 0.3482	0.3534	0.3570	Ave		0.3423				4.9		15.0			
Dimethyl phthalate	1.2898 1.1397	1.2658 1.1184	1.2233 1.0965	1.2050	1.1964	Ave		1.1919				5.8		15.0			
1,3-Dinitrobenzene	0.1449 0.2096	0.1702 0.2184	0.1900 0.2292	0.2082	0.2112	Ave		0.1977				14.1		15.0			
2,6-Dinitrotoluene	0.2784 0.2998	0.2980 0.2974	0.3029 0.3053	0.3098	0.3074	Ave		0.2999				3.3		15.0			
Acenaphthylene	1.9442 1.7244	1.8861 1.6861	1.8867 1.6060	1.8618	1.8254	Ave		1.8026				6.5		15.0			
3-Nitroaniline	0.2847 0.3179	0.2966 0.3291	0.3048 0.3389	0.3207	0.3228	Ave		0.3144				5.7		15.0			
Acenaphthene	1.3368 1.1158	1.3135 1.0740	1.2360 1.0235	1.2093	1.1872	Ave		1.1870				9.3		15.0			
2,4-Dinitrophenol	+++++ 0.1404	0.0596 0.1555	0.0888 0.1642	0.1210	0.1326	Qua	-1.265	0.1197	0.0001199		0.0500				1.0000		0.9900
4-Nitrophenol	0.1233 0.1415	0.1305 0.1471	0.1371 0.1597	0.1476	0.1437	Ave		0.1413			0.0500	7.9		15.0			
2,4-Dinitrotoluene	0.3173 0.3679	0.3460 0.3741	0.3585 0.3951	0.3736	0.3695	Ave		0.3627				6.4		15.0			
Dibenzofuran	1.8445 1.5491	1.7969 1.5137	1.7300 1.4503	1.6652	1.6234	Ave		1.6466				8.4		15.0			
2,3,4,6-Tetrachlorophenol	0.2745 0.2960	0.2730 0.2944	0.2942 0.2968	0.3141	0.3015	Ave		0.2931				4.6		15.0			
Diethyl phthalate	1.2731 1.0827	1.2041 1.0793	1.1785 1.0899	1.1662	1.1136	Ave		1.1484				6.0		15.0			
4-Chlorophenyl phenyl ether	0.7004 0.5309	0.6576 0.5220	0.6117 0.5003	0.5933	0.5619	Ave		0.5848				11.9		15.0			
Fluorene	1.4942 1.1179	1.4137 1.0929	1.3289 1.0543	1.2681	1.1896	Ave		1.2449				12.8		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
4-Nitroaniline	0.2461 0.2834	0.2700 0.2936	0.2753 0.3282	0.3007	0.2745	Ave		0.2840				8.5		15.0			
4,6-Dinitro-2-methylphenol	+++++ 0.1170	0.0710 0.1184	0.0855 0.1194	0.1069	0.1155	Lin2	-1.065	0.1202							0.9980		0.9900
Diphenylamine	1.1611 1.0094	1.1405 1.0112	1.0895 1.0173	1.0713	1.0443	Ave		1.0681				5.5		15.0			
N-Nitrosodiphenylamine	0.6125 0.5659	0.6095 0.5425	0.5927 0.5045	0.5846	0.5966	Ave		0.5761				6.4		15.0			
1,2-Diphenylhydrazine	1.2919 1.1723	1.2597 1.1481	1.2706 1.1320	1.2422	1.2243	Ave		1.2176				4.9		15.0			
Azobenzene	1.3060 1.1852	1.2735 1.1607	1.2845 1.1444	1.2558	1.2377	Ave		1.2310				4.9		15.0			
4-Bromophenyl phenyl ether	0.2374 0.2105	0.2241 0.1989	0.2160 0.1881	0.2187	0.2207	Ave		0.2143				7.1		15.0			
Hexachlorobenzene	0.2283 0.1958	0.2173 0.1865	0.2130 0.1753	0.2029	0.2021	Ave		0.2026				8.4		15.0			
Atrazine	0.1794 0.1832	0.1826 0.1807	0.1874 0.1745	0.1880	0.1926	Ave		0.1836				3.1		15.0			
Pentachlorophenol	+++++ 0.1104	0.0834 0.1125	0.0872 0.1080	0.1069	0.1140	Lin2	-0.662	0.1128							0.9970		0.9900
Phenanthrene	1.1857 1.0201	1.1671 0.9789	1.1305 0.9170	1.0963	1.0799	Ave		1.0720				8.7		15.0			
Anthracene	1.1380 1.0413	1.1303 1.0078	1.1182 0.9512	1.1200	1.1020	Ave		1.0761				6.3		15.0			
Carbazole	0.9422 0.9195	0.9684 0.8985	0.9732 0.8741	0.9588	0.9379	Ave		0.9341				3.7		15.0			
Alachlor	0.1184 0.1275	0.1243 0.1305	0.1257 0.1267	0.1329	0.1306	Ave		0.1271				3.6		15.0			
Di-n-butyl phthalate	1.0058 1.0510	1.0381 1.0394	1.0787 1.0142	1.0917	1.0878	Ave		1.0509				3.1		15.0			
Fluoranthene	0.9917 0.9935	1.0404 1.0223	1.0359 0.9951	1.0327	1.0293	Ave		1.0176				2.0		15.0			
Pyrene	1.6358 1.3689	1.5032 1.3053	1.5027 1.2325	1.4187	1.4538	Ave		1.4276				8.9		15.0			
Famphur	0.2697 0.4038	0.3159 0.3879	0.3475 0.3500	0.3971	0.4268	Ave		0.3623				14.3		15.0			
Butyl benzyl phthalate	0.4235 0.5786	0.4567 0.5903	0.5082 0.5801	0.5558	0.5918	Ave		0.5356				12.2		15.0			
3,3'-Dichlorobenzidine	0.2636 0.3599	0.2743 0.3664	0.2932 0.3498	0.3721	0.3736	Lin2	-0.454	0.3573							0.9930		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Benzo[a]anthracene	1.1474 1.2162	1.1517 1.2055	1.1744 1.1846	1.2026	1.2422	Ave		1.1906				2.7		15.0			
Chrysene	1.2522 1.2121	1.1871 1.2123	1.2615 1.1647	1.2286	1.2336	Ave		1.2190				2.6		15.0			
Bis(2-ethylhexyl) phthalate	0.4124 0.7364	0.4743 0.7642	0.5457 0.7718	0.6690	0.7594	Lin1	-2.229	0.7676							0.9980		0.9900
Di-n-octyl phthalate	+++++ 1.1409	0.5378 1.2355	0.6635 1.2982	0.9254	1.1520	Qua	-7.012	1.0621	0.0013495						0.9990		0.9900
Benzo[b]fluoranthene	1.0043 1.1926	1.1071 1.2062	1.1013 1.1438	1.1676	1.2281	Ave		1.1439				6.3		15.0			
Benzo[k]fluoranthene	1.1401 1.3728	1.2918 1.3397	1.3179 1.2672	1.3633	1.4263	Ave		1.3149				6.6		15.0			
Benzo[a]pyrene	0.8687 1.2607	0.9968 1.2243	1.0632 1.1965	1.1880	1.3042	Ave		1.1378				13.0		15.0			
Indeno[1,2,3-cd]pyrene	0.4663 0.8300	0.5526 0.8955	0.6166 0.9263	0.7314	0.8351	Lin1	-2.818	0.8910							0.9950		0.9900
Dibenz(a,h)anthracene	0.6668 1.0153	0.7791 1.0433	0.8122 1.0173	0.9559	1.0410	Lin2	-1.533	1.0030							0.9950		0.9900
Benzo[g,h,i]perylene	0.8951 1.1281	0.9260 1.1303	0.9710 1.0845	1.0837	1.1534	Ave		1.0465				9.6		15.0			
2-Fluorophenol (Surr)	1.5038 1.4993	1.4201 1.4785	1.4766 1.4032	1.5112	1.5219	Ave		1.4768				2.9		15.0			
Phenol-d5 (Surr)	1.7987 1.6314	1.7283 1.5736	1.7716 1.5343	1.7594	1.7175	Ave		1.6894				5.8		15.0			
Nitrobenzene-d5 (Surr)	0.3573 0.3479	0.3593 0.3492	0.3594 0.3380	0.3682	0.3645	Ave		0.3555				2.8		15.0			
2-Fluorobiphenyl	1.5527 1.3243	1.5179 1.2986	1.4821 1.2052	1.4164	1.4132	Ave		1.4013				8.5		15.0			
2,4,6-Tribromophenol (Surr)	0.1171 0.1361	0.1301 0.1392	0.1328 0.1438	0.1385	0.1368	Ave		0.1343				6.0		15.0			
Terphenyl-d14 (Surr)	1.1257 0.9574	1.0695 0.9168	1.0435 0.8730	0.9990	1.0012	Ave		0.9983				8.2		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD004 280-437249/5	K27518.D
Level 2	STD010 280-437249/6	K27519.D
Level 3	STD020 280-437249/7	K27520.D
Level 4	STD050 280-437249/8	K27521.D
Level 5	ICIS 280-437249/4	K27517.D
Level 6	STD120 280-437249/9	K27522.D
Level 7	STD160 280-437249/10	K27523.D
Level 8	STD200 280-437249/11	K27524.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,4-Dioxane	DCBd 4	Ave	11399 291003	25950 366901	52907 479962	131239	218647	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodimethylamine	DCBd 4	Ave	16786 435543	37499 555023	76796 718609	198337	327345	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyridine	DCBd 4	Ave	56915 1391751	128987 1747731	253814 2248258	639736	1061866	8.00 240	20.0 320	40.0 400	100	160
Phenol	DCBd 4	Ave	31756 753322	72199 929978	148322 1200519	365423	597047	4.00 120	10.0 160	20.0 200	50.0	80.0
Aniline	DCBd 4	Ave	32366 922267	81566 1176857	175185 1535864	447487	724082	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethyl)ether	DCBd 4	Ave	25459 549928	59319 670714	115967 814682	280605	437163	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chlorophenol	DCBd 4	Ave	25376 637497	59275 799888	122879 1023223	305007	502544	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dichlorobenzene	DCBd 4	Ave	29045 693090	67895 862705	135903 1095747	330067	535816	4.00 120	10.0 160	20.0 200	50.0	80.0
1,4-Dichlorobenzene	DCBd 4	Ave	28975 693185	67353 869430	136149 1084450	334619	539536	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzyl alcohol	DCBd 4	Ave	16267 407977	37654 521996	78795 673404	198281	328615	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2-Dichlorobenzene	DCBd 4	Ave	27675 656940	63495 830376	129118 1048468	315295	513653	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylphenol	DCBd 4	Ave	24202 572885	56786 707944	111029 913772	279041	454005	4.00 120	10.0 160	20.0 200	50.0	80.0
bis (2-chloroisopropyl) ether	DCBd 4	Qua	47902 935342	112210 1129823	218454 1361070	504032	771480	4.00 120	10.0 160	20.0 200	50.0	80.0
3 & 4 Methylphenol	DCBd 4	Ave	24000 501084	56789 615314	110970 754301	275215	419791	4.00 120	10.0 160	20.0 200	50.0	80.0
N-Nitrosodi-n-propylamine	DCBd 4	Ave	16787 354366	40552 440112	80454 552463	188873	287578	4.00 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Acetophenone	DCBd 4	Qua	36065 699770	81703 847040	159609 1045464	378102	580484	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachloroethane	DCBd 4	Ave	11216 264156	24262 323939	48933 406771	126661	203487	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene	NPT	Ave	24196 607287	59190 769048	120151 992197	294116	485411	4.00 120	10.0 160	20.0 200	50.0	80.0
Isophorone	NPT	Ave	45280 1056965	105139 1339577	210192 1710575	522490	836027	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitrophenol	NPT	Ave	10635 330343	28817 421572	59166 547384	160413	258457	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dimethylphenol	NPT	Ave	23959 567982	58478 705645	114731 906957	285083	449937	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-chloroethoxy)methane	NPT	Ave	27766 649652	67005 812311	135621 1042598	330079	515205	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzoic acid	NPT	Lin2	+++++ 829953	51263 1074213	122013 1484036	349055	657531	+++++ 240	20.0 320	40.0 400	100	160
2,4-Dichlorophenol	NPT	Ave	18665 478443	45348 594218	94817 750002	234732	379056	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2,4-Trichlorobenzene	NPT	Ave	22849 520813	53277 639841	106615 824470	257693	407488	4.00 120	10.0 160	20.0 200	50.0	80.0
Naphthalene	NPT	Ave	73579 1589119	168243 1951562	335110 2450895	800761	1271334	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloroaniline	NPT	Ave	25992 677743	61593 850849	134743 1093730	339141	552447	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dichlorophenol	NPT	Ave	19349 451360	45279 570129	90137 730028	224979	359653	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobutadiene	NPT	Ave	12250 277806	28876 354708	56083 445704	138975	223029	4.00 120	10.0 160	20.0 200	50.0	80.0
Caprolactam	NPT	Ave	9623 280749	24356 363432	50055 514718	129577	203191	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chloro-3-methylphenol	NPT	Ave	18565 458386	45311 578839	90149 757388	223076	355896	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Methylnaphthalene	NPT	Ave	51291 1101727	121187 1367650	231609 1728912	569115	875336	4.00 120	10.0 160	20.0 200	50.0	80.0
1-Methylnaphthalene	NPT	Ave	47202 1045992	110589 1285338	217651 1617870	531192	824364	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorocyclopentadiene	ANT	Ave	9915 293527	25385 366563	55220 466223	144719	234637	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2,4,5-Tetrachlorobenzene	NPT	Ave	21704 434374	49084 541081	96477 682759	226363	349072	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Trichlorophenol	ANT	Ave	11704 283804	29264 354021	59367 450850	142723	223851	4.00 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
2,4,5-Trichlorophenol	ANT	Ave	13614 325374	31522 411551	63495 547675	158437	250869	4.00 120	10.0 160	20.0 200	50.0	80.0
1,1'-Biphenyl	ANT	Ave	60304 1246665	133746 1545973	262928 1955223	641700	996919	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Chloronaphthalene	ANT	Ave	43949 949825	105223 1175719	197412 1513212	481509	754762	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Nitroaniline	ANT	Ave	10330 293186	25774 372972	53038 503416	136888	217560	4.00 120	10.0 160	20.0 200	50.0	80.0
Dimethyl phthalate	ANT	Ave	43042 948611	100186 1180346	191578 1585470	466760	729076	4.00 120	10.0 160	20.0 200	50.0	80.0
1,3-Dinitrobenzene	ANT	Ave	4835 174453	13475 230442	29759 331405	80637	128712	4.00 120	10.0 160	20.0 200	50.0	80.0
2,6-Dinitrotoluene	ANT	Ave	9290 249565	23587 313855	47430 441414	120015	187364	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthylene	ANT	Ave	64879 1435231	149283 1779448	295459 2322219	721183	1112423	4.00 120	10.0 160	20.0 200	50.0	80.0
3-Nitroaniline	ANT	Ave	9500 264605	23478 347285	47735 489984	124236	196724	4.00 120	10.0 160	20.0 200	50.0	80.0
Acenaphthene	ANT	Ave	44610 928673	103960 1133494	193569 1479940	468435	723467	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4-Dinitrophenol	ANT	Qua	+++++ 233753	9433 328211	27820 474816	93710	161590	+++++ 240	20.0 320	40.0 400	100	160
4-Nitrophenol	ANT	Ave	8227 235624	20658 310541	42951 461891	114326	175204	8.00 240	20.0 320	40.0 400	100	160
2,4-Dinitrotoluene	ANT	Ave	10589 306237	27384 394810	56145 571234	144725	225149	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenzofuran	ANT	Ave	61549 1289352	142224 1597450	270931 2097032	645043	989293	4.00 120	10.0 160	20.0 200	50.0	80.0
2,3,4,6-Tetrachlorophenol	ANT	Ave	9161 246394	21606 310696	46070 429114	121660	183767	4.00 120	10.0 160	20.0 200	50.0	80.0
Diethyl phthalate	ANT	Ave	42484 901148	95303 1138989	184562 1575961	451744	678621	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Chlorophenyl phenyl ether	ANT	Ave	23371 441882	52047 550852	95792 723386	229841	342443	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluorene	ANT	Ave	49860 930427	111895 1153370	208104 1524433	491217	724942	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Nitroaniline	ANT	Ave	8213 235862	21367 309819	43117 474545	116495	167262	4.00 120	10.0 160	20.0 200	50.0	80.0
4,6-Dinitro-2-methylphenol	PHN	Lin2	+++++ 295376	17868 396005	41831 591876	128991	209416	+++++ 240	20.0 320	40.0 400	100	160
Diphenylamine	ANT	Ave	32933 714108	76728 907132	145028 1250342	352738	540938	3.40 102	8.50 136	17.0 170	42.5	68.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
N-Nitrosodiphenylamine	PHN	Ave	32933 714108	76728 907132	145028 1250342	352738	540938	4.00 120	10.0 160	20.0 200	50.0	80.0
1,2-Diphenylhydrazine	ANT	Ave	43582 986445	100799 1224965	201165 1654760	486464	754289	4.04 121	10.1 162	20.2 202	50.5	80.9
Azobenzene	ANT	Ave	43582 986445	100799 1224965	201165 1654760	486464	754289	4.00 120	10.0 160	20.0 200	50.0	80.0
4-Bromophenyl phenyl ether	PHN	Ave	12763 265613	28209 332486	52862 466191	131956	200057	4.00 120	10.0 160	20.0 200	50.0	80.0
Hexachlorobenzene	PHN	Ave	12274 247092	27362 311825	52110 434405	122431	183210	4.00 120	10.0 160	20.0 200	50.0	80.0
Atrazine	PHN	Ave	9645 231230	22988 302087	45846 432420	113470	174637	4.00 120	10.0 160	20.0 200	50.0	80.0
Pentachlorophenol	PHN	Lin2	+++++ 278575	20989 376339	42663 535552	129030	206661	+++++ 240	20.0 320	40.0 400	100	160
Phenanthrene	PHN	Ave	63752 1287205	146936 1636790	276647 2272594	661531	979081	4.00 120	10.0 160	20.0 200	50.0	80.0
Anthracene	PHN	Ave	61186 1313990	142295 1685118	273627 2357335	675825	999113	4.00 120	10.0 160	20.0 200	50.0	80.0
Carbazole	PHN	Ave	50657 1160202	121915 1502282	238147 2166475	578565	850349	4.00 120	10.0 160	20.0 200	50.0	80.0
Alachlor	PHN	Ave	6366 160858	15651 218134	30752 314032	80219	118388	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-butyl phthalate	PHN	Ave	54079 1326203	130696 1737983	263974 2513679	658740	986220	4.00 120	10.0 160	20.0 200	50.0	80.0
Fluoranthene	PHN	Ave	53321 1253693	130983 1709394	253483 2466324	623130	933186	4.00 120	10.0 160	20.0 200	50.0	80.0
Pyrene	CRY	Ave	56554 1290294	129402 1737190	257256 2571063	633882	952061	4.00 120	10.0 160	20.0 200	50.0	80.0
Famphur	CRY	Ave	9324 380659	27194 516322	59495 730022	177444	279473	4.00 120	10.0 160	20.0 200	50.0	80.0
Butyl benzyl phthalate	CRY	Ave	14640 545371	39311 785657	86998 1210104	248334	387517	4.00 120	10.0 160	20.0 200	50.0	80.0
3,3'-Dichlorobenzidine	CRY	Lin2	9114 339266	23615 487610	50201 729742	166265	244677	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]anthracene	CRY	Ave	39666 1146414	99144 1604483	201060 2471111	537361	813469	4.00 120	10.0 160	20.0 200	50.0	80.0
Chrysene	CRY	Ave	43290 1142542	102188 1613485	215972 2429624	548948	807869	4.00 120	10.0 160	20.0 200	50.0	80.0
Bis(2-ethylhexyl) phthalate	CRY	Lin1	14258 694101	40829 1017034	93418 1609994	298912	497333	4.00 120	10.0 160	20.0 200	50.0	80.0
Di-n-octyl phthalate	CRY	Qua	+++++ 1075381	46296 1644331	113590 2708127	413485	754412	+++++ 120	10.0 160	20.0 200	50.0	80.0

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437249

SDG No.:

Instrument ID: SMS_K GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:56 Calibration End Date: 11/12/2018 18:19 Calibration ID: 34294

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Benzo[b]fluoranthene	PRY	Ave	27834 977871	74045 1453264	153020 2252939	433901	684262	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[k]fluoranthene	PRY	Ave	31597 1125661	86398 1614080	183109 2495851	506646	794687	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[a]pyrene	PRY	Ave	24075 1033688	66671 1475040	147726 2356683	441504	726633	4.00 120	10.0 160	20.0 200	50.0	80.0
Indeno[1,2,3-cd]pyrene	CRY	Lin1	16120 782312	47569 1191852	105557 1932250	326812	546867	4.00 120	10.0 160	20.0 200	50.0	80.0
Dibenz(a,h)anthracene	PRY	Lin2	18481 832493	52106 1256976	112845 2003800	355242	579997	4.00 120	10.0 160	20.0 200	50.0	80.0
Benzo[g,h,i]perylene	PRY	Ave	24806 924989	61936 1361804	134918 2136038	402717	642639	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorophenol (Surr)	DCBd 4	Ave	24553 666289	57200 846273	118322 1067154	305386	508299	4.00 120	10.0 160	20.0 200	50.0	80.0
Phenol-d5 (Surr)	DCBd 4	Ave	29368 725010	69617 900726	141956 1166876	355542	573643	4.00 120	10.0 160	20.0 200	50.0	80.0
Nitrobenzene-d5 (Surr)	NPT	Ave	23606 618838	57259 779145	117194 1016832	299123	485311	4.00 120	10.0 160	20.0 200	50.0	80.0
2-Fluorobiphenyl	ANT	Ave	51812 1102284	120139 1370430	232109 1742590	548658	861199	4.00 120	10.0 160	20.0 200	50.0	80.0
2,4,6-Tribromophenol (Surr)	ANT	Ave	3906 113316	10296 146853	20800 207911	53654	83382	4.00 120	10.0 160	20.0 200	50.0	80.0
Terphenyl-d14 (Surr)	CRY	Ave	38916 902409	92069 1220242	178652 1820996	446379	655619	4.00 120	10.0 160	20.0 200	50.0	80.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27517.D
Lims ID: ICIS HSL
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 12-Nov-2018 14:56:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: ICIS HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:11 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:25:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	95	166997	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	99	665671	40.0	40.0	
* 3 Acenaphthene-d10	164	7.349	7.349	0.000	96	304707	40.0	40.0	
* 4 Phenanthrene-d10	188	8.824	8.824	0.000	97	453315	40.0	40.0	
* 5 Chrysene-d12	240	12.590	12.590	0.000	99	327432	40.0	40.0	
* 6 Perylene-d12	264	16.303	16.303	0.000	98	278577	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	94	508299	80.0	82.4	
$ 8 Phenol-d5	99	4.029	4.029	0.000	99	573643	80.0	81.3	
$ 9 Nitrobenzene-d5	82	4.905	4.905	0.000	95	485311	80.0	82.0	
$ 11 2-Fluorobiphenyl	172	6.673	6.673	0.000	100	861199	80.0	80.7	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	92	83382	80.0	81.5	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	655619	80.0	80.2	
19 1,4-Dioxane	88	1.785	1.785	0.000	96	218647	80.0	80.1	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	87	327345	80.0	80.7	
21 Pyridine	79	2.067	2.067	0.000	83	1061866	160.0	160.6	
32 Phenol	94	4.041	4.041	0.000	98	597047	80.0	81.2	
34 Aniline	93	4.070	4.070	0.000	97	724082	80.0	83.0	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	94	494375	80.0	80.6	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	95	437163	80.0	78.6	
38 n-Decane	43	4.235	4.235	0.000	94	654317	80.0	79.4	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	502544	80.0	82.0	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	535816	80.0	79.6	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	94	539536	80.0	80.0	
43 Benzyl alcohol	108	4.505	4.505	0.000	93	328615	80.0	82.9	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	513653	80.0	80.1	
45 2-Methylphenol	108	4.611	4.611	0.000	96	454005	80.0	81.0	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	95	771480	80.0	80.0	
47 Indene	116	4.634	4.634	0.000	91	1401929	160.0	158.2	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	66	419791	80.0	79.8	
50 3-Methylphenol	108	4.752	4.752	0.000	74	419791	80.0	79.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	77	419791	80.0	79.8	
52 N-Nitrosodi-n-propylamine	70	4.758	4.758	0.000	80	287578	80.0	77.3	
54 Acetophenone	105	4.758	4.758	0.000	80	580484	80.0	81.0	
58 Hexachloroethane	117	4.875	4.875	0.000	95	203487	80.0	80.7	
59 Nitrobenzene	77	4.922	4.922	0.000	93	485411	80.0	81.9	
63 Isophorone	82	5.152	5.152	0.000	98	836027	80.0	80.0	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	258457	80.0	84.4	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	95	449937	80.0	79.9	
68 Benzoic acid	105	5.381	5.381	0.000	89	657531	160.0	168.8	
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	97	515205	80.0	79.2	
71 3,5-Dimethylphenol	107	5.398	5.398	0.000	84	459119	80.0	81.4	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	379056	80.0	82.2	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	95	407488	80.0	78.9	
79 Naphthalene	128	5.633	5.633	0.000	98	1271334	80.0	79.2	
80 4-Chloroaniline	127	5.674	5.674	0.000	96	552447	80.0	84.3	
81 2,6-Dichlorophenol	162	5.692	5.692	0.000	97	359653	80.0	80.3	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	96	223029	80.0	80.0	
86 Caprolactam	55	5.998	5.998	0.000	75	203191	80.0	77.8	
89 4-Chloro-3-methylphenol	107	6.150	6.150	0.000	96	355896	80.0	79.5	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	875336	80.0	77.7	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	95	824364	80.0	78.5	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	95	234637	80.0	89.6	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	349072	80.0	76.7	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	91	223851	80.0	83.3	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	97	389384	80.0	81.9	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	250869	80.0	82.5	
104 1,1'-Biphenyl	154	6.773	6.773	0.000	94	996919	80.0	81.9	
106 2-Chloronaphthalene	162	6.797	6.797	0.000	95	754762	80.0	81.8	
108 2-Nitroaniline	65	6.885	6.885	0.000	87	217560	80.0	83.4	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	729076	80.0	80.3	
112 1,3-Dinitrobenzene	168	7.085	7.085	0.000	87	128712	80.0	85.5	
113 2,6-Dinitrotoluene	165	7.120	7.120	0.000	95	187364	80.0	82.0	
114 Acenaphthylene	152	7.208	7.208	0.000	98	1112423	80.0	81.0	
115 3-Nitroaniline	138	7.290	7.290	0.000	96	196724	80.0	82.1	
117 Acenaphthene	153	7.378	7.378	0.000	94	723467	80.0	80.0	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	84	161590	160.0	161.7	
119 4-Nitrophenol	109	7.461	7.461	0.000	92	175204	160.0	162.7	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	225149	80.0	81.5	
123 Dibenzofuran	168	7.549	7.549	0.000	97	989293	80.0	78.9	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	183767	80.0	82.3	
127 Hexadecane	57	7.790	7.790	0.000	91	658930	80.0	82.6	
130 Diethyl phthalate	149	7.766	7.766	0.000	98	678621	80.0	77.6	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	90	342443	80.0	76.9	
135 Fluorene	166	7.890	7.890	0.000	95	724942	80.0	76.4	
138 4-Nitroaniline	138	7.895	7.895	0.000	89	167262	80.0	77.3	
139 4,6-Dinitro-2-methylphenol	198	7.931	7.931	0.000	84	209416	160.0	162.6	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	63	540938	80.0	82.9	
142 Diphenylamine	169	7.995	7.995	0.000	95	540938	68.0	66.5	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	41	754289	80.9	81.3	
144 Azobenzene	77	8.042	8.042	0.000	98	754289	80.0	80.4	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	92	83393	80.0	81.4	
156 4-Bromophenyl phenyl ether	248	8.371	8.371	0.000	67	200057	80.0	82.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.454	8.454	0.000	93	183210	80.0	79.8	
159 Atrazine	200	8.524	8.524	0.000	91	174637	80.0	84.0	
161 n-Octadecane	85	8.706	8.706	0.000	93	219752	80.0	86.4	
163 Pentachlorophenol	266	8.642	8.642	0.000	92	206661	160.0	167.6	
168 Phenanthrene	178	8.847	8.847	0.000	97	979081	80.0	80.6	
169 Anthracene	178	8.894	8.894	0.000	97	999113	80.0	81.9	
170 Carbazole	167	9.047	9.047	0.000	96	850349	80.0	80.3	
171 Alachlor	188	9.188	9.188	0.000	93	118388	80.0	82.2	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	986220	80.0	82.8	
179 Fluoranthene	202	10.122	10.122	0.000	98	933186	80.0	80.9	
182 Pyrene	202	10.428	10.428	0.000	97	952061	80.0	81.5	
188 Famphur	218	11.356	11.356	0.000	84	279473	80.0	94.2	
190 Butyl benzyl phthalate	149	11.474	11.474	0.000	98	387517	80.0	88.4	
195 Bis(2-ethylhexyl) phthalat	149	12.755	12.755	0.000	98	497333	80.0	82.1	
197 3,3'-Dichlorobenzidine	252	12.537	12.537	0.000	74	244677	80.0	84.9	
198 Benzo[a]anthracene	228	12.566	12.566	0.000	99	813469	80.0	83.5	
199 Chrysene	228	12.649	12.649	0.000	97	807869	80.0	81.0	
201 Di-n-octyl phthalate	149	14.464	14.464	0.000	99	754412	80.0	84.3	
203 Benzo[b]fluoranthene	252	15.269	15.269	0.000	97	684262	80.0	85.9	
204 Benzo[k]fluoranthene	252	15.340	15.340	0.000	99	794687	80.0	86.8	
206 Benzo[e]pyrene	252	16.004	16.004	0.000	97	683646	80.0	86.1	
207 Benzo[a]pyrene	252	16.145	16.145	0.000	77	726633	80.0	91.7	
213 Dibenz(a,h)anthracene	278	19.417	19.417	0.000	95	579997	80.0	84.6	
214 Indeno[1,2,3-cd]pyrene	276	19.312	19.312	0.000	98	546867	80.0	78.1	
215 Benzo[g,h,i]perylene	276	20.028	20.028	0.000	97	642639	80.0	88.2	

Reagents:

MS-HSLA080_00039 Amount Added: 200.00 Units: uL

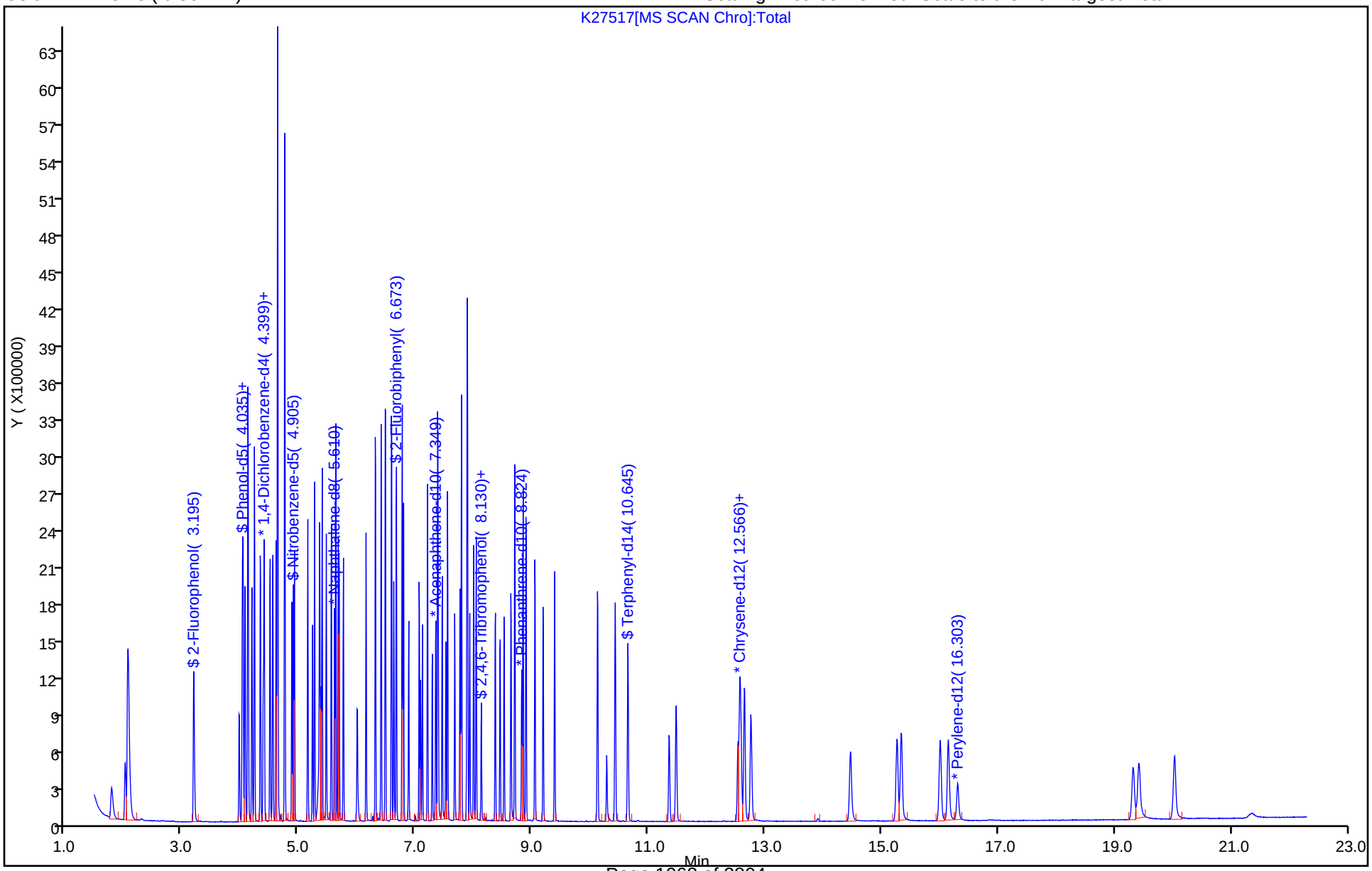
Report Date: 13-Nov-2018 11:59:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27517.D

Injection Date:	12-Nov-2018 14:56:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	ICIS HSL			Worklist Smp#:	4
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27518.D
Lims ID: STD004 HSL
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 12-Nov-2018 15:25:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD004 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:14 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:27:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	163273	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	99	660716	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	94	333698	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	537662	40.0	40.0	
* 5 Chrysene-d12	240	12.578	12.590	-0.012	99	345718	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	97	277140	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	24553	4.00	4.07	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	94	29368	4.00	4.26	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	23606	4.00	4.02	
$ 11 2-Fluorobiphenyl	172	6.667	6.673	-0.006	100	51812	4.00	4.43	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	90	3906	4.00	3.49	
$ 13 Terphenyl-d14	244	10.639	10.645	-0.006	98	38916	4.00	4.51	
19 1,4-Dioxane	88	1.791	1.785	0.006	96	11399	4.00	4.27	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	89	16786	4.00	4.23	
21 Pyridine	79	2.073	2.067	0.006	84	56915	8.00	8.80	
32 Phenol	94	4.035	4.041	-0.006	98	31756	4.00	4.42	
34 Aniline	93	4.070	4.070	0.000	97	32366	4.00	3.79	
35 Alpha Methyl Styrene	118	4.123	4.129	-0.006	92	26027	4.00	4.34	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	95	25459	4.00	4.68	
38 n-Decane	43	4.235	4.235	0.000	95	35234	4.00	4.37	
39 2-Chlorophenol	128	4.194	4.194	0.000	97	25376	4.00	4.23	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	29045	4.00	4.41	
42 1,4-Dichlorobenzene	146	4.399	4.405	-0.006	93	28975	4.00	4.39	
43 Benzyl alcohol	108	4.499	4.505	-0.006	93	16267	4.00	4.20	
44 1,2-Dichlorobenzene	146	4.546	4.552	-0.006	97	27675	4.00	4.41	
45 2-Methylphenol	108	4.605	4.611	-0.006	94	24202	4.00	4.41	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	89	47902	4.00	3.48	
47 Indene	116	4.634	4.634	0.000	93	88636	8.00	6.86	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	72	24000	4.00	4.67	
50 3-Methylphenol	108	4.752	4.752	0.000	91	24000	4.00	4.67	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	86	24000	4.00	4.67	
52 N-Nitrosodi-n-propylamine	70	4.752	4.758	-0.006	96	16787	4.00	4.62	
54 Acetophenone	105	4.752	4.758	-0.006	95	36065	4.00	3.44	
58 Hexachloroethane	117	4.875	4.875	0.000	96	11216	4.00	4.55	
59 Nitrobenzene	77	4.916	4.922	-0.006	97	24196	4.00	4.11	
63 Isophorone	82	5.146	5.152	-0.006	99	45280	4.00	4.36	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	10635	4.00	3.50	
65 2,4-Dimethylphenol	107	5.263	5.269	-0.006	93	23959	4.00	4.29	
68 Benzoic acid	105	5.304	5.381	-0.077	90	18466	8.00	12.0	a
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	96	27766	4.00	4.30	
71 3,5-Dimethylphenol	107	5.392	5.398	-0.006	82	24537	4.00	4.38	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	18665	4.00	4.08	
76 1,2,4-Trichlorobenzene	180	5.551	5.557	-0.006	93	22849	4.00	4.45	
79 Naphthalene	128	5.627	5.633	-0.006	97	73579	4.00	4.62	
80 4-Chloroaniline	127	5.669	5.674	-0.005	95	25992	4.00	3.99	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	96	19349	4.00	4.35	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	96	12250	4.00	4.43	
86 Caprolactam	55	5.968	5.998	-0.030	76	9623	4.00	3.71	
89 4-Chloro-3-methylphenol	107	6.144	6.150	-0.006	96	18565	4.00	4.18	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	51291	4.00	4.59	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	94	47202	4.00	4.53	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	72	9915	4.00	3.46	
98 1,2,4,5-Tetrachlorobenzene	216	6.479	6.485	-0.006	96	21704	4.00	4.81	
100 2,4,6-Trichlorophenol	196	6.585	6.591	-0.006	75	11704	4.00	3.97	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	92	22587	4.00	4.34	
102 2,4,5-Trichlorophenol	196	6.620	6.626	-0.006	94	13614	4.00	4.09	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	94	60304	4.00	4.52	
106 2-Chloronaphthalene	162	6.791	6.797	-0.006	96	43949	4.00	4.35	
108 2-Nitroaniline	65	6.879	6.885	-0.006	87	10330	4.00	3.62	
111 Dimethyl phthalate	163	7.055	7.061	-0.006	99	43042	4.00	4.33	
112 1,3-Dinitrobenzene	168	7.085	7.085	0.000	88	4835	4.00	2.93	
113 2,6-Dinitrotoluene	165	7.114	7.120	-0.006	94	9290	4.00	3.71	
114 Acenaphthylene	152	7.202	7.208	-0.006	99	64879	4.00	4.31	
115 3-Nitroaniline	138	7.284	7.290	-0.006	93	9500	4.00	3.62	
117 Acenaphthene	153	7.378	7.378	0.000	94	44610	4.00	4.50	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	75	2610	8.00	13.0	
119 4-Nitrophenol	109	7.449	7.461	-0.012	95	8227	8.00	6.98	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	94	10589	4.00	3.50	
123 Dibenzofuran	168	7.549	7.549	0.000	97	61549	4.00	4.48	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	9161	4.00	3.75	
127 Hexadecane	57	7.784	7.790	-0.006	90	36793	4.00	4.21	
130 Diethyl phthalate	149	7.760	7.766	-0.006	98	42484	4.00	4.43	
134 4-Chlorophenyl phenyl ethe	204	7.878	7.884	-0.006	93	23371	4.00	4.79	
135 Fluorene	166	7.890	7.890	0.000	96	49860	4.00	4.80	
138 4-Nitroaniline	138	7.890	7.895	-0.005	68	8213	4.00	3.47	
139 4,6-Dinitro-2-methylphenol	198	7.925	7.931	-0.006	84	5571	8.00	12.3	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	63	32933	4.00	4.25	
142 Diphenylamine	169	7.995	7.995	0.000	94	32933	3.40	3.70	
143 1,2-Diphenylhydrazine	77	8.036	8.042	-0.006	41	43582	4.04	4.29	
144 Azobenzene	77	8.036	8.042	-0.006	98	43582	4.00	4.24	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	90	3906	4.00	3.48	
156 4-Bromophenyl phenyl ether	248	8.365	8.371	-0.006	68	12763	4.00	4.43	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.448	8.454	-0.006	93	12274	4.00	4.51	
159 Atrazine	200	8.518	8.524	-0.006	91	9645	4.00	3.91	
161 n-Octadecane	85	8.700	8.706	-0.006	92	12453	4.00	4.13	
163 Pentachlorophenol	266	8.636	8.642	-0.006	91	7730	8.00	11.0	
168 Phenanthrene	178	8.841	8.847	-0.006	98	63752	4.00	4.42	
169 Anthracene	178	8.894	8.894	0.000	97	61186	4.00	4.23	
170 Carbazole	167	9.047	9.047	0.000	95	50657	4.00	4.03	
171 Alachlor	188	9.188	9.188	0.000	93	6366	4.00	3.73	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	54079	4.00	3.83	
179 Fluoranthene	202	10.122	10.122	0.000	97	53321	4.00	3.90	
182 Pyrene	202	10.422	10.428	-0.006	98	56554	4.00	4.58	
188 Famphur	218	11.350	11.356	-0.006	86	9324	4.00	2.98	
190 Butyl benzyl phthalate	149	11.474	11.474	0.000	98	14640	4.00	3.16	
195 Bis(2-ethylhexyl) phthalat	149	12.755	12.755	0.000	97	14258	4.00	5.05	
197 3,3'-Dichlorobenzidine	252	12.531	12.537	-0.006	69	9114	4.00	4.22	
198 Benzo[a]anthracene	228	12.561	12.566	-0.005	98	39666	4.00	3.85	
199 Chrysene	228	12.637	12.649	-0.012	97	43290	4.00	4.11	
201 Di-n-octyl phthalate	149	14.453	14.464	-0.011	97	15764	4.00	8.23	
203 Benzo[b]fluoranthene	252	15.252	15.269	-0.017	98	27834	4.00	3.51	
204 Benzo[k]fluoranthene	252	15.328	15.340	-0.012	98	31597	4.00	3.47	
206 Benzo[e]pyrene	252	15.992	16.004	-0.012	97	30663	4.00	3.88	
207 Benzo[a]pyrene	252	16.133	16.145	-0.012	83	24075	4.00	3.05	
213 Dibenz(a,h)anthracene	278	19.400	19.417	-0.017	92	18481	4.00	4.19	
214 Indeno[1,2,3-cd]pyrene	276	19.300	19.312	-0.012	98	16120	4.00	5.26	
215 Benzo[g,h,i]perylene	276	20.011	20.028	-0.017	97	24806	4.00	3.42	
S 217 Total Cresols	108				0			9.08	
S 218 Methyl Phenols,Total	108				0			9.08	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA004_00039 Amount Added: 200.00 Units: uL

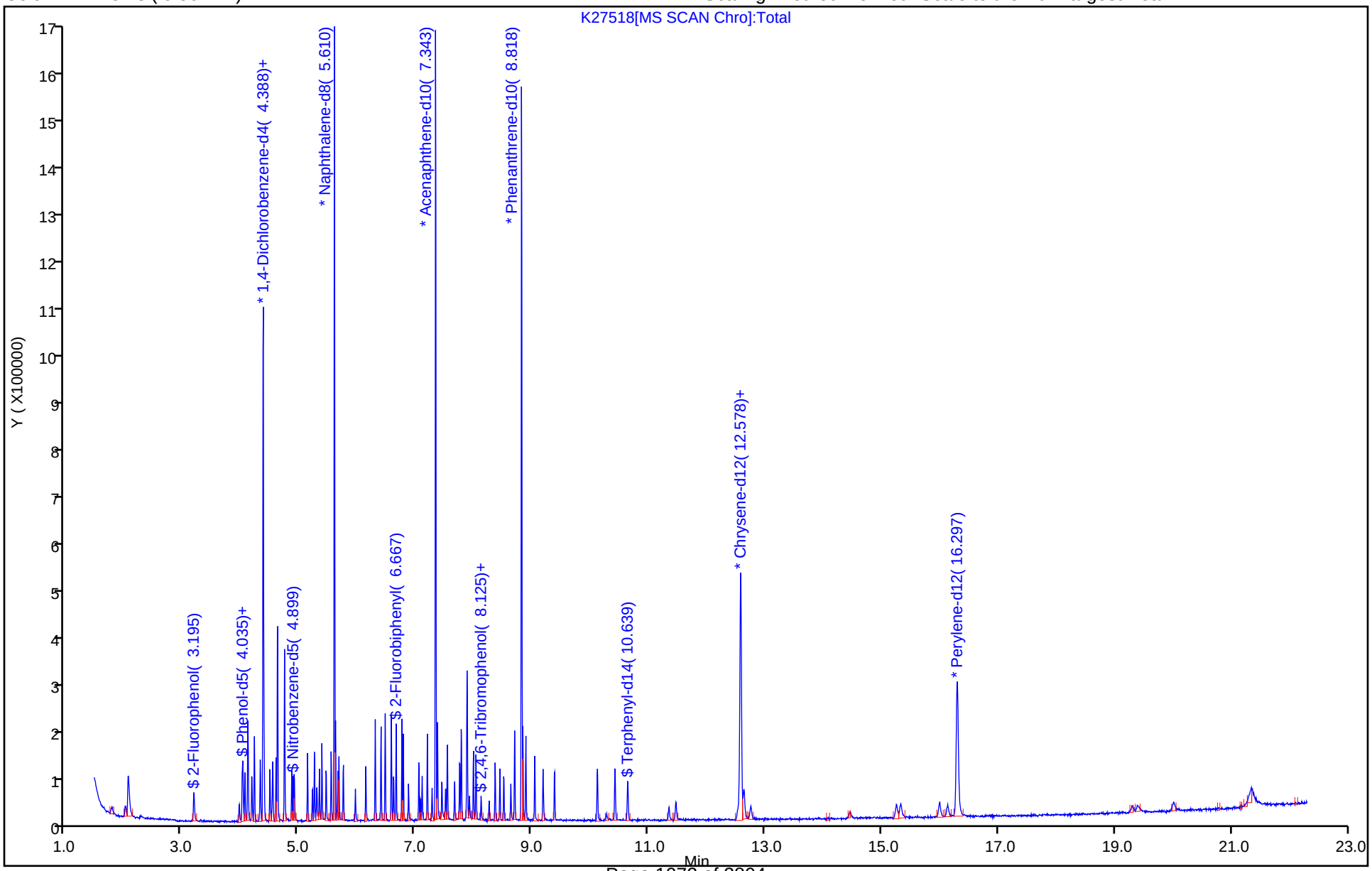
Report Date: 13-Nov-2018 11:59:15 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27518.D

Injection Date:	12-Nov-2018 15:25:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD004 HSL			Worklist Smp#:	5
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

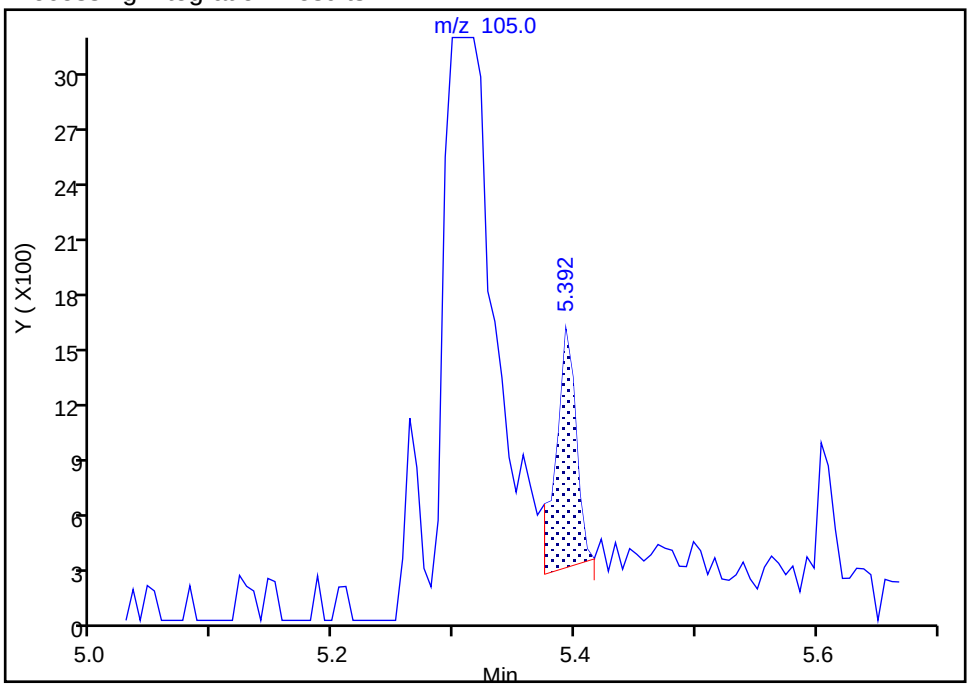
Data File:	\\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27518.D				
Injection Date:	12-Nov-2018 15:25:30	Instrument ID:	SMS_K		
Lims ID:	STD004 HSL				
Client ID:					
Operator ID:	KIEKELD	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	0.5 ul	Dil. Factor:	1.0000		
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		
Column:	VF-5ms (0.50 mm)	Detector	MS SCAN		

68 Benzoic acid, CAS: 65-85-0

Signal: 1

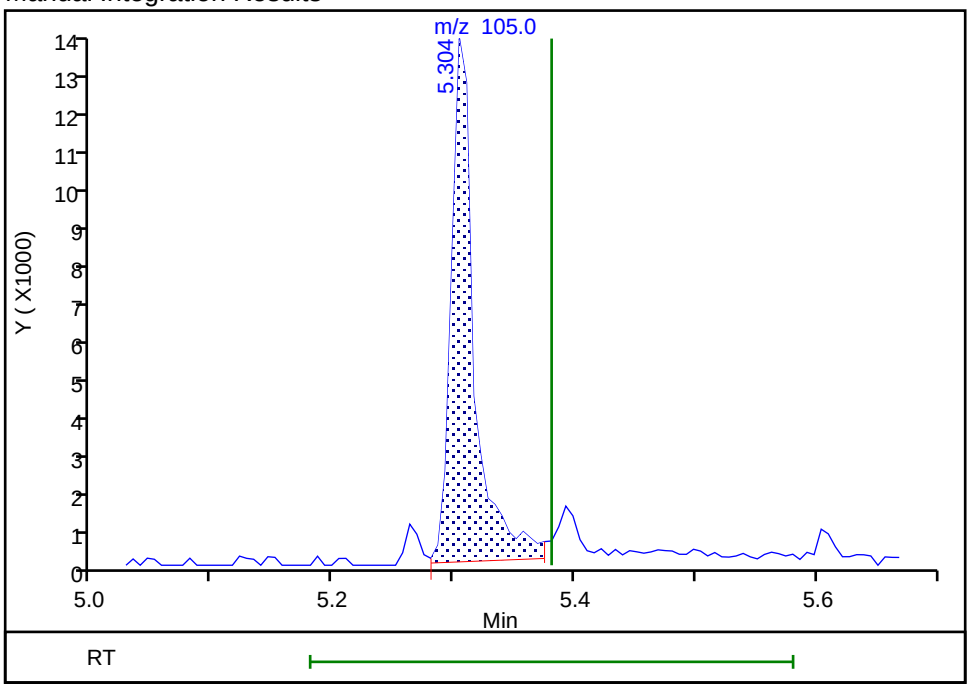
Processing Integration Results

RT: 5.39
Area: 1484
Amount: 10.586077
Amount Units: ug/ml



Manual Integration Results

RT: 5.30
Area: 18466
Amount: 11.980123
Amount Units: ug/ml



Reviewer: kiekeld, 13-Nov-2018 10:26:41

Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27519.D
Lims ID: STD010 HSL
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Nov-2018 15:54:30 ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD010 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:17 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:28:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	161120	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	637396	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	93	316601	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	503585	40.0	40.0	
* 5 Chrysene-d12	240	12.584	12.590	-0.006	99	344337	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	97	267529	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	57200	10.0	9.62	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	95	69617	10.0	10.2	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	57259	10.0	10.1	
$ 11 2-Fluorobiphenyl	172	6.667	6.673	-0.006	100	120139	10.0	10.8	
$ 12 2,4,6-Tribromophenol	330	8.124	8.130	-0.006	88	10296	10.0	9.69	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	92069	10.0	10.7	
19 1,4-Dioxane	88	1.791	1.785	0.006	97	25950	10.0	9.85	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	89	37499	10.0	9.58	
21 Pyridine	79	2.073	2.067	0.006	85	128987	20.0	20.2	
32 Phenol	94	4.035	4.041	-0.006	97	72199	10.0	10.2	
34 Aniline	93	4.070	4.070	0.000	97	81566	10.0	9.68	
35 Alpha Methyl Styrene	118	4.123	4.129	-0.006	92	62540	10.0	10.6	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	93	59319	10.0	11.1	
38 n-Decane	43	4.235	4.235	0.000	94	83264	10.0	10.5	
39 2-Chlorophenol	128	4.188	4.194	-0.006	98	59275	10.0	10.0	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	67895	10.0	10.4	
42 1,4-Dichlorobenzene	146	4.399	4.405	-0.006	95	67353	10.0	10.4	
43 Benzyl alcohol	108	4.499	4.505	-0.006	93	37654	10.0	9.85	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	96	63495	10.0	10.3	
45 2-Methylphenol	108	4.605	4.611	-0.006	95	56786	10.0	10.5	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	66	112210	10.0	9.79	
47 Indene	116	4.634	4.634	0.000	92	206592	20.0	19.6	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	79	56789	10.0	11.2	
50 3-Methylphenol	108	4.752	4.752	0.000	87	56789	10.0	11.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	95	56789	10.0	11.2	
52 N-Nitrosodi-n-propylamine	70	4.752	4.758	-0.006	95	40552	10.0	11.3	
54 Acetophenone	105	4.752	4.758	-0.006	96	81703	10.0	9.54	
58 Hexachloroethane	117	4.875	4.875	0.000	93	24262	10.0	9.97	
59 Nitrobenzene	77	4.916	4.922	-0.006	94	59190	10.0	10.4	
63 Isophorone	82	5.146	5.152	-0.006	98	105139	10.0	10.5	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	28817	10.0	9.83	
65 2,4-Dimethylphenol	107	5.263	5.269	-0.006	95	58478	10.0	10.8	
68 Benzoic acid	105	5.316	5.381	-0.065	91	51263	20.0	20.6	a
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	97	67005	10.0	10.8	
71 3,5-Dimethylphenol	107	5.392	5.398	-0.006	84	58060	10.0	10.7	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	95	45348	10.0	10.3	
76 1,2,4-Trichlorobenzene	180	5.551	5.557	-0.006	94	53277	10.0	10.8	
79 Naphthalene	128	5.627	5.633	-0.006	97	168243	10.0	10.9	
80 4-Chloroaniline	127	5.668	5.674	-0.006	96	61593	10.0	9.81	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	96	45279	10.0	10.6	
83 Hexachlorobutadiene	225	5.763	5.763	-0.001	96	28876	10.0	10.8	
86 Caprolactam	55	5.968	5.998	-0.030	75	24356	10.0	9.74	
89 4-Chloro-3-methylphenol	107	6.144	6.150	-0.006	97	45311	10.0	10.6	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	121187	10.0	11.2	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	110589	10.0	11.0	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	96	25385	10.0	9.32	
98 1,2,4,5-Tetrachlorobenzene	216	6.479	6.485	-0.006	97	49084	10.0	11.3	
100 2,4,6-Trichlorophenol	196	6.585	6.591	-0.006	78	29264	10.0	10.5	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	91	52465	10.0	10.6	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	31522	10.0	9.98	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	95	133746	10.0	10.6	
106 2-Chloronaphthalene	162	6.791	6.797	-0.006	95	105223	10.0	11.0	
108 2-Nitroaniline	65	6.879	6.885	-0.006	85	25774	10.0	9.51	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	100186	10.0	10.6	
112 1,3-Dinitrobenzene	168	7.085	7.085	-0.001	88	13475	10.0	8.61	
113 2,6-Dinitrotoluene	165	7.114	7.120	-0.006	95	23587	10.0	9.94	
114 Acenaphthylene	152	7.202	7.208	-0.006	98	149283	10.0	10.5	
115 3-Nitroaniline	138	7.284	7.290	-0.006	96	23478	10.0	9.43	
117 Acenaphthene	153	7.378	7.378	0.000	94	103960	10.0	11.1	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	83	9433	20.0	20.1	
119 4-Nitrophenol	109	7.449	7.461	-0.012	94	20658	20.0	18.5	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	94	27384	10.0	9.54	
123 Dibenzofuran	168	7.549	7.549	0.000	97	142224	10.0	10.9	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	21606	10.0	9.31	
127 Hexadecane	57	7.784	7.790	-0.006	91	89440	10.0	10.8	
130 Diethyl phthalate	149	7.760	7.766	-0.006	98	95303	10.0	10.5	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	94	52047	10.0	11.2	
135 Fluorene	166	7.889	7.890	-0.001	96	111895	10.0	11.4	
138 4-Nitroaniline	138	7.889	7.895	-0.006	82	21367	10.0	9.51	
139 4,6-Dinitro-2-methylphenol	198	7.925	7.931	-0.006	81	17868	20.0	20.7	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	63	76728	10.0	10.6	
142 Diphenylamine	169	7.995	7.995	0.000	95	76728	8.50	9.08	
143 1,2-Diphenylhydrazine	77	8.036	8.042	-0.006	41	100799	10.1	10.5	
144 Azobenzene	77	8.036	8.042	-0.006	98	100799	10.0	10.3	
147 2,4,6 - Tribromophenol	330	8.124	8.130	-0.006	88	10242	10.0	9.62	
156 4-Bromophenyl phenyl ether	248	8.365	8.371	-0.006	68	28209	10.0	10.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.448	8.454	-0.006	94	27362	10.0	10.7	
159 Atrazine	200	8.518	8.524	-0.006	90	22988	10.0	9.95	
161 n-Octadecane	85	8.700	8.706	-0.006	92	29488	10.0	10.4	
163 Pentachlorophenol	266	8.636	8.642	-0.006	92	20989	20.0	20.7	
168 Phenanthrene	178	8.841	8.847	-0.006	97	146936	10.0	10.9	
169 Anthracene	178	8.894	8.894	0.000	97	142295	10.0	10.5	
170 Carbazole	167	9.047	9.047	0.000	95	121915	10.0	10.4	
171 Alachlor	188	9.188	9.188	0.000	92	15651	10.0	9.78	
173 Di-n-butyl phthalate	149	9.382	9.388	-0.006	99	130696	10.0	9.88	
179 Fluoranthene	202	10.122	10.122	0.000	97	130983	10.0	10.2	
182 Pyrene	202	10.422	10.428	-0.006	97	129402	10.0	10.5	
188 Famphur	218	11.350	11.356	-0.006	86	27194	10.0	8.72	
190 Butyl benzyl phthalate	149	11.468	11.474	-0.006	98	39311	10.0	8.53	
195 Bis(2-ethylhexyl) phthalat	149	12.754	12.755	0.000	97	40829	10.0	9.08	
197 3,3'-Dichlorobenzidine	252	12.525	12.537	-0.012	74	23615	10.0	8.95	
198 Benzo[a]anthracene	228	12.561	12.566	-0.005	98	99144	10.0	9.67	
199 Chrysene	228	12.637	12.649	-0.012	98	102188	10.0	9.74	
201 Di-n-octyl phthalate	149	14.452	14.464	-0.012	99	46296	10.0	11.5	
203 Benzo[b]fluoranthene	252	15.252	15.269	-0.017	97	74045	10.0	9.68	
204 Benzo[k]fluoranthene	252	15.322	15.340	-0.018	99	86398	10.0	9.82	
206 Benzo[e]pyrene	252	15.992	16.004	-0.012	97	73491	10.0	9.64	
207 Benzo[a]pyrene	252	16.133	16.145	-0.012	77	66671	10.0	8.76	
213 Dibenz(a,h)anthracene	278	19.400	19.417	-0.017	95	52106	10.0	9.30	
214 Indeno[1,2,3-cd]pyrene	276	19.300	19.312	-0.012	98	47569	10.0	9.37	
215 Benzo[g,h,i]perylene	276	20.011	20.028	-0.017	98	61936	10.0	8.85	
S 217 Total Cresols	108				0			21.7	
S 218 Methyl Phenols,Total	108				0			21.7	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA010_00039 Amount Added: 200.00 Units: uL

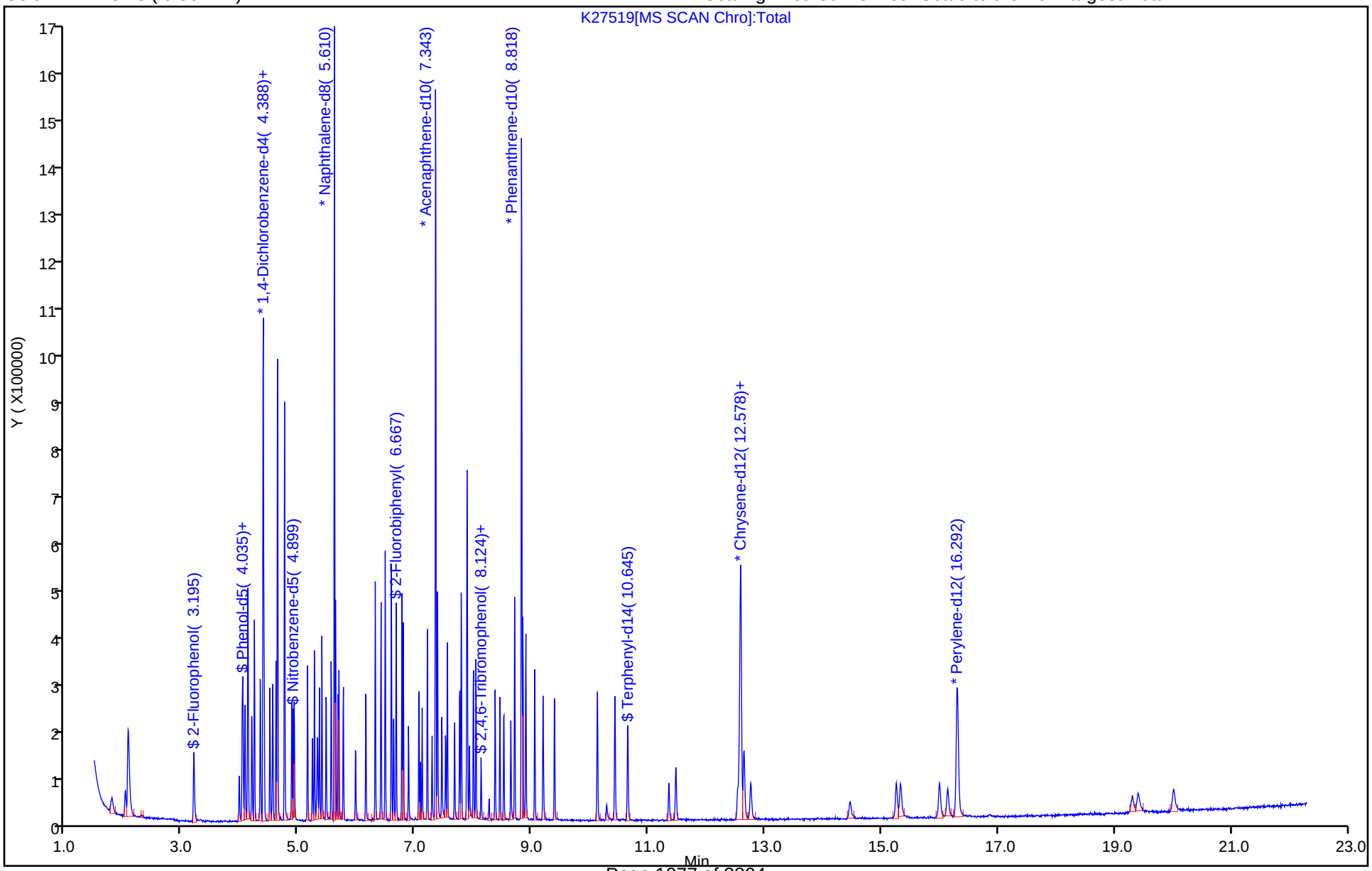
Report Date: 13-Nov-2018 11:59:18 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27519.D

Injection Date:	12-Nov-2018 15:54:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD010 HSL			Worklist Smp#:	6
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

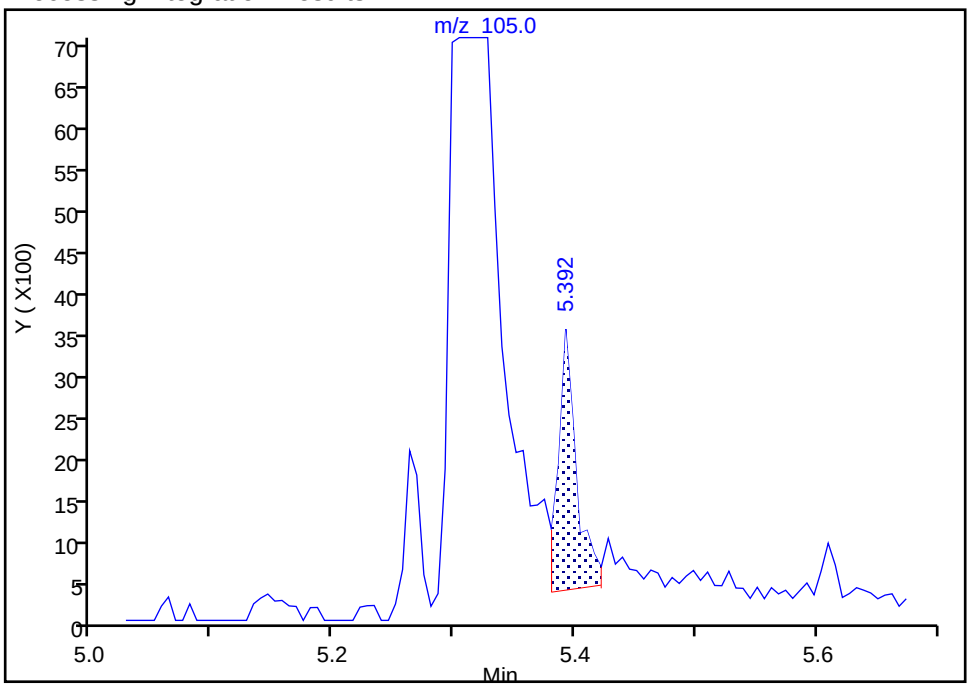
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27519.D
Injection Date: 12-Nov-2018 15:54:30 Instrument ID: SMS_K
Lims ID: STD010 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

68 Benzoic acid, CAS: 65-85-0

Signal: 1

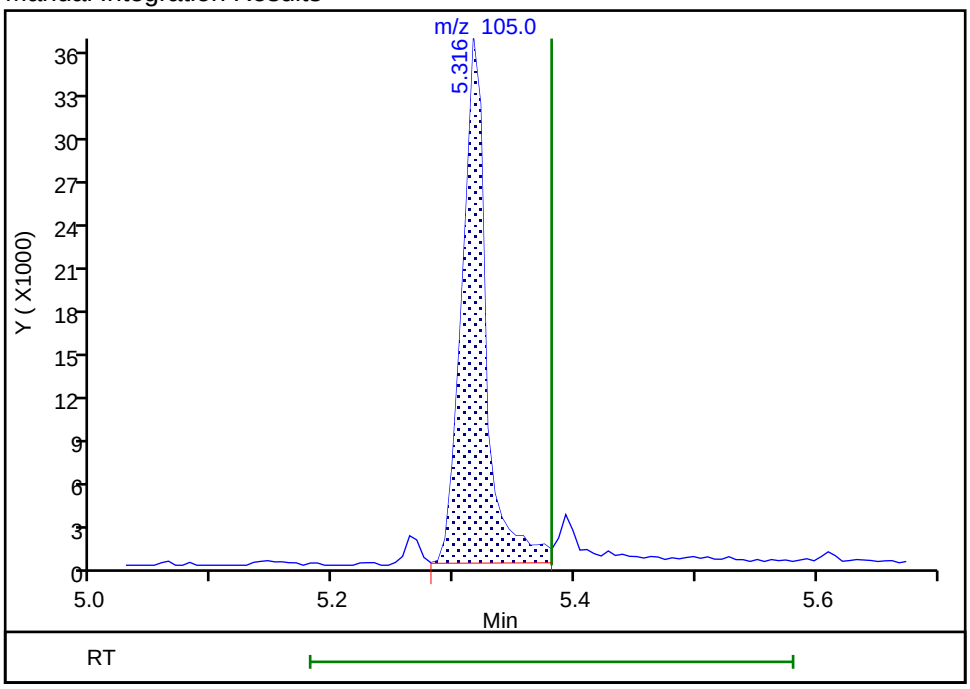
Processing Integration Results

RT: 5.39
Area: 3340
Amount: 6.091943
Amount Units: ug/ml



Manual Integration Results

RT: 5.32
Area: 51263
Amount: 20.553675
Amount Units: ug/ml



Reviewer: kiekeld, 13-Nov-2018 10:28:15
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27520.D
Lims ID: STD020 HSL
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Nov-2018 16:23:30 ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD020 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:20 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:29:33

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	160260	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	652114	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	94	313209	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	489409	40.0	40.0	
* 5 Chrysene-d12	240	12.584	12.590	-0.006	99	342396	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	98	277882	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	118322	20.0	20.0	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	95	141956	20.0	21.0	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	117194	20.0	20.2	
$ 11 2-Fluorobiphenyl	172	6.667	6.673	-0.006	100	232109	20.0	21.2	
$ 12 2,4,6-Tribromophenol	330	8.124	8.130	-0.006	89	20800	20.0	19.8	
$ 13 Terphenyl-d14	244	10.639	10.645	-0.006	98	178652	20.0	20.9	
19 1,4-Dioxane	88	1.791	1.785	0.006	97	52907	20.0	20.2	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	89	76796	20.0	19.7	
21 Pyridine	79	2.067	2.067	0.000	85	253814	40.0	40.0	
32 Phenol	94	4.035	4.041	-0.006	98	148322	20.0	21.0	
34 Aniline	93	4.070	4.070	0.000	97	175185	20.0	20.9	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	93	126344	20.0	21.5	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	96	115967	20.0	21.7	
38 n-Decane	43	4.235	4.235	0.000	94	166185	20.0	21.0	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	122879	20.0	20.9	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	135903	20.0	21.0	
42 1,4-Dichlorobenzene	146	4.399	4.405	-0.006	94	136149	20.0	21.0	
43 Benzyl alcohol	108	4.499	4.505	-0.006	94	78795	20.0	20.7	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	129118	20.0	21.0	
45 2-Methylphenol	108	4.605	4.611	-0.006	97	111029	20.0	20.6	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	92	218454	20.0	20.5	
47 Indene	116	4.634	4.634	0.000	91	397201	40.0	40.7	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	78	110970	20.0	22.0	
50 3-Methylphenol	108	4.752	4.752	0.000	88	110970	20.0	22.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	94	110970	20.0	22.0	
52 N-Nitrosodi-n-propylamine	70	4.752	4.758	-0.006	91	80454	20.0	22.5	
54 Acetophenone	105	4.752	4.758	-0.006	95	159609	20.0	20.2	
58 Hexachloroethane	117	4.875	4.875	0.000	93	48933	20.0	20.2	
59 Nitrobenzene	77	4.916	4.922	-0.006	94	120151	20.0	20.7	
63 Isophorone	82	5.146	5.152	-0.006	98	210192	20.0	20.5	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	59166	20.0	19.7	
65 2,4-Dimethylphenol	107	5.263	5.269	-0.006	95	114731	20.0	20.8	
68 Benzoic acid	105	5.334	5.381	-0.047	90	122013	40.0	38.0	a
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	98	135621	20.0	21.3	
71 3,5-Dimethylphenol	107	5.392	5.398	-0.006	84	118841	20.0	21.5	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	94817	20.0	21.0	
76 1,2,4-Trichlorobenzene	180	5.551	5.557	-0.006	94	106615	20.0	21.1	
79 Naphthalene	128	5.627	5.633	-0.006	98	335110	20.0	21.3	
80 4-Chloroaniline	127	5.668	5.674	-0.006	96	134743	20.0	21.0	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	96	90137	20.0	20.5	
83 Hexachlorobutadiene	225	5.762	5.763	-0.001	96	56083	20.0	20.5	
86 Caprolactam	55	5.974	5.998	-0.024	75	50055	20.0	19.6	
89 4-Chloro-3-methylphenol	107	6.144	6.150	-0.006	96	90149	20.0	20.6	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	231609	20.0	21.0	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	217651	20.0	21.1	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	76	55220	20.0	20.5	
98 1,2,4,5-Tetrachlorobenzene	216	6.479	6.485	-0.006	97	96477	20.0	21.6	
100 2,4,6-Trichlorophenol	196	6.585	6.591	-0.006	94	59367	20.0	21.5	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	96	106971	20.0	21.9	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	63495	20.0	20.3	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	94	262928	20.0	21.0	
106 2-Chloronaphthalene	162	6.791	6.797	-0.006	96	197412	20.0	20.8	
108 2-Nitroaniline	65	6.879	6.885	-0.006	86	53038	20.0	19.8	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	191578	20.0	20.5	
112 1,3-Dinitrobenzene	168	7.084	7.085	-0.001	88	29759	20.0	19.2	
113 2,6-Dinitrotoluene	165	7.114	7.120	-0.006	95	47430	20.0	20.2	
114 Acenaphthylene	152	7.202	7.208	-0.006	98	295459	20.0	20.9	
115 3-Nitroaniline	138	7.284	7.290	-0.006	94	47735	20.0	19.4	
117 Acenaphthene	153	7.378	7.378	0.000	93	193569	20.0	20.8	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	86	27820	40.0	38.8	
119 4-Nitrophenol	109	7.449	7.461	-0.012	96	42951	40.0	38.8	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	56145	20.0	19.8	
123 Dibenzofuran	168	7.549	7.549	0.000	97	270931	20.0	21.0	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	72	46070	20.0	20.1	
127 Hexadecane	57	7.784	7.790	-0.006	91	174776	20.0	21.3	
130 Diethyl phthalate	149	7.760	7.766	-0.006	98	184562	20.0	20.5	
134 4-Chlorophenyl phenyl ethe	204	7.878	7.884	-0.006	94	95792	20.0	20.9	
135 Fluorene	166	7.889	7.890	-0.001	96	208104	20.0	21.3	
138 4-Nitroaniline	138	7.889	7.895	-0.006	57	43117	20.0	19.4	
139 4,6-Dinitro-2-methylphenol	198	7.925	7.931	-0.006	82	41831	40.0	37.3	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	77	145028	20.0	20.6	
142 Diphenylamine	169	7.995	7.995	0.000	95	145028	17.0	17.3	
143 1,2-Diphenylhydrazine	77	8.036	8.042	-0.006	41	201165	20.2	21.1	
144 Azobenzene	77	8.036	8.042	-0.006	98	201165	20.0	20.9	
147 2,4,6 - Tribromophenol	330	8.124	8.130	-0.006	89	20800	20.0	19.8	
156 4-Bromophenyl phenyl ether	248	8.365	8.371	-0.006	69	52862	20.0	20.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.448	8.454	-0.006	93	52110	20.0	21.0	
159 Atrazine	200	8.518	8.524	-0.006	91	45846	20.0	20.4	
161 n-Octadecane	85	8.700	8.706	-0.006	92	57732	20.0	21.0	
163 Pentachlorophenol	266	8.636	8.642	-0.006	90	42663	40.0	36.8	
168 Phenanthrene	178	8.841	8.847	-0.006	97	276647	20.0	21.1	
169 Anthracene	178	8.894	8.894	0.000	97	273627	20.0	20.8	
170 Carbazole	167	9.047	9.047	0.000	95	238147	20.0	20.8	
171 Alachlor	188	9.188	9.188	0.000	92	30752	20.0	19.8	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	263974	20.0	20.5	
179 Fluoranthene	202	10.122	10.122	0.000	98	253483	20.0	20.4	
182 Pyrene	202	10.422	10.428	-0.006	97	257256	20.0	21.1	
188 Famphur	218	11.350	11.356	-0.006	85	59495	20.0	19.2	
190 Butyl benzyl phthalate	149	11.468	11.474	-0.006	97	86998	20.0	19.0	
195 Bis(2-ethylhexyl) phthalat	149	12.754	12.755	0.000	97	93418	20.0	17.1	
197 3,3'-Dichlorobenzidine	252	12.531	12.537	-0.006	73	50201	20.0	17.7	
198 Benzo[a]anthracene	228	12.561	12.566	-0.006	98	201060	20.0	19.7	
199 Chrysene	228	12.637	12.649	-0.012	97	215972	20.0	20.7	
201 Di-n-octyl phthalate	149	14.458	14.464	-0.006	99	113590	20.0	18.7	
203 Benzo[b]fluoranthene	252	15.252	15.269	-0.017	97	153020	20.0	19.3	
204 Benzo[k]fluoranthene	252	15.328	15.340	-0.012	99	183109	20.0	20.0	
206 Benzo[e]pyrene	252	15.992	16.004	-0.012	97	153199	20.0	19.3	
207 Benzo[a]pyrene	252	16.139	16.145	-0.006	83	147726	20.0	18.7	
213 Dibenz(a,h)anthracene	278	19.406	19.417	-0.011	94	112845	20.0	17.7	
214 Indeno[1,2,3-cd]pyrene	276	19.300	19.312	-0.012	98	105557	20.0	17.0	
215 Benzo[g,h,i]perylene	276	20.017	20.028	-0.011	98	134918	20.0	18.6	
S 217 Total Cresols	108				0			42.6	
S 218 Methyl Phenols,Total	108				0			42.6	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA020_00039 Amount Added: 200.00 Units: uL

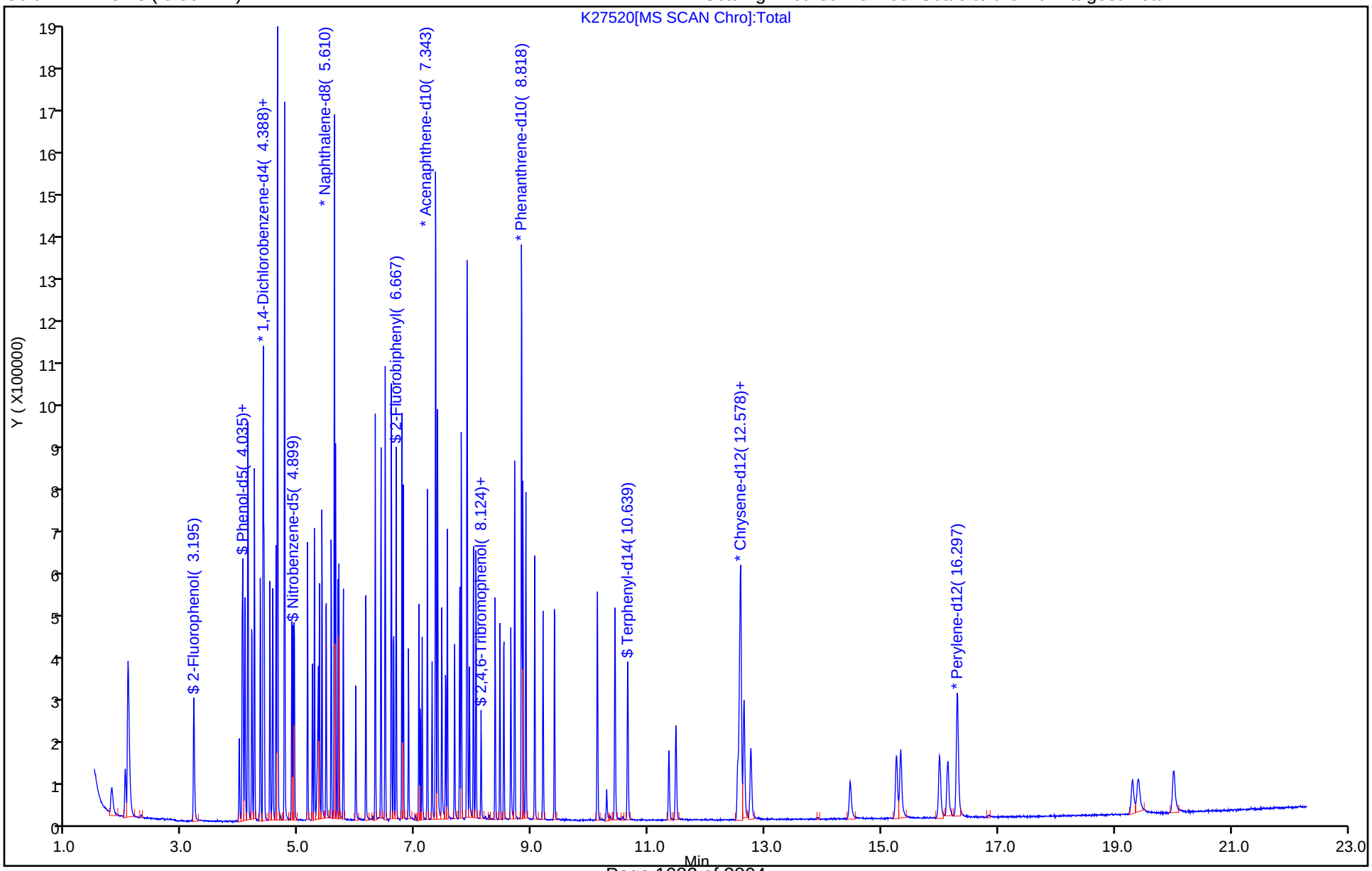
Report Date: 13-Nov-2018 11:59:21 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27520.D

Injection Date:	12-Nov-2018 16:23:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD020 HSL			Worklist Smp#:	7
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

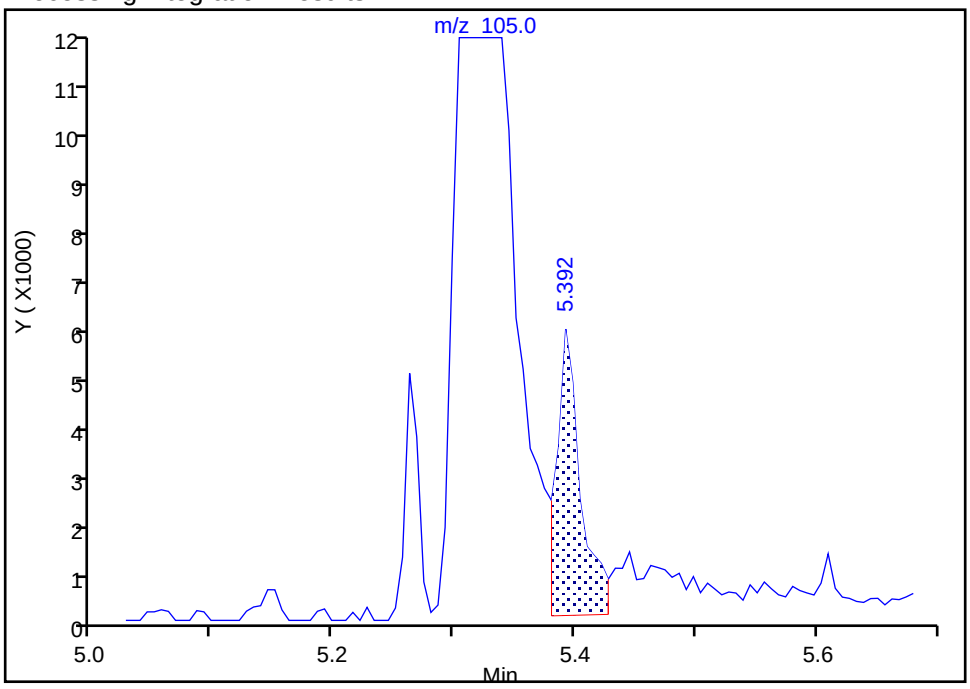
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27520.D
Injection Date: 12-Nov-2018 16:23:30 Instrument ID: SMS_K
Lims ID: STD020 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

68 Benzoic acid, CAS: 65-85-0

Signal: 1

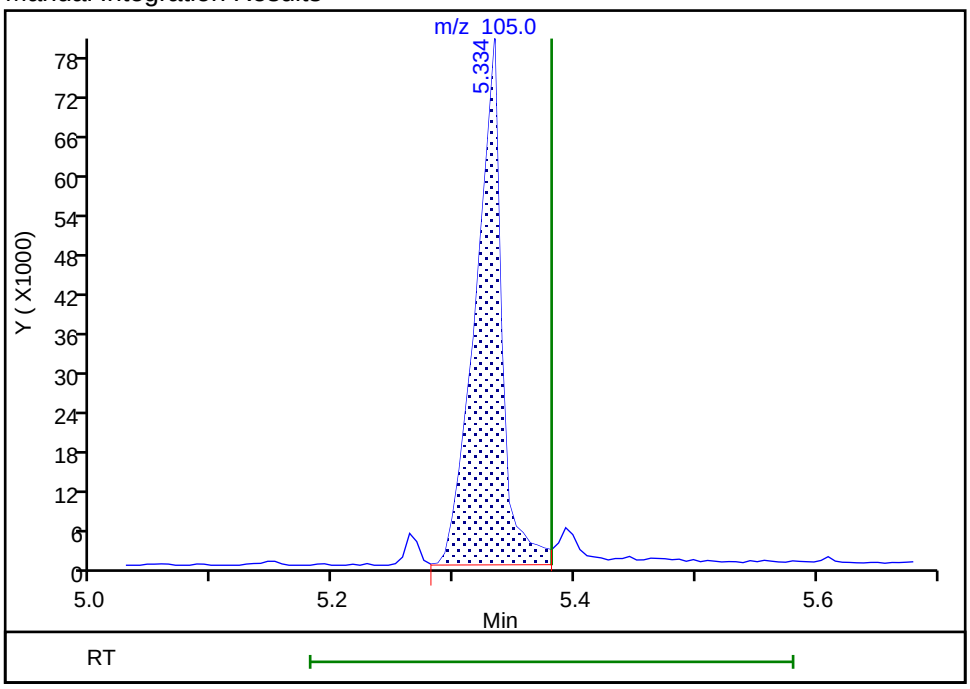
Processing Integration Results

RT: 5.39
Area: 7922
Amount: 5.786665
Amount Units: ug/ml



Manual Integration Results

RT: 5.33
Area: 122013
Amount: 37.982393
Amount Units: ug/ml



Reviewer: kiekeld, 13-Nov-2018 10:29:08
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27521.D
Lims ID: STD050 HSL
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 12-Nov-2018 16:52:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD050 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:23 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:31:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	161661	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	649913	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	95	309891	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	97	482728	40.0	40.0	
* 5 Chrysene-d12	240	12.584	12.590	-0.006	99	357454	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	98	297301	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	305386	50.0	51.2	
$ 8 Phenol-d5	99	4.023	4.029	-0.006	96	355542	50.0	52.1	
$ 9 Nitrobenzene-d5	82	4.899	4.905	-0.006	94	299123	50.0	51.8	
$ 11 2-Fluorobiphenyl	172	6.667	6.673	-0.006	100	548658	50.0	50.5	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	94	53654	50.0	51.6	
$ 13 Terphenyl-d14	244	10.639	10.645	-0.006	98	446379	50.0	50.0	
19 1,4-Dioxane	88	1.785	1.785	0.000	96	131239	50.0	49.6	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	88	198337	50.0	50.5	
21 Pyridine	79	2.067	2.067	0.000	84	639736	100.0	99.9	
32 Phenol	94	4.041	4.041	0.000	98	365423	50.0	51.4	
34 Aniline	93	4.070	4.070	0.000	97	447487	50.0	53.0	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	93	311084	50.0	52.4	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	92	280605	50.0	52.1	
38 n-Decane	43	4.235	4.235	0.000	94	410700	50.0	51.5	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	305007	50.0	51.4	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	330067	50.0	50.6	
42 1,4-Dichlorobenzene	146	4.399	4.405	-0.006	94	334619	50.0	51.3	
43 Benzyl alcohol	108	4.499	4.505	-0.006	94	198281	50.0	51.7	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	96	315295	50.0	50.8	
45 2-Methylphenol	108	4.605	4.611	-0.006	96	279041	50.0	51.4	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	64	504032	50.0	50.9	
47 Indene	116	4.634	4.634	0.000	92	934303	100.0	103.2	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	78	275215	50.0	54.1	
50 3-Methylphenol	108	4.752	4.752	0.000	89	275215	50.0	54.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.752	4.752	0.000	92	275215	50.0	54.1	
52 N-Nitrosodi-n-propylamine	70	4.752	4.758	-0.006	88	188873	50.0	52.5	
54 Acetophenone	105	4.758	4.758	0.000	92	378102	50.0	51.6	
58 Hexachloroethane	117	4.875	4.875	0.000	96	126661	50.0	51.9	
59 Nitrobenzene	77	4.922	4.922	0.000	93	294116	50.0	50.8	
63 Isophorone	82	5.151	5.152	-0.001	98	522490	50.0	51.2	
64 2-Nitrophenol	139	5.234	5.234	0.000	93	160413	50.0	53.7	
65 2,4-Dimethylphenol	107	5.263	5.269	-0.006	95	285083	50.0	51.8	
68 Benzoic acid	105	5.363	5.381	-0.018	90	349055	100.0	95.2	a
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	97	330079	50.0	52.0	
71 3,5-Dimethylphenol	107	5.392	5.398	-0.006	84	288027	50.0	52.3	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	95	234732	50.0	52.2	
76 1,2,4-Trichlorobenzene	180	5.551	5.557	-0.006	94	257693	50.0	51.1	
79 Naphthalene	128	5.627	5.633	-0.006	98	800761	50.0	51.1	
80 4-Chloroaniline	127	5.669	5.674	-0.005	96	339141	50.0	53.0	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	96	224979	50.0	51.5	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	96	138975	50.0	51.0	
86 Caprolactam	55	5.986	5.998	-0.012	75	129577	50.0	50.8	
89 4-Chloro-3-methylphenol	107	6.150	6.150	0.000	97	223076	50.0	51.0	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	96	569115	50.0	51.8	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	531192	50.0	51.8	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	97	144719	50.0	54.3	
98 1,2,4,5-Tetrachlorobenzene	216	6.479	6.485	-0.006	97	226363	50.0	51.0	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	92	142723	50.0	52.2	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	97	248080	50.0	51.3	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	158437	50.0	51.3	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	95	641700	50.0	51.8	
106 2-Chloronaphthalene	162	6.791	6.797	-0.006	96	481509	50.0	51.3	
108 2-Nitroaniline	65	6.879	6.885	-0.006	87	136888	50.0	51.6	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	466760	50.0	50.5	
112 1,3-Dinitrobenzene	168	7.085	7.085	0.000	87	80637	50.0	52.6	
113 2,6-Dinitrotoluene	165	7.114	7.120	-0.006	95	120015	50.0	51.7	
114 Acenaphthylene	152	7.202	7.208	-0.006	98	721183	50.0	51.6	
115 3-Nitroaniline	138	7.284	7.290	-0.006	96	124236	50.0	51.0	
117 Acenaphthene	153	7.378	7.378	0.000	93	468435	50.0	50.9	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	85	93710	100.0	101.4	
119 4-Nitrophenol	109	7.455	7.461	-0.006	93	114326	100.0	104.4	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	144725	50.0	51.5	
123 Dibenzofuran	168	7.549	7.549	0.000	97	645043	50.0	50.6	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	72	121660	50.0	53.6	
127 Hexadecane	57	7.784	7.790	-0.006	91	425883	50.0	52.5	
130 Diethyl phthalate	149	7.760	7.766	-0.006	98	451744	50.0	50.8	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	92	229841	50.0	50.7	
135 Fluorene	166	7.889	7.890	-0.001	95	491217	50.0	50.9	
138 4-Nitroaniline	138	7.889	7.895	-0.006	87	116495	50.0	53.0	
139 4,6-Dinitro-2-methylphenol	198	7.931	7.931	0.000	88	128991	100.0	97.8	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	63	352738	50.0	50.7	
142 Diphenylamine	169	7.995	7.995	0.000	95	352738	42.5	42.6	
143 1,2-Diphenylhydrazine	77	8.036	8.042	-0.006	43	486464	50.5	51.6	
144 Azobenzene	77	8.036	8.042	-0.006	98	486464	50.0	51.0	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	94	53654	50.0	51.5	
156 4-Bromophenyl phenyl ether	248	8.365	8.371	-0.006	69	131956	50.0	51.0	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.448	8.454	-0.006	93	122431	50.0	50.1	
159 Atrazine	200	8.518	8.524	-0.006	91	113470	50.0	51.2	
161 n-Octadecane	85	8.700	8.706	-0.006	92	140191	50.0	51.8	
163 Pentachlorophenol	266	8.636	8.642	-0.006	92	129030	100.0	100.7	
168 Phenanthrene	178	8.847	8.847	0.000	97	661531	50.0	51.1	
169 Anthracene	178	8.894	8.894	0.000	97	675825	50.0	52.0	
170 Carbazole	167	9.047	9.047	0.000	95	578565	50.0	51.3	
171 Alachlor	188	9.188	9.188	0.000	93	80219	50.0	52.3	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	658740	50.0	51.9	
179 Fluoranthene	202	10.122	10.122	0.000	98	623130	50.0	50.7	
182 Pyrene	202	10.422	10.428	-0.006	97	633882	50.0	49.7	
188 Famphur	218	11.350	11.356	-0.006	85	177444	50.0	54.8	
190 Butyl benzyl phthalate	149	11.468	11.474	-0.006	97	248334	50.0	51.9	
195 Bis(2-ethylhexyl) phthalat	149	12.754	12.755	0.000	97	298912	50.0	46.5	
197 3,3'-Dichlorobenzidine	252	12.531	12.537	-0.006	73	166265	50.0	53.3	
198 Benzo[a]anthracene	228	12.561	12.566	-0.005	99	537361	50.0	50.5	
199 Chrysene	228	12.637	12.649	-0.012	97	548948	50.0	50.4	
201 Di-n-octyl phthalate	149	14.458	14.464	-0.006	99	413485	50.0	47.3	
203 Benzo[b]fluoranthene	252	15.257	15.269	-0.012	98	433901	50.0	51.0	
204 Benzo[k]fluoranthene	252	15.328	15.340	-0.012	99	506646	50.0	51.8	
206 Benzo[e]pyrene	252	15.998	16.004	-0.006	97	434768	50.0	51.3	
207 Benzo[a]pyrene	252	16.133	16.145	-0.012	77	441504	50.0	52.2	
213 Dibenz(a,h)anthracene	278	19.406	19.417	-0.011	94	355242	50.0	49.2	
214 Indeno[1,2,3-cd]pyrene	276	19.306	19.312	-0.006	98	326812	50.0	44.2	
215 Benzo[g,h,i]perylene	276	20.017	20.028	-0.011	98	402717	50.0	51.8	
S 217 Total Cresols	108				0			105.5	
S 218 Methyl Phenols,Total	108				0			105.5	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MS-HSLA050_00040 Amount Added: 200.00 Units: uL

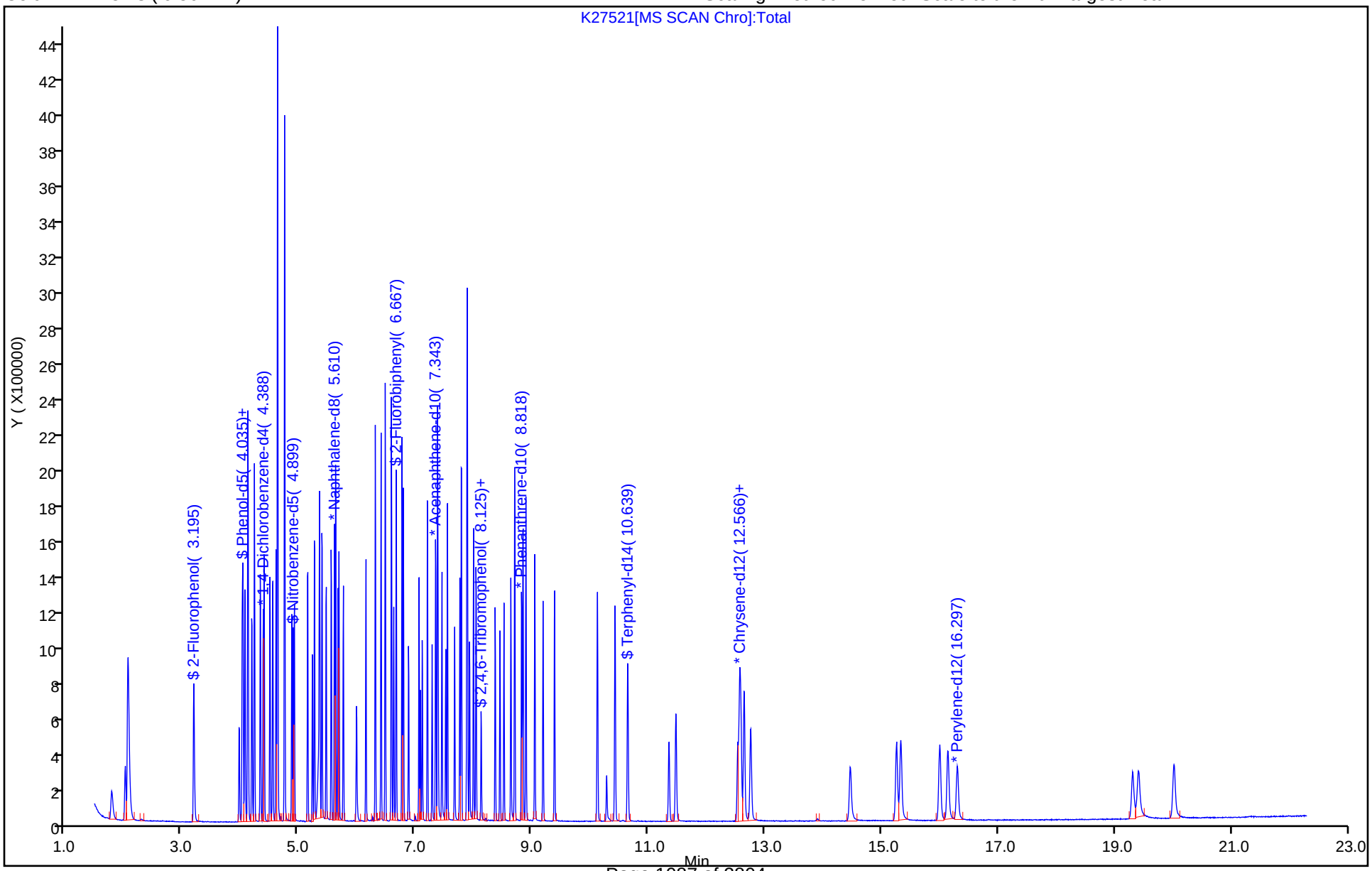
Report Date: 13-Nov-2018 11:59:24 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27521.D

Injection Date:	12-Nov-2018 16:52:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD050 HSL			Worklist Smp#:	8
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

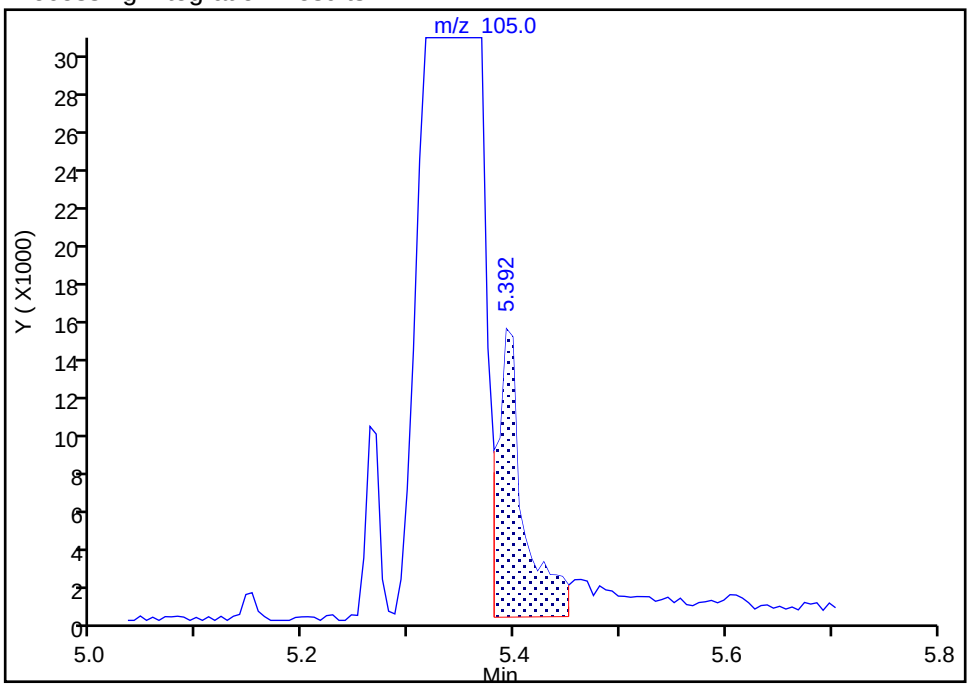
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27521.D
Injection Date: 12-Nov-2018 16:52:30 Instrument ID: SMS_K
Lims ID: STD050 HSL
Client ID:
Operator ID: KIEKELD ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

68 Benzoic acid, CAS: 65-85-0

Signal: 1

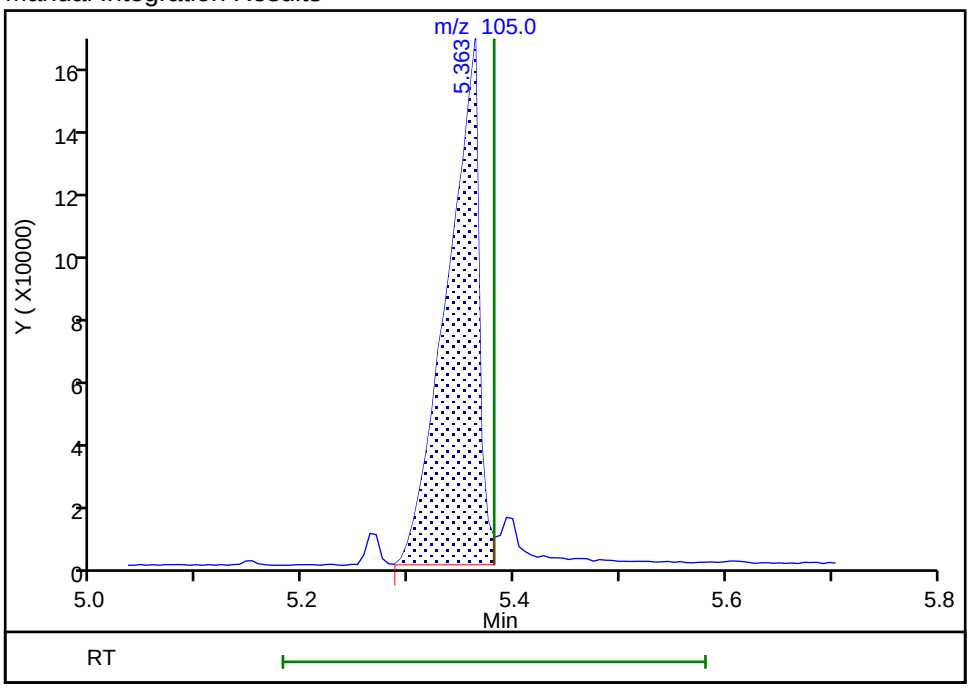
Processing Integration Results

RT: 5.39
Area: 25870
Amount: 10.863962
Amount Units: ug/ml



Manual Integration Results

RT: 5.36
Area: 349055
Amount: 95.160279
Amount Units: ug/ml



Reviewer: kiekeld, 13-Nov-2018 10:30:21
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27522.D
Lims ID: STD120 HSL
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 12-Nov-2018 17:21:30 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD120 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:26 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:31:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	148135	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	99	592974	40.0	40.0	
* 3 Acenaphthene-d10	164	7.349	7.349	0.000	96	277443	40.0	40.0	
* 4 Phenanthrene-d10	188	8.824	8.824	0.000	97	420612	40.0	40.0	
* 5 Chrysene-d12	240	12.590	12.590	0.000	99	314199	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	98	273317	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	93	666289	120.0	121.8	
$ 8 Phenol-d5	99	4.029	4.029	0.000	98	725010	120.0	115.9	
$ 9 Nitrobenzene-d5	82	4.905	4.905	0.000	92	618838	120.0	117.4	
$ 11 2-Fluorobiphenyl	172	6.673	6.673	0.000	100	1102284	120.0	113.4	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	93	113316	120.0	121.7	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	902409	120.0	115.1	
19 1,4-Dioxane	88	1.785	1.785	0.000	96	291003	120.0	120.1	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	87	435543	120.0	121.0	
21 Pyridine	79	2.067	2.067	0.000	84	1391751	240.0	237.3	
32 Phenol	94	4.041	4.041	0.000	98	753322	120.0	115.6	
34 Aniline	93	4.076	4.070	0.006	97	922267	120.0	119.1	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	94	629995	120.0	115.8	
36 Bis(2-chloroethyl)ether	93	4.123	4.117	0.006	97	549928	120.0	111.5	
38 n-Decane	43	4.235	4.235	0.000	94	857875	120.0	117.4	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	637497	120.0	117.2	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	693090	120.0	116.0	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	94	693185	120.0	115.9	
43 Benzyl alcohol	108	4.505	4.505	0.000	93	407977	120.0	116.0	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	656940	120.0	115.5	
45 2-Methylphenol	108	4.611	4.611	0.000	95	572885	120.0	115.2	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	92	935342	120.0	118.0	
47 Indene	116	4.634	4.634	0.000	91	1734609	240.0	238.0	
49 3 & 4 Methylphenol	108	4.758	4.752	0.006	66	501084	120.0	107.4	
50 3-Methylphenol	108	4.758	4.752	0.006	71	501084	120.0	107.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.758	4.752	0.006	68	501084	120.0	107.4	
52 N-Nitrosodi-n-propylamine	70	4.758	4.758	0.000	79	354366	120.0	107.4	
54 Acetophenone	105	4.758	4.758	0.000	79	699770	120.0	117.6	
58 Hexachloroethane	117	4.875	4.875	0.000	95	264156	120.0	118.1	
59 Nitrobenzene	77	4.922	4.922	0.000	93	607287	120.0	115.0	
63 Isophorone	82	5.152	5.152	0.000	98	1056965	120.0	113.5	
64 2-Nitrophenol	139	5.234	5.234	0.000	93	330343	120.0	121.2	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	94	567982	120.0	113.2	
68 Benzoic acid	105	5.392	5.381	0.011	85	829953	240.0	236.1	
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	97	649652	120.0	112.2	
71 3,5-Dimethylphenol	107	5.398	5.398	0.000	90	556813	120.0	110.8	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	478443	120.0	116.5	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	94	520813	120.0	113.1	
79 Naphthalene	128	5.633	5.633	0.000	98	1589119	120.0	111.1	
80 4-Chloroaniline	127	5.674	5.674	0.000	96	677743	120.0	116.1	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	96	451360	120.0	113.2	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	97	277806	120.0	111.8	
86 Caprolactam	55	6.009	5.998	0.011	74	280749	120.0	120.6	
89 4-Chloro-3-methylphenol	107	6.150	6.150	0.000	96	458386	120.0	114.9	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	1101727	120.0	109.9	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	1045992	120.0	111.8	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	95	293527	120.0	123.0	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	434374	120.0	107.2	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	92	283804	120.0	115.9	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	97	485871	120.0	112.2	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	325374	120.0	117.6	
104 1,1'-Biphenyl	154	6.773	6.773	0.000	94	1246665	120.0	112.5	
106 2-Chloronaphthalene	162	6.797	6.797	0.000	95	949825	120.0	113.1	
108 2-Nitroaniline	65	6.885	6.885	0.000	87	293186	120.0	123.5	
111 Dimethyl phthalate	163	7.067	7.061	0.006	99	948611	120.0	114.7	
112 1,3-Dinitrobenzene	168	7.085	7.085	0.000	87	174453	120.0	127.2	
113 2,6-Dinitrotoluene	165	7.120	7.120	0.000	95	249565	120.0	120.0	
114 Acenaphthylene	152	7.208	7.208	0.000	98	1435231	120.0	114.8	
115 3-Nitroaniline	138	7.290	7.290	0.000	95	264605	120.0	121.3	
117 Acenaphthene	153	7.378	7.378	0.000	93	928673	120.0	112.8	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	83	233753	240.0	236.3	
119 4-Nitrophenol	109	7.461	7.461	0.000	92	235624	240.0	240.4	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	306237	120.0	121.7	
123 Dibenzofuran	168	7.549	7.549	0.000	97	1289352	120.0	112.9	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	246394	120.0	121.2	
127 Hexadecane	57	7.790	7.790	0.000	92	819804	120.0	112.9	
130 Diethyl phthalate	149	7.766	7.766	0.000	98	901148	120.0	113.1	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	94	441882	120.0	108.9	
135 Fluorene	166	7.890	7.890	0.000	95	930427	120.0	107.8	
138 4-Nitroaniline	138	7.895	7.895	0.000	87	235862	120.0	119.7	
139 4,6-Dinitro-2-methylphenol	198	7.931	7.931	0.000	84	295376	240.0	242.6	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	63	714108	120.0	117.9	
142 Diphenylamine	169	7.995	7.995	0.000	95	714108	102.0	96.4	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	41	986445	121.3	116.8	
144 Azobenzene	77	8.042	8.042	0.000	97	986445	120.0	115.5	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	93	115024	120.0	123.3	
156 4-Bromophenyl phenyl ether	248	8.371	8.371	0.000	68	265613	120.0	117.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.454	8.454	0.000	94	247092	120.0	116.0	
159 Atrazine	200	8.524	8.524	0.000	91	231230	120.0	119.8	
161 n-Octadecane	85	8.700	8.706	-0.006	92	286472	120.0	121.4	
163 Pentachlorophenol	266	8.642	8.642	0.000	92	278575	240.0	240.8	
168 Phenanthrene	178	8.847	8.847	0.000	97	1287205	120.0	114.2	
169 Anthracene	178	8.894	8.894	0.000	97	1313990	120.0	116.1	
170 Carbazole	167	9.047	9.047	0.000	95	1160202	120.0	118.1	
171 Alachlor	188	9.188	9.188	0.000	93	160858	120.0	120.4	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	1326203	120.0	120.0	
179 Fluoranthene	202	10.122	10.122	0.000	98	1253693	120.0	117.2	
182 Pyrene	202	10.428	10.428	0.000	97	1290294	120.0	115.1	
188 Famphur	218	11.356	11.356	0.000	84	380659	120.0	133.7	
190 Butyl benzyl phthalate	149	11.474	11.474	0.000	97	545371	120.0	129.6	
195 Bis(2-ethylhexyl) phthalat	149	12.755	12.755	0.000	97	694101	120.0	118.0	
197 3,3'-Dichlorobenzidine	252	12.531	12.537	-0.006	73	339266	120.0	122.2	
198 Benzo[a]anthracene	228	12.566	12.566	0.000	99	1146414	120.0	122.6	
199 Chrysene	228	12.643	12.649	-0.006	97	1142542	120.0	119.3	
201 Di-n-octyl phthalate	149	14.464	14.464	0.000	99	1075381	120.0	117.9	
203 Benzo[b]fluoranthene	252	15.263	15.269	-0.006	97	977871	120.0	125.1	
204 Benzo[k]fluoranthene	252	15.340	15.340	0.000	99	1125661	120.0	125.3	
206 Benzo[e]pyrene	252	16.004	16.004	0.000	97	951997	120.0	122.2	
207 Benzo[a]pyrene	252	16.145	16.145	0.000	77	1033688	120.0	133.0	
213 Dibenz(a,h)anthracene	278	19.417	19.417	0.000	93	832493	120.0	123.0	
214 Indeno[1,2,3-cd]pyrene	276	19.318	19.312	0.006	98	782312	120.0	114.9	
215 Benzo[g,h,i]perylene	276	20.034	20.028	0.006	98	924989	120.0	129.4	
S 217 Total Cresols	108				0			222.6	
S 218 Methyl Phenols,Total	108				0			222.6	

Reagents:

MS-HSLA120_00039 Amount Added: 200.00 Units: uL

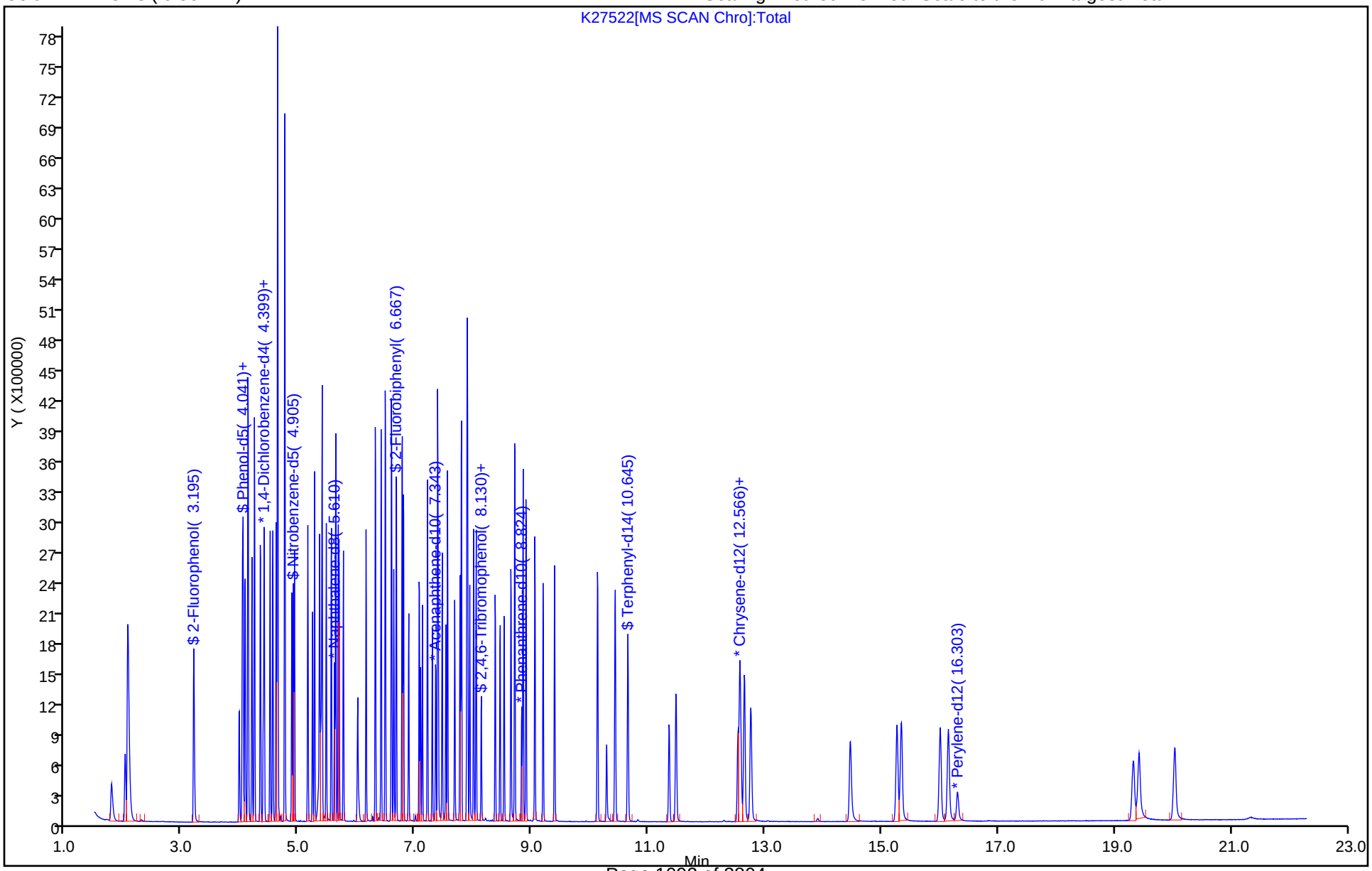
Report Date: 13-Nov-2018 11:59:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27522.D

Injection Date:	12-Nov-2018 17:21:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD120 HSL			Worklist Smp#:	9
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27523.D
Lims ID: STD160 HSL
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 12-Nov-2018 17:50:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD160 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:29 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:32:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	95	143099	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	557775	40.0	40.0	
* 3 Acenaphthene-d10	164	7.349	7.349	0.000	93	263837	40.0	40.0	
* 4 Phenanthrene-d10	188	8.824	8.824	0.000	97	418007	40.0	40.0	
* 5 Chrysene-d12	240	12.590	12.590	0.000	99	332730	40.0	40.0	
* 6 Perylene-d12	264	16.303	16.303	0.000	97	301196	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	94	846273	160.0	160.2	
$ 8 Phenol-d5	99	4.029	4.029	0.000	97	900726	160.0	149.0	
$ 9 Nitrobenzene-d5	82	4.905	4.905	0.000	94	779145	160.0	157.2	
$ 11 2-Fluorobiphenyl	172	6.673	6.673	0.000	100	1370430	160.0	148.3	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	93	146853	160.0	165.8	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	1220242	160.0	147.0	
19 1,4-Dioxane	88	1.785	1.785	0.000	97	366901	160.0	156.8	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	87	555023	160.0	159.7	
21 Pyridine	79	2.067	2.067	0.000	84	1747731	320.0	308.4	
32 Phenol	94	4.041	4.041	0.000	98	929978	160.0	147.7	
34 Aniline	93	4.076	4.070	0.006	96	1176857	160.0	157.3	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	93	770633	160.0	146.7	
36 Bis(2-chloroethyl)ether	93	4.123	4.117	0.006	92	670714	160.0	140.7	
38 n-Decane	43	4.235	4.235	0.000	94	1058317	160.0	149.9	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	799888	160.0	152.2	
40 1,3-Dichlorobenzene	146	4.341	4.335	0.006	98	862705	160.0	149.5	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	94	869430	160.0	150.5	
43 Benzyl alcohol	108	4.505	4.505	0.000	93	521996	160.0	153.7	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	830376	160.0	151.1	
45 2-Methylphenol	108	4.611	4.611	0.000	95	707944	160.0	147.3	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	63	1129823	160.0	161.7	
47 Indene	116	4.634	4.634	0.000	92	2083219	320.0	321.2	
49 3 & 4 Methylphenol	108	4.758	4.752	0.006	67	615314	160.0	136.5	
50 3-Methylphenol	108	4.758	4.752	0.006	74	615314	160.0	136.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.758	4.752	0.006	71	615314	160.0	136.5	
52 N-Nitrosodi-n-propylamine	70	4.758	4.758	0.000	79	440112	160.0	138.1	
54 Acetophenone	105	4.758	4.758	0.000	76	847040	160.0	159.4	
58 Hexachloroethane	117	4.875	4.875	0.000	95	323939	160.0	149.9	
59 Nitrobenzene	77	4.922	4.922	0.000	94	769048	160.0	154.9	
63 Isophorone	82	5.151	5.152	-0.001	98	1339577	160.0	153.0	
64 2-Nitrophenol	139	5.234	5.234	0.000	93	421572	160.0	164.4	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	94	705645	160.0	149.5	
68 Benzoic acid	105	5.410	5.381	0.029	93	1074213	320.0	322.1	
69 Bis(2-chloroethoxy)methane	93	5.357	5.351	0.006	98	812311	160.0	149.1	
71 3,5-Dimethylphenol	107	5.398	5.398	0.000	91	685333	160.0	145.0	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	95	594218	160.0	153.8	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	95	639841	160.0	147.8	
79 Naphthalene	128	5.633	5.633	0.000	98	1951562	160.0	145.0	
80 4-Chloroaniline	127	5.674	5.674	0.000	96	850849	160.0	154.9	
81 2,6-Dichlorophenol	162	5.692	5.692	0.000	96	570129	160.0	152.0	
83 Hexachlorobutadiene	225	5.762	5.763	-0.001	96	354708	160.0	151.8	
86 Caprolactam	55	6.015	5.998	0.017	74	363432	160.0	166.0	
89 4-Chloro-3-methylphenol	107	6.156	6.150	0.006	96	578839	160.0	154.3	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	94	1367650	160.0	145.0	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	95	1285338	160.0	146.0	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	95	366563	160.0	161.6	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	541081	160.0	141.9	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	92	354021	160.0	152.1	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	97	606382	160.0	147.3	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	411551	160.0	156.4	
104 1,1'-Biphenyl	154	6.773	6.773	0.000	95	1545973	160.0	146.7	
106 2-Chloronaphthalene	162	6.797	6.797	0.000	95	1175719	160.0	147.2	
108 2-Nitroaniline	65	6.885	6.885	0.000	86	372972	160.0	165.2	
111 Dimethyl phthalate	163	7.067	7.061	0.006	99	1180346	160.0	150.1	
112 1,3-Dinitrobenzene	168	7.090	7.085	0.005	90	230442	160.0	176.7	
113 2,6-Dinitrotoluene	165	7.120	7.120	0.000	95	313855	160.0	158.7	
114 Acenaphthylene	152	7.208	7.208	0.000	98	1779448	160.0	149.7	
115 3-Nitroaniline	138	7.290	7.290	0.000	95	347285	160.0	167.4	
117 Acenaphthene	153	7.378	7.378	0.000	94	1133494	160.0	144.8	
118 2,4-Dinitrophenol	184	7.396	7.390	0.006	83	328211	320.0	322.3	
119 4-Nitrophenol	109	7.461	7.461	0.000	95	310541	320.0	333.1	
122 2,4-Dinitrotoluene	165	7.525	7.519	0.006	95	394810	160.0	165.0	
123 Dibenzofuran	168	7.549	7.549	0.000	97	1597450	160.0	147.1	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	73	310696	160.0	160.7	
127 Hexadecane	57	7.790	7.790	0.000	91	1023746	160.0	148.2	
130 Diethyl phthalate	149	7.766	7.766	0.000	98	1138989	160.0	150.4	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	93	550852	160.0	142.8	
135 Fluorene	166	7.889	7.890	-0.001	95	1153370	160.0	140.5	
138 4-Nitroaniline	138	7.901	7.895	0.006	87	309819	160.0	165.4	
139 4,6-Dinitro-2-methylphenol	198	7.936	7.931	0.005	87	396005	320.0	324.2	
141 N-Nitrosodiphenylamine	169	8.001	7.995	0.006	63	907132	160.0	150.7	
142 Diphenylamine	169	8.001	7.995	0.006	95	907132	136.0	128.8	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	41	1224965	161.8	152.5	
144 Azobenzene	77	8.042	8.042	0.000	97	1224965	160.0	150.9	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	93	146853	160.0	165.6	
156 4-Bromophenyl phenyl ether	248	8.371	8.371	0.000	67	332486	160.0	148.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.453	8.454	-0.001	94	311825	160.0	147.3	
159 Atrazine	200	8.524	8.524	0.000	91	302087	160.0	157.5	
161 n-Octadecane	85	8.706	8.706	0.000	92	352348	160.0	150.2	
163 Pentachlorophenol	266	8.642	8.642	0.000	93	376339	320.0	325.3	
168 Phenanthrene	178	8.847	8.847	0.000	97	1636790	160.0	146.1	
169 Anthracene	178	8.900	8.894	0.006	97	1685118	160.0	149.8	
170 Carbazole	167	9.053	9.047	0.006	96	1502282	160.0	153.9	
171 Alachlor	188	9.188	9.188	0.000	94	218134	160.0	164.3	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	1737983	160.0	158.3	
179 Fluoranthene	202	10.128	10.122	0.006	98	1709394	160.0	160.7	
182 Pyrene	202	10.428	10.428	0.000	97	1737190	160.0	146.3	
188 Famphur	218	11.356	11.356	0.000	84	516322	160.0	171.3	
190 Butyl benzyl phthalate	149	11.474	11.474	0.000	97	785657	160.0	176.3	
195 Bis(2-ethylhexyl) phthalat	149	12.754	12.755	0.000	97	1017034	160.0	162.2	
197 3,3'-Dichlorobenzidine	252	12.537	12.537	0.000	75	487610	160.0	165.3	
198 Benzo[a]anthracene	228	12.572	12.566	0.006	98	1604483	160.0	162.0	
199 Chrysene	228	12.649	12.649	0.000	97	1613485	160.0	159.1	
201 Di-n-octyl phthalate	149	14.464	14.464	0.000	99	1644331	160.0	160.1	
203 Benzo[b]fluoranthene	252	15.269	15.269	0.000	97	1453264	160.0	168.7	
204 Benzo[k]fluoranthene	252	15.346	15.340	0.006	99	1614080	160.0	163.0	
206 Benzo[e]pyrene	252	16.015	16.004	0.011	97	1399392	160.0	163.0	
207 Benzo[a]pyrene	252	16.151	16.145	0.006	78	1475040	160.0	172.2	
213 Dibenz(a,h)anthracene	278	19.423	19.417	0.006	93	1256976	160.0	168.0	
214 Indeno[1,2,3-cd]pyrene	276	19.329	19.312	0.017	98	1191852	160.0	164.0	
215 Benzo[g,h,i]perylene	276	20.040	20.028	0.012	98	1361804	160.0	172.8	
S 217 Total Cresols	108				0			283.9	
S 218 Methyl Phenols,Total	108				0			283.9	

Reagents:

MS-HSLA160_00039 Amount Added: 200.00 Units: uL

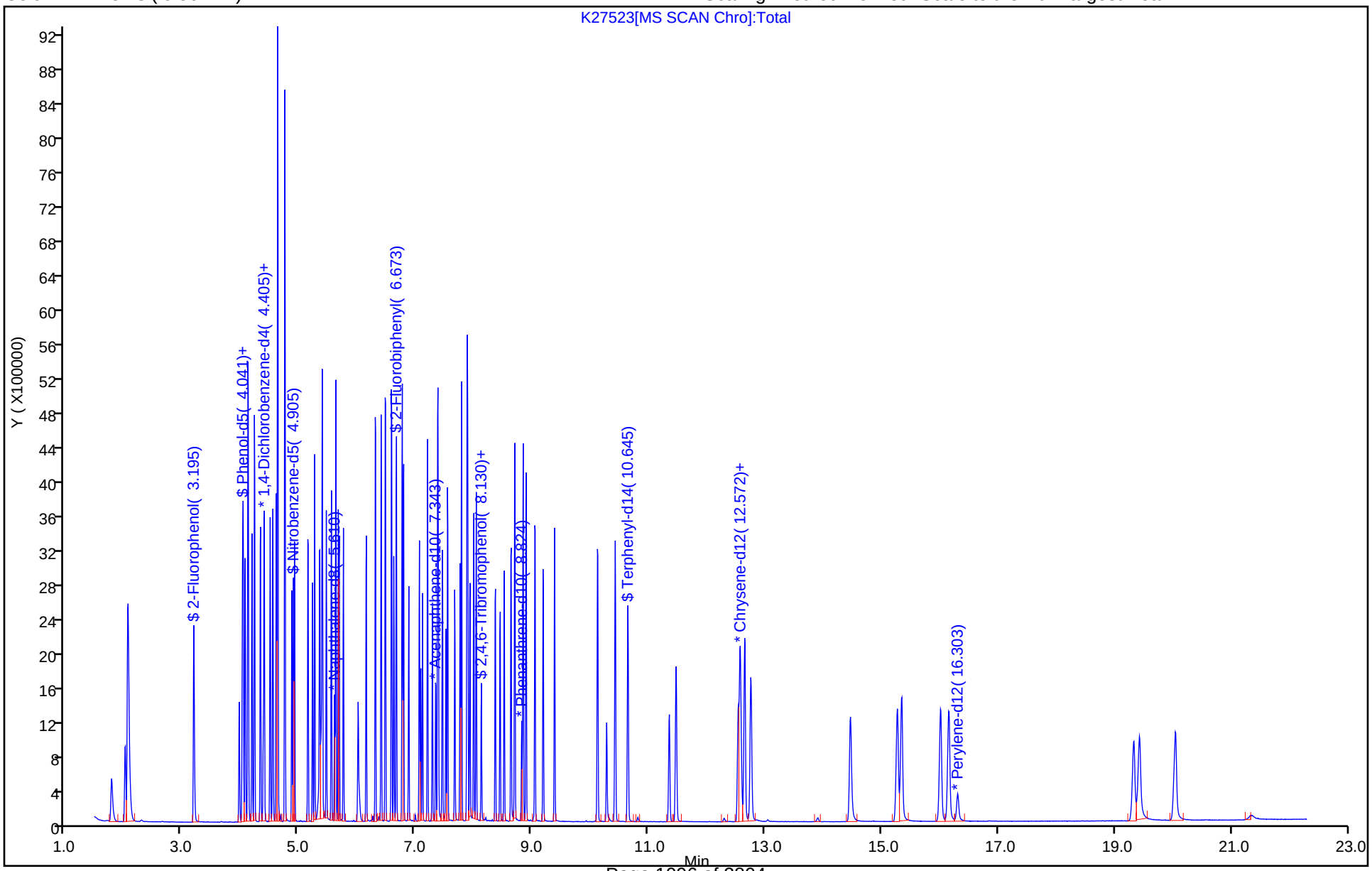
Report Date: 13-Nov-2018 11:59:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27523.D

Injection Date:	12-Nov-2018 17:50:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD160 HSL			Worklist Smp#:	10
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D
Lims ID: STD200 HSL
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 12-Nov-2018 18:19:30 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: STD200 HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:32 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:40:06

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	152108	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	601602	40.0	40.0	
* 3 Acenaphthene-d10	164	7.349	7.349	0.000	95	289185	40.0	40.0	
* 4 Phenanthrene-d10	188	8.824	8.824	0.000	98	495678	40.0	40.0	
* 5 Chrysene-d12	240	12.596	12.590	0.006	99	417203	40.0	40.0	
* 6 Perylene-d12	264	16.309	16.303	0.006	98	393928	40.0	40.0	
$ 7 2-Fluorophenol	112	3.195	3.195	0.000	94	1067154	200.0	190.0	
$ 8 Phenol-d5	99	4.029	4.029	0.000	97	1166876	200.0	181.6	
$ 9 Nitrobenzene-d5	82	4.905	4.905	0.000	93	1016832	200.0	190.2	
$ 11 2-Fluorobiphenyl	172	6.673	6.673	0.000	100	1742590	200.0	172.0	
$ 12 2,4,6-Tribromophenol	330	8.130	8.130	0.000	91	207911	200.0	214.1	
$ 13 Terphenyl-d14	244	10.645	10.645	0.000	98	1820996	200.0	174.9	
19 1,4-Dioxane	88	1.785	1.785	0.000	97	479962	200.0	192.9	
20 N-Nitrosodimethylamine	74	2.020	2.020	0.000	88	718609	200.0	194.5	
21 Pyridine	79	2.067	2.067	0.000	84	2248258	400.0	373.3	
32 Phenol	94	4.047	4.041	0.006	98	1200519	200.0	179.3	
34 Aniline	93	4.076	4.070	0.006	97	1535864	200.0	193.2	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	93	944092	200.0	169.1	
36 Bis(2-chloroethyl)ether	93	4.123	4.117	0.006	96	814682	200.0	160.8	
38 n-Decane	43	4.235	4.235	0.000	94	1304124	200.0	173.8	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	1023223	200.0	183.2	
40 1,3-Dichlorobenzene	146	4.341	4.335	0.006	98	1095747	200.0	178.6	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	94	1084450	200.0	176.6	
43 Benzyl alcohol	108	4.505	4.505	0.000	93	673404	200.0	186.5	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	1048468	200.0	179.5	
45 2-Methylphenol	108	4.611	4.611	0.000	96	913772	200.0	178.9	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	93	1361070	200.0	199.7	
47 Indene	116	4.634	4.634	0.000	91	2539426	400.0	400.3	
49 3 & 4 Methylphenol	108	4.758	4.752	0.006	67	754301	200.0	157.5	
50 3-Methylphenol	108	4.758	4.752	0.006	74	754301	200.0	157.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.758	4.752	0.006	72	754301	200.0	157.5	
52 N-Nitrosodi-n-propylamine	70	4.764	4.758	0.006	76	552463	200.0	163.1	
54 Acetophenone	105	4.764	4.758	0.006	81	1045464	200.0	201.3	
58 Hexachloroethane	117	4.875	4.875	0.000	95	406771	200.0	177.1	
59 Nitrobenzene	77	4.928	4.922	0.006	92	992197	200.0	185.3	
63 Isophorone	82	5.157	5.152	0.005	98	1710575	200.0	181.1	
64 2-Nitrophenol	139	5.234	5.234	0.000	94	547384	200.0	197.9	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	95	906957	200.0	178.2	
68 Benzoic acid	105	5.428	5.381	0.047	89	1484036	400.0	410.4	
69 Bis(2-chloroethoxy)methane	93	5.357	5.351	0.006	97	1042598	200.0	177.4	
71 3,5-Dimethylphenol	107	5.404	5.398	0.006	89	880339	200.0	172.6	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	95	750002	200.0	180.0	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	94	824470	200.0	176.5	
79 Naphthalene	128	5.633	5.633	0.000	98	2450895	200.0	168.9	
80 4-Chloroaniline	127	5.674	5.674	0.000	96	1093730	200.0	184.6	
81 2,6-Dichlorophenol	162	5.692	5.692	0.000	97	730028	200.0	180.4	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	96	445704	200.0	176.9	
86 Caprolactam	55	6.027	5.998	0.029	75	514718	200.0	218.0	
89 4-Chloro-3-methylphenol	107	6.156	6.150	0.006	96	757388	200.0	187.1	
93 2-Methylnaphthalene	142	6.315	6.309	0.006	95	1728912	200.0	169.9	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	95	1617870	200.0	170.4	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	96	466223	200.0	187.5	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	682759	200.0	166.1	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	92	450850	200.0	176.7	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	97	770040	200.0	170.7	
102 2,4,5-Trichlorophenol	196	6.632	6.626	0.006	94	547675	200.0	189.9	
104 1,1'-Biphenyl	154	6.773	6.773	0.000	94	1955223	200.0	169.3	
106 2-Chloronaphthalene	162	6.797	6.797	0.000	96	1513212	200.0	172.8	
108 2-Nitroaniline	65	6.885	6.885	0.000	89	503416	200.0	203.4	
111 Dimethyl phthalate	163	7.067	7.061	0.006	98	1585470	200.0	184.0	
112 1,3-Dinitrobenzene	168	7.090	7.085	0.005	89	331405	200.0	231.9	
113 2,6-Dinitrotoluene	165	7.126	7.120	0.006	95	441414	200.0	203.6	
114 Acenaphthylene	152	7.208	7.208	0.000	98	2322219	200.0	178.2	
115 3-Nitroaniline	138	7.296	7.290	0.006	97	489984	200.0	215.5	
117 Acenaphthene	153	7.384	7.378	0.006	93	1479940	200.0	172.5	
118 2,4-Dinitrophenol	184	7.396	7.390	0.006	84	474816	400.0	399.5	
119 4-Nitrophenol	109	7.466	7.461	0.005	95	461891	400.0	452.1	
122 2,4-Dinitrotoluene	165	7.525	7.519	0.006	95	571234	200.0	217.8	
123 Dibenzofuran	168	7.555	7.549	0.006	97	2097032	200.0	176.2	
125 2,3,4,6-Tetrachlorophenol	232	7.678	7.672	0.006	73	429114	200.0	202.5	
127 Hexadecane	57	7.790	7.790	0.000	91	1289330	200.0	170.3	
130 Diethyl phthalate	149	7.766	7.766	0.000	98	1575961	200.0	189.8	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	93	723386	200.0	171.1	
135 Fluorene	166	7.895	7.890	0.005	95	1524433	200.0	169.4	
138 4-Nitroaniline	138	7.907	7.895	0.012	87	474545	200.0	231.1	
139 4,6-Dinitro-2-methylphenol	198	7.942	7.931	0.011	88	591876	400.0	406.3	
141 N-Nitrosodiphenylamine	169	8.001	7.995	0.006	62	1250342	200.0	175.1	
142 Diphenylamine	169	8.001	7.995	0.006	95	1250342	170.0	161.9	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	41	1654760	202.2	188.0	
144 Azobenzene	77	8.042	8.042	0.000	97	1654760	200.0	185.9	
147 2,4,6 - Tribromophenol	330	8.130	8.130	0.000	91	207911	200.0	213.9	
156 4-Bromophenyl phenyl ether	248	8.371	8.371	0.000	67	466191	200.0	175.6	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.454	8.454	0.000	94	434405	200.0	173.0	
159 Atrazine	200	8.530	8.524	0.006	92	432420	200.0	190.1	
161 n-Octadecane	85	8.706	8.706	0.000	92	449936	200.0	161.8	
163 Pentachlorophenol	266	8.642	8.642	0.000	93	535552	400.0	389.2	
168 Phenanthrene	178	8.847	8.847	0.000	98	2272594	200.0	171.1	
169 Anthracene	178	8.900	8.894	0.006	97	2357335	200.0	176.8	
170 Carbazole	167	9.053	9.047	0.006	96	2166475	200.0	187.2	
171 Alachlor	188	9.194	9.188	0.006	96	314032	200.0	199.4	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	2513679	200.0	193.0	
179 Fluoranthene	202	10.128	10.122	0.006	98	2466324	200.0	195.6	
182 Pyrene	202	10.434	10.428	0.006	97	2571063	200.0	172.7	
188 Famphur	218	11.356	11.356	0.000	84	730022	200.0	193.2	
190 Butyl benzyl phthalate	149	11.474	11.474	0.000	97	1210104	200.0	216.6	
195 Bis(2-ethylhexyl) phthalat	149	12.760	12.755	0.006	97	1609994	200.0	204.0	
197 3,3'-Dichlorobenzidine	252	12.543	12.537	0.006	76	729742	200.0	197.1	
198 Benzo[a]anthracene	228	12.572	12.566	0.006	99	2471111	200.0	199.0	
199 Chrysene	228	12.655	12.649	0.006	97	2429624	200.0	191.1	
201 Di-n-octyl phthalate	149	14.470	14.464	0.006	99	2708127	200.0	200.2	
203 Benzo[b]fluoranthene	252	15.281	15.269	0.012	98	2252939	200.0	200.0	
204 Benzo[k]fluoranthene	252	15.357	15.340	0.017	99	2495851	200.0	192.7	
206 Benzo[e]pyrene	252	16.021	16.004	0.017	97	2154952	200.0	191.9	
207 Benzo[a]pyrene	252	16.162	16.145	0.017	78	2356683	200.0	210.3	
213 Dibenz(a,h)anthracene	278	19.441	19.417	0.024	93	2003800	200.0	204.4	
214 Indeno[1,2,3-cd]pyrene	276	19.341	19.312	0.029	98	1932250	200.0	211.1	
215 Benzo[g,h,i]perylene	276	20.058	20.028	0.030	97	2136038	200.0	207.3	
S 217 Total Cresols	108				0			336.4	
S 218 Methyl Phenols,Total	108				0			336.4	

Reagents:

MS-HSLA200_00039 Amount Added: 200.00 Units: uL

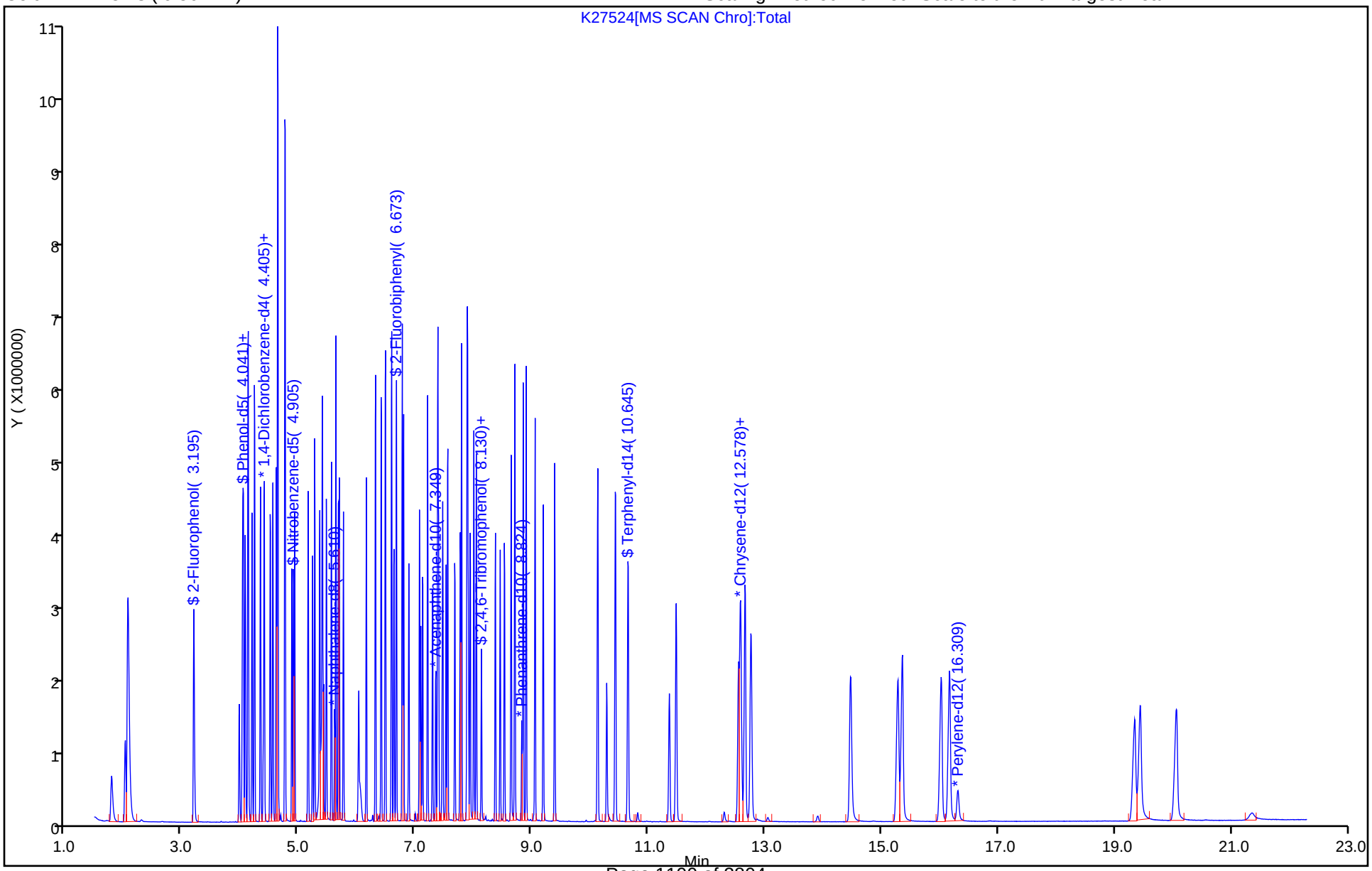
Report Date: 13-Nov-2018 11:59:33 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Injection Date:	12-Nov-2018 18:19:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	STD200 HSL			Worklist Smp#:	11
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-437249/12 Calibration Date: 11/12/2018 18:48

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27525.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6542	0.6394		97700	100000	-2.3	20.0
N-Nitrosodimethylamine	Ave	0.9717	0.9543		98200	100000	-1.8	20.0
Pyridine	Ave	1.584	1.655		209000	200000	4.5	20.0
Phenol	Ave	1.760	1.725	0.8000	98000	100000	-2.0	20.0
Aniline	Ave	2.091	2.116		101000	100000	1.2	20.0
Bis(2-chloroethyl)ether	Ave	1.332	1.264	0.7000	94900	100000	-5.1	20.0
2-Chlorophenol	Ave	1.469	1.431	0.8000	97400	100000	-2.6	20.0
1,3-Dichlorobenzene	Ave	1.613	1.564		97000	100000	-3.0	20.0
1,4-Dichlorobenzene	Ave	1.615	1.587		98300	100000	-1.7	20.0
Benzyl alcohol	Ave	0.9494	0.9301		98000	100000	-2.0	20.0
1,2-Dichlorobenzene	Ave	1.536	1.500		97700	100000	-2.3	20.0
2-Methylphenol	Ave	1.343	1.302	0.7000	97000	100000	-3.0	20.0
bis (2-chloroisopropyl) ether	Qua		2.069	0.0100	91700	100000	-8.3	20.0
3 & 4 Methylphenol	Ave	1.260	1.186		94200	100000	-5.8	20.0
N-Nitrosodi-n-propylamine	Ave	0.8909	0.8193	0.5000	92000	100000	-8.0	20.0
Acetophenone	Qua		1.611	0.0100	96500	100000	-3.5	20.0
Hexachloroethane	Ave	0.6039	0.5813	0.3000	96300	100000	-3.7	20.0
Nitrobenzene	Ave	0.3561	0.3480		97700	100000	-2.3	20.0
Isophorone	Ave	0.6280	0.6072	0.4000	96700	100000	-3.3	20.0
2-Nitrophenol	Ave	0.1839	0.1875	0.1000	102000	100000	1.9	20.0
2,4-Dimethylphenol	Ave	0.3384	0.3247	0.2000	96000	100000	-4.0	20.0
Bis(2-chloroethoxy)methane	Ave	0.3907	0.3781	0.3000	96800	100000	-3.2	20.0
Benzoic acid	Lin2		0.2535		214000	200000	7.2	20.0
2,4-Dichlorophenol	Ave	0.2770	0.2751	0.2000	99300	100000	-0.7	20.0
1,2,4-Trichlorobenzene	Ave	0.3105	0.3019		97200	100000	-2.8	20.0
Naphthalene	Ave	0.9651	0.9212	0.7000	95500	100000	-4.5	20.0
4-Chloroaniline	Ave	0.3939	0.4058	0.0100	103000	100000	3.0	20.0
2,6-Dichlorophenol	Ave	0.2691	0.2654		98600	100000	-1.4	20.0
Hexachlorobutadiene	Ave	0.1676	0.1684	0.0100	100000	100000	0.5	20.0
4-Chloro-3-methylphenol	Ave	0.2691	0.2664	0.2000	99000	100000	-1.0	20.0
2-Methylnaphthalene	Ave	0.6765	0.6394	0.4000	94500	100000	-5.5	20.0
1-Methylnaphthalene	Ave	0.6314	0.6129		97100	100000	-2.9	20.0
Hexachlorocyclopentadiene	Ave	0.3439	0.3525	0.0500	102000	100000	2.5	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.2734	0.2551	0.0100	93300	100000	-6.7	20.0
2,4,6-Trichlorophenol	Ave	0.3529	0.3505	0.2000	99300	100000	-0.7	20.0
2,4,5-Trichlorophenol	Ave	0.3990	0.4067	0.2000	102000	100000	1.9	20.0
1,1'-Biphenyl	Ave	1.598	1.517		94900	100000	-5.1	20.0
2-Chloronaphthalene	Ave	1.211	1.140	0.8000	94100	100000	-5.9	20.0
2-Nitroaniline	Ave	0.3423	0.3467	0.0100	101000	100000	1.3	20.0
Dimethyl phthalate	Ave	1.192	1.136	0.0100	95400	100000	-4.6	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-437249/12 Calibration Date: 11/12/2018 18:48

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27525.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3-Dinitrobenzene	Ave	0.1977	0.2081		105000	100000	5.3	20.0
2,6-Dinitrotoluene	Ave	0.2999	0.2967	0.2000	98900	100000	-1.1	20.0
Acenaphthylene	Ave	1.803	1.733	0.9000	96100	100000	-3.9	20.0
3-Nitroaniline	Ave	0.3144	0.3167	0.0100	101000	100000	0.7	20.0
Acenaphthene	Ave	1.187	1.103	0.9000	92900	100000	-7.1	20.0
2,4-Dinitrophenol	Qua		0.1439	0.0100	208000	200000	3.9	20.0
4-Nitrophenol	Ave	0.1413	0.1421	0.0100	201000	200000	0.5	20.0
2,4-Dinitrotoluene	Ave	0.3627	0.3637	0.2000	100000	100000	0.3	20.0
Dibenzofuran	Ave	1.647	1.527	0.8000	92800	100000	-7.2	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2931	0.2978	0.0100	102000	100000	1.6	20.0
Diethyl phthalate	Ave	1.148	1.077	0.0100	93800	100000	-6.2	20.0
4-Chlorophenyl phenyl ether	Ave	0.5848	0.5255	0.4000	89900	100000	-10.1	20.0
Fluorene	Ave	1.245	1.135	0.9000	91100	100000	-8.9	20.0
4-Nitroaniline	Ave	0.2840	0.2670	0.0100	94000	100000	-6.0	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1317	0.0100	228000	200000	14.0	20.0
Diphenylamine	Ave	1.068	1.020		81200	85000	-4.5	20.0
N-Nitrosodiphenylamine	Ave	0.5761	0.5771	0.0100	100000	100000	0.2	20.0
1,2-Diphenylhydrazine	Ave	1.218	1.156		96000	101000	-5.1	20.0
Azobenzene	Ave	1.231	1.169		94900	100000	-5.1	20.0
4-Bromophenyl phenyl ether	Ave	0.2143	0.2064	0.1000	96300	100000	-3.7	20.0
Hexachlorobenzene	Ave	0.2026	0.1997	0.1000	98500	100000	-1.5	20.0
Pentachlorophenol	Lin2		0.1200	0.0500	219000	200000	9.3	20.0
Phenanthrene	Ave	1.072	1.024	0.7000	95500	100000	-4.5	20.0
Anthracene	Ave	1.076	1.047	0.7000	97300	100000	-2.7	20.0
Carbazole	Ave	0.9341	0.9132	0.0100	97800	100000	-2.2	20.0
Alachlor	Ave	0.1271	0.1261		99200	100000	-0.8	20.0
Di-n-butyl phthalate	Ave	1.051	1.039	0.0100	98900	100000	-1.1	20.0
Fluoranthene	Ave	1.018	0.9755	0.6000	95900	100000	-4.1	20.0
Pyrene	Ave	1.428	1.355	0.6000	94900	100000	-5.1	20.0
Butyl benzyl phthalate	Ave	0.5356	0.5583	0.0100	104000	100000	4.2	20.0
Benzo[a]anthracene	Ave	1.191	1.167	0.8000	98100	100000	-1.9	20.0
Chrysene	Ave	1.219	1.217	0.7000	99800	100000	-0.2	20.0
Bis(2-ethylhexyl) phthalate	Lin1		0.7215	0.0100	96900	100000	-3.1	20.0
Di-n-octyl phthalate	Qua		1.101	0.0100	98100	100000	-1.9	20.0
Benzo[b]fluoranthene	Ave	1.144	1.189	0.7000	104000	100000	3.9	20.0
Benzo[k]fluoranthene	Ave	1.315	1.330	0.7000	101000	100000	1.2	20.0
Benzo[a]pyrene	Ave	1.138	1.213	0.7000	107000	100000	6.6	20.0
Indeno[1,2,3-cd]pyrene	Lin1		0.7965	0.5000	92600	100000	-7.4	20.0
Dibenz(a,h)anthracene	Lin2		1.012	0.4000	102000	100000	2.5	20.0
Benzo[g,h,i]perylene	Ave	1.047	1.077	0.5000	103000	100000	2.9	20.0

Report Date: 13-Nov-2018 11:59:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27525.D
Lims ID: ICV HSL 1
Client ID:
Sample Type: ICV
Inject. Date: 12-Nov-2018 18:48:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: ICV HSL 1
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:32 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:41:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	96	151819	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	599282	40.0	40.0	
* 3 Acenaphthene-d10	164	7.349	7.349	0.000	95	289647	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	97	435099	40.0	40.0	
* 5 Chrysene-d12	240	12.584	12.590	-0.006	99	321061	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	98	278701	40.0	40.0	
19 1,4-Dioxane	88	1.785	1.785	0.000	95	242663	100.0	97.7	
20 N-Nitrosodimethylamine	74	2.014	2.020	-0.006	86	362184	100.0	98.2	
21 Pyridine	79	2.061	2.067	-0.006	84	1255966	200.0	208.9	
32 Phenol	94	4.041	4.041	0.000	98	654598	100.0	98.0	
34 Aniline	93	4.070	4.070	0.000	97	803211	100.0	101.2	
35 Alpha Methyl Styrene	118	4.129	4.129	0.000	94	530329	100.0	95.1	
36 Bis(2-chloroethyl)ether	93	4.117	4.117	0.000	95	479577	100.0	94.9	
38 n-Decane	43	4.235	4.235	0.000	95	733095	100.0	97.9	
39 2-Chlorophenol	128	4.194	4.194	0.000	98	543079	100.0	97.4	
40 1,3-Dichlorobenzene	146	4.335	4.335	0.000	98	593630	100.0	97.0	
42 1,4-Dichlorobenzene	146	4.405	4.405	0.000	94	602371	100.0	98.3	
43 Benzyl alcohol	108	4.505	4.505	0.000	94	353007	100.0	98.0	
44 1,2-Dichlorobenzene	146	4.552	4.552	0.000	97	569374	100.0	97.7	
45 2-Methylphenol	108	4.611	4.611	0.000	95	494280	100.0	97.0	
46 2,2'-oxybis[1-chloropropan	45	4.634	4.634	0.000	93	785288	100.0	91.7	
47 Indene	116	4.634	4.634	0.000	91	1531542	200.0	197.3	
49 3 & 4 Methylphenol	108	4.752	4.752	0.000	67	450302	100.0	94.2	
50 3-Methylphenol	108	4.752	4.752	0.000	74	450302	100.0	94.2	
51 4-Methylphenol	108	4.752	4.752	0.000	78	450302	100.0	94.2	
52 N-Nitrosodi-n-propylamine	70	4.752	4.758	-0.006	89	310960	100.0	92.0	
54 Acetophenone	105	4.758	4.758	0.000	83	611519	100.0	96.5	
58 Hexachloroethane	117	4.875	4.875	0.000	96	220622	100.0	96.3	
59 Nitrobenzene	77	4.922	4.922	0.000	93	521418	100.0	97.7	
63 Isophorone	82	5.152	5.152	0.000	98	909699	100.0	96.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
64 2-Nitrophenol	139	5.234	5.234	0.000	94	280942	100.0	101.9	
65 2,4-Dimethylphenol	107	5.269	5.269	0.000	94	486504	100.0	96.0	
68 Benzoic acid	105	5.387	5.381	0.006	93	759595	200.0	214.5	
69 Bis(2-chloroethoxy)methane	93	5.351	5.351	0.000	98	566444	100.0	96.8	
71 3,5-Dimethylphenol	107	5.398	5.398	0.000	90	487972	100.0	96.1	
74 2,4-Dichlorophenol	162	5.469	5.469	0.000	94	412113	100.0	99.3	
76 1,2,4-Trichlorobenzene	180	5.557	5.557	0.000	94	452303	100.0	97.2	
79 Naphthalene	128	5.633	5.633	0.000	98	1380156	100.0	95.5	
80 4-Chloroaniline	127	5.674	5.674	0.000	96	608006	100.0	103.0	
81 2,6-Dichlorophenol	162	5.686	5.692	-0.006	97	397648	100.0	98.6	
83 Hexachlorobutadiene	225	5.763	5.763	0.000	96	252291	100.0	100.5	
89 4-Chloro-3-methylphenol	107	6.144	6.150	-0.006	97	399041	100.0	99.0	
93 2-Methylnaphthalene	142	6.309	6.309	0.000	95	957885	100.0	94.5	
96 1-Methylnaphthalene	142	6.409	6.409	0.000	96	918261	100.0	97.1	
97 Hexachlorocyclopentadiene	237	6.479	6.479	0.000	97	255239	100.0	102.5	
98 1,2,4,5-Tetrachlorobenzene	216	6.485	6.485	0.000	97	382129	100.0	93.3	
100 2,4,6-Trichlorophenol	196	6.591	6.591	0.000	91	253813	100.0	99.3	
101 2,3-Dichlorobenzenamine	161	6.585	6.585	0.000	96	424676	100.0	94.0	
102 2,4,5-Trichlorophenol	196	6.626	6.626	0.000	94	294463	100.0	101.9	
104 1,1'-Biphenyl	154	6.767	6.773	-0.006	95	1098328	100.0	94.9	
106 2-Chloronaphthalene	162	6.791	6.797	-0.006	96	825458	100.0	94.1	
108 2-Nitroaniline	65	6.879	6.885	-0.006	86	251023	100.0	101.3	
111 Dimethyl phthalate	163	7.061	7.061	0.000	99	822938	100.0	95.4	
112 1,3-Dinitrobenzene	168	7.085	7.085	0.000	87	150683	100.0	105.3	
113 2,6-Dinitrotoluene	165	7.120	7.120	0.000	95	214830	100.0	98.9	
114 Acenaphthylene	152	7.208	7.208	0.000	98	1255001	100.0	96.1	
115 3-Nitroaniline	138	7.290	7.290	0.000	96	229311	100.0	100.7	
117 Acenaphthene	153	7.378	7.378	0.000	93	798809	100.0	92.9	
118 2,4-Dinitrophenol	184	7.390	7.390	0.000	87	208422	200.0	207.8	
119 4-Nitrophenol	109	7.455	7.461	-0.006	95	205726	200.0	201.0	
122 2,4-Dinitrotoluene	165	7.519	7.519	0.000	95	263366	100.0	100.3	
123 Dibenzofuran	168	7.549	7.549	0.000	97	1105956	100.0	92.8	
125 2,3,4,6-Tetrachlorophenol	232	7.672	7.672	0.000	72	215620	100.0	101.6	
127 Hexadecane	57	7.790	7.790	0.000	91	712749	100.0	94.0	
130 Diethyl phthalate	149	7.766	7.766	0.000	98	780098	100.0	93.8	
134 4-Chlorophenyl phenyl ethe	204	7.884	7.884	0.000	95	380530	100.0	89.9	
135 Fluorene	166	7.890	7.890	0.000	95	821674	100.0	91.1	
138 4-Nitroaniline	138	7.895	7.895	0.000	88	193361	100.0	94.0	
139 4,6-Dinitro-2-methylphenol	198	7.931	7.931	0.000	85	286414	200.0	227.9	
141 N-Nitrosodiphenylamine	169	7.995	7.995	0.000	62	627694	100.0	100.2	
142 Diphenylamine	169	7.995	7.995	0.000	96	627694	85.0	81.2	
143 1,2-Diphenylhydrazine	77	8.042	8.042	0.000	41	846210	101.1	96.0	
144 Azobenzene	77	8.042	8.042	0.000	97	846210	100.0	94.9	
156 4-Bromophenyl phenyl ether	248	8.365	8.371	-0.006	68	224546	100.0	96.3	
157 Hexachlorobenzene	284	8.454	8.454	0.000	94	217223	100.0	98.5	
161 n-Octadecane	85	8.700	8.706	-0.006	92	241614	100.0	99.0	
163 Pentachlorophenol	266	8.636	8.642	-0.006	92	260951	200.0	218.6	
168 Phenanthrene	178	8.847	8.847	0.000	97	1113437	100.0	95.5	
169 Anthracene	178	8.894	8.894	0.000	97	1138540	100.0	97.3	
170 Carbazole	167	9.047	9.047	0.000	96	993334	100.0	97.8	
171 Alachlor	188	9.188	9.188	0.000	93	137180	100.0	99.2	
173 Di-n-butyl phthalate	149	9.388	9.388	0.000	99	1130458	100.0	98.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
179 Fluoranthene	202	10.122	10.122	0.000	98	1061048	100.0	95.9	
182 Pyrene	202	10.428	10.428	0.000	97	1087825	100.0	94.9	
190 Butyl benzyl phthalate	149	11.468	11.474	-0.006	97	448094	100.0	104.2	
195 Bis(2-ethylhexyl) phthalat	149	12.755	12.755	0.000	98	579096	100.0	96.9	
198 Benzo[a]anthracene	228	12.566	12.566	0.000	98	937024	100.0	98.1	
199 Chrysene	228	12.643	12.649	-0.006	97	976880	100.0	99.8	
201 Di-n-octyl phthalate	149	14.458	14.464	-0.006	99	883991	100.0	98.1	
203 Benzo[b]fluoranthene	252	15.263	15.269	-0.006	96	828333	100.0	103.9	
204 Benzo[k]fluoranthene	252	15.334	15.340	-0.006	99	926963	100.0	101.2	
206 Benzo[e]pyrene	252	16.004	16.004	0.000	97	800736	100.0	100.8	
207 Benzo[a]pyrene	252	16.139	16.145	-0.006	78	844892	100.0	106.6	
213 Dibenz(a,h)anthracene	278	19.412	19.417	-0.005	93	705382	100.0	102.5	
214 Indeno[1,2,3-cd]pyrene	276	19.312	19.312	0.000	98	639293	100.0	92.6	
215 Benzo[g,h,i]perylene	276	20.023	20.028	-0.005	97	750074	100.0	102.9	

Reagents:

MS-HSLB1B3SSV_00052 Amount Added: 200.00 Units: uL

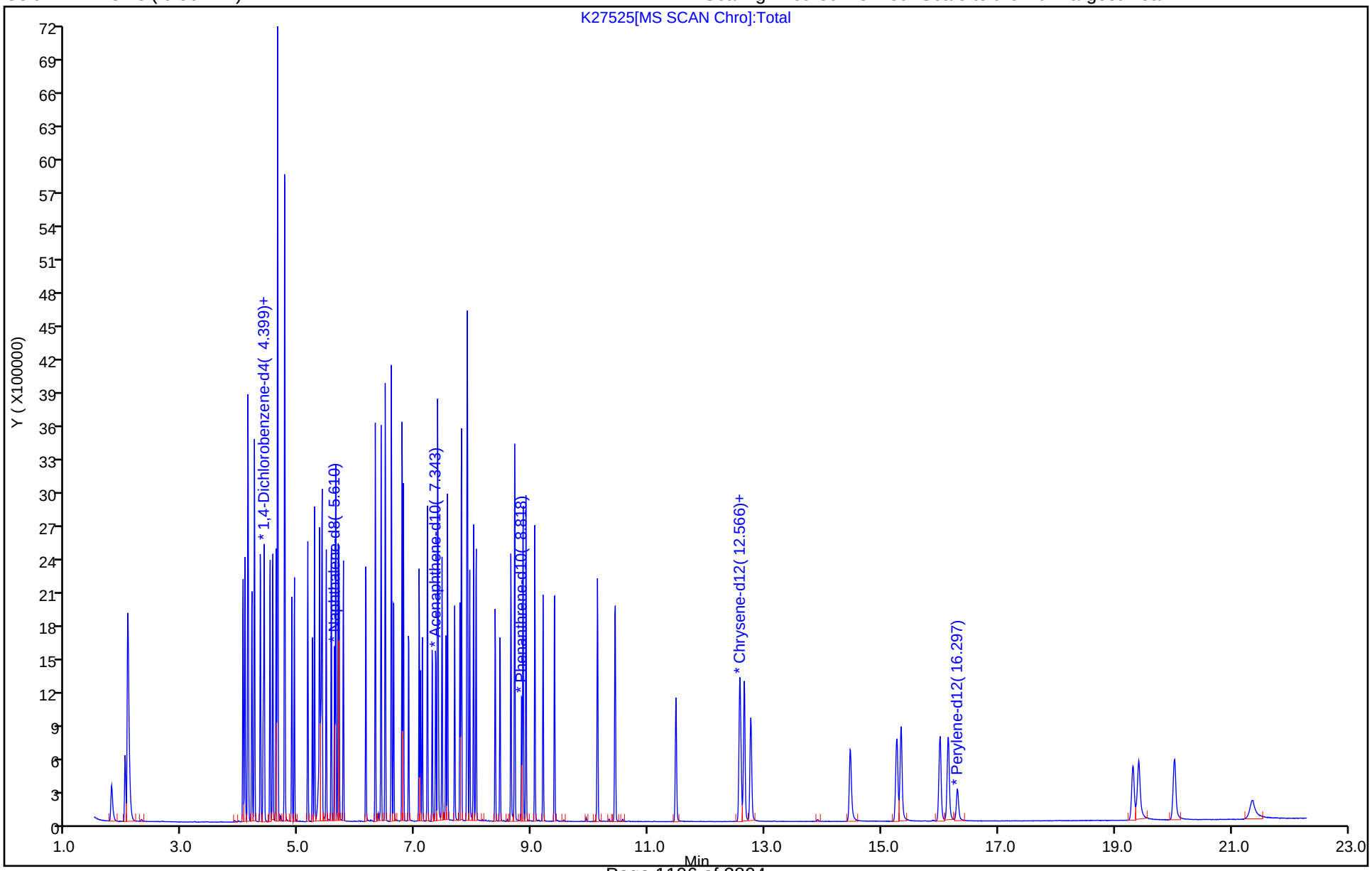
Report Date: 13-Nov-2018 11:59:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27525.D

Injection Date:	12-Nov-2018 18:48:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	ICV HSL 1			Worklist Smp#:	12
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-437249/13 Calibration Date: 11/12/2018 19:17

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27526.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Caprolactam	Ave	0.1570	0.1681		107000	100000	7.1	20.0
Atrazine	Ave	0.1836	0.1825		99400	100000	-0.6	20.0
3,3'-Dichlorobenzidine	Lin2		0.3993	0.0100	113000	100000	13.0	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27526.D
Lims ID: ICV HSL 2
Client ID:
Sample Type: ICV
Inject. Date: 12-Nov-2018 19:17:30 ALS Bottle#: 12 Worklist Smp#: 13
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: ICV HSL 2
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:32 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 13-Nov-2018 10:41:44

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.388	4.388	0.000	97	146718	40.0	40.0	
* 2 Naphthalene-d8	136	5.610	5.610	0.000	100	596980	40.0	40.0	
* 3 Acenaphthene-d10	164	7.343	7.349	-0.006	94	303592	40.0	40.0	
* 4 Phenanthrene-d10	188	8.818	8.824	-0.006	98	481837	40.0	40.0	
* 5 Chrysene-d12	240	12.578	12.590	-0.012	99	316595	40.0	40.0	
* 6 Perylene-d12	264	16.297	16.303	-0.006	97	246216	40.0	40.0	
86 Caprolactam	55	5.980	5.998	-0.018	75	250879	100.0	107.1	a
159 Atrazine	200	8.518	8.524	-0.006	91	219799	100.0	99.4	
197 3,3'-Dichlorobenzidine	252	12.531	12.537	-0.006	74	316051	100.0	113.0	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

MS-HSLB2SSV_00047 Amount Added: 200.00 Units: uL

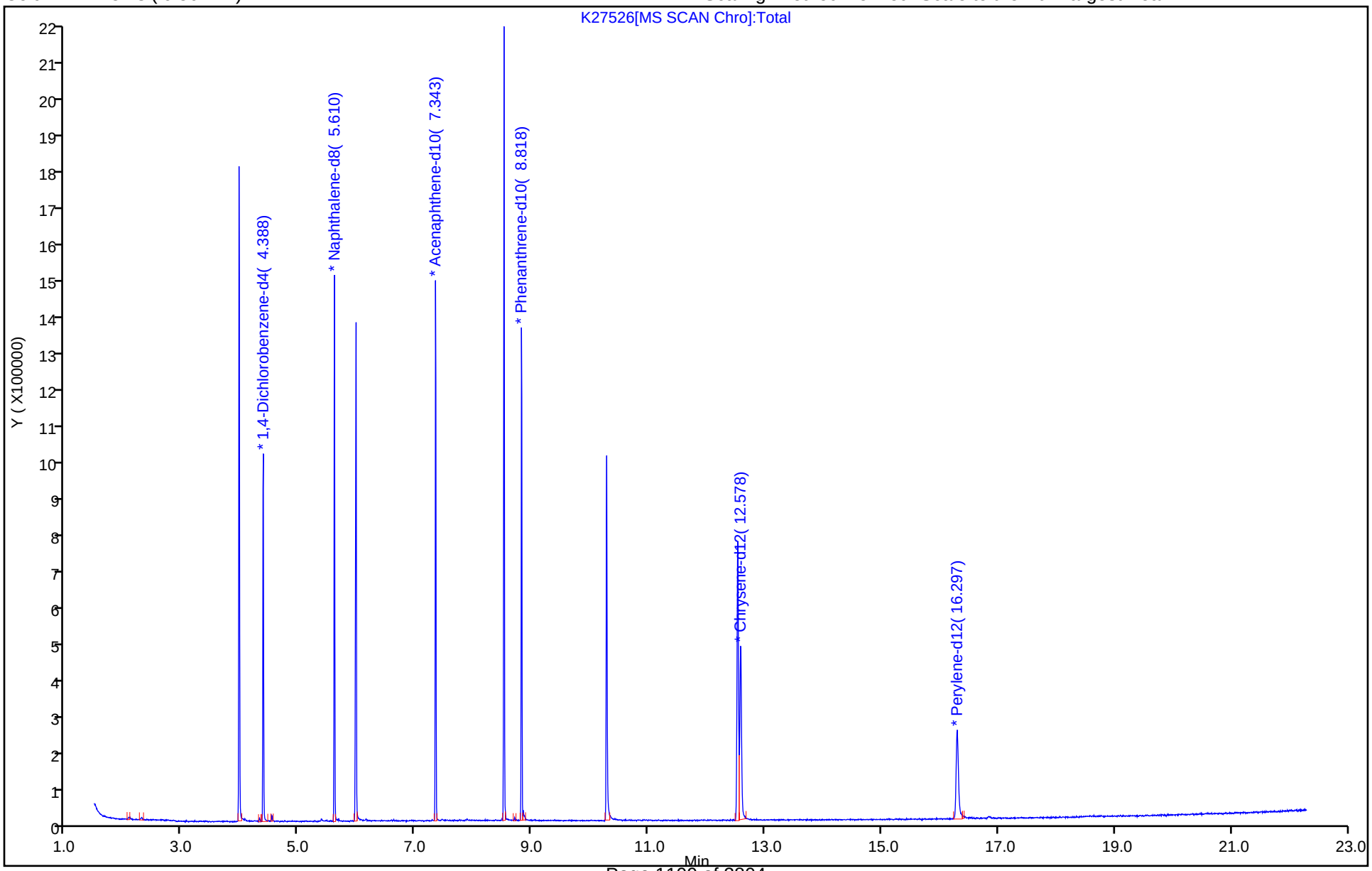
Report Date: 13-Nov-2018 11:59:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27526.D

Injection Date:	12-Nov-2018 19:17:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	ICV HSL 2			Worklist Smp#:	13
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

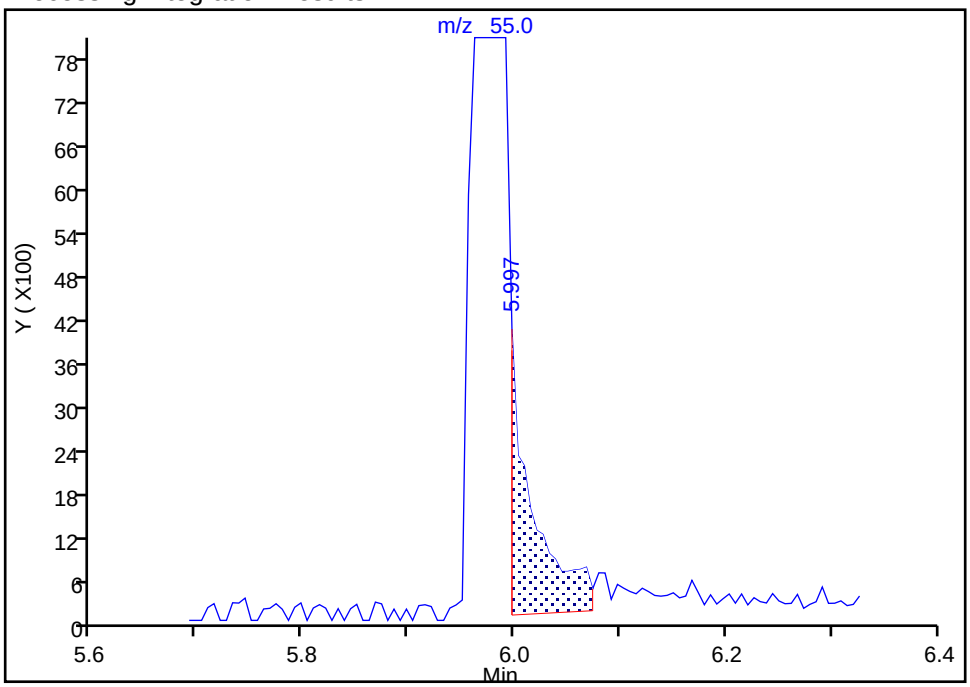
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27526.D
Injection Date: 12-Nov-2018 19:17:30 Instrument ID: SMS_K
Lims ID: ICV HSL 2
Client ID:
Operator ID: KIEKELD ALS Bottle#: 12 Worklist Smp#: 13
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Column: VF-5ms (0.50 mm) Detector MS SCAN

86 Caprolactam, CAS: 105-60-2

Signal: 1

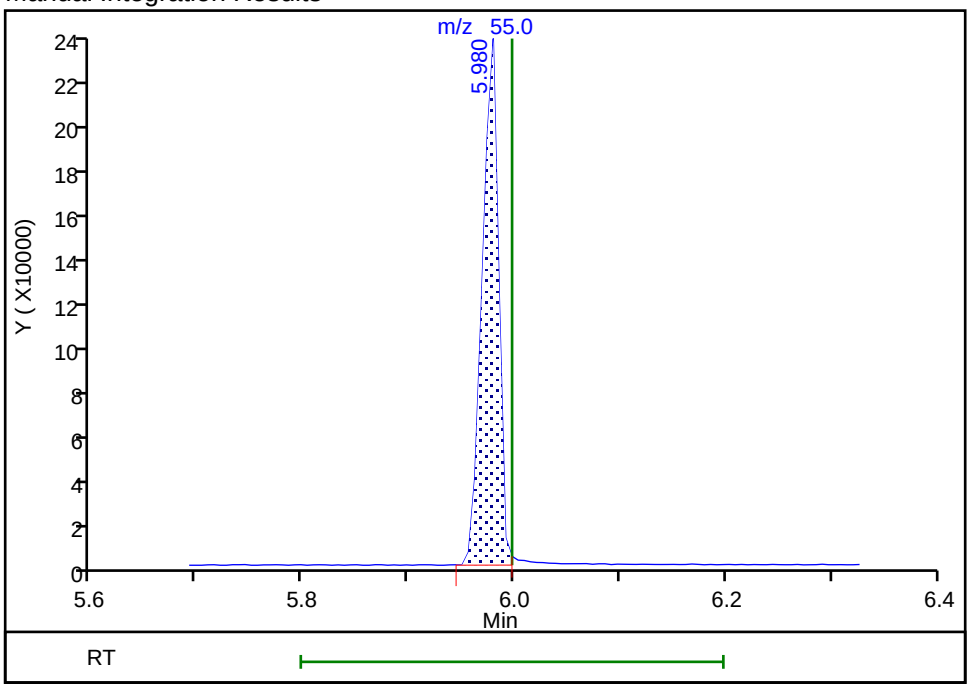
Processing Integration Results

RT: 6.00
Area: 5841
Amount: 2.492883
Amount Units: ug/ml



Manual Integration Results

RT: 5.98
Area: 250879
Amount: 107.0728
Amount Units: ug/ml



Reviewer: kiekeld, 13-Nov-2018 10:41:36
Audit Action: Assigned Compound ID Audit Reason: Wrong peak

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-437601/3 Calibration Date: 11/14/2018 14:26

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27564.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6542	0.7091		86700	80000	8.4	20.0
N-Nitrosodimethylamine	Ave	0.9717	1.078		88800	80000	10.9	20.0
Pyridine	Ave	1.584	1.736		175000	160000	9.6	20.0
Phenol	Ave	1.760	1.916	0.8000	87100	80000	8.8	20.0
Aniline	Ave	2.091	2.328		89100	80000	11.4	20.0
Bis(2-chloroethyl)ether	Ave	1.332	1.394	0.7000	83700	80000	4.7	20.0
2-Chlorophenol	Ave	1.469	1.570	0.8000	85500	80000	6.9	20.0
1,3-Dichlorobenzene	Ave	1.613	1.623		80500	80000	0.6	20.0
1,4-Dichlorobenzene	Ave	1.615	1.652		81800	80000	2.3	20.0
Benzyl alcohol	Ave	0.9494	1.022		86100	80000	7.6	20.0
1,2-Dichlorobenzene	Ave	1.536	1.576		82100	80000	2.6	20.0
2-Methylphenol	Ave	1.343	1.405	0.7000	83700	80000	4.6	20.0
bis (2-chloroisopropyl) ether	Qua		2.489	0.0100	87500	80000	9.4	20.0
3 & 4 Methylphenol	Ave	1.260	1.286		81700	80000	2.1	20.0
N-Nitrosodi-n-propylamine	Ave	0.8909	0.8804	0.5000	79100	80000	-1.2	20.0
Acetophenone	Qua		1.776	0.0100	83100	80000	3.8	20.0
Hexachloroethane	Ave	0.6039	0.6286	0.3000	83300	80000	4.1	20.0
Nitrobenzene	Ave	0.3561	0.3821		85800	80000	7.3	20.0
Isophorone	Ave	0.6280	0.6544	0.4000	83400	80000	4.2	20.0
2-Nitrophenol	Ave	0.1839	0.1909	0.1000	83000	80000	3.8	20.0
2,4-Dimethylphenol	Ave	0.3384	0.3563	0.2000	84200	80000	5.3	20.0
Bis(2-chloroethoxy)methane	Ave	0.3907	0.4186	0.3000	85700	80000	7.1	20.0
Benzoic acid	Lin2		0.2241		154000	160000	-3.8	20.0
2,4-Dichlorophenol	Ave	0.2770	0.2867	0.2000	82800	80000	3.5	20.0
1,2,4-Trichlorobenzene	Ave	0.3105	0.3105		80000	80000	0.0	20.0
Naphthalene	Ave	0.9651	0.9767	0.7000	81000	80000	1.2	20.0
4-Chloroaniline	Ave	0.3939	0.4090	0.0100	83100	80000	3.8	20.0
2,6-Dichlorophenol	Ave	0.2691	0.2652		78900	80000	-1.4	20.0
Hexachlorobutadiene	Ave	0.1676	0.1666	0.0100	79500	80000	-0.6	20.0
Caprolactam	Ave	0.1570	0.1648		84000	80000	5.0	20.0
4-Chloro-3-methylphenol	Ave	0.2691	0.2753	0.2000	81800	80000	2.3	20.0
2-Methylnaphthalene	Ave	0.6765	0.6718	0.4000	79400	80000	-0.7	20.0
1-Methylnaphthalene	Ave	0.6314	0.6139		77800	80000	-2.8	20.0
Hexachlorocyclopentadiene	Ave	0.3439	0.3933	0.0500	91500	80000	14.3	20.0
1,2,4,5-Tetrachlorobenzene	Ave	0.2734	0.2633	0.0100	77100	80000	-3.7	20.0
2,4,6-Trichlorophenol	Ave	0.3529	0.3583	0.2000	81200	80000	1.5	20.0
2,4,5-Trichlorophenol	Ave	0.3990	0.4187	0.2000	83900	80000	4.9	20.0
1,1'-Biphenyl	Ave	1.598	1.633		81700	80000	2.2	20.0
2-Chloronaphthalene	Ave	1.211	1.224	0.8000	80900	80000	1.1	20.0
2-Nitroaniline	Ave	0.3423	0.3506	0.0100	82000	80000	2.4	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-437601/3 Calibration Date: 11/14/2018 14:26

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27564.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl phthalate	Ave	1.192	1.168	0.0100	78400	80000	-2.0	20.0
1,3-Dinitrobenzene	Ave	0.1977	0.1982		80200	80000	0.3	20.0
2,6-Dinitrotoluene	Ave	0.2999	0.2969	0.2000	79200	80000	-1.0	20.0
Acenaphthylene	Ave	1.803	1.819	0.9000	80700	80000	0.9	20.0
3-Nitroaniline	Ave	0.3144	0.3210	0.0100	81700	80000	2.1	20.0
Acenaphthene	Ave	1.187	1.192	0.9000	80300	80000	0.4	20.0
2,4-Dinitrophenol	Qua		0.1281	0.0100	157000	160000	-1.8	20.0
4-Nitrophenol	Ave	0.1413	0.1420	0.0100	161000	160000	0.5	20.0
2,4-Dinitrotoluene	Ave	0.3627	0.3538	0.2000	78000	80000	-2.5	20.0
Dibenzofuran	Ave	1.647	1.617	0.8000	78600	80000	-1.8	20.0
2,3,4,6-Tetrachlorophenol	Ave	0.2931	0.3044	0.0100	83100	80000	3.9	20.0
Diethyl phthalate	Ave	1.148	1.118	0.0100	77900	80000	-2.7	20.0
4-Chlorophenyl phenyl ether	Ave	0.5848	0.5606	0.4000	76700	80000	-4.1	20.0
4-Nitroaniline	Ave	0.2840	0.2774	0.0100	78200	80000	-2.3	20.0
Fluorene	Ave	1.245	1.186	0.9000	76200	80000	-4.7	20.0
4,6-Dinitro-2-methylphenol	Lin2		0.1072	0.0100	152000	160000	-5.3	20.0
Diphenylamine	Ave	1.068	1.043		66400	68000	-2.4	20.0
N-Nitrosodiphenylamine	Ave	0.5761	0.5791	0.0100	80400	80000	0.5	20.0
1,2-Diphenylhydrazine	Ave	1.218	1.249		83000	80900	2.6	20.0
Azobenzene	Ave	1.231	1.263		82100	80000	2.6	20.0
4-Bromophenyl phenyl ether	Ave	0.2143	0.2136	0.1000	79700	80000	-0.3	20.0
Hexachlorobenzene	Ave	0.2026	0.1980	0.1000	78200	80000	-2.3	20.0
Atrazine	Ave	0.1836	0.1856		80900	80000	1.1	20.0
Pentachlorophenol	Lin2		0.1142	0.0500	168000	160000	4.9	20.0
Phenanthrene	Ave	1.072	1.067	0.7000	79700	80000	-0.4	20.0
Anthracene	Ave	1.076	1.075	0.7000	79900	80000	-0.1	20.0
Carbazole	Ave	0.9341	0.9470	0.0100	81100	80000	1.4	20.0
Alachlor	Ave	0.1271	0.1313		82700	80000	3.4	20.0
Di-n-butyl phthalate	Ave	1.051	1.098	0.0100	83600	80000	4.4	20.0
Fluoranthene	Ave	1.018	1.041	0.6000	81800	80000	2.3	20.0
Pyrene	Ave	1.428	1.453	0.6000	81400	80000	1.8	20.0
Famphur	Ave	0.3623	0.3943		87000	80000	8.8	20.0
Butyl benzyl phthalate	Ave	0.5356	0.5751	0.0100	85900	80000	7.4	20.0
3,3'-Dichlorobenzidine	Lin2		0.3713	0.0100	84400	80000	5.5	20.0
Benzo[a]anthracene	Ave	1.191	1.263	0.8000	84900	80000	6.1	20.0
Chrysene	Ave	1.219	1.242	0.7000	81500	80000	1.9	20.0
Bis(2-ethylhexyl) phthalate	Lin1		0.7149	0.0100	77400	80000	-3.2	20.0
Di-n-octyl phthalate	Qua		1.091	0.0100	80500	80000	0.7	20.0
Benzo[b]fluoranthene	Ave	1.144	1.295	0.7000	90600	80000	13.3	20.0
Benzo[k]fluoranthene	Ave	1.315	1.386	0.7000	84300	80000	5.4	20.0
Benzo[a]pyrene	Ave	1.138	1.254	0.7000	88200	80000	10.2	20.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-437601/3 Calibration Date: 11/14/2018 14:26

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27564.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Lin1		0.8379	0.5000	78400	80000	-2.0	20.0
Dibenz(a,h)anthracene	Lin2		1.063	0.4000	86300	80000	7.9	20.0
Benzo[g,h,i]perylene	Ave	1.047	1.153	0.5000	88100	80000	10.2	20.0
2-Fluorophenol (Surr)	Ave	1.477	1.623		87900	80000	9.9	20.0
Phenol-d5 (Surr)	Ave	1.689	1.826		86500	80000	8.1	20.0
Nitrobenzene-d5 (Surr)	Ave	0.3555	0.3769		84800	80000	6.0	20.0
2-Fluorobiphenyl	Ave	1.401	1.415		80800	80000	1.0	20.0
2,4,6-Tribromophenol (Surr)	Ave	0.1343	0.1345		80100	80000	0.1	20.0
Terphenyl-d14 (Surr)	Ave	0.998	1.006		80600	80000	0.8	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27564.D
Lims ID: CCV HSL
Client ID:
Sample Type: CCV
Inject. Date: 14-Nov-2018 14:26:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: CCV HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 15-Nov-2018 09:19:37 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: kiekeld Date: 14-Nov-2018 15:36:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.382	4.382	0.000	96	151575	40.0	40.0	
* 2 Naphthalene-d8	136	5.604	5.604	0.000	100	600002	40.0	40.0	
* 3 Acenaphthene-d10	164	7.337	7.337	0.000	95	271804	40.0	40.0	
* 4 Phenanthrene-d10	188	8.812	8.812	0.000	98	416041	40.0	40.0	
* 5 Chrysene-d12	240	12.561	12.561	0.000	99	309128	40.0	40.0	
* 6 Perylene-d12	264	16.268	16.268	0.000	97	260932	40.0	40.0	
$ 7 2-Fluorophenol	112	3.189	3.189	0.000	94	492074	80.0	87.9	
$ 8 Phenol-d5	99	4.018	4.018	0.000	96	553517	80.0	86.5	
$ 9 Nitrobenzene-d5	82	4.899	4.899	0.000	94	452324	80.0	84.8	
$ 11 2-Fluorobiphenyl	172	6.662	6.662	0.000	100	769278	80.0	80.8	
$ 12 2,4,6-Tribromophenol	330	8.125	8.125	0.000	93	73100	80.0	80.1	
$ 13 Terphenyl-d14	244	10.628	10.628	0.000	98	622167	80.0	80.6	
19 1,4-Dioxane	88	1.779	1.779	0.000	96	214950	80.0	86.7	
20 N-Nitrosodimethylamine	74	2.008	2.008	0.000	86	326816	80.0	88.8	
21 Pyridine	79	2.055	2.055	0.000	83	1052710	160.0	175.4	
32 Phenol	94	4.035	4.035	0.000	98	580769	80.0	87.1	
34 Aniline	93	4.065	4.065	0.000	97	705809	80.0	89.1	
35 Alpha Methyl Styrene	118	4.123	4.123	0.000	94	466704	80.0	83.9	
36 Bis(2-chloroethyl)ether	93	4.112	4.112	0.000	94	422658	80.0	83.7	
38 n-Decane	43	4.229	4.229	0.000	95	665068	80.0	89.0	
39 2-Chlorophenol	128	4.188	4.188	0.000	98	476010	80.0	85.5	
40 1,3-Dichlorobenzene	146	4.329	4.329	0.000	97	492033	80.0	80.5	
42 1,4-Dichlorobenzene	146	4.399	4.399	0.000	93	500730	80.0	81.8	
43 Benzyl alcohol	108	4.499	4.499	0.000	93	309797	80.0	86.1	
44 1,2-Dichlorobenzene	146	4.546	4.546	0.000	96	477885	80.0	82.1	
45 2-Methylphenol	108	4.599	4.599	0.000	96	426071	80.0	83.7	
46 2,2'-oxybis[1-chloropropan	45	4.629	4.629	0.000	92	754447	80.0	87.5	
47 Indene	116	4.629	4.629	0.000	92	1330571	160.0	166.8	
49 3 & 4 Methylphenol	108	4.746	4.746	0.000	77	389963	80.0	81.7	
50 3-Methylphenol	108	4.746	4.746	0.000	81	389963	80.0	81.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.746	4.746	0.000	91	389963	80.0	81.7	
52 N-Nitrosodi-n-propylamine	70	4.746	4.746	0.000	90	266883	80.0	79.1	
54 Acetophenone	105	4.752	4.752	0.000	81	538374	80.0	83.1	
58 Hexachloroethane	117	4.869	4.869	0.000	95	190563	80.0	83.3	
59 Nitrobenzene	77	4.916	4.916	0.000	94	458487	80.0	85.8	
63 Isophorone	82	5.146	5.146	0.000	97	785276	80.0	83.4	
64 2-Nitrophenol	139	5.228	5.228	0.000	94	229110	80.0	83.0	
65 2,4-Dimethylphenol	107	5.263	5.263	0.000	95	427500	80.0	84.2	
68 Benzoic acid	105	5.369	5.369	0.000	89	537948	160.0	153.9	
69 Bis(2-chloroethoxy)methane	93	5.345	5.345	0.000	97	502324	80.0	85.7	
71 3,5-Dimethylphenol	107	5.392	5.392	0.000	84	425831	80.0	83.7	
74 2,4-Dichlorophenol	162	5.463	5.463	0.000	95	344087	80.0	82.8	
76 1,2,4-Trichlorobenzene	180	5.551	5.551	0.000	95	372597	80.0	80.0	
79 Naphthalene	128	5.627	5.627	0.000	97	1172060	80.0	81.0	
80 4-Chloroaniline	127	5.669	5.669	0.000	96	490846	80.0	83.1	
81 2,6-Dichlorophenol	162	5.680	5.680	0.000	97	318235	80.0	78.9	
83 Hexachlorobutadiene	225	5.757	5.757	0.000	97	199861	80.0	79.5	
86 Caprolactam	55	5.992	5.992	0.000	74	197772	80.0	84.0	
89 4-Chloro-3-methylphenol	107	6.144	6.144	0.000	97	330337	80.0	81.8	
93 2-Methylnaphthalene	142	6.303	6.303	0.000	95	806168	80.0	79.4	
96 1-Methylnaphthalene	142	6.403	6.403	0.000	95	736620	80.0	77.8	
97 Hexachlorocyclopentadiene	237	6.473	6.473	0.000	97	213782	80.0	91.5	
98 1,2,4,5-Tetrachlorobenzene	216	6.479	6.479	0.000	97	315975	80.0	77.1	
100 2,4,6-Trichlorophenol	196	6.585	6.585	0.000	92	194755	80.0	81.2	
101 2,3-Dichlorobenzenamine	161	6.579	6.579	0.000	96	344746	80.0	81.3	
102 2,4,5-Trichlorophenol	196	6.620	6.620	0.000	94	227585	80.0	83.9	
104 1,1'-Biphenyl	154	6.761	6.761	0.000	95	887458	80.0	81.7	
106 2-Chloronaphthalene	162	6.785	6.785	0.000	96	665527	80.0	80.9	
108 2-Nitroaniline	65	6.873	6.873	0.000	85	190594	80.0	82.0	
111 Dimethyl phthalate	163	7.055	7.055	0.000	99	634772	80.0	78.4	
112 1,3-Dinitrobenzene	168	7.079	7.079	0.000	86	107758	80.0	80.2	
113 2,6-Dinitrotoluene	165	7.114	7.114	0.000	94	161384	80.0	79.2	
114 Acenaphthylene	152	7.196	7.196	0.000	98	988874	80.0	80.7	
115 3-Nitroaniline	138	7.278	7.278	0.000	94	174487	80.0	81.7	
117 Acenaphthene	153	7.372	7.372	0.000	93	648089	80.0	80.3	
118 2,4-Dinitrophenol	184	7.384	7.384	0.000	86	139225	160.0	157.1	
119 4-Nitrophenol	109	7.449	7.449	0.000	94	154383	160.0	160.8	
122 2,4-Dinitrotoluene	165	7.513	7.513	0.000	94	192319	80.0	78.0	
123 Dibenzofuran	168	7.543	7.543	0.000	97	879139	80.0	78.6	
125 2,3,4,6-Tetrachlorophenol	232	7.666	7.666	0.000	73	165494	80.0	83.1	
127 Hexadecane	57	7.784	7.784	0.000	91	618103	80.0	86.9	
130 Diethyl phthalate	149	7.754	7.754	0.000	98	607599	80.0	77.9	
134 4-Chlorophenyl phenyl ethe	204	7.872	7.872	0.000	95	304760	80.0	76.7	
135 Fluorene	166	7.884	7.884	0.000	95	644766	80.0	76.2	
138 4-Nitroaniline	138	7.884	7.884	0.000	87	150818	80.0	78.2	
139 4,6-Dinitro-2-methylphenol	198	7.925	7.925	0.000	84	178401	160.0	151.6	
141 N-Nitrosodiphenylamine	169	7.989	7.989	0.000	63	481877	80.0	80.4	
142 Diphenylamine	169	7.989	7.989	0.000	95	481877	68.0	66.4	
143 1,2-Diphenylhydrazine	77	8.031	8.031	0.000	42	686591	80.9	83.0	
144 Azobenzene	77	8.031	8.031	0.000	98	686591	80.0	82.1	
147 2,4,6 - Tribromophenol	330	8.125	8.125	0.000	93	73750	80.0	80.7	
156 4-Bromophenyl phenyl ether	248	8.360	8.360	0.000	70	177712	80.0	79.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.442	8.442	0.000	93	164761	80.0	78.2	
159 Atrazine	200	8.512	8.512	0.000	90	154447	80.0	80.9	
161 n-Octadecane	85	8.694	8.694	0.000	92	204178	80.0	87.5	
163 Pentachlorophenol	266	8.630	8.630	0.000	92	190030	160.0	167.9	
168 Phenanthrene	178	8.835	8.835	0.000	97	888080	80.0	79.7	
169 Anthracene	178	8.888	8.888	0.000	97	894198	80.0	79.9	
170 Carbazole	167	9.041	9.041	0.000	96	787983	80.0	81.1	
171 Alachlor	188	9.182	9.182	0.000	92	109286	80.0	82.7	
173 Di-n-butyl phthalate	149	9.376	9.376	0.000	99	913243	80.0	83.6	
179 Fluoranthene	202	10.110	10.110	0.000	98	865954	80.0	81.8	
182 Pyrene	202	10.410	10.410	0.000	97	898223	80.0	81.4	
188 Famphur	218	11.333	11.333	0.000	87	243748	80.0	87.0	
190 Butyl benzyl phthalate	149	11.450	11.450	0.000	98	355568	80.0	85.9	
195 Bis(2-ethylhexyl) phthalat	149	12.731	12.731	0.000	96	441992	80.0	77.4	
197 3,3'-Dichlorobenzidine	252	12.508	12.508	0.000	74	229526	80.0	84.4	
198 Benzo[a]anthracene	228	12.543	12.543	0.000	99	780788	80.0	84.9	
199 Chrysene	228	12.619	12.619	0.000	97	768173	80.0	81.5	
201 Di-n-octyl phthalate	149	14.435	14.435	0.000	99	674548	80.0	80.5	
203 Benzo[b]fluoranthene	252	15.234	15.234	0.000	98	676072	80.0	90.6	
204 Benzo[k]fluoranthene	252	15.304	15.304	0.000	99	723262	80.0	84.3	
206 Benzo[e]pyrene	252	15.974	15.974	0.000	97	642784	80.0	86.4	
207 Benzo[a]pyrene	252	16.109	16.109	0.000	78	654613	80.0	88.2	
213 Dibenz(a,h)anthracene	278	19.376	19.376	0.000	95	554817	80.0	86.3	
214 Indeno[1,2,3-cd]pyrene	276	19.282	19.282	0.000	98	518046	80.0	78.4	
215 Benzo[g,h,i]perylene	276	19.993	19.993	0.000	99	601729	80.0	88.1	

Reagents:

MS-HSLACCV080_00173 Amount Added: 200.00 Units: uL

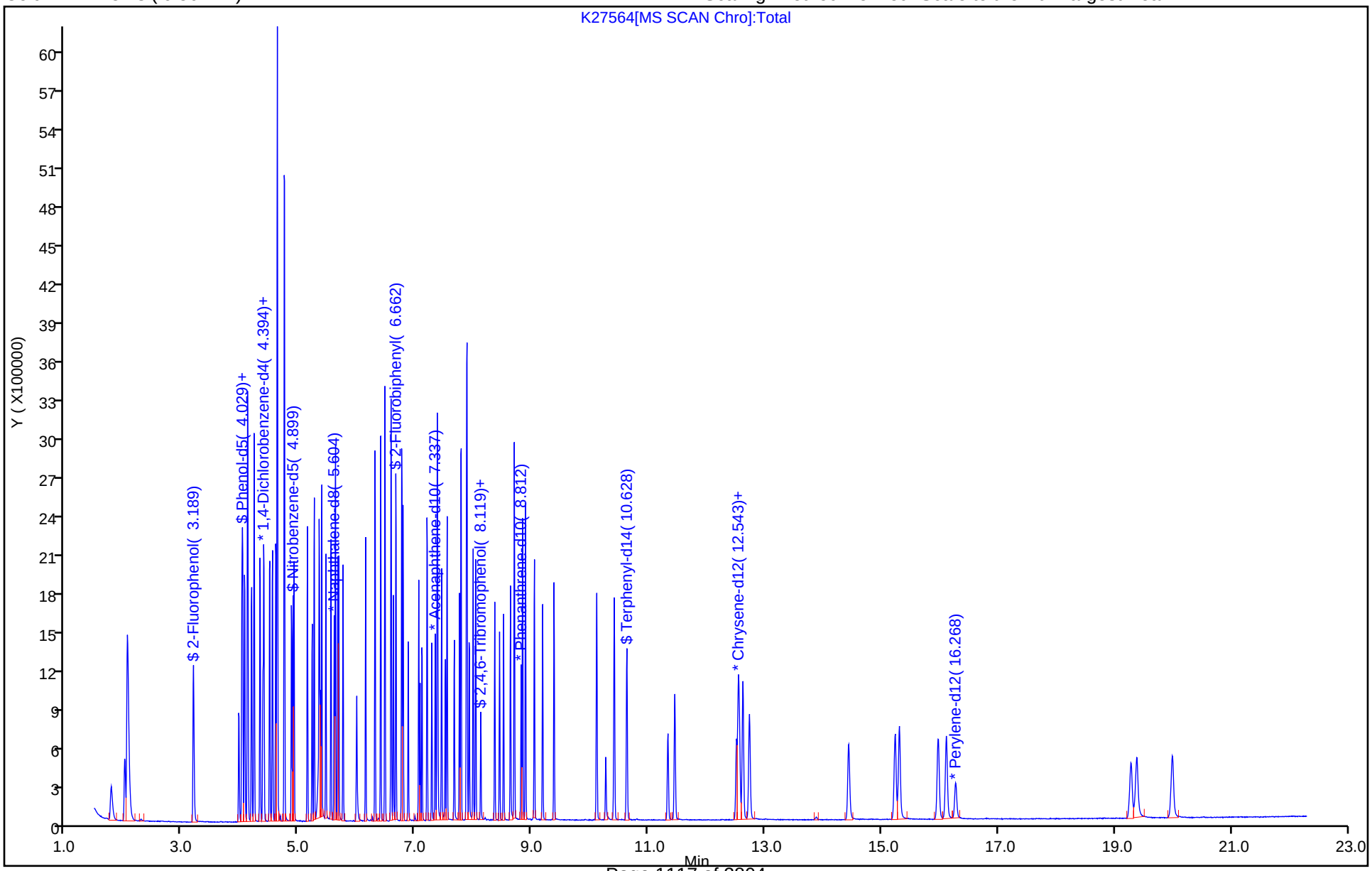
Report Date: 15-Nov-2018 09:19:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27564.D

Injection Date:	14-Nov-2018 14:26:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	CCV HSL			Worklist Smp#:	3
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVC 280-437601/52 Calibration Date: 11/15/2018 03:02

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27590.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.6542	0.6670		81600	80000	2.0	50.0
N-Nitrosodimethylamine	Ave	0.9717	1.000		82400	80000	3.0	50.0
Pyridine	Ave	1.584	1.615		163000	160000	2.0	50.0
Phenol	Ave	1.760	1.778	0.8000	80800	80000	1.0	50.0
Aniline	Ave	2.091	2.172		83100	80000	3.9	50.0
Bis(2-chloroethyl)ether	Ave	1.332	1.322	0.7000	79400	80000	-0.7	50.0
2-Chlorophenol	Ave	1.469	1.482	0.8000	80700	80000	0.9	50.0
1,3-Dichlorobenzene	Ave	1.613	1.599		79300	80000	-0.9	50.0
1,4-Dichlorobenzene	Ave	1.615	1.622		80300	80000	0.4	50.0
Benzyl alcohol	Ave	0.9494	0.9553		80500	80000	0.6	50.0
1,2-Dichlorobenzene	Ave	1.536	1.531		79700	80000	-0.3	50.0
2-Methylphenol	Ave	1.343	1.346	0.7000	80200	80000	0.2	50.0
bis (2-chloroisopropyl) ether	Qua		2.347	0.0100	81500	80000	1.9	50.0
3 & 4 Methylphenol	Ave	1.260	1.239		78700	80000	-1.7	50.0
N-Nitrosodi-n-propylamine	Ave	0.8909	0.8568	0.5000	76900	80000	-3.8	50.0
Acetophenone	Qua		1.710	0.0100	79400	80000	-0.7	50.0
Hexachloroethane	Ave	0.6039	0.6187	0.3000	82000	80000	2.4	50.0
Nitrobenzene	Ave	0.3561	0.3552		79800	80000	-0.3	50.0
Isophorone	Ave	0.6280	0.6213	0.4000	79100	80000	-1.1	50.0
2-Nitrophenol	Ave	0.1839	0.1885	0.1000	82000	80000	2.5	50.0
2,4-Dimethylphenol	Ave	0.3384	0.3304	0.2000	78100	80000	-2.4	50.0
Bis(2-chloroethoxy)methane	Ave	0.3907	0.3826	0.3000	78300	80000	-2.1	50.0
Benzoic acid	Lin2		0.2306		158000	160000	-1.2	50.0
2,4-Dichlorophenol	Ave	0.2770	0.2675	0.2000	77300	80000	-3.4	50.0
1,2,4-Trichlorobenzene	Ave	0.3105	0.2939		75700	80000	-5.4	50.0
Naphthalene	Ave	0.9651	0.9177	0.7000	76100	80000	-4.9	50.0
4-Chloroaniline	Ave	0.3939	0.3941	0.0100	80000	80000	0.0	50.0
2,6-Dichlorophenol	Ave	0.2691	0.2592		77100	80000	-3.7	50.0
Hexachlorobutadiene	Ave	0.1676	0.1589	0.0100	75800	80000	-5.2	50.0
Caprolactam	Ave	0.1570	0.1554		79200	80000	-1.0	50.0
4-Chloro-3-methylphenol	Ave	0.2691	0.2647	0.2000	78700	80000	-1.6	50.0
2-Methylnaphthalene	Ave	0.6765	0.6447	0.4000	76200	80000	-4.7	50.0
1-Methylnaphthalene	Ave	0.6314	0.6092		77200	80000	-3.5	50.0
Hexachlorocyclopentadiene	Ave	0.3439	0.3531	0.0500	82100	80000	2.7	50.0
1,2,4,5-Tetrachlorobenzene	Ave	0.2734	0.2543	0.0100	74400	80000	-7.0	50.0
2,4,6-Trichlorophenol	Ave	0.3529	0.3414	0.2000	77400	80000	-3.3	50.0
2,4,5-Trichlorophenol	Ave	0.3990	0.3883	0.2000	77900	80000	-2.7	50.0
1,1'-Biphenyl	Ave	1.598	1.531		76700	80000	-4.2	50.0
2-Chloronaphthalene	Ave	1.211	1.152	0.8000	76100	80000	-4.9	50.0
2-Nitroaniline	Ave	0.3423	0.3421	0.0100	80000	80000	-0.0	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVC 280-437601/52 Calibration Date: 11/15/2018 03:02

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27590.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dimethyl phthalate	Ave	1.192	1.114	0.0100	74800	80000	-6.5	50.0
1,3-Dinitrobenzene	Ave	0.1977	0.1991		80600	80000	0.7	50.0
2,6-Dinitrotoluene	Ave	0.2999	0.2881	0.2000	76900	80000	-3.9	50.0
Acenaphthylene	Ave	1.803	1.701	0.9000	75500	80000	-5.7	50.0
3-Nitroaniline	Ave	0.3144	0.3054	0.0100	77700	80000	-2.9	50.0
Acenaphthene	Ave	1.187	1.121	0.9000	75500	80000	-5.6	50.0
2,4-Dinitrophenol	Qua		0.1250	0.0100	154000	160000	-3.8	50.0
4-Nitrophenol	Ave	0.1413	0.1356	0.0100	153000	160000	-4.1	50.0
2,4-Dinitrotoluene	Ave	0.3627	0.3513	0.2000	77500	80000	-3.2	50.0
Dibenzofuran	Ave	1.647	1.521	0.8000	73900	80000	-7.6	50.0
2,3,4,6-Tetrachlorophenol	Ave	0.2931	0.2859	0.0100	78100	80000	-2.4	50.0
Diethyl phthalate	Ave	1.148	1.054	0.0100	73400	80000	-8.2	50.0
4-Chlorophenyl phenyl ether	Ave	0.5848	0.5294	0.4000	72400	80000	-9.5	50.0
4-Nitroaniline	Ave	0.2840	0.2616	0.0100	73700	80000	-7.9	50.0
Fluorene	Ave	1.245	1.110	0.9000	71400	80000	-10.8	50.0
4,6-Dinitro-2-methylphenol	Lin2		0.1086	0.0100	153000	160000	-4.1	50.0
Diphenylamine	Ave	1.068	0.999		63600	68000	-6.5	50.0
N-Nitrosodiphenylamine	Ave	0.5761	0.5714	0.0100	79400	80000	-0.8	50.0
1,2-Diphenylhydrazine	Ave	1.218	1.181		78400	80900	-3.0	50.0
Azobenzene	Ave	1.231	1.194		77600	80000	-3.0	50.0
4-Bromophenyl phenyl ether	Ave	0.2143	0.2068	0.1000	77200	80000	-3.5	50.0
Hexachlorobenzene	Ave	0.2026	0.1932	0.1000	76300	80000	-4.7	50.0
Atrazine	Ave	0.1836	0.1770		77100	80000	-3.6	50.0
Pentachlorophenol	Lin2		0.1098	0.0500	162000	160000	1.0	50.0
Phenanthrene	Ave	1.072	1.009	0.7000	75300	80000	-5.8	50.0
Anthracene	Ave	1.076	1.050	0.7000	78100	80000	-2.4	50.0
Carbazole	Ave	0.9341	0.8945	0.0100	76600	80000	-4.2	50.0
Alachlor	Ave	0.1271	0.1228		77300	80000	-3.4	50.0
Di-n-butyl phthalate	Ave	1.051	1.042	0.0100	79300	80000	-0.9	50.0
Fluoranthene	Ave	1.018	0.9576	0.6000	75300	80000	-5.9	50.0
Pyrene	Ave	1.428	1.356	0.6000	76000	80000	-5.0	50.0
Famphur	Ave	0.3623	0.3689		81400	80000	1.8	50.0
Butyl benzyl phthalate	Ave	0.5356	0.5448	0.0100	81400	80000	1.7	50.0
3,3'-Dichlorobenzidine	Lin2		0.3396	0.0100	77300	80000	-3.4	50.0
Benzo[a]anthracene	Ave	1.191	1.163	0.8000	78100	80000	-2.4	50.0
Chrysene	Ave	1.219	1.175	0.7000	77100	80000	-3.6	50.0
Bis(2-ethylhexyl) phthalate	Lin1		0.6793	0.0100	73700	80000	-7.9	50.0
Di-n-octyl phthalate	Qua		0.9464	0.0100	71400	80000	-10.7	50.0
Benzo[b]fluoranthene	Ave	1.144	1.134	0.7000	79300	80000	-0.8	50.0
Benzo[k]fluoranthene	Ave	1.315	1.288	0.7000	78400	80000	-2.0	50.0
Benzo[a]pyrene	Ave	1.138	1.173	0.7000	82500	80000	3.1	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVC 280-437601/52 Calibration Date: 11/15/2018 03:02

Instrument ID: SMS_K Calib Start Date: 11/12/2018 14:56

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/12/2018 18:19

Lab File ID: K27590.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Indeno[1,2,3-cd]pyrene	Lin1		0.7143	0.5000	67300	80000	-15.9	50.0
Dibenz(a,h)anthracene	Lin2		0.9162	0.4000	74600	80000	-6.7	50.0
Benzo[g,h,i]perylene	Ave	1.047	1.036	0.5000	79200	80000	-1.0	50.0
2-Fluorophenol (Surr)	Ave	1.477	1.506		81600	80000	2.0	50.0
Phenol-d5 (Surr)	Ave	1.689	1.717		81300	80000	1.6	50.0
Nitrobenzene-d5 (Surr)	Ave	0.3555	0.3539		79600	80000	-0.4	50.0
2-Fluorobiphenyl	Ave	1.401	1.319		75300	80000	-5.9	50.0
2,4,6-Tribromophenol (Surr)	Ave	0.1343	0.1286		76600	80000	-4.3	50.0
Terphenyl-d14 (Surr)	Ave	0.998	0.9352		74900	80000	-6.3	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27590.D
Lims ID: CCVC HSL
Client ID:
Sample Type: CCVC
Inject. Date: 15-Nov-2018 03:02:30 ALS Bottle#: 28 Worklist Smp#: 52
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: CCVC HSL
Operator ID: KIEKELD Instrument ID: SMS_K
Sublist: chrom-SMSK_8270C*sub25

Method: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 15-Nov-2018 10:15:41 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: kiekeld Date: 15-Nov-2018 09:18:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.382	4.382	0.000	96	160495	40.0	40.0	
* 2 Naphthalene-d8	136	5.604	5.604	0.000	100	657262	40.0	40.0	
* 3 Acenaphthene-d10	164	7.337	7.337	0.000	95	312303	40.0	40.0	
* 4 Phenanthrene-d10	188	8.812	8.812	0.000	98	464039	40.0	40.0	
* 5 Chrysene-d12	240	12.560	12.555	0.005	99	342371	40.0	40.0	
* 6 Perylene-d12	264	16.268	16.268	0.000	98	290110	40.0	40.0	
$ 7 2-Fluorophenol	112	3.189	3.189	0.000	94	483533	80.0	81.6	
$ 8 Phenol-d5	99	4.023	4.018	0.005	99	551146	80.0	81.3	
$ 9 Nitrobenzene-d5	82	4.899	4.899	0.000	93	465199	80.0	79.6	
$ 11 2-Fluorobiphenyl	172	6.661	6.662	-0.001	100	823867	80.0	75.3	
$ 12 2,4,6-Tribromophenol	330	8.119	8.125	-0.007	89	80309	80.0	76.6	
$ 13 Terphenyl-d14	244	10.627	10.628	-0.001	98	640371	80.0	74.9	
19 1,4-Dioxane	88	1.779	1.779	0.000	98	214102	80.0	81.6	
20 N-Nitrosodimethylamine	74	2.008	2.008	0.000	86	321133	80.0	82.4	
21 Pyridine	79	2.055	2.055	0.000	84	1036977	160.0	163.2	
32 Phenol	94	4.035	4.035	0.000	97	570691	80.0	80.8	
34 Aniline	93	4.064	4.065	0.000	97	697293	80.0	83.1	
35 Alpha Methyl Styrene	118	4.123	4.123	0.000	94	478272	80.0	81.2	
36 Bis(2-chloroethyl)ether	93	4.111	4.112	-0.001	95	424506	80.0	79.4	
38 n-Decane	43	4.229	4.229	0.000	94	658393	80.0	83.2	
39 2-Chlorophenol	128	4.188	4.188	0.000	98	475609	80.0	80.7	
40 1,3-Dichlorobenzene	146	4.329	4.329	0.000	98	513107	80.0	79.3	
42 1,4-Dichlorobenzene	146	4.399	4.399	0.000	94	520544	80.0	80.3	
43 Benzyl alcohol	108	4.499	4.499	0.000	93	306635	80.0	80.5	
44 1,2-Dichlorobenzene	146	4.546	4.546	0.000	97	491496	80.0	79.7	
45 2-Methylphenol	108	4.605	4.599	0.006	95	432042	80.0	80.2	
46 2,2'-oxybis[1-chloropropan	45	4.628	4.629	-0.001	92	753331	80.0	81.5	
47 Indene	116	4.628	4.629	-0.001	91	1366243	160.0	160.8	
49 3 & 4 Methylphenol	108	4.746	4.746	0.000	78	397590	80.0	78.7	
50 3-Methylphenol	108	4.746	4.746	0.000	85	397590	80.0	78.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
51 4-Methylphenol	108	4.746	4.746	0.000	89	397590	80.0	78.7	
52 N-Nitrosodi-n-propylamine	70	4.746	4.746	0.000	91	275015	80.0	76.9	
54 Acetophenone	105	4.752	4.752	0.000	86	548790	80.0	79.4	
58 Hexachloroethane	117	4.869	4.869	0.000	95	198589	80.0	82.0	
59 Nitrobenzene	77	4.916	4.916	0.000	93	466905	80.0	79.8	
63 Isophorone	82	5.145	5.146	-0.001	98	816742	80.0	79.1	
64 2-Nitrophenol	139	5.228	5.228	0.000	93	247745	80.0	82.0	
65 2,4-Dimethylphenol	107	5.263	5.263	0.000	95	434288	80.0	78.1	
68 Benzoic acid	105	5.375	5.369	0.006	89	606202	160.0	158.1	
69 Bis(2-chloroethoxy)methane	93	5.345	5.345	0.000	97	502903	80.0	78.3	
71 3,5-Dimethylphenol	107	5.392	5.392	0.000	84	436241	80.0	78.3	
74 2,4-Dichlorophenol	162	5.463	5.463	0.000	95	351689	80.0	77.3	
76 1,2,4-Trichlorobenzene	180	5.551	5.551	0.000	94	386291	80.0	75.7	
79 Naphthalene	128	5.627	5.627	0.000	98	1206283	80.0	76.1	
80 4-Chloroaniline	127	5.668	5.669	-0.001	96	518045	80.0	80.0	
81 2,6-Dichlorophenol	162	5.680	5.680	0.000	97	340706	80.0	77.1	
83 Hexachlorobutadiene	225	5.757	5.757	0.000	97	208833	80.0	75.8	
86 Caprolactam	55	5.992	5.992	0.000	74	204336	80.0	79.2	
89 4-Chloro-3-methylphenol	107	6.144	6.144	0.000	97	348006	80.0	78.7	
93 2-Methylnaphthalene	142	6.303	6.303	0.000	95	847405	80.0	76.2	
96 1-Methylnaphthalene	142	6.403	6.403	0.000	96	800811	80.0	77.2	
97 Hexachlorocyclopentadiene	237	6.473	6.473	0.000	96	220538	80.0	82.1	
98 1,2,4,5-Tetrachlorobenzene	216	6.479	6.479	0.000	97	334327	80.0	74.4	
100 2,4,6-Trichlorophenol	196	6.585	6.585	0.000	93	213224	80.0	77.4	
101 2,3-Dichlorobenzenamine	161	6.579	6.579	0.000	96	372807	80.0	76.5	
102 2,4,5-Trichlorophenol	196	6.620	6.620	0.000	94	242544	80.0	77.9	
104 1,1'-Biphenyl	154	6.761	6.761	0.000	95	956349	80.0	76.7	
106 2-Chloronaphthalene	162	6.785	6.785	0.000	96	719331	80.0	76.1	
108 2-Nitroaniline	65	6.873	6.873	0.000	86	213677	80.0	80.0	
111 Dimethyl phthalate	163	7.055	7.055	0.000	99	695696	80.0	74.8	
112 1,3-Dinitrobenzene	168	7.079	7.079	0.000	86	124341	80.0	80.6	
113 2,6-Dinitrotoluene	165	7.114	7.114	0.000	94	179939	80.0	76.9	
114 Acenaphthylene	152	7.196	7.196	0.000	98	1062199	80.0	75.5	
115 3-Nitroaniline	138	7.278	7.278	0.000	94	190752	80.0	77.7	
117 Acenaphthene	153	7.372	7.372	0.000	93	699966	80.0	75.5	
118 2,4-Dinitrophenol	184	7.384	7.384	0.000	86	156107	160.0	153.9	
119 4-Nitrophenol	109	7.449	7.449	0.000	95	169329	160.0	153.5	
122 2,4-Dinitrotoluene	165	7.513	7.513	0.000	95	219430	80.0	77.5	
123 Dibenzofuran	168	7.543	7.543	0.000	97	950310	80.0	73.9	
125 2,3,4,6-Tetrachlorophenol	232	7.666	7.666	0.000	73	178591	80.0	78.1	
127 Hexadecane	57	7.778	7.784	-0.006	91	642161	80.0	78.6	
130 Diethyl phthalate	149	7.754	7.754	0.000	98	658296	80.0	73.4	
134 4-Chlorophenyl phenyl ethe	204	7.878	7.872	0.006	93	330660	80.0	72.4	
135 Fluorene	166	7.883	7.884	-0.001	95	693517	80.0	71.4	
138 4-Nitroaniline	138	7.883	7.884	-0.001	88	163394	80.0	73.7	
139 4,6-Dinitro-2-methylphenol	198	7.925	7.925	0.000	86	201624	160.0	153.5	
141 N-Nitrosodiphenylamine	169	7.989	7.989	0.000	63	530344	80.0	79.4	
142 Diphenylamine	169	7.989	7.989	0.000	95	530344	68.0	63.6	
143 1,2-Diphenylhydrazine	77	8.030	8.031	-0.001	41	745713	80.9	78.4	
144 Azobenzene	77	8.030	8.031	-0.001	98	745713	80.0	77.6	
147 2,4,6 - Tribromophenol	330	8.119	8.125	-0.007	89	80202	80.0	76.4	
156 4-Bromophenyl phenyl ether	248	8.359	8.360	-0.001	69	191913	80.0	77.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
157 Hexachlorobenzene	284	8.442	8.442	0.000	93	179260	80.0	76.3	
159 Atrazine	200	8.512	8.512	0.000	91	164279	80.0	77.1	
161 n-Octadecane	85	8.694	8.694	0.000	92	215076	80.0	82.6	
163 Pentachlorophenol	266	8.630	8.630	0.000	92	203767	160.0	161.7	
168 Phenanthrene	178	8.835	8.835	0.000	98	936818	80.0	75.3	
169 Anthracene	178	8.888	8.888	0.000	97	974464	80.0	78.1	
170 Carbazole	167	9.041	9.041	0.000	96	830207	80.0	76.6	
171 Alachlor	188	9.182	9.182	0.000	94	113956	80.0	77.3	
173 Di-n-butyl phthalate	149	9.376	9.376	0.000	99	966980	80.0	79.3	
179 Fluoranthene	202	10.110	10.110	0.000	98	888698	80.0	75.3	
182 Pyrene	202	10.410	10.410	0.000	97	928813	80.0	76.0	
188 Famphur	218	11.332	11.333	-0.001	85	252606	80.0	81.4	
190 Butyl benzyl phthalate	149	11.450	11.450	0.000	98	373051	80.0	81.4	
195 Bis(2-ethylhexyl) phthalat	149	12.731	12.731	0.000	97	465135	80.0	73.7	
197 3,3'-Dichlorobenzidine	252	12.508	12.508	0.000	74	232525	80.0	77.3	
198 Benzo[a]anthracene	228	12.543	12.543	0.000	99	796066	80.0	78.1	
199 Chrysene	228	12.619	12.619	0.000	97	804381	80.0	77.1	
201 Di-n-octyl phthalate	149	14.435	14.435	0.000	99	648030	80.0	71.4	
203 Benzo[b]fluoranthene	252	15.228	15.234	-0.006	98	658226	80.0	79.3	
204 Benzo[k]fluoranthene	252	15.304	15.304	0.000	99	747334	80.0	78.4	
206 Benzo[e]pyrene	252	15.968	15.974	-0.006	97	636972	80.0	77.0	
207 Benzo[a]pyrene	252	16.109	16.109	0.000	78	680406	80.0	82.5	
213 Dibenz(a,h)anthracene	278	19.382	19.376	0.006	94	531606	80.0	74.6	
214 Indeno[1,2,3-cd]pyrene	276	19.282	19.282	0.000	98	489140	80.0	67.3	
215 Benzo[g,h,i]perylene	276	19.993	19.993	0.000	97	601165	80.0	79.2	
S 217 Total Cresols	108				0			158.8	
S 218 Methyl Phenols,Total	108				0			158.8	

Reagents:

MS-HSLACCV080_00173 Amount Added: 200.00 Units: uL

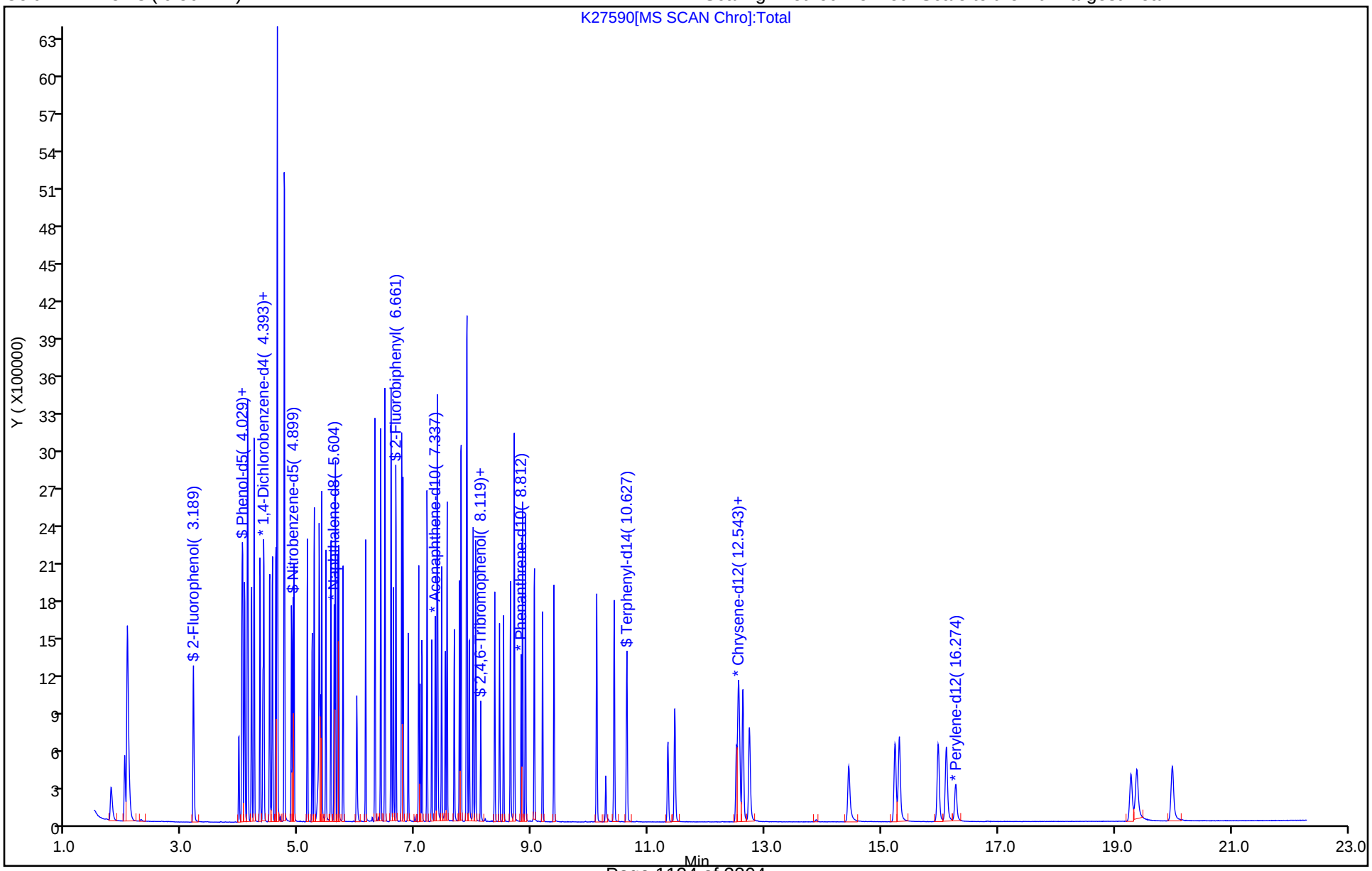
Report Date: 15-Nov-2018 10:15:44 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27590.D

Injection Date:	15-Nov-2018 03:02:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	CCVC HSL			Worklist Smp#:	52
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 12-Nov-2018 14:10:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 13-Nov-2018 11:59:08 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0329

First Level Reviewer: kiekeld Date: 12-Nov-2018 14:47:12

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
28 Pentachlorophenol_T	266	3.549	3.549	0.000	92	78667	NR	NR	
48 Benzidine_T	184	4.624	4.624	0.000	99	599365	NR	NR	
30 DFTPP									
56 4,4'-DDE	246		4.759				ND	ND	Ua
62 4,4'-DDD	235	5.036	5.036	0.000	94	2968	NR	NR	a
70 4,4'-DDT	235	5.229	5.229	0.000	98	242126	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
ND - Not Detected or Marked ND
Review Flags
U - Marked Undetected
a - User Assigned ID

Reagents:

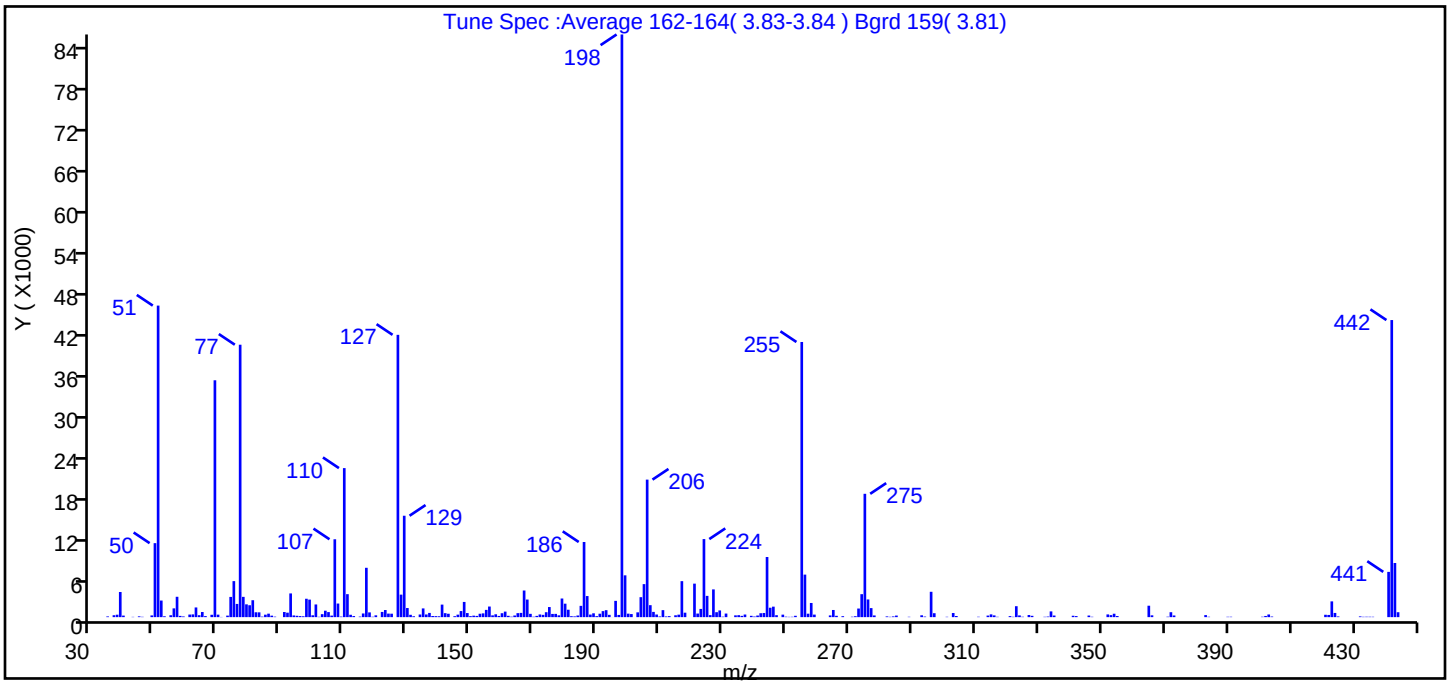
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D
Injection Date: 12-Nov-2018 14:10:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Tune Method: DFTPP Method 8270

30 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	53.5
68	<2% of mass 69	0.4 (1.0)
69	Present	40.7
70	<2% of mass 69	0.4 (1.1)
127	40-60% of mass 198	48.5
197	<1% of mass 198	0.4
199	5-9% of mass 198	7.2
275	10-30% of mass 198	21.2
365	>1% of mass 198	2.0
441	Present but less than mass 443	7.8 (83.6)
442	>40% of mass 198	51.0
443	17-23% of mass 442	9.3 (18.2)

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D\SMSK_8270C.rslt\spectra.d
Injection Date: 12-Nov-2018 14:10:30
Spectrum: Tune Spec :Average 162-164(3.83-3.84) Bgrd 159(3.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	105	117.00	7237	190.00	146	275.00	18088
37.00	283	118.00	695	191.00	503	276.00	2594
38.00	358	119.00	57	192.00	883	277.00	1326
39.00	3686	120.00	266	193.00	1022	278.00	249
40.00	227	122.00	763	194.00	337	282.00	109
43.00	40	123.00	1044	195.00	7	283.00	48
45.00	115	124.00	519	196.00	2387	284.00	106
46.00	50	125.00	505	197.00	324	285.00	232
49.00	251	127.00	41400	198.00	85448	289.00	52
50.00	10851	128.00	3301	199.00	6131	293.00	271
51.00	45688	129.00	14871	200.00	510	294.00	83
52.00	2434	130.00	1336	201.00	451	296.00	3718
53.00	127	131.00	344	203.00	702	297.00	577
55.00	279	132.00	127	204.00	2928	301.00	52
56.00	1287	134.00	389	205.00	4842	303.00	604
57.00	2986	135.00	1280	206.00	20168	304.00	166
58.00	183	136.00	392	207.00	1755	311.00	57
59.00	101	137.00	620	208.00	770	314.00	230
61.00	380	138.00	166	209.00	384	315.00	407
62.00	405	139.00	147	210.00	100	316.00	257
63.00	1421	140.00	130	211.00	1027	317.00	51
64.00	284	141.00	1839	212.00	100	321.00	150
65.00	752	142.00	584	213.00	148	322.00	53
66.00	152	143.00	497	215.00	271	323.00	1605
68.00	347	145.00	138	216.00	363	324.00	254
69.00	34736	146.00	365	217.00	5278	325.00	59
70.00	365	147.00	891	218.00	653	327.00	309
71.00	28	148.00	2230	221.00	4914	328.00	194
73.00	224	149.00	599	222.00	526	332.00	51
74.00	2966	150.00	149	223.00	1206	333.00	85
75.00	5283	151.00	218	224.00	11448	334.00	843
76.00	1938	152.00	181	225.00	3119	335.00	236
77.00	39952	153.00	498	226.00	295	341.00	203

Report Date: 13-Nov-2018 11:59:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D\SMSK_8270C.rslt\spectra.d
Injection Date: 12-Nov-2018 14:10:30
Spectrum: Tune Spec :Average 162-164(3.83-3.84) Bgrd 159(3.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	2975	154.00	554	227.00	4069	342.00	156
79.00	1877	155.00	1063	228.00	725	346.00	236
80.00	1746	156.00	1556	229.00	983	347.00	55
81.00	2482	157.00	260	230.00	68	352.00	399
82.00	714	158.00	419	231.00	526	353.00	294
83.00	703	159.00	177	234.00	262	354.00	500
84.00	75	160.00	576	235.00	287	355.00	162
85.00	361	161.00	812	236.00	190	365.00	1676
86.00	510	162.00	196	237.00	385	366.00	266
87.00	217	163.00	68	239.00	194	371.00	63
88.00	70	164.00	240	240.00	88	372.00	724
91.00	751	165.00	585	241.00	236	373.00	245
92.00	653	166.00	624	242.00	575	383.00	300
93.00	3478	167.00	3907	243.00	609	384.00	57
94.00	249	168.00	2580	244.00	8820	390.00	53
95.00	200	169.00	484	245.00	1380	391.00	58
96.00	154	170.00	60	246.00	1538	401.00	60
97.00	123	171.00	183	247.00	287	402.00	173
98.00	2697	172.00	392	249.00	367	403.00	390
99.00	2570	173.00	336	250.00	68	404.00	89
100.00	270	174.00	723	251.00	43	421.00	348
101.00	1861	175.00	1481	252.00	53	422.00	322
102.00	50	176.00	471	253.00	199	423.00	2313
103.00	437	177.00	478	255.00	40352	424.00	616
104.00	943	178.00	264	256.00	6237	425.00	104
105.00	740	179.00	2733	257.00	505	432.00	110
106.00	226	180.00	1974	258.00	2077	433.00	52
107.00	11420	181.00	1088	259.00	372	434.00	62
108.00	1994	182.00	138	264.00	252	435.00	59
109.00	79	183.00	108	265.00	1050	436.00	55
110.00	21856	184.00	240	266.00	198	441.00	6638
111.00	3370	185.00	1656	268.00	139	442.00	43568
112.00	348	186.00	11019	271.00	63	443.00	7940
113.00	158	187.00	3092	272.00	135	444.00	721

Report Date: 13-Nov-2018 11:59:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D\SMSK_8270C.rslt\spectra.d
Injection Date: 12-Nov-2018 14:10:30
Spectrum: Tune Spec :Average 162-164(3.83-3.84) Bgrd 159(3.81)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	80	188.00	377	273.00	1262		
116.00	539	189.00	562	274.00	3369		

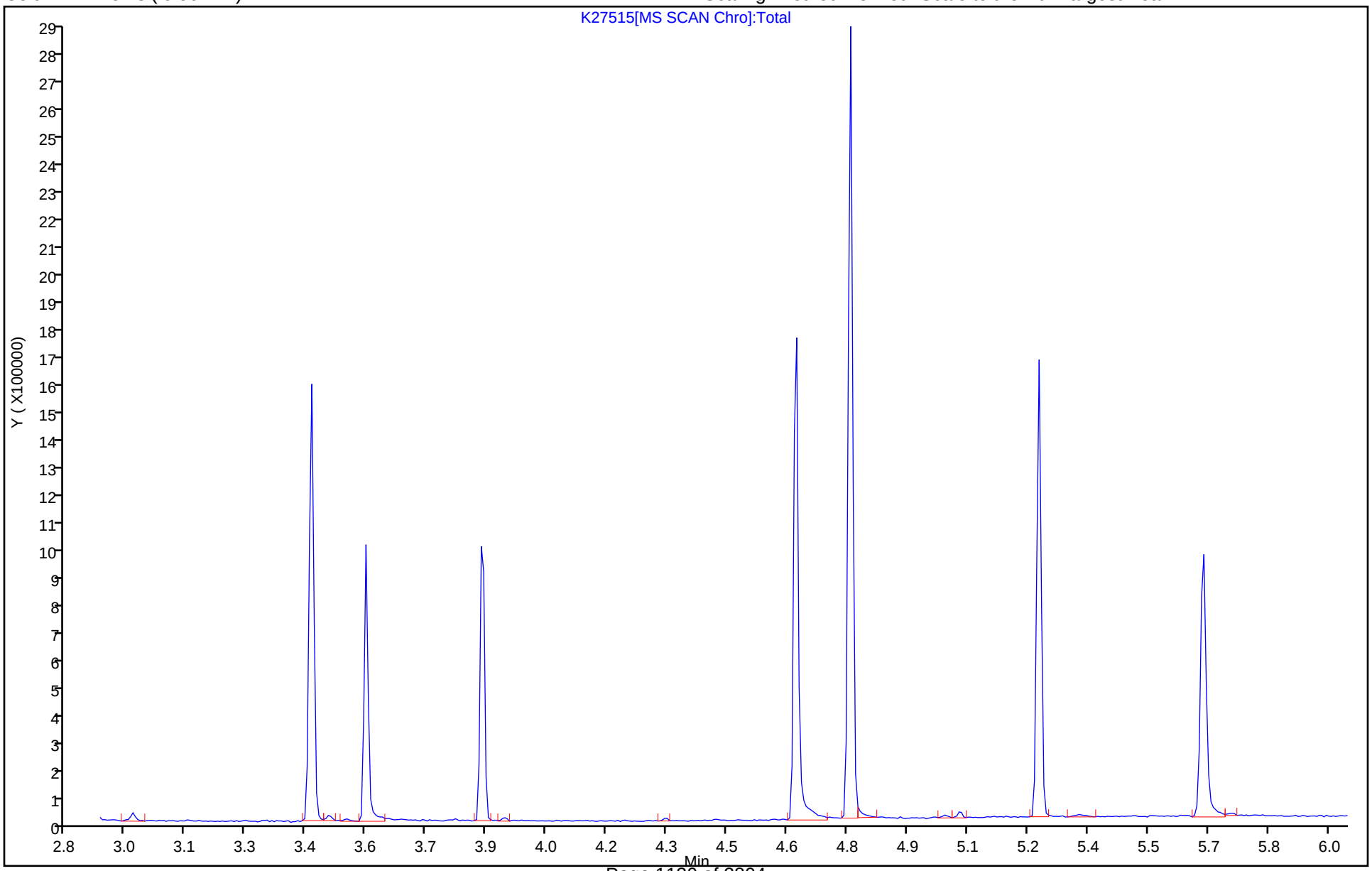
Report Date: 13-Nov-2018 11:59:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D

Injection Date:	12-Nov-2018 14:10:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1

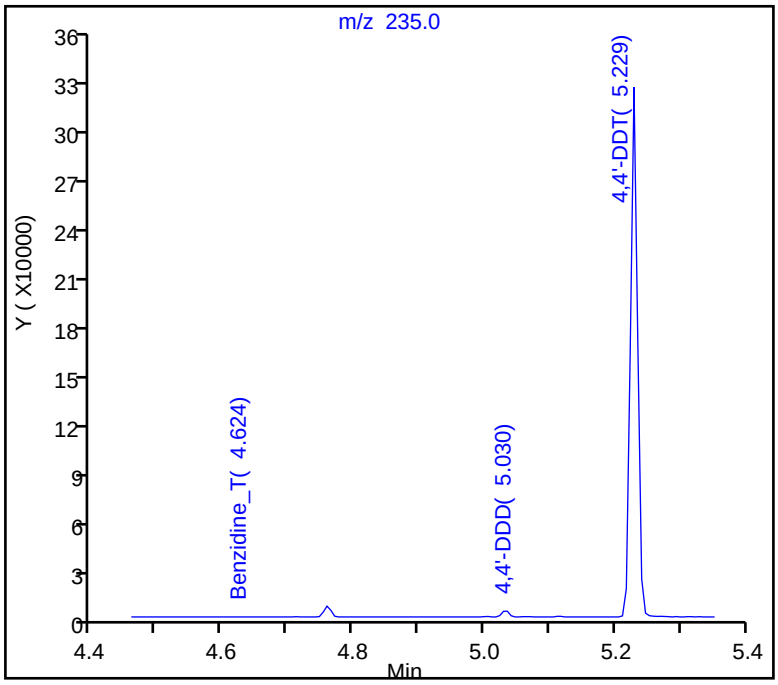


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D
Injection Date: 12-Nov-2018 14:10:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

70 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

70 4,4'-DDT, Area = 242126
62 4,4'-DDD, Area = 2968
56 4,4'-DDE, Area = 0

%Breakdown: 1.21%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

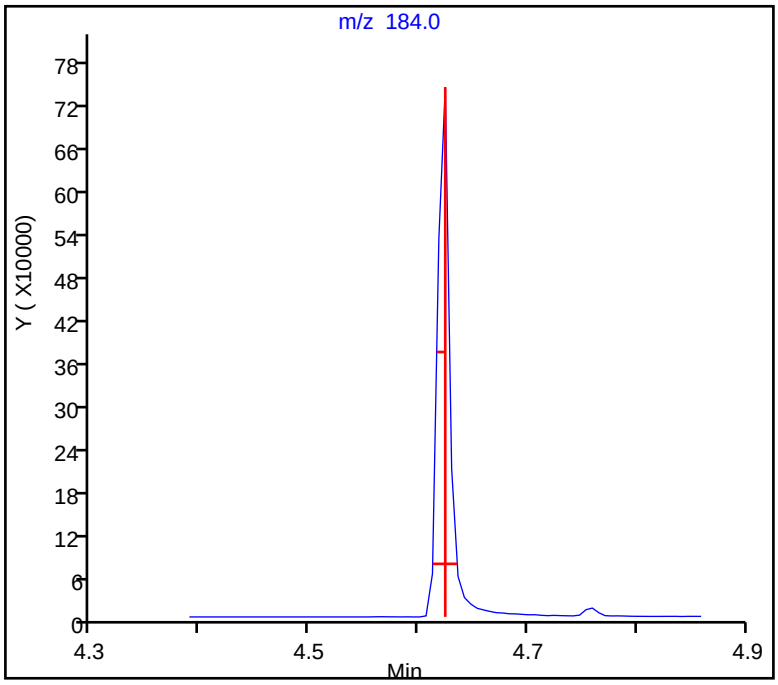
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D
Injection Date: 12-Nov-2018 14:10:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

48 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.012 (min.)

Tailing Factor = 1.0, Max. Tailing < 3.00
Passed



Peak Tailing Report

TestAmerica Denver

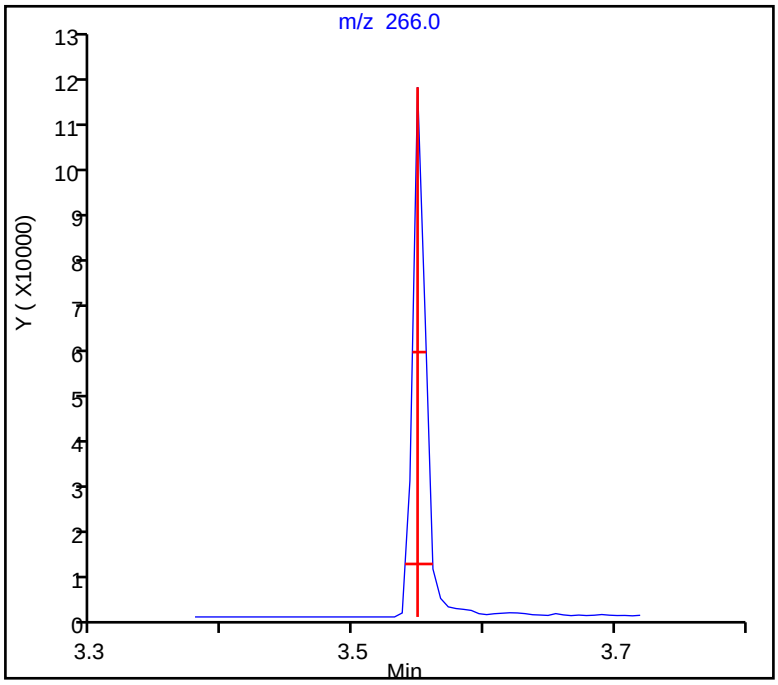
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27515.D
Injection Date: 12-Nov-2018 14:10:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

28 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.012 (min.)
Front Width = 0.010 (min.)

Tailing Factor = 1.2, Max. Tailing < 5.00
Passed



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27563.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 14-Nov-2018 14:13:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 15-Nov-2018 09:19:29 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: kiekeld Date: 14-Nov-2018 14:23:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
28 Pentachlorophenol_T	266	3.537	3.537	0.000	92	60485	NR	NR	
48 Benzidine_T	184	4.607	4.607	0.000	100	505102	NR	NR	
30 DFTPP									
56 4,4'-DDE	246	4.748	4.748	0.000	1	172	NR	NR	a
62 4,4'-DDD	235	5.018	5.018	0.000	91	2067	NR	NR	a
70 4,4'-DDT	235	5.212	5.212	0.000	98	195744	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

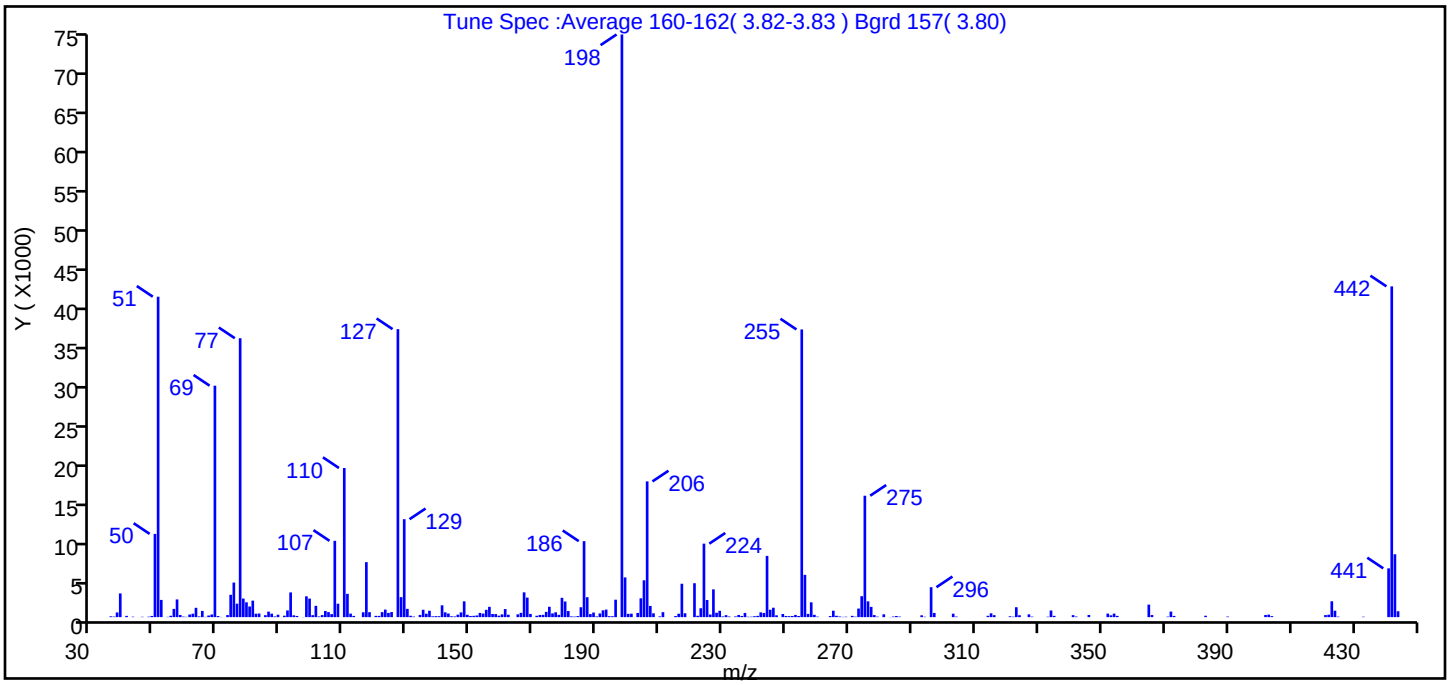
MS-DFTPP_00047 Amount Added: 200.00 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27563.D
Injection Date: 14-Nov-2018 14:13:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625
Tune Method: DFTPP Method 8270

30 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	55.0
68	<2% of mass 69	0.5 (1.1)
69	Present	39.7
70	<2% of mass 69	0.2 (0.5)
127	40-60% of mass 198	49.4
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.8
275	10-30% of mass 198	20.8
365	>1% of mass 198	2.1
441	Present but less than mass 443	8.4 (77.6)
442	>40% of mass 198	56.8
443	17-23% of mass 442	10.8 (19.0)

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27563.D\SMSK_8270C.rslt\spectra.d
Injection Date: 14-Nov-2018 14:13:30
Spectrum: Tune Spec :Average 160-162(3.82-3.83) Bgrd 157(3.80)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 264

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	105	111.00	2976	184.00	135	260.00	66
37.00	71	112.00	446	185.00	1264	264.00	141
38.00	598	113.00	160	186.00	9710	265.00	823
39.00	3032	116.00	619	187.00	2545	266.00	174
41.00	164	117.00	7028	188.00	394	267.00	86
43.00	58	118.00	636	189.00	588	268.00	35
45.00	9	120.00	163	190.00	88	269.00	56
46.00	45	121.00	161	191.00	473	271.00	164
48.00	59	122.00	640	192.00	869	272.00	61
49.00	153	123.00	964	193.00	964	273.00	1095
50.00	10639	124.00	541	194.00	125	274.00	2676
51.00	40944	125.00	651	195.00	117	275.00	15515
52.00	2201	127.00	36800	196.00	2230	276.00	2016
53.00	4	128.00	2554	198.00	74448	277.00	1307
54.00	38	129.00	12514	199.00	5078	278.00	260
55.00	175	130.00	1060	200.00	422	279.00	65
56.00	1055	131.00	177	201.00	440	281.00	362
57.00	2264	132.00	74	203.00	540	283.00	20
58.00	277	133.00	3	204.00	2403	284.00	77
59.00	70	134.00	284	205.00	4708	285.00	147
60.00	36	135.00	944	206.00	17344	286.00	69
61.00	336	136.00	441	207.00	1431	293.00	233
62.00	438	137.00	818	208.00	490	294.00	50
63.00	1193	138.00	102	210.00	90	296.00	3825
64.00	91	139.00	127	211.00	637	297.00	537
65.00	798	140.00	122	215.00	145	303.00	441
66.00	33	141.00	1513	216.00	433	304.00	69
67.00	207	142.00	615	217.00	4268	314.00	171
68.00	337	143.00	460	218.00	494	315.00	488
69.00	29576	144.00	109	221.00	4335	316.00	250
70.00	139	145.00	85	222.00	175	321.00	107
71.00	24	146.00	315	223.00	1139	322.00	57
73.00	264	147.00	606	224.00	9390	323.00	1270

Report Date: 15-Nov-2018 09:19:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27563.D\SMSK_8270C.rslt\spectra.d
Injection Date: 14-Nov-2018 14:13:30
Spectrum: Tune Spec :Average 160-162(3.82-3.83) Bgrd 157(3.80)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 264

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	2854	148.00	2022	225.00	2191	324.00	245
75.00	4421	149.00	305	226.00	336	327.00	359
76.00	1721	150.00	151	227.00	3549	328.00	64
77.00	35640	151.00	169	228.00	561	333.00	55
78.00	2374	152.00	214	229.00	812	334.00	848
79.00	1897	153.00	539	230.00	90	335.00	164
80.00	1362	154.00	454	231.00	254	341.00	256
81.00	2107	155.00	935	232.00	81	342.00	76
82.00	438	156.00	1318	234.00	92	346.00	276
83.00	463	157.00	403	235.00	279	352.00	453
85.00	248	158.00	392	236.00	152	353.00	234
86.00	705	159.00	187	237.00	538	354.00	452
87.00	443	160.00	351	238.00	51	355.00	160
88.00	90	161.00	1032	239.00	58	365.00	1599
89.00	312	162.00	308	240.00	122	366.00	270
91.00	185	165.00	358	241.00	164	371.00	63
92.00	855	166.00	547	242.00	611	372.00	711
93.00	3160	167.00	3168	243.00	532	373.00	158
94.00	231	168.00	2500	244.00	7828	383.00	180
95.00	153	169.00	414	245.00	949	390.00	76
97.00	15	171.00	176	246.00	1203	402.00	281
98.00	2666	172.00	277	247.00	235	403.00	324
99.00	2371	173.00	295	249.00	403	404.00	131
100.00	251	174.00	675	250.00	144	421.00	265
101.00	1446	175.00	1324	251.00	128	422.00	313
102.00	84	176.00	477	252.00	143	423.00	2028
103.00	264	177.00	623	253.00	285	424.00	821
104.00	785	178.00	294	254.00	147	425.00	67
105.00	645	179.00	2472	255.00	36760	433.00	56
106.00	387	180.00	1997	256.00	5404	441.00	6234
107.00	9752	181.00	782	257.00	416	442.00	42264
108.00	1717	182.00	95	258.00	1896	443.00	8034
110.00	19056	183.00	72	259.00	298	444.00	753

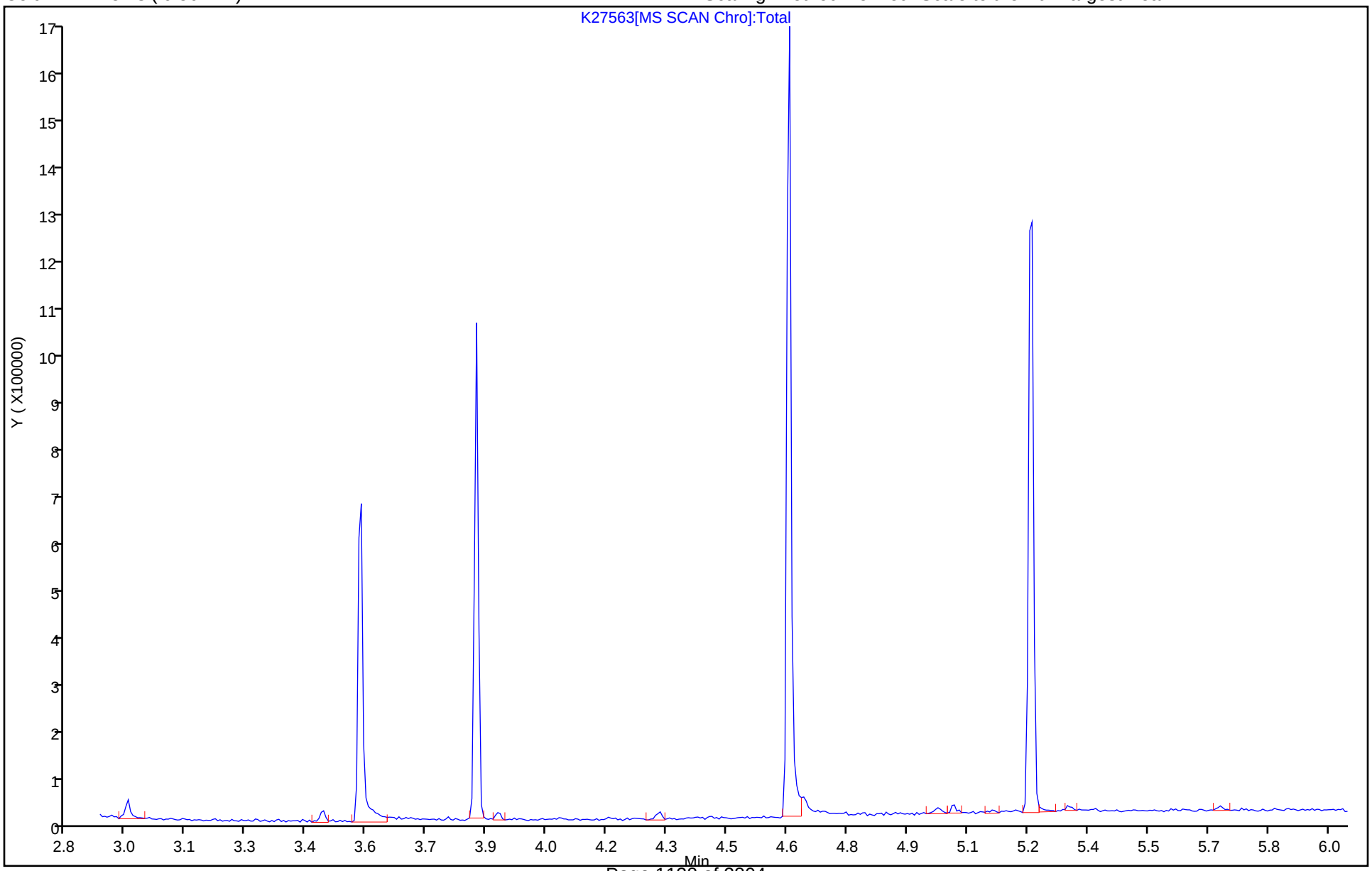
Report Date: 15-Nov-2018 09:19:30 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27563.D

Injection Date:	14-Nov-2018 14:13:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1

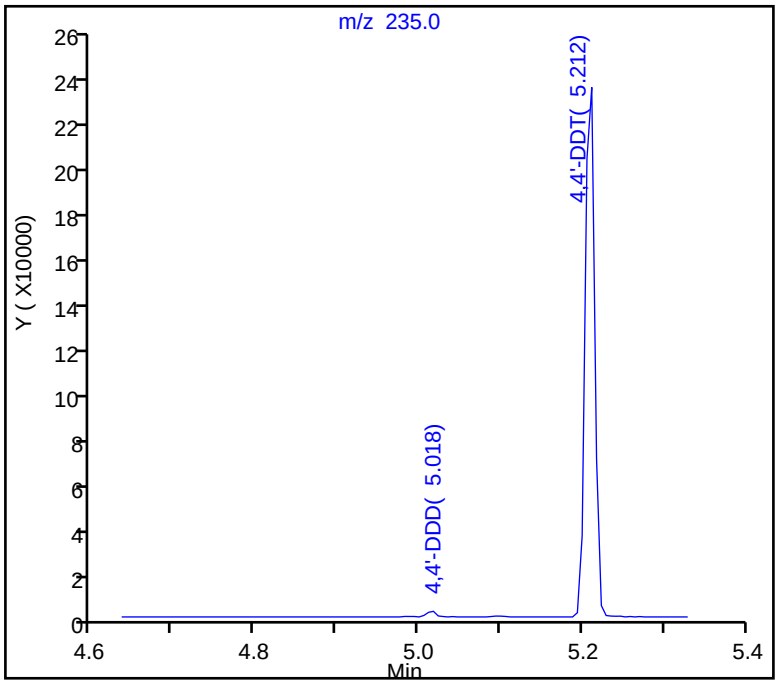


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27563.D
Injection Date: 14-Nov-2018 14:13:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

70 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

70 4,4'-DDT, Area = 195744
62 4,4'-DDD, Area = 2067
56 4,4'-DDE, Area = 172

%Breakdown: 1.13%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

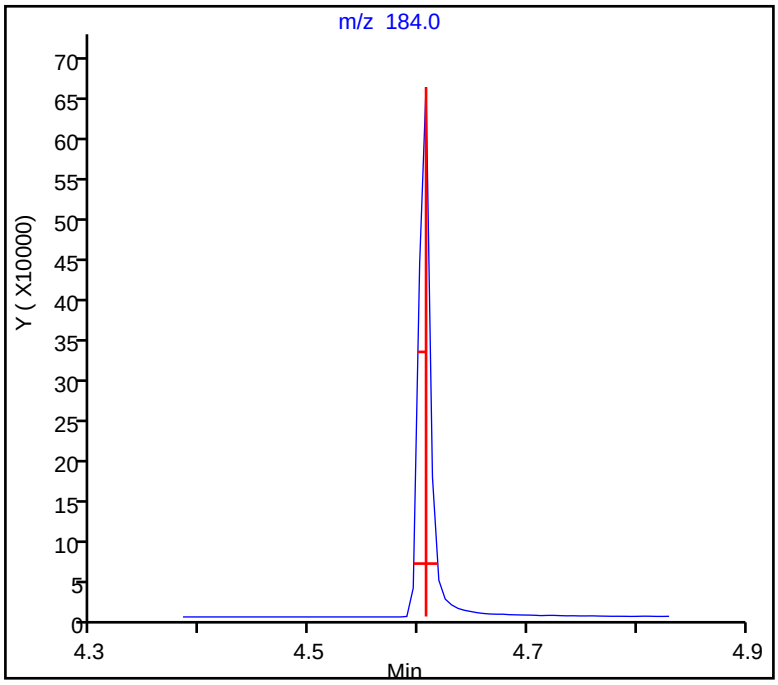
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27563.D
Injection Date: 14-Nov-2018 14:13:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

48 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.0, Max. Tailing < 3.00
Passed



Peak Tailing Report

TestAmerica Denver

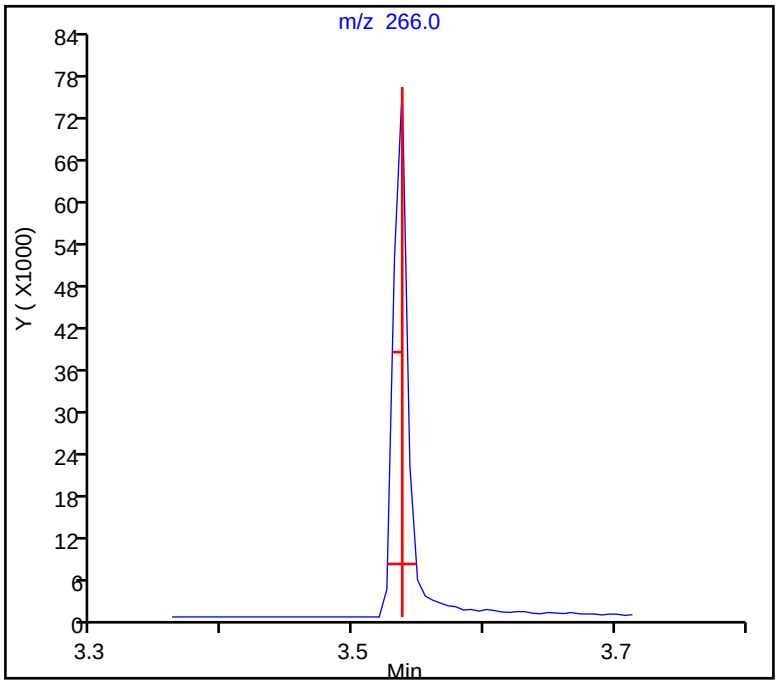
Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27563.D
Injection Date: 14-Nov-2018 14:13:30 Instrument ID: SMS_K
Lims ID: DFTPP
Client ID:
Operator ID: KIEKELD ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Method: SMSK_8270C Limit Group: MSSV - 8270C_625

28 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.011 (min.)

Tailing Factor = 1.0, Max. Tailing < 5.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436342/1-A

Matrix: Water | Lab File ID: K27570.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 11/05/2018 12:30

Sample wt/vol: 1000(mL) | Date Analyzed: 11/14/2018 17:21

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437601 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	1.0	U	10	1.0	0.28
95-50-1	1,2-Dichlorobenzene	0.50	U	10	0.50	0.23
541-73-1	1,3-Dichlorobenzene	1.0	U	10	1.0	0.30
106-46-7	1,4-Dichlorobenzene	1.0	U	10	1.0	0.32
123-91-1	1,4-Dioxane	4.4	U	18	4.4	1.7
95-95-4	2,4,5-Trichlorophenol	1.0	U	20	1.0	0.45
88-06-2	2,4,6-Trichlorophenol	1.0	U	20	1.0	0.29
120-83-2	2,4-Dichlorophenol	2.0	U	10	2.0	0.64
105-67-9	2,4-Dimethylphenol	2.0	U	10	2.0	0.58
51-28-5	2,4-Dinitrophenol	30	U	80	30	10
121-14-2	2,4-Dinitrotoluene	4.4	U	20	4.4	1.7
606-20-2	2,6-Dinitrotoluene	4.4	U	20	4.4	1.9
91-58-7	2-Chloronaphthalene	1.0	U	10	1.0	0.26
95-57-8	2-Chlorophenol	4.4	U	10	4.4	2.0
95-48-7	2-Methylphenol	2.0	U	10	2.0	0.98
88-74-4	2-Nitroaniline	4.4	U	50	4.4	1.7
88-75-5	2-Nitrophenol	1.0	U	20	1.0	0.39
15831-10-4	3 & 4 Methylphenol	0.50	U	20	0.50	0.25
91-94-1	3,3'-Dichlorobenzidine	4.4	U	50	4.4	2.0
99-09-2	3-Nitroaniline	4.4	U	50	4.4	2.0
534-52-1	4,6-Dinitro-2-methylphenol	8.8	U	80	8.8	4.0
101-55-3	4-Bromophenyl phenyl ether	1.0	U	10	1.0	0.43
59-50-7	4-Chloro-3-methylphenol	5.0	U	20	5.0	2.4
106-47-8	4-Chloroaniline	4.4	U	25	4.4	2.1
7005-72-3	4-Chlorophenyl phenyl ether	4.4	U	10	4.4	1.7
100-01-6	4-Nitroaniline	4.4	U	50	4.4	2.0
100-02-7	4-Nitrophenol	4.0	U	50	4.0	1.2
65-85-0	Benzoic acid	30	U	80	30	10
100-51-6	Benzyl alcohol	0.50	U	25	0.50	0.23
108-60-1	bis (2-chloroisopropyl) ether	1.0	U	10	1.0	0.28
111-91-1	Bis(2-chloroethoxy)methane	2.0	U	10	2.0	0.97
111-44-4	Bis(2-chloroethyl)ether	1.0	U	20	1.0	0.41
117-81-7	Bis(2-ethylhexyl) phthalate	2.0	U	10	2.0	0.56
85-68-7	Butyl benzyl phthalate	2.0	U	20	2.0	1.0

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436342/1-A

Matrix: Water | Lab File ID: K27570.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 11/05/2018 12:30

Sample wt/vol: 1000(mL) | Date Analyzed: 11/14/2018 17:21

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437601 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	1.0	U	10	1.0	0.43
132-64-9	Dibenzofuran	1.0	U	10	1.0	0.29
84-66-2	Diethyl phthalate	1.0	U	20	1.0	0.38
131-11-3	Dimethyl phthalate	0.50	U	20	0.50	0.21
84-74-2	Di-n-butyl phthalate	4.4	U	20	4.4	1.2
117-84-0	Di-n-octyl phthalate	1.0	U	20	1.0	0.35
118-74-1	Hexachlorobenzene	2.0	U	10	2.0	0.66
87-68-3	Hexachlorobutadiene	10	U	30	10	3.3
77-47-4	Hexachlorocyclopentadiene	30	U	50	30	10
67-72-1	Hexachloroethane	4.4	U	10	4.4	2.1
78-59-1	Isophorone	0.50	U	10	0.50	0.21
98-95-3	Nitrobenzene	2.0	U	20	2.0	0.81
621-64-7	N-Nitrosodi-n-propylamine	1.0	U	20	1.0	0.35
86-30-6	N-Nitrosodiphenylamine	1.0	U	10	1.0	0.44
87-86-5	Pentachlorophenol	60	U	80	60	20
108-95-2	Phenol	4.4	U	10	4.4	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	85		43-140
321-60-8	2-Fluorobiphenyl	86		44-119
367-12-4	2-Fluorophenol (Surr)	98		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	99		44-120
4165-62-2	Phenol-d5 (Surr)	102		10-115
1718-51-0	Terphenyl-d14 (Surr)	99		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27570.D
Lims ID: MB 280-436342/1-A
Client ID:
Sample Type: MB
Inject. Date: 14-Nov-2018 17:21:30 ALS Bottle#: 8 Worklist Smp#: 32
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: MB 280-436342_1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 15-Nov-2018 09:19:54 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: kiekeld Date: 15-Nov-2018 08:58:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.382	4.382	0.000	96	142392	40.0	40.0	
* 2 Naphthalene-d8	136	5.604	5.604	0.000	99	575266	40.0	40.0	
* 3 Acenaphthene-d10	164	7.337	7.337	0.000	94	298040	40.0	40.0	
* 4 Phenanthrene-d10	188	8.812	8.812	0.000	97	476391	40.0	40.0	
* 5 Chrysene-d12	240	12.555	12.555	0.000	99	314310	40.0	40.0	
* 6 Perylene-d12	264	16.268	16.268	0.000	97	234941	40.0	40.0	
$ 7 2-Fluorophenol	112	3.189	3.189	0.000	94	513858	100.0	97.7	
$ 8 Phenol-d5	99	4.018	4.018	0.000	95	614515	100.0	102.2	
$ 9 Nitrobenzene-d5	82	4.893	4.899	-0.006	95	505080	100.0	98.8	
$ 10 2,4,6-Trichlorophenol-d2	198		6.920					ND	
$ 11 2-Fluorobiphenyl	172	6.662	6.662	0.000	99	898889	100.0	86.1	
$ 12 2,4,6-Tribromophenol	330	8.119	8.125	-0.006	91	85361	100.0	85.3	
$ 13 Terphenyl-d14	244	10.628	10.628	0.000	99	772973	100.0	98.5	
17 Triethyl amine	86		2.185					ND	
18 2-Ethoxyethanol	59		2.337					ND	
19 1,4-Dioxane	88		1.779					ND	
20 N-Nitrosodimethylamine	74		2.008					ND	
21 Pyridine	79		2.055					ND	
22 Dimethylformamide	73		2.819					ND	
23 2-Picoline	93		2.678					ND	
24 N-Nitrosomethylethylamine	88		2.760					ND	
25 Acrylamide	71		2.995					ND	
26 Methyl methanesulfonate	80		3.018					ND	
27 N-Nitrosodiethylamine	102		3.383					ND	
28 Pentachlorophenol_T	266		3.537					ND	
29 Ethyl methanesulfonate	79		3.641					ND	
31 Benzaldehyde	106		3.965					ND	
32 Phenol	94		4.035					ND	
33 Phenylmercaptan	110		4.012					ND	
34 Aniline	93		4.065					ND	
35 Alpha Methyl Styrene	118		4.123					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
36 Bis(2-chloroethyl)ether	93		4.112					ND	
37 Pentachloroethane	117		4.117					ND	
38 n-Decane	43		4.229					ND	
39 2-Chlorophenol	128		4.188					ND	
40 1,3-Dichlorobenzene	146		4.329					ND	
41 Methyl styrene	118		4.834					ND	
42 1,4-Dichlorobenzene	146		4.399					ND	
43 Benzyl alcohol	108		4.499					ND	
44 1,2-Dichlorobenzene	146		4.546					ND	
45 2-Methylphenol	108		4.599					ND	
46 2,2'-oxybis[1-chloropropan	45		4.629					ND	
47 Indene	116		4.629					ND	
48 Benzidine_T	184		4.607					ND	
49 3 & 4 Methylphenol	108		4.746					ND	
50 3-Methylphenol	108		4.746					ND	
51 4-Methylphenol	108		4.746					ND	
52 N-Nitrosodi-n-propylamine	70		4.746					ND	
53 N-Nitrosopyrrolidine	100		4.717					ND	
54 Acetophenone	105		4.752					ND	
55 N-Nitrosomorpholine	116		4.752					ND	
57 2-Toluidine	106		4.787					ND	
58 Hexachloroethane	117		4.869					ND	
59 Nitrobenzene	77		4.916					ND	
60 Triethyl phosphate	99		5.346					ND	
61 N-Nitrosopiperidine	114		5.051					ND	
63 Isophorone	82		5.146					ND	
64 2-Nitrophenol	139		5.228					ND	
65 2,4-Dimethylphenol	107		5.263					ND	
66 Benzyl dichloride	125		5.610					ND	
67 o,o',o''-Triethylphosphoro	198		5.322					ND	
68 Benzoic acid	105		5.369					ND	
69 Bis(2-chloroethoxy)methane	93		5.345					ND	
71 3,5-Dimethylphenol	107		5.392					ND	
72 2,4-Xylidine	121		5.769					ND	
73 alpha,alpha-Dimethyl phene	58		5.486					ND	
74 2,4-Dichlorophenol	162		5.463					ND	
75 o-Anisidine	80		5.804					ND	
76 1,2,4-Trichlorobenzene	180		5.551					ND	
77 4-chlorobenzenethiol	144		5.745					ND	
78 Alpha-Terpineol	59		5.621					ND	
79 Naphthalene	128		5.627					ND	
80 4-Chloroaniline	127		5.669					ND	
81 2,6-Dichlorophenol	162		5.680					ND	
82 Hexachloropropene	213		5.721					ND	
83 Hexachlorobutadiene	225		5.757					ND	
84 Quinoline	129		5.945					ND	
85 N-Nitrosodi-n-butylamine	84		5.997					ND	
86 Caprolactam	55		5.992					ND	
87 p-Phenylene diamine	108		6.003					ND	
88 5-Methyl-o-Anisidine	122		6.421					ND	
89 4-Chloro-3-methylphenol	107		6.144					ND	
90 Safrole, Total	162		6.209					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
91 Carbofuran phenol	164		6.568					ND	
92 1,3-phenylenediamine	108		6.545					ND	
93 2-Methylnaphthalene	142		6.303					ND	
94 Methyl 4-chlorophenyl sulf	158		6.979					ND	
95 Phthalic anhydride	76		6.338					ND	
96 1-Methylnaphthalene	142		6.403					ND	
97 Hexachlorocyclopentadiene	237		6.473					ND	
98 1,2,4,5-Tetrachlorobenzene	216		6.479					ND	
99 Isosafrole Peak 1	162		6.497					ND	
100 2,4,6-Trichlorophenol	196		6.585					ND	
101 2,3-Dichlorobenzenamine	161		6.579					ND	
102 2,4,5-Trichlorophenol	196		6.620					ND	
103 Isosafrole Peak 2	104		6.720					ND	
104 1,1'-Biphenyl	154		6.761					ND	
105 Toluene diamine (2,4- + 2,	122		7.091					ND	
106 2-Chloronaphthalene	162		6.785					ND	
107 1-Chloronaphthalene	162		6.808					ND	
108 2-Nitroaniline	65		6.873					ND	
109 1,4-Naphthoquinone	158		6.949					ND	
110 1,4-Dinitrobenzene	168		6.996					ND	
111 Dimethyl phthalate	163		7.055					ND	
112 1,3-Dinitrobenzene	168		7.079					ND	
113 2,6-Dinitrotoluene	165		7.114					ND	
114 Acenaphthylene	152		7.196					ND	
115 3-Nitroaniline	138		7.278					ND	
116 1,3-Dimethyl-2,4-Dinitrobe	77		7.719					ND	
117 Acenaphthene	153		7.372					ND	
118 2,4-Dinitrophenol	184		7.384					ND	
119 4-Nitrophenol	109		7.449					ND	
120 1,3-Dimethyl-2,5-Dinitrobe	179		7.678					ND	
121 Pentachlorobenzene	250		7.513					ND	
122 2,4-Dinitrotoluene	165		7.513					ND	
123 Dibenzofuran	168		7.543					ND	
124 1-Naphthylamine	143		7.607					ND	
125 2,3,4,6-Tetrachlorophenol	232		7.666					ND	
126 1,4-Dimethyl-2,6-Dinitrobe	179		8.019					ND	
127 Hexadecane	57		7.784					ND	
128 1,4-Dimethyl-2,3-Dinitrobe	77		8.054					ND	
129 2-Naphthylamine	143		7.690					ND	
130 Diethyl phthalate	149		7.754					ND	
131 n-hydroxymethylphthalimide	147		7.919					ND	
132 1,2-Dimethyl-3,6-Dinitrobe	179		8.131					ND	
133 Thionazin	97		7.831					ND	
134 4-Chlorophenyl phenyl ethe	204		7.872					ND	
135 Fluorene	166		7.884					ND	
136 Tributyl phosphate	99		8.307					ND	
137 N-Nitro-o-toluidine	152		7.878					ND	
138 4-Nitroaniline	138		7.884					ND	
139 4,6-Dinitro-2-methylphenol	198		7.925					ND	
140 1,5-Dimethyl-2,4-Dinitrobe	179		8.283					ND	
141 N-Nitrosodiphenylamine	169		7.989					ND	
142 Diphenylamine	169		7.989					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
143 1,2-Diphenylhydrazine	77		8.031					ND	
144 Azobenzene	77		8.031					ND	
145 1,5-Dimethyl-2,3-Dinitrobe	179		8.383					ND	
146 Sulfotepp	97		8.142					ND	
147 2,4,6 - Tribromophenol	330		8.125				ND	ND	U
148 1,2-Dimethyl-3,5-Dinitrobe	179		8.495					ND	
149 Phenyl sulfide	186		8.465					ND	
150 Diallate Peak 1	86		8.277					ND	
151 1,3,5-Trinitrobenzene	213		8.230					ND	
152 Phorate	121		8.283					ND	
153 Phenacetin	108		8.289					ND	
154 1,2-Dimethyl-3,4-Dinitrobe	179		8.648					ND	
155 Diallate Peak 2	86		8.365					ND	
156 4-Bromophenyl phenyl ether	248		8.360					ND	
157 Hexachlorobenzene	284		8.442					ND	
158 Dimethoate	87		8.442					ND	
159 Atrazine	200		8.512					ND	
160 1,2-Dimethyl-4,5-Dinitrobe	91		8.889					ND	
161 n-Octadecane	85		8.694					ND	
162 4-Aminobiphenyl	169		8.612					ND	
163 Pentachlorophenol	266		8.630					ND	
164 Pentachloronitrobenzene	237		8.647					ND	
165 Pronamide	173		8.677					ND	
166 Disulfoton	88		8.800					ND	U
167 Dinoseb	211		8.806					ND	
168 Phenanthrene	178		8.835					ND	
169 Anthracene	178		8.888					ND	
170 Carbazole	167		9.041					ND	
171 Alachlor	188		9.182					ND	
172 Methyl parathion	109		9.170					ND	
173 Di-n-butyl phthalate	149		9.376					ND	
174 Ethyl Parathion	109		9.570					ND	
175 4-Nitroquinoline-1-oxide	190		9.605					ND	
176 Methapyrilene	97		9.693					ND	
177 Phenyl disulfide	109		9.896					ND	
178 Isodrin	193		9.934					ND	
179 Fluoranthene	202		10.110					ND	
180 Diphenylsulfone	125		10.196					ND	
181 Benzidine	184		10.187					ND	
182 Pyrene	202		10.410					ND	
183 Aramite Peak 1	185		10.592					ND	
184 Octachlorostyrene	308		10.392					ND	
185 Aramite Peak 2	185		10.710					ND	
186 p-Dimethylamino azobenzene	120		10.845					ND	
187 Chlorobenzilate	251		10.921					ND	
188 Famphur	218		11.333					ND	
189 4,4-Dichlorobenzil	139		10.657					ND	
190 Butyl benzyl phthalate	149		11.450					ND	
191 3,3'-Dimethylbenzidine	212		11.409					ND	
193 p-chlorophenyl sulfone	159		11.021					ND	
194 2-Acetylaminofluorene	181		11.891					ND	
195 Bis(2-ethylhexyl) phthalat	149		12.731					ND	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
196 4,4'-Methylene bis(2-chlor	231		12.519					ND	
197 3,3'-Dichlorobenzidine	252		12.508					ND	
198 Benzo[a]anthracene	228		12.543					ND	
199 Chrysene	228		12.619					ND	
200 6-Methylchrysene	242		13.706					ND	
201 Di-n-octyl phthalate	149		14.435					ND	
202 7,12-Dimethylbenz(a)anthra	256		15.240					ND	
203 Benzo[b]fluoranthene	252		15.234					ND	
204 Benzo[k]fluoranthene	252		15.304					ND	
205 Hexachlorophene	196		16.144					ND	
206 Benzo[e]pyrene	252		15.974					ND	
207 Benzo[a]pyrene	252		16.109					ND	
208 Perylene	252		17.491					ND	
209 3-Methylcholanthrene	268		17.155					ND	
210 Tris(2,3-dibromopropyl)pho	119		18.971					ND	
211 Dibenz[a,h]acridine	279		18.683					ND	
212 Dibenz[a,j]acridine	279		18.830					ND	
213 Dibenz(a,h)anthracene	278		19.376					ND	
214 Indeno[1,2,3-cd]pyrene	276		19.282					ND	
215 Benzo[g,h,i]perylene	276		19.993					ND	
216 Dibenzo[a,e]pyrene	302		25.523					ND	
S 217 Total Cresols	108		15.496					ND	
S 218 Methyl Phenols,Total	108		15.496					ND	
S 219 Isosafrole	162		15.496					ND	
S 220 Diallate	86		15.496					ND	
S 221 Aramite, Total	185		15.496					ND	
S 222 Phthalic acid	148		19.689					ND	
14 1,2,3,4-Tetrahydronaphthal	1		0.000					ND	
15 2-Butoxyethanol	1		0.000					ND	
16 2-Phenoxyethanol	1		0.000					ND	
56 4,4'-DDE	246		4.748					ND	
62 4,4'-DDD	235		5.018					ND	
70 4,4'-DDT	235		5.212					ND	
S 231 TPAH	1		0.000					ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

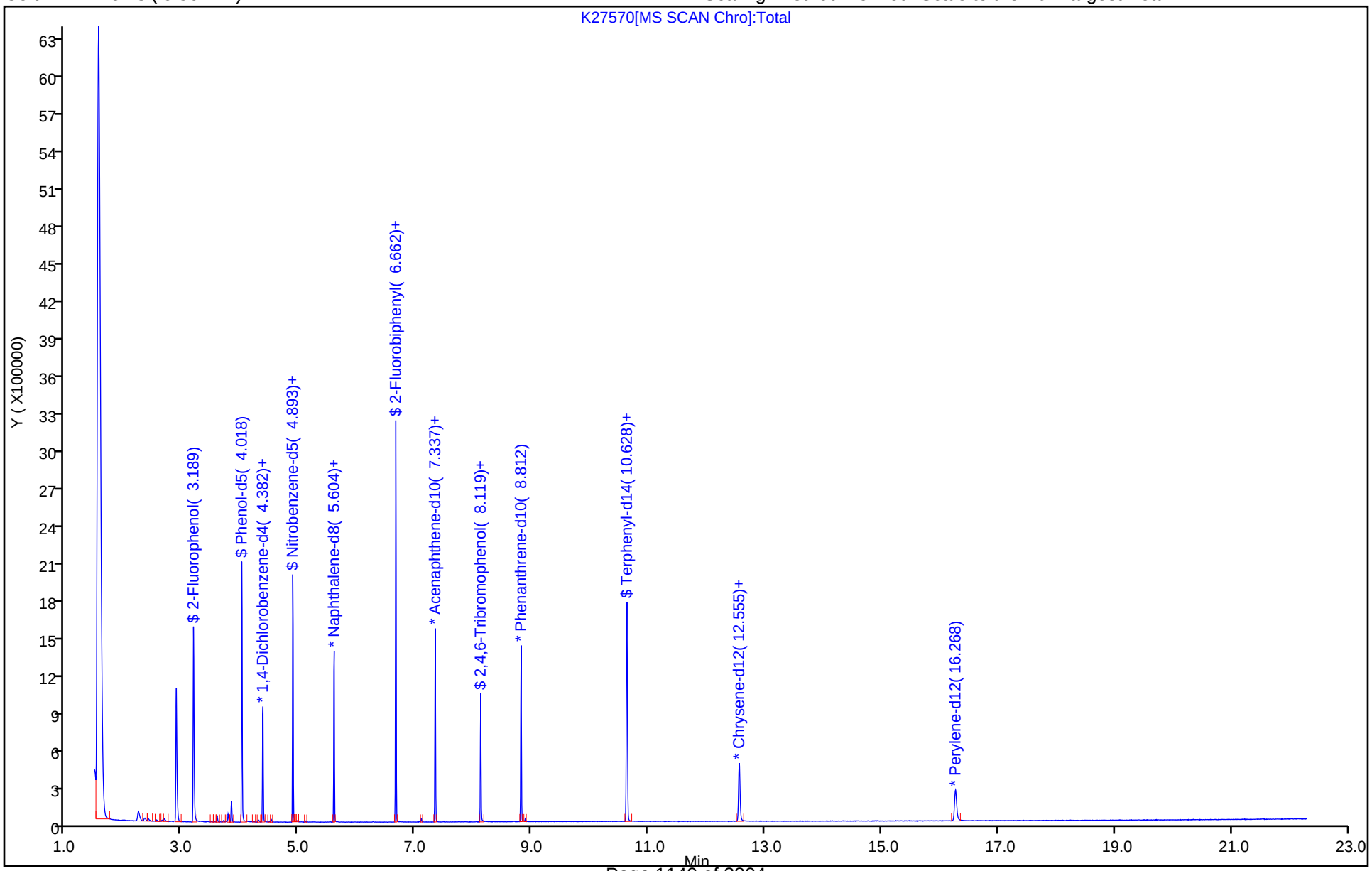
Report Date: 15-Nov-2018 09:20:05 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27570.D

Injection Date:	14-Nov-2018 17:21:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	MB 280-436342/1-A			Worklist Smp#:	32
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27570.D
Lims ID: MB 280-436342/1-A
Client ID:
Sample Type: MB
Inject. Date: 14-Nov-2018 17:21:30 ALS Bottle#: 8 Worklist Smp#: 32
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: MB 280-436342_1-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 15-Nov-2018 09:19:54 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: kiekeld Date: 15-Nov-2018 08:58:23

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	97.7	97.74
$ 8 Phenol-d5	100.0	102.2	102.18
$ 9 Nitrobenzene-d5	100.0	98.8	98.79
$ 11 2-Fluorobiphenyl	100.0	86.1	86.09
$ 12 2,4,6-Tribromophenol	100.0	85.3	85.31
$ 13 Terphenyl-d14	100.0	98.5	98.54

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436342/2-A

Matrix: Water | Lab File ID: K27571.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 11/05/2018 12:30

Sample wt/vol: 1000(mL) | Date Analyzed: 11/14/2018 17:50

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437601 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
120-82-1	1,2,4-Trichlorobenzene	62.3		10	1.0	0.28
95-50-1	1,2-Dichlorobenzene	60.5		10	0.50	0.23
541-73-1	1,3-Dichlorobenzene	58.3		10	1.0	0.30
106-46-7	1,4-Dichlorobenzene	59.3		10	1.0	0.32
123-91-1	1,4-Dioxane	71.6		18	4.4	1.7
95-95-4	2,4,5-Trichlorophenol	75.0		20	1.0	0.45
88-06-2	2,4,6-Trichlorophenol	78.5		20	1.0	0.29
120-83-2	2,4-Dichlorophenol	72.5		10	2.0	0.64
105-67-9	2,4-Dimethylphenol	68.7		10	2.0	0.58
51-28-5	2,4-Dinitrophenol	140		80	30	10
121-14-2	2,4-Dinitrotoluene	78.1		20	4.4	1.7
606-20-2	2,6-Dinitrotoluene	75.7		20	4.4	1.9
91-58-7	2-Chloronaphthalene	71.6		10	1.0	0.26
95-57-8	2-Chlorophenol	76.4		10	4.4	2.0
95-48-7	2-Methylphenol	77.5		10	2.0	0.98
88-74-4	2-Nitroaniline	78.8		50	4.4	1.7
88-75-5	2-Nitrophenol	77.3		20	1.0	0.39
15831-10-4	3 & 4 Methylphenol	75.9		20	0.50	0.25
91-94-1	3,3'-Dichlorobenzidine	139		50	4.4	2.0
99-09-2	3-Nitroaniline	65.5		50	4.4	2.0
534-52-1	4,6-Dinitro-2-methylphenol	156		80	8.8	4.0
101-55-3	4-Bromophenyl phenyl ether	74.5		10	1.0	0.43
59-50-7	4-Chloro-3-methylphenol	74.7		20	5.0	2.4
106-47-8	4-Chloroaniline	65.4		25	4.4	2.1
7005-72-3	4-Chlorophenyl phenyl ether	72.0		10	4.4	1.7
100-01-6	4-Nitroaniline	73.5		50	4.4	2.0
100-02-7	4-Nitrophenol	135		50	4.0	1.2
65-85-0	Benzoic acid	49.6	J	80	30	10
100-51-6	Benzyl alcohol	79.7		25	0.50	0.23
108-60-1	bis (2-chloroisopropyl) ether	93.1		10	1.0	0.28
111-91-1	Bis(2-chloroethoxy)methane	79.1		10	2.0	0.97
111-44-4	Bis(2-chloroethyl)ether	87.8		20	1.0	0.41
117-81-7	Bis(2-ethylhexyl) phthalate	68.0		10	2.0	0.56
85-68-7	Butyl benzyl phthalate	73.6		20	2.0	1.0

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436342/2-A

Matrix: Water | Lab File ID: K27571.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 11/05/2018 12:30

Sample wt/vol: 1000(mL) | Date Analyzed: 11/14/2018 17:50

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 0.5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437601 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
86-74-8	Carbazole	76.9		10	1.0	0.43
132-64-9	Dibenzofuran	72.2		10	1.0	0.29
84-66-2	Diethyl phthalate	74.2		20	1.0	0.38
131-11-3	Dimethyl phthalate	74.7		20	0.50	0.21
84-74-2	Di-n-butyl phthalate	75.9		20	4.4	1.2
117-84-0	Di-n-octyl phthalate	66.8		20	1.0	0.35
118-74-1	Hexachlorobenzene	75.6		10	2.0	0.66
87-68-3	Hexachlorobutadiene	55.6		30	10	3.3
77-47-4	Hexachlorocyclopentadiene	89.9		50	30	10
67-72-1	Hexachloroethane	54.7		10	4.4	2.1
78-59-1	Isophorone	77.2		10	0.50	0.21
98-95-3	Nitrobenzene	78.5		20	2.0	0.81
621-64-7	N-Nitrosodi-n-propylamine	78.1		20	1.0	0.35
86-30-6	N-Nitrosodiphenylamine	76.2		10	1.0	0.44
87-86-5	Pentachlorophenol	147		80	60	20
108-95-2	Phenol	71.3		10	4.4	2.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
118-79-6	2,4,6-Tribromophenol (Surr)	96		43-140
321-60-8	2-Fluorobiphenyl	92		44-119
367-12-4	2-Fluorophenol (Surr)	100		19-119
4165-60-0	Nitrobenzene-d5 (Surr)	99		44-120
4165-62-2	Phenol-d5 (Surr)	94		10-115
1718-51-0	Terphenyl-d14 (Surr)	86		50-134

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27571.D
Lims ID: LCS 280-436342/2-A
Client ID:
Sample Type: LCS
Inject. Date: 14-Nov-2018 17:50:30 ALS Bottle#: 9 Worklist Smp#: 33
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436342_2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 15-Nov-2018 09:19:54 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: kiekeld Date: 15-Nov-2018 08:59:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
* 1 1,4-Dichlorobenzene-d4	152	4.382	4.382	0.000	96	151240	40.0	40.0	
* 2 Naphthalene-d8	136	5.604	5.604	0.000	100	620917	40.0	40.0	
* 3 Acenaphthene-d10	164	7.337	7.337	0.000	93	294625	40.0	40.0	
* 4 Phenanthrene-d10	188	8.812	8.812	0.000	98	440132	40.0	40.0	
* 5 Chrysene-d12	240	12.561	12.555	0.006	99	325291	40.0	40.0	
* 6 Perylene-d12	264	16.268	16.268	0.000	97	263727	40.0	40.0	
$ 7 2-Fluorophenol	112	3.189	3.189	0.000	94	556507	100.0	99.7	
$ 8 Phenol-d5	99	4.023	4.018	0.005	97	599855	100.0	93.9	
$ 9 Nitrobenzene-d5	82	4.899	4.899	0.000	94	547314	100.0	99.2	
$ 11 2-Fluorobiphenyl	172	6.662	6.662	0.000	100	944652	100.0	91.5	
$ 12 2,4,6-Tribromophenol	330	8.119	8.125	-0.006	88	94645	100.0	95.7	
$ 13 Terphenyl-d14	244	10.628	10.628	0.000	99	697076	100.0	85.9	
19 1,4-Dioxane	88	1.773	1.779	-0.006	96	177031	80.0	71.6	
20 N-Nitrosodimethylamine	74	2.008	2.008	0.000	86	292418	80.0	79.6	
21 Pyridine	79	2.055	2.055	0.000	82	734938	160.0	122.7	
31 Benzaldehyde	106	3.965	3.965	0.000	91	225704	80.0	49.7	
32 Phenol	94	4.035	4.035	0.000	97	474318	80.0	71.3	
34 Aniline	93	4.065	4.065	0.000	97	512768	80.0	64.9	
36 Bis(2-chloroethyl)ether	93	4.112	4.112	0.000	94	442122	80.0	87.8	
38 n-Decane	43	4.229	4.229	0.000	95	378454	80.0	50.7	
39 2-Chlorophenol	128	4.188	4.188	0.000	98	424516	80.0	76.4	
40 1,3-Dichlorobenzene	146	4.329	4.329	0.000	97	355787	80.0	58.3	
42 1,4-Dichlorobenzene	146	4.394	4.399	-0.005	93	362174	80.0	59.3	
43 Benzyl alcohol	108	4.493	4.499	-0.006	93	286071	80.0	79.7	
44 1,2-Dichlorobenzene	146	4.546	4.546	0.000	96	351302	80.0	60.5	
45 2-Methylphenol	108	4.605	4.599	0.006	95	393545	80.0	77.5	
46 2,2'-oxybis[1-chloropropan	45	4.629	4.629	0.000	91	791987	80.0	93.1	
47 Indene	116	4.629	4.629	0.000	92	590345	80.0	66.9	
49 3 & 4 Methylphenol	108	4.746	4.746	0.000	78	361656	80.0	75.9	
50 3-Methylphenol	108	4.746	4.746	0.000	88	361656	80.0	75.9	
51 4-Methylphenol	108	4.746	4.746	0.000	94	361656	80.0	75.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
52 N-Nitrosodi-n-propylamine	70	4.746	4.746	0.000	89	263040	80.0	78.1	
54 Acetophenone	105	4.752	4.752	0.000	88	517161	80.0	79.5	
58 Hexachloroethane	117	4.869	4.869	0.000	96	124996	80.0	54.7	
59 Nitrobenzene	77	4.916	4.916	0.000	93	433934	80.0	78.5	
63 Isophorone	82	5.140	5.146	-0.006	98	753043	80.0	77.2	
64 2-Nitrophenol	139	5.228	5.228	0.000	94	220602	80.0	77.3	
65 2,4-Dimethylphenol	107	5.263	5.263	0.000	95	360906	80.0	68.7	
68 Benzoic acid	105	5.334	5.369	-0.035	91	160336	80.0	49.6	
69 Bis(2-chloroethoxy)methane	93	5.345	5.345	0.000	98	479967	80.0	79.1	
74 2,4-Dichlorophenol	162	5.463	5.463	0.000	95	311716	80.0	72.5	
76 1,2,4-Trichlorobenzene	180	5.545	5.551	-0.006	94	300293	80.0	62.3	
79 Naphthalene	128	5.622	5.627	-0.005	98	1035821	80.0	69.1	
80 4-Chloroaniline	127	5.669	5.669	0.000	96	399888	80.0	65.4	
81 2,6-Dichlorophenol	162	5.680	5.680	0.000	96	304672	80.0	72.9	
83 Hexachlorobutadiene	225	5.757	5.757	0.000	96	144532	80.0	55.6	
86 Caprolactam	55	5.980	5.992	-0.012	74	161951	80.0	66.5	
89 4-Chloro-3-methylphenol	107	6.144	6.144	0.000	97	312130	80.0	74.7	
93 2-Methylnaphthalene	142	6.303	6.303	0.000	95	744005	80.0	70.8	
96 1-Methylnaphthalene	142	6.403	6.403	0.000	96	702901	80.0	71.7	
97 Hexachlorocyclopentadiene	237	6.474	6.473	0.001	97	227726	160.0	89.9	
98 1,2,4,5-Tetrachlorobenzene	216	6.474	6.479	-0.005	98	280672	80.0	66.1	
100 2,4,6-Trichlorophenol	196	6.585	6.585	0.000	93	204129	80.0	78.5	
102 2,4,5-Trichlorophenol	196	6.620	6.620	0.000	94	220550	80.0	75.0	
104 1,1'-Biphenyl	154	6.761	6.761	0.000	94	861807	80.0	73.2	
106 2-Chloronaphthalene	162	6.785	6.785	0.000	96	638672	80.0	71.6	
108 2-Nitroaniline	65	6.873	6.873	0.000	85	198679	80.0	78.8	
111 Dimethyl phthalate	163	7.055	7.055	0.000	98	655664	80.0	74.7	
112 1,3-Dinitrobenzene	168	7.079	7.079	0.000	86	112449	80.0	77.2	
113 2,6-Dinitrotoluene	165	7.108	7.114	-0.006	94	167151	80.0	75.7	
114 Acenaphthylene	152	7.196	7.196	0.000	98	946029	80.0	71.3	
115 3-Nitroaniline	138	7.278	7.278	0.000	93	151655	80.0	65.5	
117 Acenaphthene	153	7.372	7.372	0.000	94	630970	80.0	72.2	
118 2,4-Dinitrophenol	184	7.384	7.384	0.000	85	131361	160.0	140.0	
119 4-Nitrophenol	109	7.449	7.449	0.000	94	140694	160.0	135.2	
122 2,4-Dinitrotoluene	165	7.513	7.513	0.000	95	208688	80.0	78.1	
123 Dibenzofuran	168	7.543	7.543	0.000	97	875454	80.0	72.2	
125 2,3,4,6-Tetrachlorophenol	232	7.666	7.666	0.000	74	156667	80.0	72.6	
127 Hexadecane	57	7.778	7.784	-0.006	91	604531	80.0	78.4	
130 Diethyl phthalate	149	7.754	7.754	0.000	98	627779	80.0	74.2	
134 4-Chlorophenyl phenyl ethe	204	7.878	7.872	0.006	94	310307	80.0	72.0	
135 Fluorene	166	7.884	7.884	0.000	95	657750	80.0	71.7	
138 4-Nitroaniline	138	7.884	7.884	0.000	86	153764	80.0	73.5	
139 4,6-Dinitro-2-methylphenol	198	7.925	7.925	0.000	85	195010	160.0	156.3	
141 N-Nitrosodiphenylamine	169	7.989	7.989	0.000	63	483027	80.0	76.2	
142 Diphenylamine	169	7.989	7.989	0.000	95	483027	68.0	61.4	
143 1,2-Diphenylhydrazine	77	8.031	8.031	0.000	41	732034	80.9	81.6	
144 Azobenzene	77	8.031	8.031	0.000	98	732034	80.0	80.7	
147 2,4,6 - Tribromophenol	330	8.119	8.125	-0.006	88	94938	100.0	95.9	
156 4-Bromophenyl phenyl ether	248	8.360	8.360	0.000	70	175597	80.0	74.5	
157 Hexachlorobenzene	284	8.442	8.442	0.000	93	168545	80.0	75.6	
159 Atrazine	200	8.512	8.512	0.000	90	148865	80.0	73.7	
161 n-Octadecane	85	8.694	8.694	0.000	92	204664	80.0	82.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
163 Pentachlorophenol	266	8.630	8.630	0.000	92	175237	160.0	147.1	
168 Phenanthrene	178	8.835	8.835	0.000	97	893447	80.0	75.7	
169 Anthracene	178	8.888	8.888	0.000	97	910671	80.0	76.9	
170 Carbazole	167	9.041	9.041	0.000	96	790662	80.0	76.9	
173 Di-n-butyl phthalate	149	9.376	9.376	0.000	99	877616	80.0	75.9	
179 Fluoranthene	202	10.110	10.110	0.000	98	839845	80.0	75.0	
181 Benzidine	184	10.263	10.187	0.076	100	412194	160.0	67.5	
182 Pyrene	202	10.410	10.410	0.000	97	875546	80.0	75.4	
190 Butyl benzyl phthalate	149	11.450	11.450	0.000	98	320585	80.0	73.6	
195 Bis(2-ethylhexyl) phthalat	149	12.731	12.731	0.000	97	406598	80.0	68.0	
197 3,3'-Dichlorobenzidine	252	12.508	12.508	0.000	74	400299	160.0	139.0	
198 Benzo[a]anthracene	228	12.543	12.543	0.000	99	706505	80.0	73.0	
199 Chrysene	228	12.619	12.619	0.000	97	750027	80.0	75.7	
201 Di-n-octyl phthalate	149	14.435	14.435	0.000	99	568672	80.0	66.8	
203 Benzo[b]fluoranthene	252	15.228	15.234	-0.006	98	606147	80.0	80.4	
204 Benzo[k]fluoranthene	252	15.299	15.304	-0.005	99	704454	80.0	81.3	
207 Benzo[a]pyrene	252	16.104	16.109	-0.005	78	575878	80.0	76.8	
213 Dibenz(a,h)anthracene	278	19.376	19.376	0.000	93	506718	80.0	78.2	
214 Indeno[1,2,3-cd]pyrene	276	19.276	19.282	-0.006	98	441871	80.0	64.1	
215 Benzo[g,h,i]perylene	276	19.993	19.993	0.000	97	550812	80.0	79.8	

Reagents:

MS-IS_00014 Amount Added: 20.00 Units: uL Run Reagent

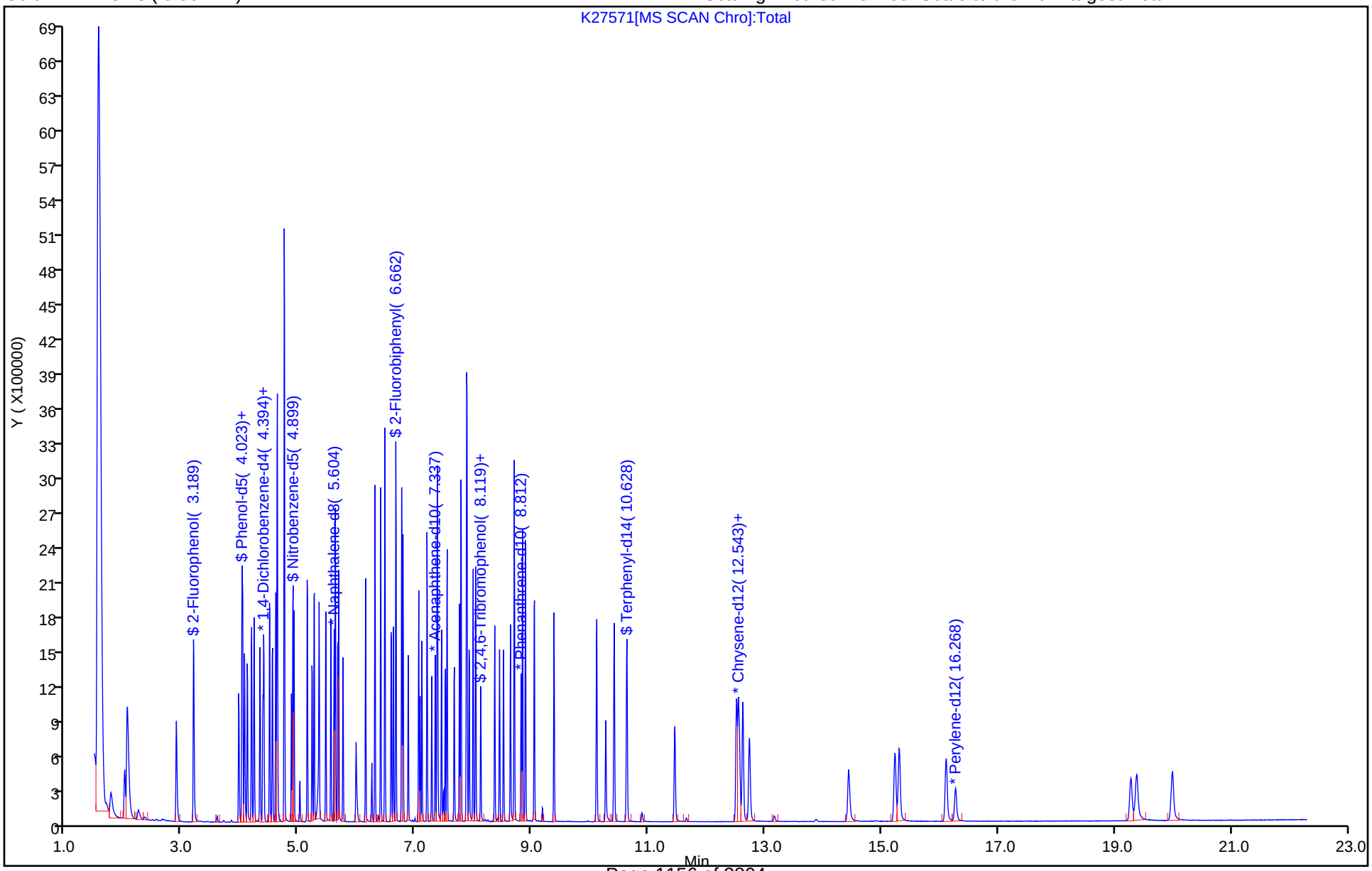
Report Date: 15-Nov-2018 09:20:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27571.D

Injection Date:	14-Nov-2018 17:50:30	Instrument ID:	SMS_K	Operator ID:	KIEKELD
Lims ID:	LCS 280-436342/2-A			Worklist Smp#:	33
Client ID:					
Injection Vol:	0.5 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	SMSK_8270C	Limit Group:	MSSV - 8270C_625		

Column: VF-5ms (0.50 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\K27571.D
Lims ID: LCS 280-436342/2-A
Client ID:
Sample Type: LCS
Inject. Date: 14-Nov-2018 17:50:30 ALS Bottle#: 9 Worklist Smp#: 33
Injection Vol: 0.5 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436342_2-A
Operator ID: KIEKELD Instrument ID: SMS_K

Method: \\ChromNA\Denver\ChromData\SMS_K\20181114-76202.b\SMSK_8270C.m
Limit Group: MSSV - 8270C_625
Method Label: 8270C / 625
Last Update: 15-Nov-2018 09:19:54 Calib Date: 12-Nov-2018 18:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_K\20181112-76087.b\K27524.D

Column 1 : VF-5ms (0.50 mm) Det: MS SCAN
Process Host: CTX0320

First Level Reviewer: kiekeld Date: 15-Nov-2018 08:59:00

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 2-Fluorophenol	100.0	99.7	99.66
$ 8 Phenol-d5	100.0	93.9	93.91
$ 9 Nitrobenzene-d5	100.0	99.2	99.18
$ 11 2-Fluorobiphenyl	100.0	91.5	91.52
$ 12 2,4,6-Tribromophenol	100.0	95.7	95.68
$ 13 Terphenyl-d14	100.0	85.9	85.87

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SMS_K Start Date: 11/12/2018 14:10

Analysis Batch Number: 437249 End Date: 11/12/2018 19:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-437249/2		11/12/2018 14:10	1	K27515.D	Rxi-5Sil MS 0.25(mm)
ICIS 280-437249/4		11/12/2018 14:56	1	K27517.D	Rxi-5Sil MS 0.25(mm)
STD004 280-437249/5 IC		11/12/2018 15:25	1	K27518.D	Rxi-5Sil MS 0.25(mm)
STD010 280-437249/6 IC		11/12/2018 15:54	1	K27519.D	Rxi-5Sil MS 0.25(mm)
STD020 280-437249/7 IC		11/12/2018 16:23	1	K27520.D	Rxi-5Sil MS 0.25(mm)
STD050 280-437249/8 IC		11/12/2018 16:52	1	K27521.D	Rxi-5Sil MS 0.25(mm)
STD120 280-437249/9 IC		11/12/2018 17:21	1	K27522.D	Rxi-5Sil MS 0.25(mm)
STD160 280-437249/10 IC		11/12/2018 17:50	1	K27523.D	Rxi-5Sil MS 0.25(mm)
STD200 280-437249/11 IC		11/12/2018 18:19	1	K27524.D	Rxi-5Sil MS 0.25(mm)
ICV 280-437249/12		11/12/2018 18:48	1	K27525.D	Rxi-5Sil MS 0.25(mm)
ICV 280-437249/13		11/12/2018 19:17	1	K27526.D	Rxi-5Sil MS 0.25(mm)
ICV 280-437249/14		11/12/2018 19:45	1	K27527.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SMS_K Start Date: 11/14/2018 14:13

Analysis Batch Number: 437601 End Date: 11/15/2018 05:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-437601/2		11/14/2018 14:13	1	K27563.D	Rxi-5Sil MS 0.25(mm)
CCV 280-437601/3		11/14/2018 14:26	1	K27564.D	Rxi-5Sil MS 0.25(mm)
CCV 280-437601/4		11/14/2018 14:55	1	K27565.D	Rxi-5Sil MS 0.25(mm)
CCV 280-437601/5		11/14/2018 15:24	1	K27566.D	Rxi-5Sil MS 0.25(mm)
CCV 280-437601/6		11/14/2018 15:53	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 16:23	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 16:52	1		Rxi-5Sil MS 0.25(mm)
MB 280-436342/1-A		11/14/2018 17:21	1	K27570.D	Rxi-5Sil MS 0.25(mm)
LCS 280-436342/2-A		11/14/2018 17:50	1	K27571.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 18:18	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 18:47	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 19:17	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 19:46	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 20:15	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 20:44	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 21:13	1		Rxi-5Sil MS 0.25(mm)
280-116538-2		11/14/2018 21:42	1	K27579.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 22:11	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 22:40	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 23:09	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/14/2018 23:38	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 00:07	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 00:36	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 01:05	1		Rxi-5Sil MS 0.25(mm)
280-116538-1		11/15/2018 01:34	1	K27587.D	Rxi-5Sil MS 0.25(mm)
CCVC 280-437601/50		11/15/2018 02:03	1		Rxi-5Sil MS 0.25(mm)
CCVC 280-437601/51		11/15/2018 02:33	1		Rxi-5Sil MS 0.25(mm)
CCVC 280-437601/52		11/15/2018 03:02	1	K27590.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 03:31	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 04:00	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 04:29	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 04:58	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/15/2018 05:27	1		Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436342 Batch Start Date: 11/05/18 12:30 Batch Analyst: Zhang, Jian

Batch Method: 3520C Batch End Date: 11/07/18 22:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH
MB 280-436342/1		3520C, 8270D				1000 mL	1 mL	7 SU	1-2 SU
LCS 280-436342/2		3520C, 8270D				1000 mL	1 mL	7 SU	1-2 SU
280-116538-C-2	SCLmw-003-181001-GW	3520C, 8270D	T	1445.1 g	502.9 g	942.2 mL	1 mL	7 SU	1-2 SU
280-116538-B-1	SCLmw-001-181001-GW	3520C, 8270D	T	1365.1 g	499.9 g	865.2 mL	1 mL	7 SU	1-2 SU

Lab Sample ID	Client Sample ID	Method Chain	Basis	SecondAdjustpH	8270_LCS_Main 00055	8270_LCS_Supp 00309	8270Surrogate 00128		
MB 280-436342/1		3520C, 8270D		11-12 SU			1 mL		
LCS 280-436342/2		3520C, 8270D		11-12 SU	1 mL	1 mL	1 mL		
280-116538-C-2	SCLmw-003-181001-GW	3520C, 8270D	T	11-12 SU			1 mL		
280-116538-B-1	SCLmw-001-181001-GW	3520C, 8270D	T	11-12 SU			1 mL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436342 Batch Start Date: 11/05/18 12:30 Batch Analyst: Zhang, Jian

Batch Method: 3520C Batch End Date: 11/07/18 22:20

Batch Notes	
Acid Used for pH Adjustment ID	1:1 H2SO4_00077
Balance ID	B318295195
Base Used to Adjust pH ID	10N_NaOH_00132
Batch Comment	DV-OP-0008/0007; H2O N.ELGA
Analyst ID - Concentration	CR/MM
Concentration 1 Corrected Temperature	84 Degrees C
Equipment ID - Concentration 1	A
Analyst ID - Extraction	JZ (Trainer)/VV(Trainee)
Extraction 1 End Time	11/06/2018 06:48
Extraction 1 Start Time	11/05/2018 12:37
Method/Fraction	3520C/8270D_DOD5
Na2SO4 ID	0000205461_00009
NaCl ID	173831
Pipette/Syringe/Dispenser ID	Woo!
Prep Solvent ID	MeCl2_Cycl_00411/412
Extraction 2 End Time	11/07/2018 04:32
Extraction 2 Start Time	11/06/2018 08:20
Analyst ID - Spike Analyst	VV (Trainer JZ)
Analyst ID - Spike Witness Analyst	Reviewer: MM
Sufficient Volume for Batch QC	No
Concentration 1 Uncorrected Temperature	85 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8270D_SIM_DOD5

Semivolatile Organic Compounds (GC/MS SIM)

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rxi-5Sil MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	NBZ	#	FBP	#	TPHL	#
SCLmw-001-181001-GW	280-116538-1	53	Q	59		69	
SCLmw-003-181001-GW	280-116538-2	69		80		90	
	MB 280-436346/1-A	70		80		78	
	LCS 280-436346/2-A	68		76		86	

	QC LIMITS
NBZ = Nitrobenzene-d5	55-111
FBP = 2-Fluorobiphenyl	53-106
TPHL = Terphenyl-d14	58-132

Column to be used to flag recovery values

FORM II 8270D SIM

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: F4556.D

Lab ID: LCS 280-436346/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1-Methylnaphthalene	0.900	0.701	78	41-115	
2-Methylnaphthalene	0.900	0.661	73	39-114	
Acenaphthene	0.900	0.660	73	48-114	
Acenaphthylene	0.900	0.547	61	35-121	
Anthracene	0.900	0.747	83	53-119	M
Benzo[a]anthracene	0.900	0.800	89	59-120	
Benzo[a]pyrene	0.900	0.656	73	53-120	
Benzo[b]fluoranthene	0.900	0.715	79	53-126	
Benzo[g,h,i]perylene	0.900	0.576	64	44-128	
Benzo[k]fluoranthene	0.900	0.728	81	54-125	
Chrysene	0.900	0.864	96	57-120	
Dibenz(a,h)anthracene	0.900	0.532	59	44-131	
Fluoranthene	0.900	0.794	88	58-120	
Fluorene	0.900	0.700	78	50-118	
Indeno[1,2,3-cd]pyrene	0.900	0.547	61	48-130	
Naphthalene	0.900	0.682	76	43-114	
Phenanthrene	0.900	0.826	92	53-115	M
Pyrene	0.900	0.878	98	53-121	

Column to be used to flag recovery and RPD values

FORM III 8270D SIM

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab File ID: F4555.D Lab Sample ID: MB 280-436346/1-A

Matrix: Water Date Extracted: 11/05/2018 13:07

Instrument ID: SMS_F Date Analyzed: 11/08/2018 16:59

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 280-436346/2-A	F4556.D	11/08/2018 17:28
SCLmw-001-181001-GW	280-116538-1	F4570.D	11/09/2018 00:23
SCLmw-003-181001-GW	280-116538-2	F4571.D	11/09/2018 00:53

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab File ID: F4561.D DFTPP Injection Date: 11/07/2018

Instrument ID: SMS_F DFTPP Injection Time: 19:54

Analysis Batch No.: 436730

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	57.1	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	58.5	
70	Less than 2.0 % of mass 69	0.2	(0.4) 1
127	40.0 - 60.0 % of mass 198	58.5	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	6.7	
275	10.0 - 30.0 % of mass 198	23.8	
365	Greater than 1.0 % of mass 198	2.8	
441	Present but less than mass 443	11.5	(82.1) 3
442	Greater than 40.0 % of mass 198	70.5	
443	17.0 - 23.0 % of mass 442	14.0	(19.8) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICIS 280-436730/3	F4562.D	11/07/2018	20:06
	STD0500 280-436730/6	F4563.D	11/07/2018	20:35
	STD0100 280-436730/7	F4564.D	11/07/2018	21:05
	STD0001 280-436730/4	F4565.D	11/07/2018	21:34
	STD0002 280-436730/5	F4566.D	11/07/2018	22:02
	STD0300 280-436730/8	F4567.D	11/07/2018	22:31
	STD1200 280-436730/9	F4568.D	11/07/2018	23:00
	STD2500 280-436730/10	F4569.D	11/07/2018	23:29
	STD5000 280-436730/11	F4570.D	11/07/2018	23:58
	ICV 280-436730/12	F4571.D	11/08/2018	00:27

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab File ID: F4553.D DFTPP Injection Date: 11/08/2018

Instrument ID: SMS_F DFTPP Injection Time: 15:41

Analysis Batch No.: 436903

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	54.7	
68	Less than 2.0 % of mass 69	0.0	(0.0) 1
69	Mass 69 relative abundance	57.8	
70	Less than 2.0 % of mass 69	0.4	(0.6) 1
127	40.0 - 60.0 % of mass 198	58.9	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	6.9	
275	10.0 - 30.0 % of mass 198	24.4	
365	Greater than 1.0 % of mass 198	3.0	
441	Present but less than mass 443	13.4	(88.8) 3
442	Greater than 40.0 % of mass 198	79.0	
443	17.0 - 23.0 % of mass 442	15.1	(19.1) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 280-436903/3	F4554.D	11/08/2018	15:54
	MB 280-436346/1-A	F4555.D	11/08/2018	16:59
	LCS 280-436346/2-A	F4556.D	11/08/2018	17:28
SCLmw-001-181001-GW	280-116538-1	F4570.D	11/09/2018	00:23
SCLmw-003-181001-GW	280-116538-2	F4571.D	11/09/2018	00:53
	CCVC 280-436903/23	F4574.D	11/09/2018	02:22

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: ICIS 280-436730/3 Date Analyzed: 11/07/2018 20:06

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): F4562.D Heated Purge: (Y/N) N

Calibration ID: 34235

		ANT		PHN		CRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		50543	7.63	108205	9.12	100389	13.18
UPPER LIMIT		101086	8.13	216410	9.62	200778	13.68
LOWER LIMIT		25272	7.13	54103	8.62	50195	12.68
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-436730/12		45866	7.63	99357	9.11	87955	13.16
CCV 280-436903/3		45662	7.63	92694	9.11	80280	13.16
MB 280-436346/1-A		43628	7.63	92369	9.11	73383	13.17
LCS 280-436346/2-A		45057	7.62	103489	9.11	91350	13.15
280-116538-1	SCLmw-001-181001-GW	41369	7.62	87743	9.11	69371	13.15
280-116538-2	SCLmw-003-181001-GW	42169	7.62	88427	9.11	68128	13.15
CCVC 280-436903/23		41494	7.62	82505	9.11	68666	13.15

ANT = Acenaphthene-d10
PHN = Phenanthrene-d10
CRY = Chrysene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D SIM

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW | Lab Sample ID: 280-116538-1

Matrix: Water | Lab File ID: F4570.D

Analysis Method: 8270D SIM | Date Collected: 11/02/2018 10:45

Extract. Method: 3510C | Date Extracted: 11/05/2018 13:07

Sample wt/vol: 214.5(mL) | Date Analyzed: 11/09/2018 00:23

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436903 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.014	U Q	0.12	0.014	0.0069
91-57-6	2-Methylnaphthalene	0.014	U Q	0.12	0.014	0.0070
83-32-9	Acenaphthene	0.047	U M	0.12	0.047	0.0049
208-96-8	Acenaphthylene	0.047	U	0.12	0.047	0.0059
120-12-7	Anthracene	0.047	U M	0.12	0.047	0.0065
56-55-3	Benzo[a]anthracene	0.014	U	0.12	0.014	0.0049
50-32-8	Benzo[a]pyrene	0.014	U M	0.12	0.014	0.0080
205-99-2	Benzo[b]fluoranthene	0.014	U	0.12	0.014	0.0036
191-24-2	Benzo[g,h,i]perylene	0.014	U	0.12	0.014	0.0072
207-08-9	Benzo[k]fluoranthene	0.014	U	0.12	0.014	0.0073
218-01-9	Chrysene	0.014	U	0.12	0.014	0.0038
53-70-3	Dibenz(a,h)anthracene	0.014	U	0.12	0.014	0.0048
206-44-0	Fluoranthene	0.012	J	0.12	0.014	0.0056
86-73-7	Fluorene	0.047	U	0.12	0.047	0.0064
193-39-5	Indeno[1,2,3-cd]pyrene	0.047	U	0.12	0.047	0.0052
91-20-3	Naphthalene	0.014	U Q	0.12	0.014	0.0093
85-01-8	Phenanthrene	0.013	J	0.12	0.023	0.011
129-00-0	Pyrene	0.023	U	0.12	0.023	0.0071

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	59		53-106
4165-60-0	Nitrobenzene-d5	53	Q	55-111
1718-51-0	Terphenyl-d14	69		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4570.D
Lims ID: 280-116538-L-1-A
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 09-Nov-2018 00:23:30 ALS Bottle#: 18 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-l-1-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:26:54 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: wickhamm Date: 09-Nov-2018 19:30:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.618	7.626	-0.008	87	41369	600.0	
* 2 Phenanthrene-d10	188	9.111	9.111	0.000	97	87743	600.0	
* 3 Chrysene-d12	240	13.151	13.160	-0.009	91	69371	600.0	
$ 4 Nitrobenzene-d5	82	5.164	5.169	-0.005	99	15535	265.4	
$ 5 2-Fluorobiphenyl	172	6.936	6.935	0.001	99	30065	296.3	
$ 6 Terphenyl-d14	244	11.047	11.056	-0.009	99	39478	347.4	
10 Naphthalene	128		5.898				ND	
11 2-Methylnaphthalene	142		6.572				ND	
12 1-Methylnaphthalene	142		6.678				ND	
14 Acenaphthylene	152		7.479				ND	
15 Acenaphthene	153		7.652				ND	U
18 Fluorene	166		8.167				ND	
20 Phenanthrene	178	9.128	9.128	0.000	66	527	2.85	
21 Anthracene	178		9.180				ND	U
23 Fluoranthene	202	10.494	10.502	-0.008	30	514	2.66	
24 Pyrene	202		10.831				ND	
26 Benzo[a]anthracene	228		13.133				ND	
27 Chrysene	228		13.223				ND	
30 Benzo[b]fluoranthene	252		15.988				ND	
31 Benzo[k]fluoranthene	252		16.062				ND	
32 Benzo[a]pyrene	252		16.911				ND	U
33 Indeno[1,2,3-cd]pyrene	276		20.187				ND	
34 Dibenz(a,h)anthracene	278		20.279				ND	
35 Benzo[g,h,i]perylene	276		20.922				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

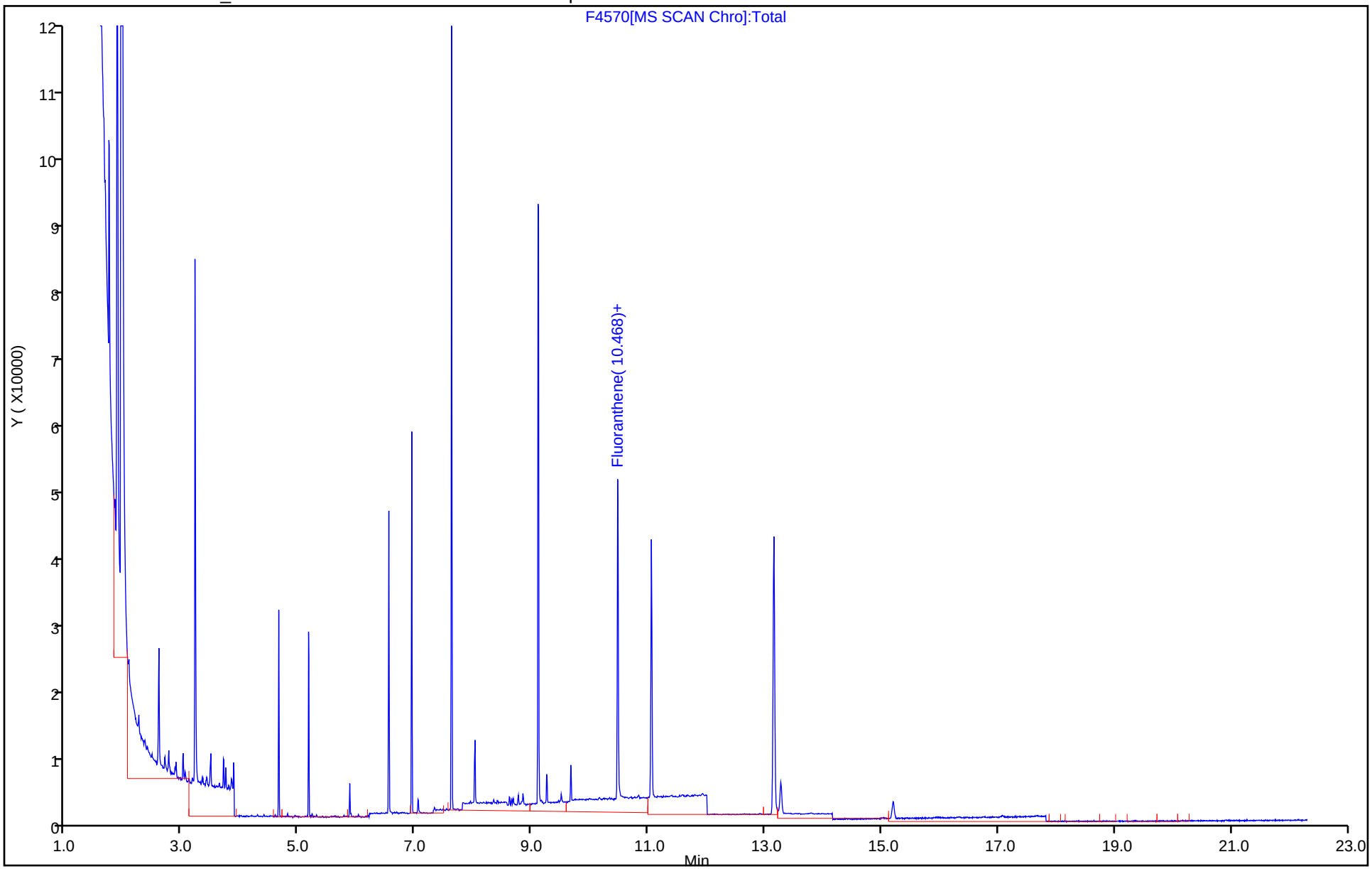
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 09-Nov-2018 21:27:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4570.D

Injection Date:	09-Nov-2018 00:23:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	280-116538-L-1-A	Lab Sample ID:	280-116538-1	Worklist Smp#:	19
Client ID:	SCLmw-001-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4570.D
Lims ID: 280-116538-L-1-A
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 09-Nov-2018 00:23:30 ALS Bottle#: 18 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-l-1-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:26:54 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: wickhamm Date: 09-Nov-2018 19:30:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	265.4	53.07
$ 5 2-Fluorobiphenyl	500.0	296.3	59.26
$ 6 Terphenyl-d14	500.0	347.4	69.48
$ 53 2-methylnaphthalene-d10	0.0	0	0.00
$ 54 Fluoranthene-d10	0.0	0	0.00

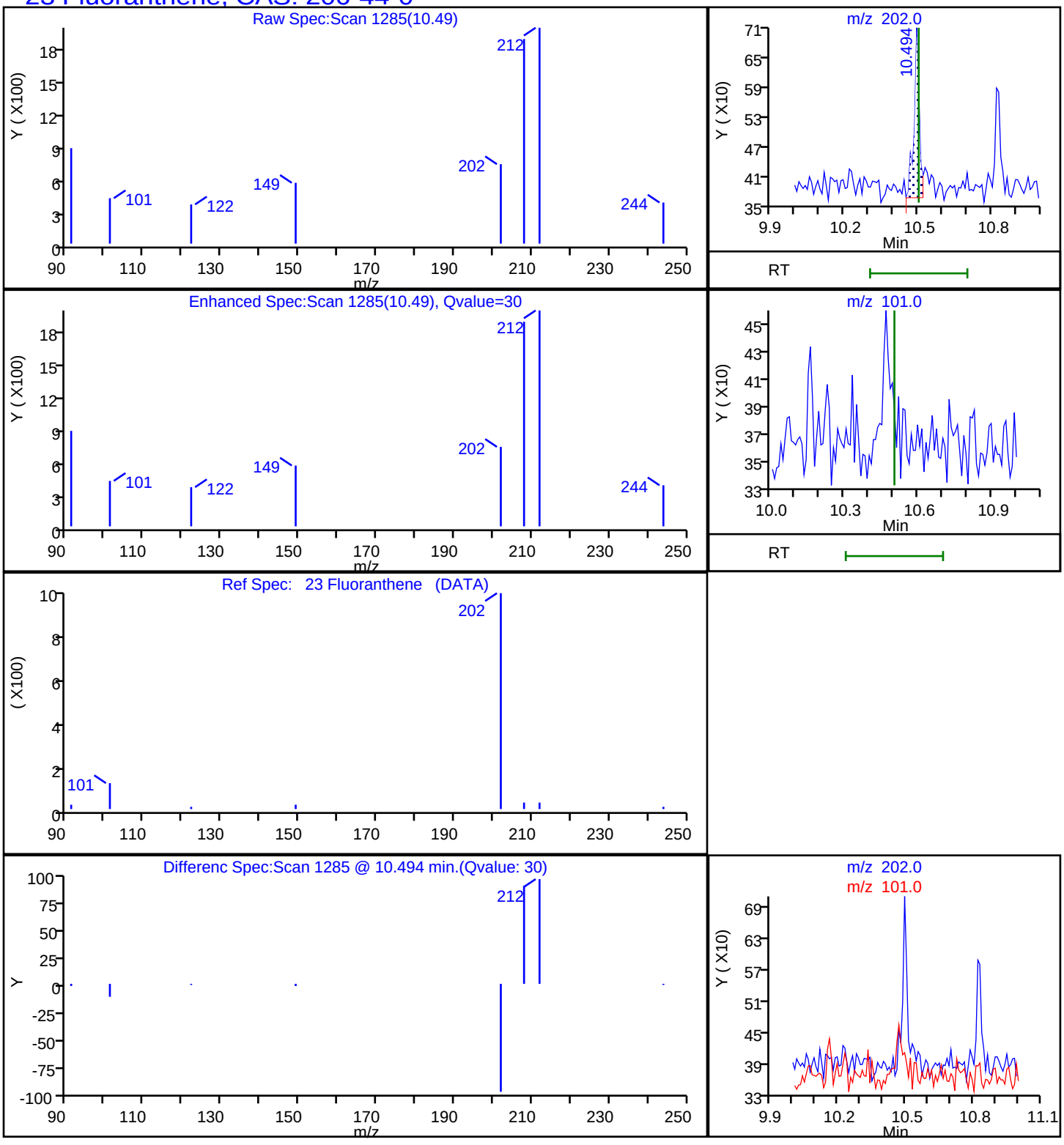
Report Date: 09-Nov-2018 21:27:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4570.D

Injection Date:	09-Nov-2018 00:23:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-1-A	Lab Sample ID:	280-116538-1		
Client ID:	SCLmw-001-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	18	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

23 Fluoranthene, CAS: 206-44-0



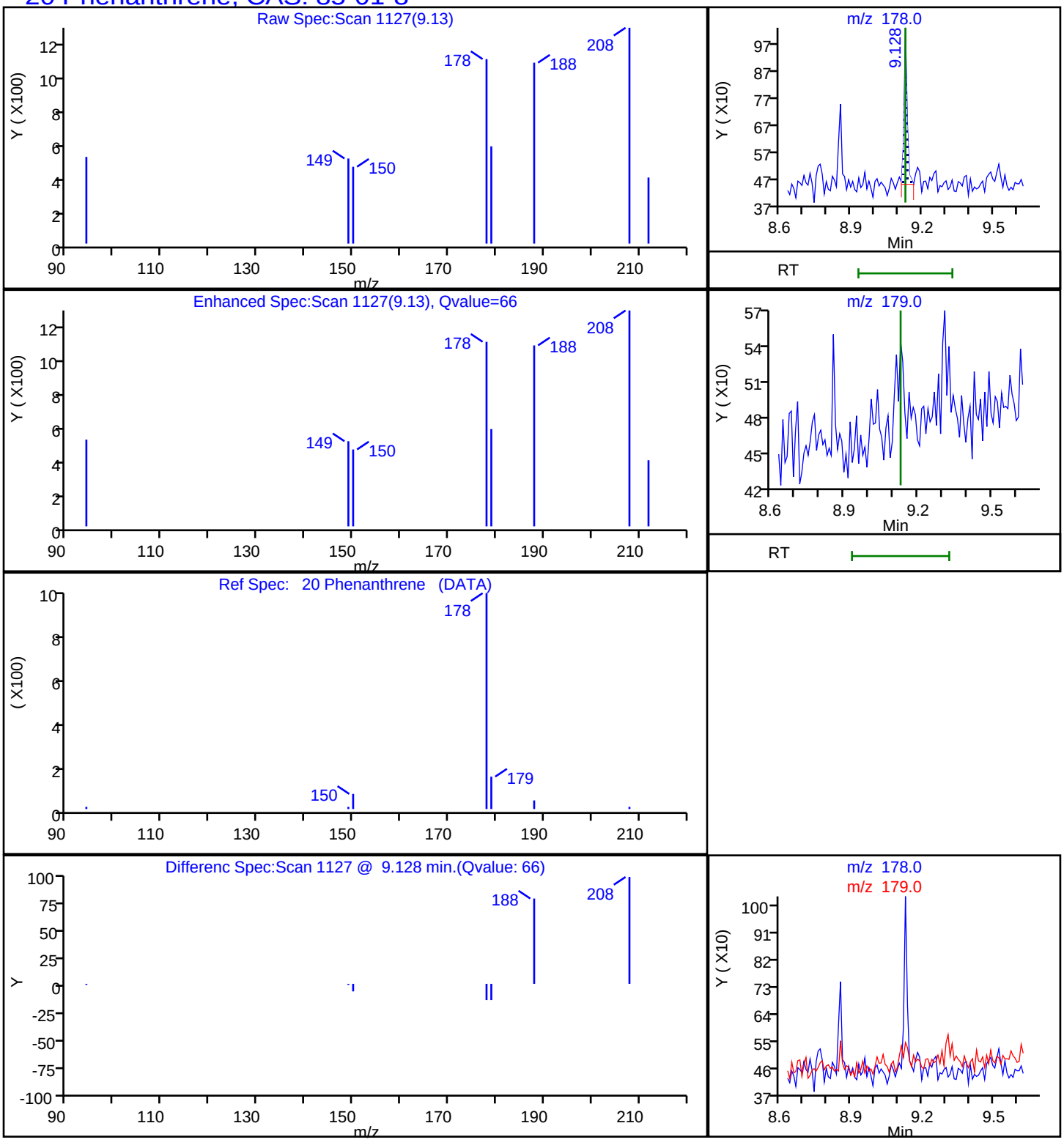
Report Date: 09-Nov-2018 21:27:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4570.D

Injection Date:	09-Nov-2018 00:23:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-1-A	Lab Sample ID:	280-116538-1		
Client ID:	SCLmw-001-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	18	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

20 Phenanthrene, CAS: 85-01-8



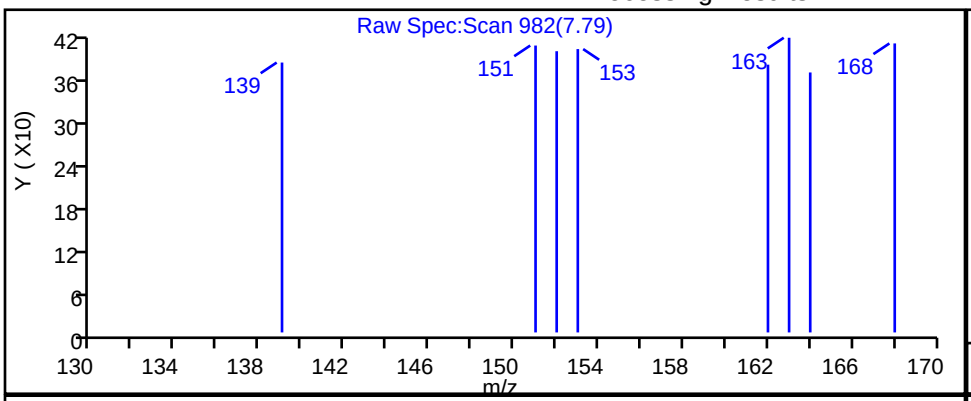
User Disabled Compound Report

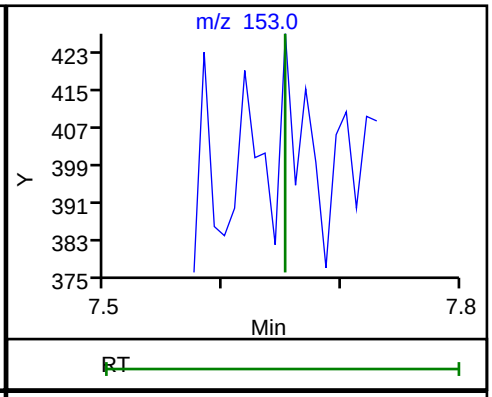
TestAmerica Denver

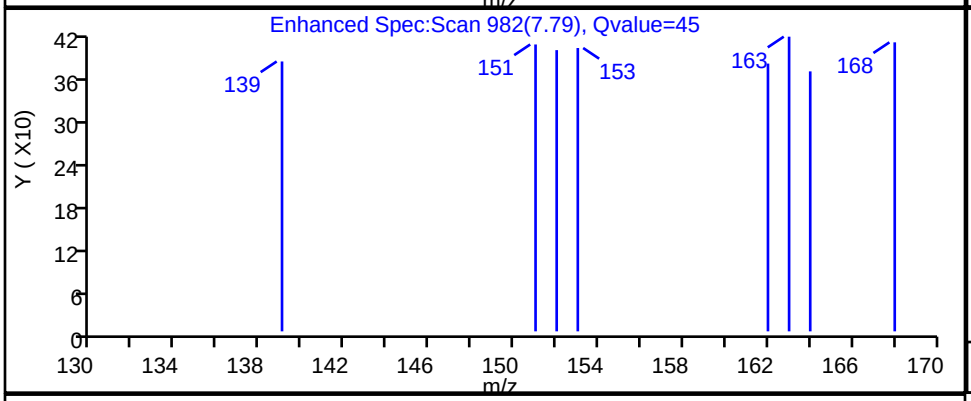
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4570.D				
Injection Date:	09-Nov-2018 00:23:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-1-A	Lab Sample ID:	280-116538-1		
Client ID:	SCLmw-001-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	18	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

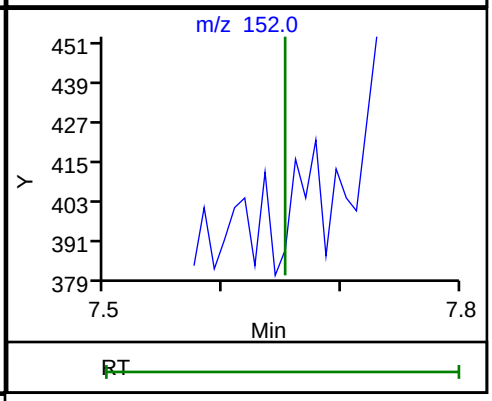
15 Acenaphthene, CAS: 83-32-9

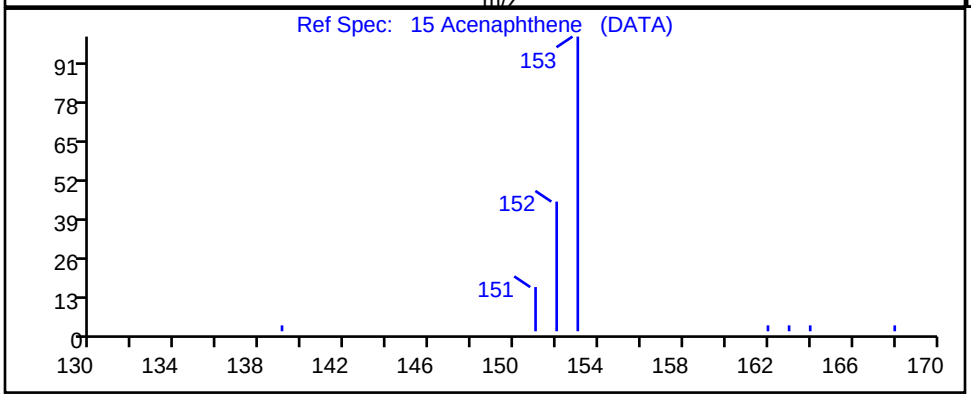
Processing Results











RT	Mass	Response	Amount
7.79	153.00	609	6.635926
7.65	152.00	0	

Reviewer: wickhamm, 09-Nov-2018 19:29:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

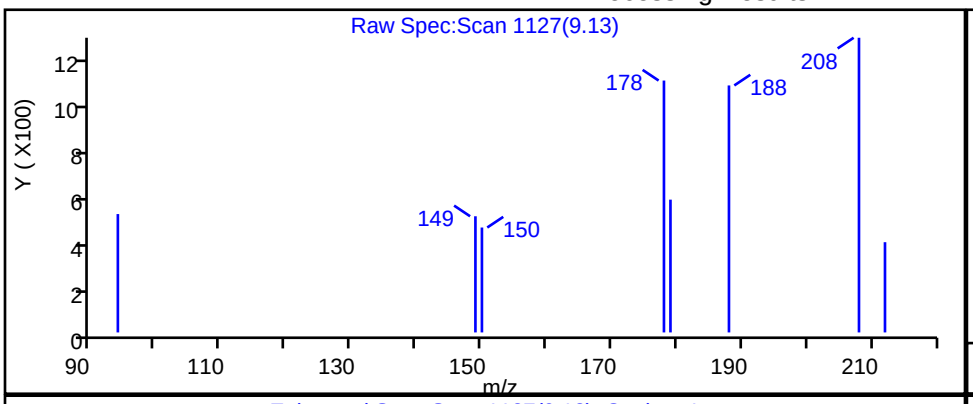
User Disabled Compound Report

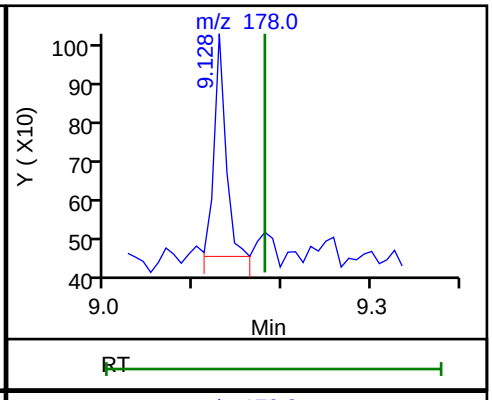
TestAmerica Denver

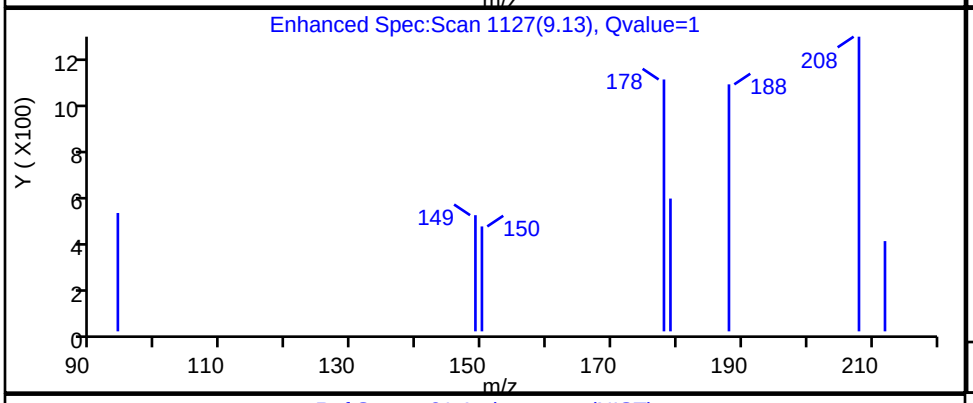
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4570.D				
Injection Date:	09-Nov-2018 00:23:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-1-A	Lab Sample ID:	280-116538-1		
Client ID:	SCLmw-001-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	18	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

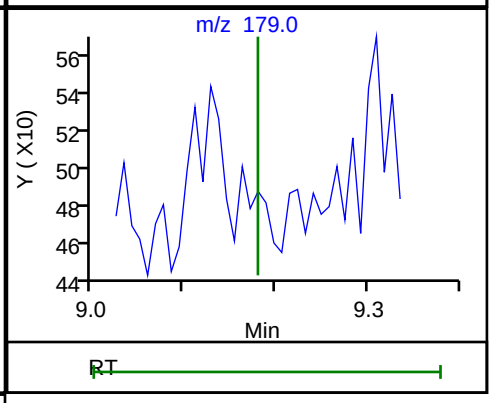
21 Anthracene, CAS: 120-12-7

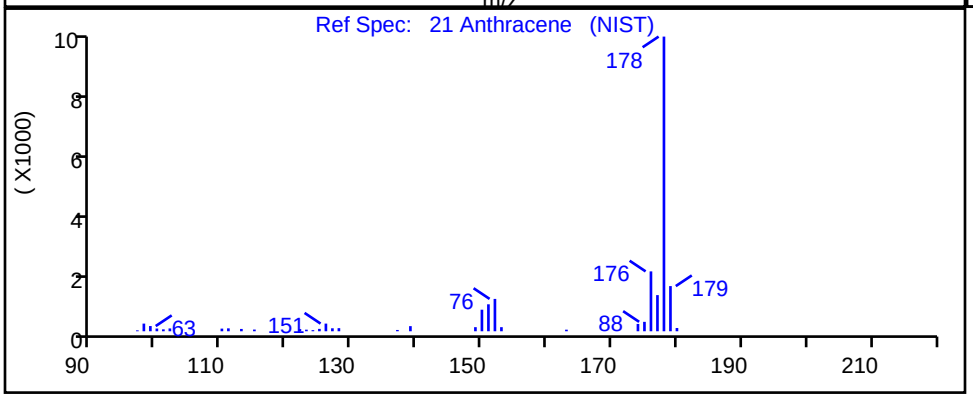
Processing Results











RT	Mass	Response	Amount
9.13	178.00	527	3.296405
9.18	179.00	0	

Reviewer: wickhamm, 09-Nov-2018 19:29:53

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

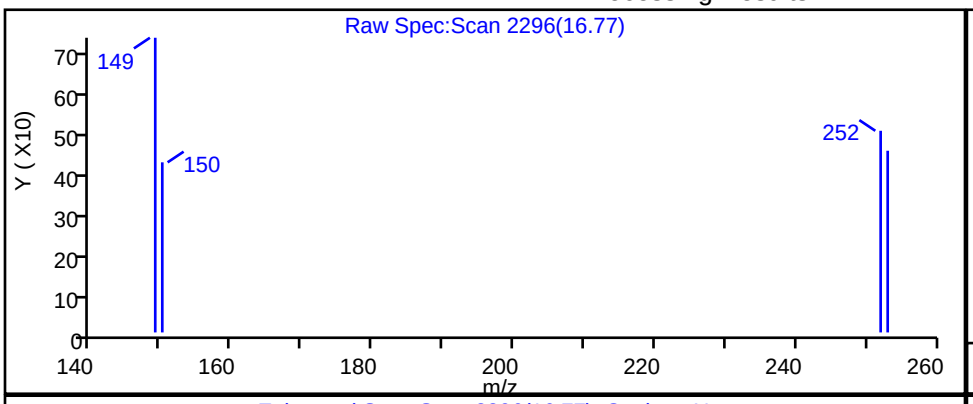
User Disabled Compound Report

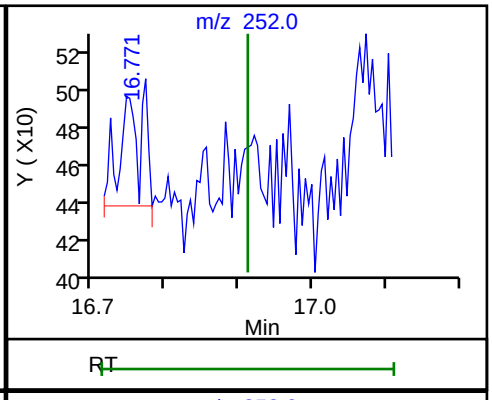
TestAmerica Denver

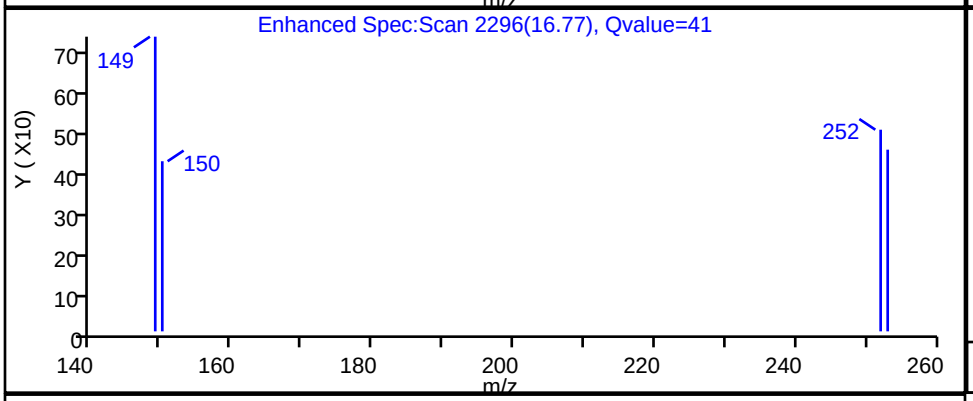
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4570.D				
Injection Date:	09-Nov-2018 00:23:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-1-A	Lab Sample ID:	280-116538-1		
Client ID:	SCLmw-001-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	18	Worklist Smp#:	19
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

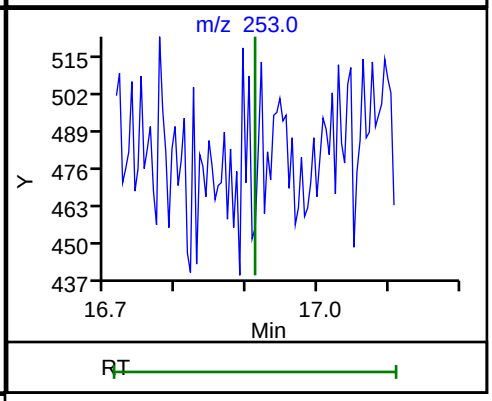
32 Benzo[a]pyrene, CAS: 50-32-8

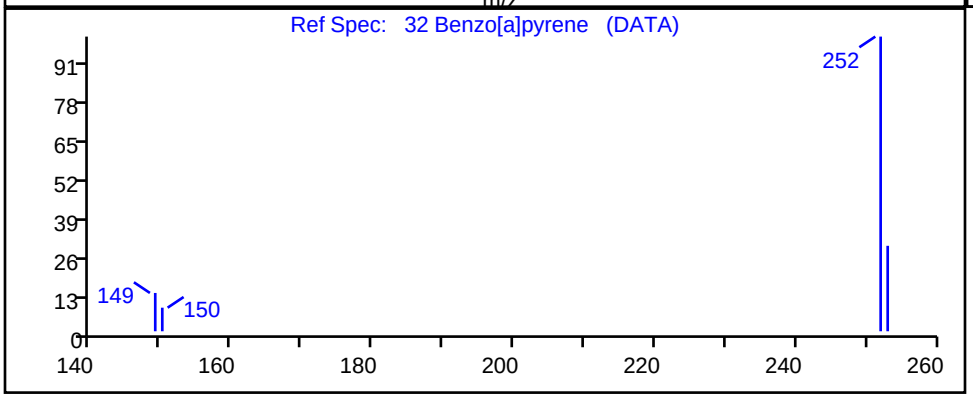
Processing Results











RT	Mass	Response	Amount
16.77	252.00	126	0.937418
16.91	253.00	0	

Reviewer: wickhamm, 09-Nov-2018 19:29:59

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-003-181001-GW | Lab Sample ID: 280-116538-2

Matrix: Water | Lab File ID: F4571.D

Analysis Method: 8270D SIM | Date Collected: 11/02/2018 11:10

Extract. Method: 3510C | Date Extracted: 11/05/2018 13:07

Sample wt/vol: 223.8(mL) | Date Analyzed: 11/09/2018 00:53

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436903 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.013	U	0.11	0.013	0.0066
91-57-6	2-Methylnaphthalene	0.013	U	0.11	0.013	0.0067
83-32-9	Acenaphthene	0.045	U M	0.11	0.045	0.0047
208-96-8	Acenaphthylene	0.045	U	0.11	0.045	0.0057
120-12-7	Anthracene	0.045	U M	0.11	0.045	0.0063
56-55-3	Benzo[a]anthracene	0.024	J	0.11	0.013	0.0047
50-32-8	Benzo[a]pyrene	0.015	J	0.11	0.013	0.0077
205-99-2	Benzo[b]fluoranthene	0.032	J	0.11	0.013	0.0035
191-24-2	Benzo[g,h,i]perylene	0.013	U M	0.11	0.013	0.0069
207-08-9	Benzo[k]fluoranthene	0.030	J	0.11	0.013	0.0070
218-01-9	Chrysene	0.053	J	0.11	0.013	0.0037
53-70-3	Dibenz(a,h)anthracene	0.013	U M	0.11	0.013	0.0046
206-44-0	Fluoranthene	0.013	U	0.11	0.013	0.0054
86-73-7	Fluorene	0.045	U	0.11	0.045	0.0061
193-39-5	Indeno[1,2,3-cd]pyrene	0.022	J	0.11	0.045	0.0050
91-20-3	Naphthalene	0.013	U	0.11	0.013	0.0089
85-01-8	Phenanthrene	0.014	J	0.11	0.022	0.010
129-00-0	Pyrene	0.022	U	0.11	0.022	0.0068

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	80		53-106
4165-60-0	Nitrobenzene-d5	69		55-111
1718-51-0	Terphenyl-d14	90		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D
Lims ID: 280-116538-L-2-A
Client ID: SCLmw-003-181001-GW
Sample Type: Client
Inject. Date: 09-Nov-2018 00:53:30 ALS Bottle#: 19 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-l-2-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:26:54 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: wickhamm Date: 09-Nov-2018 19:30:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.617	7.626	-0.009	86	42169	600.0	
* 2 Phenanthrene-d10	188	9.111	9.111	0.000	97	88427	600.0	
* 3 Chrysene-d12	240	13.151	13.160	-0.009	91	68128	600.0	
$ 4 Nitrobenzene-d5	82	5.164	5.169	-0.005	99	20459	342.8	
$ 5 2-Fluorobiphenyl	172	6.935	6.935	0.000	99	41439	400.6	
$ 6 Terphenyl-d14	244	11.047	11.056	-0.009	98	51427	449.1	
10 Naphthalene	128		5.898				ND	
11 2-Methylnaphthalene	142		6.572				ND	
12 1-Methylnaphthalene	142		6.678				ND	
14 Acenaphthylene	152		7.479				ND	
15 Acenaphthene	153		7.652				ND	U
18 Fluorene	166		8.167				ND	
20 Phenanthrene	178	9.128	9.128	0.000	57	572	3.07	
21 Anthracene	178		9.180				ND	U
23 Fluoranthene	202		10.502				ND	
24 Pyrene	202		10.831				ND	
26 Benzo[a]anthracene	228	13.124	13.133	-0.009	72	763	5.33	
27 Chrysene	228	13.214	13.223	-0.009	76	1824	11.9	
30 Benzo[b]fluoranthene	252	15.970	15.988	-0.018	70	1035	7.12	
31 Benzo[k]fluoranthene	252	16.049	16.062	-0.013	70	980	6.65	
32 Benzo[a]pyrene	252	16.893	16.911	-0.018	45	456	3.45	
33 Indeno[1,2,3-cd]pyrene	276	20.165	20.187	-0.022	68	647	4.88	
34 Dibenz(a,h)anthracene	278		20.279				ND	U
35 Benzo[g,h,i]perylene	276		20.922				ND	U

QC Flag Legend

Review Flags

U - Marked Undetected

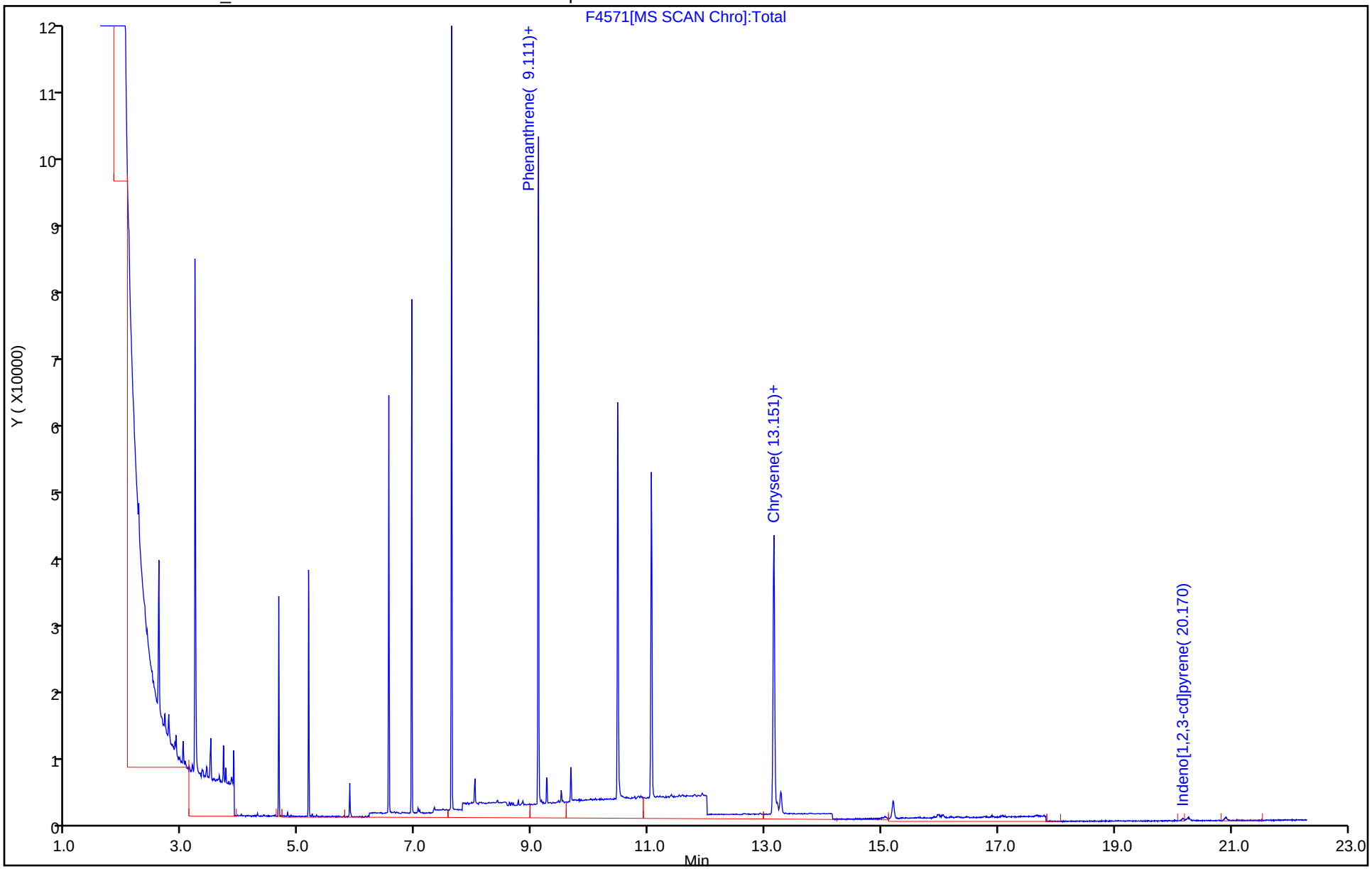
Reagents:

MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 09-Nov-2018 21:27:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D				
Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2	Worklist Smp#:	20
Client ID:	SCLmw-003-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D
Lims ID: 280-116538-L-2-A
Client ID: SCLmw-003-181001-GW
Sample Type: Client
Inject. Date: 09-Nov-2018 00:53:30 ALS Bottle#: 19 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-l-2-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:26:54 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: wickhamm Date: 09-Nov-2018 19:30:48

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	342.8	68.57
$ 5 2-Fluorobiphenyl	500.0	400.6	80.13
$ 6 Terphenyl-d14	500.0	449.1	89.81
$ 53 2-methylnaphthalene-d10	0.0	0	0.00
$ 54 Fluoranthene-d10	0.0	0	0.00

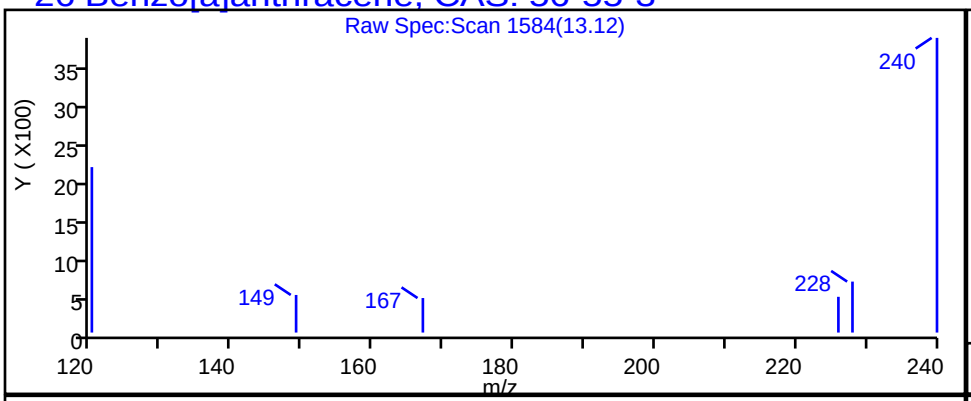
Report Date: 09-Nov-2018 21:27:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

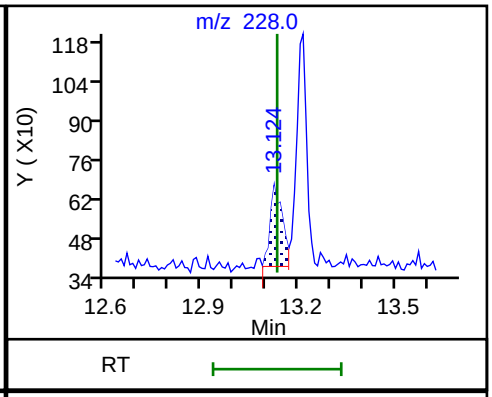
TestAmerica Denver

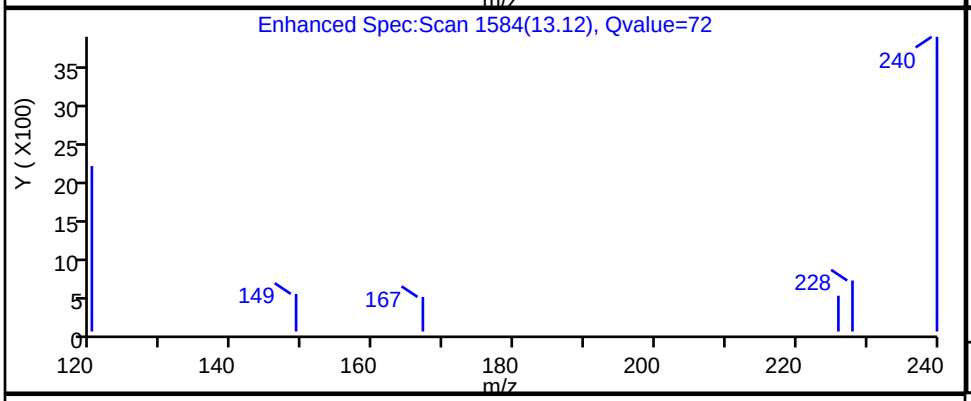
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D

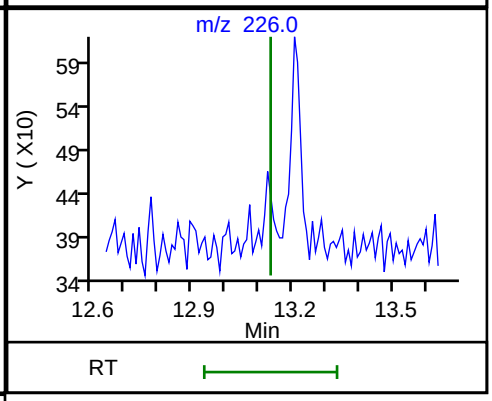
Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	19	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

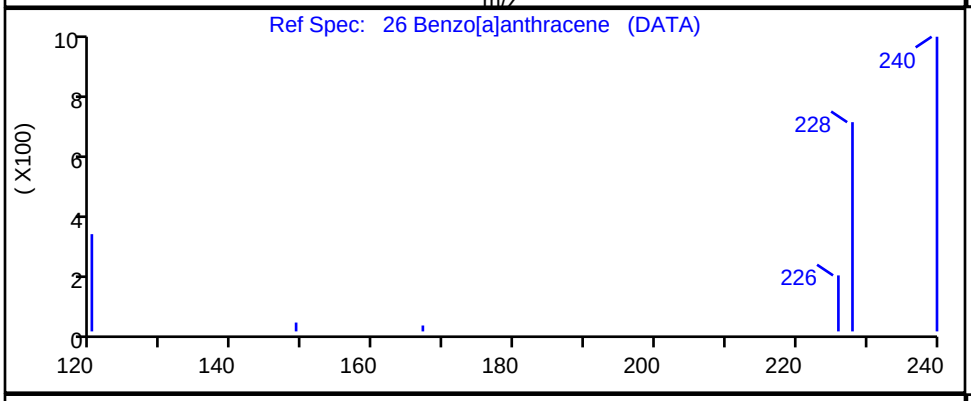
26 Benzo[a]anthracene, CAS: 56-55-3

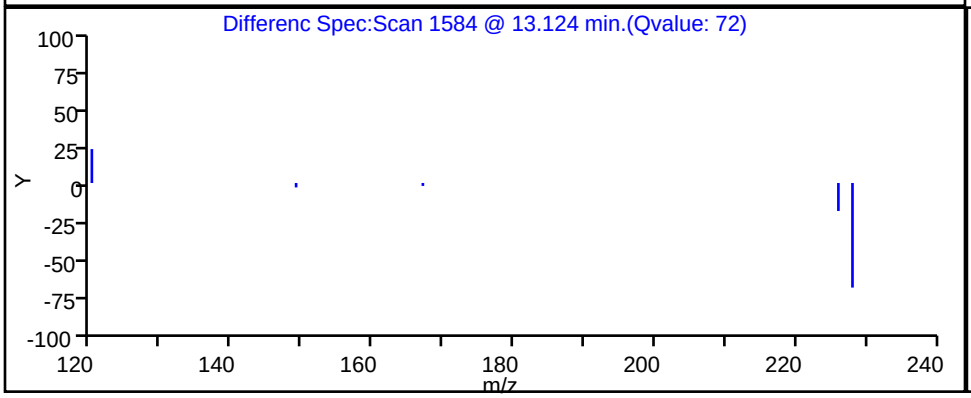


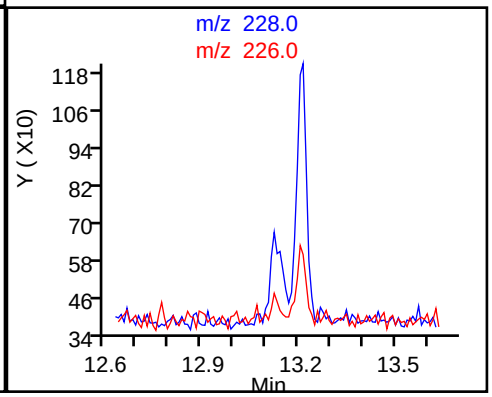












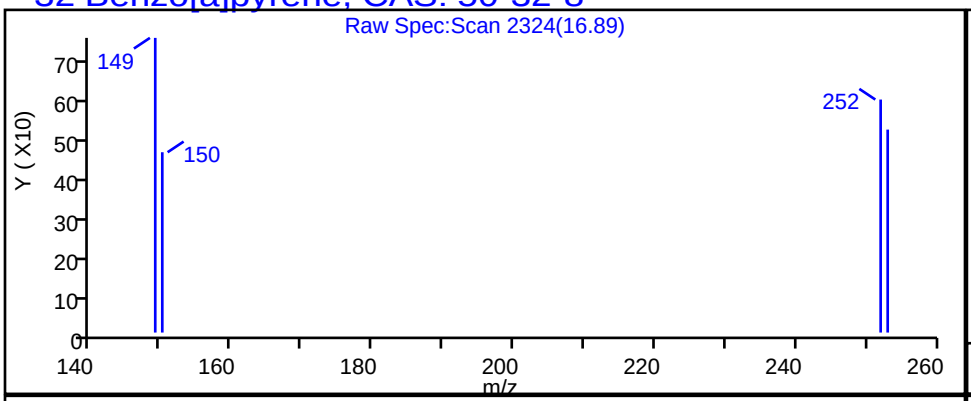
Report Date: 09-Nov-2018 21:27:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

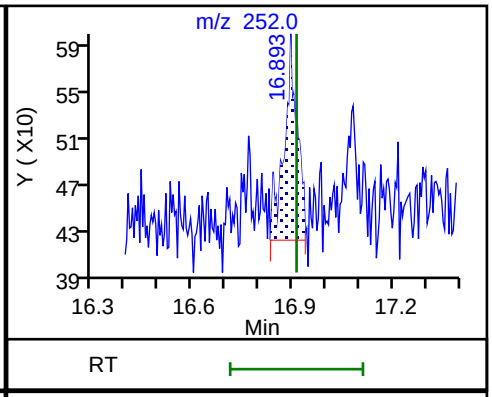
TestAmerica Denver

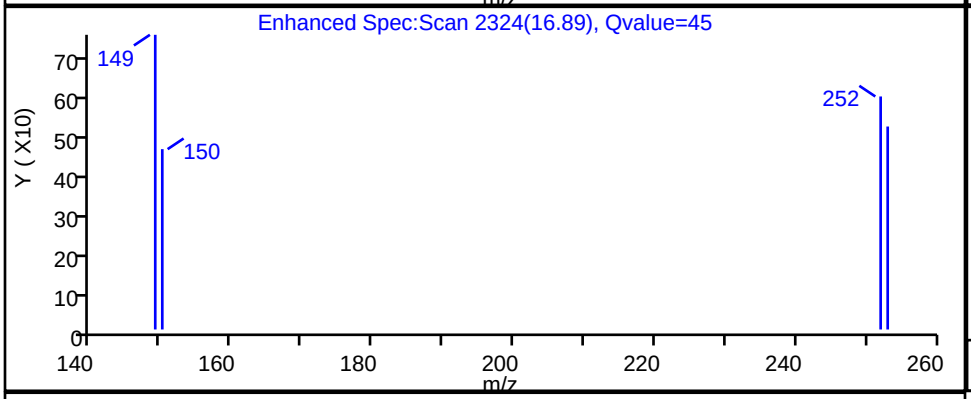
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D

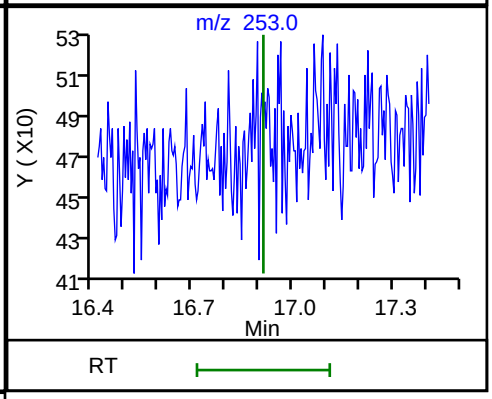
Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	19	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

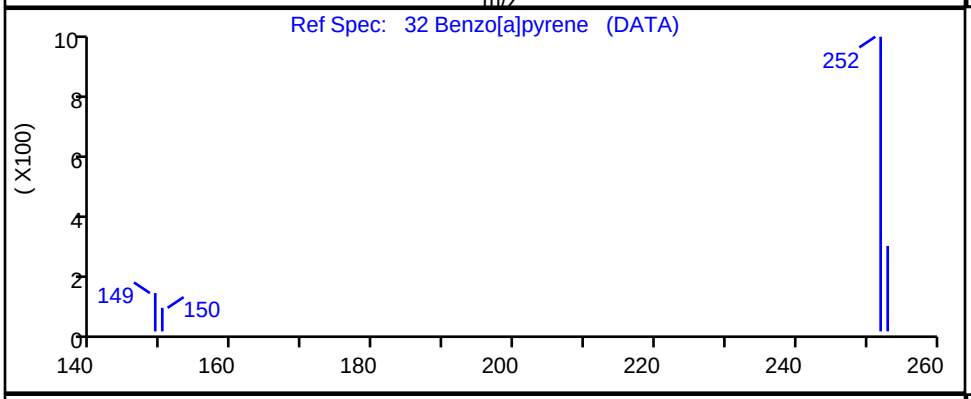
32 Benzo[a]pyrene, CAS: 50-32-8

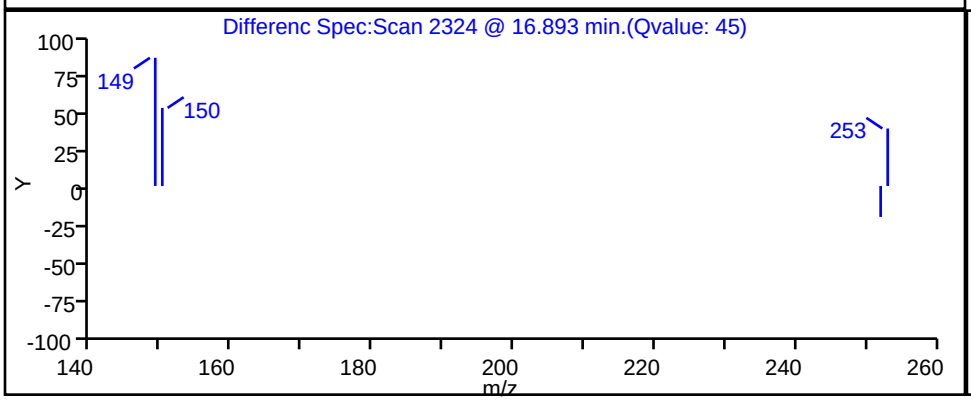


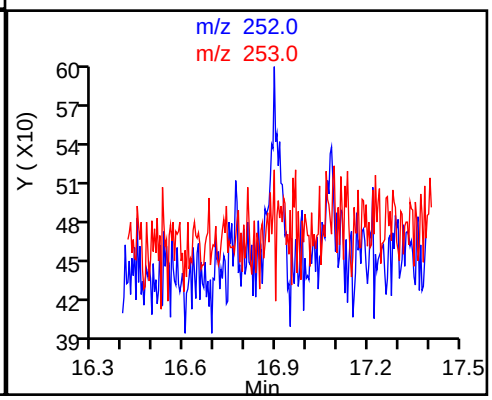










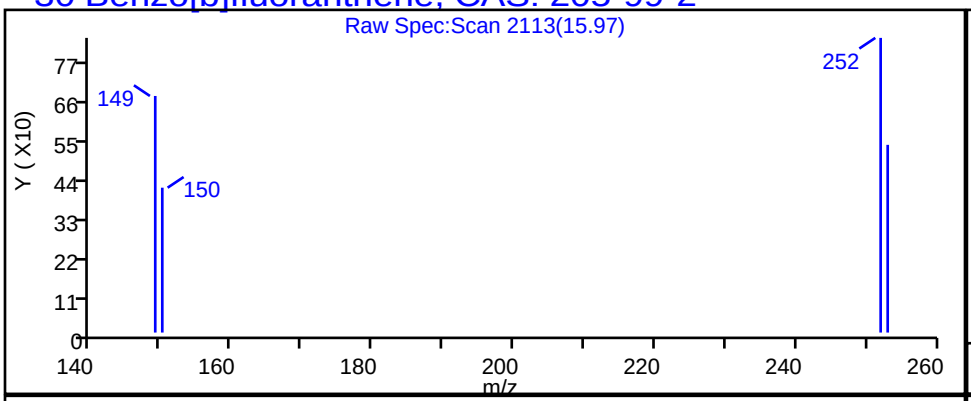


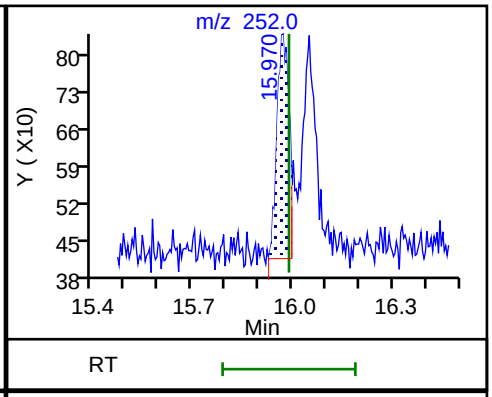
Report Date: 09-Nov-2018 21:27:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

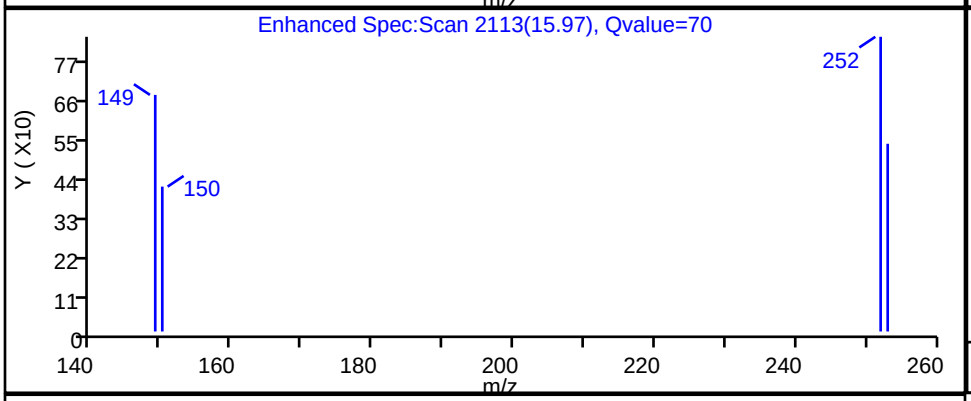
TestAmerica Denver

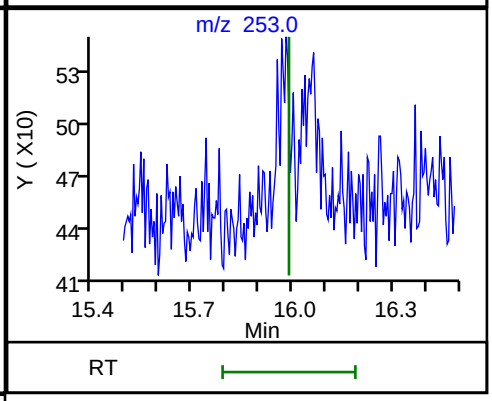
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D				
Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	19	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

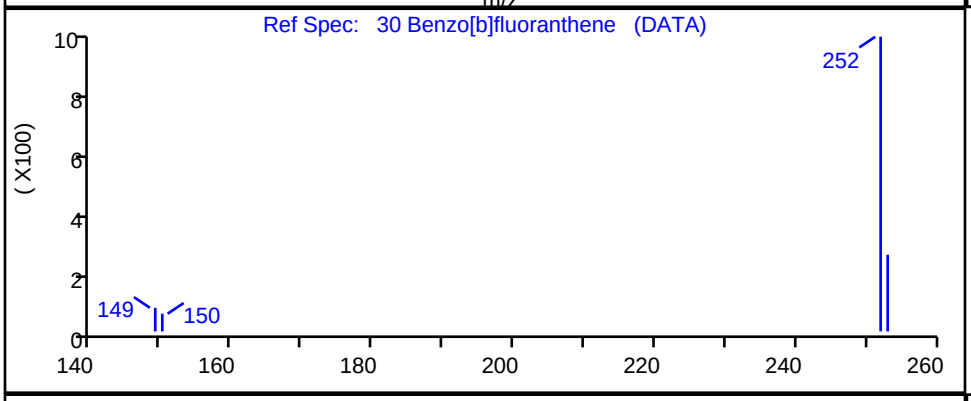
30 Benzo[b]fluoranthene, CAS: 205-99-2

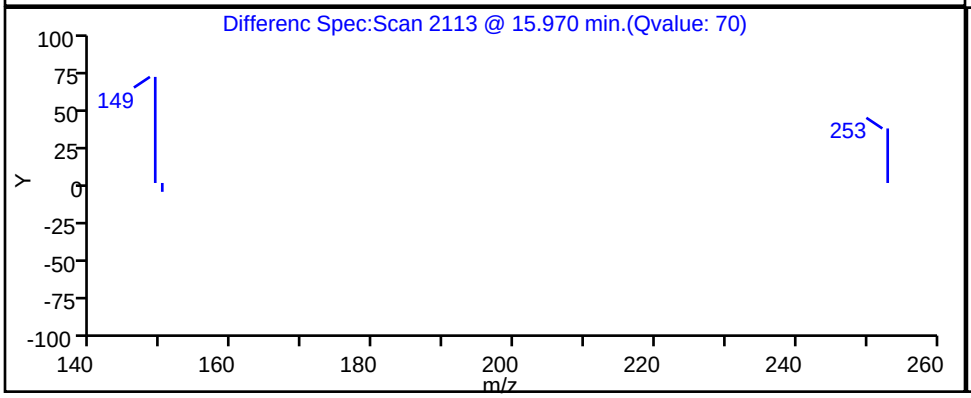


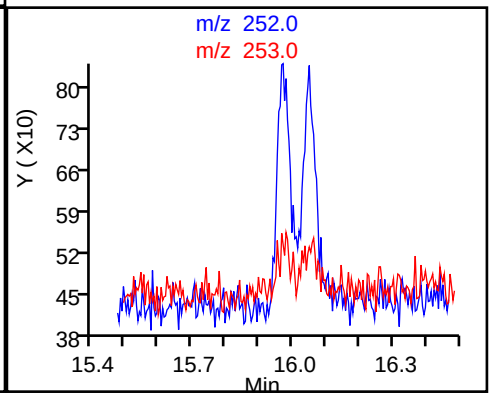












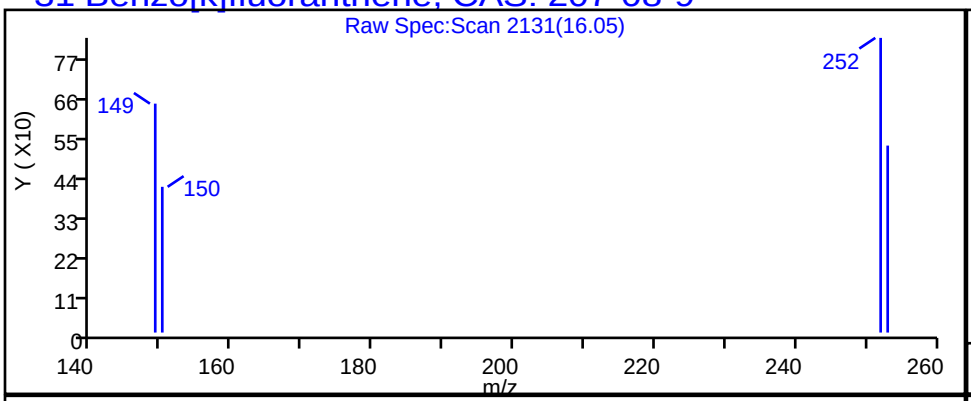
Report Date: 09-Nov-2018 21:27:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

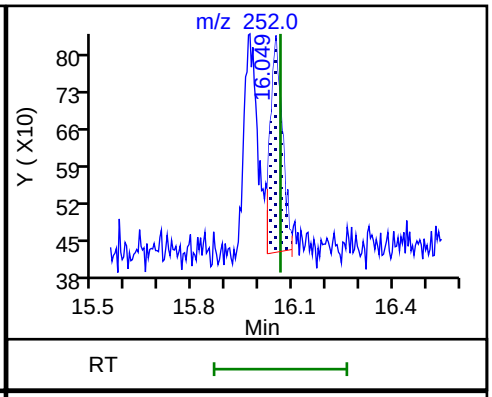
TestAmerica Denver

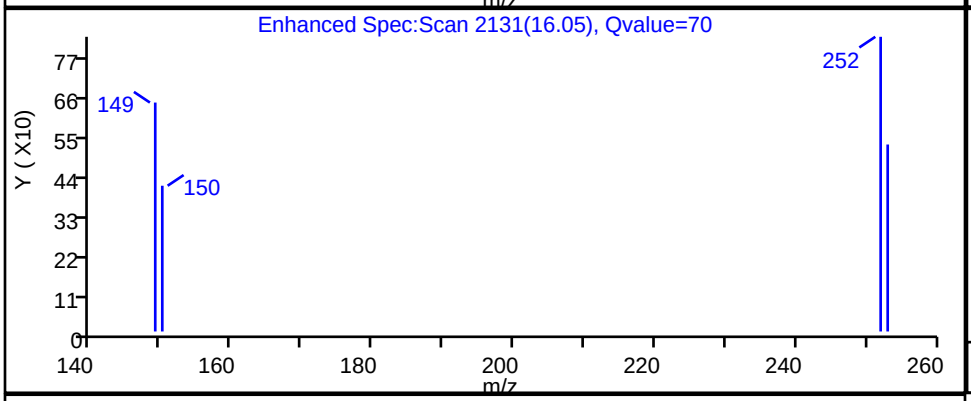
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D

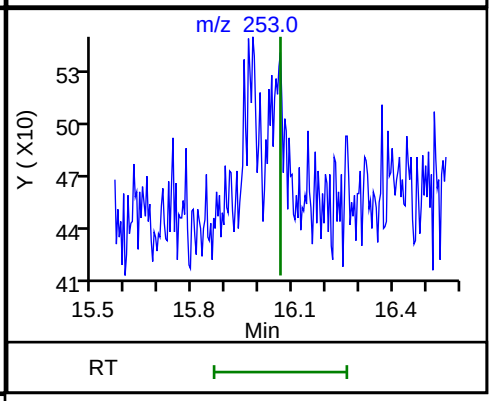
Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	19	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

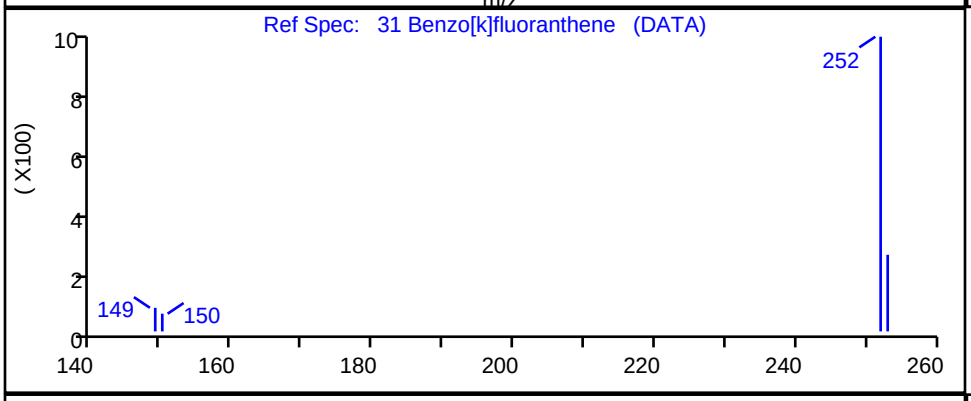
31 Benzo[k]fluoranthene, CAS: 207-08-9

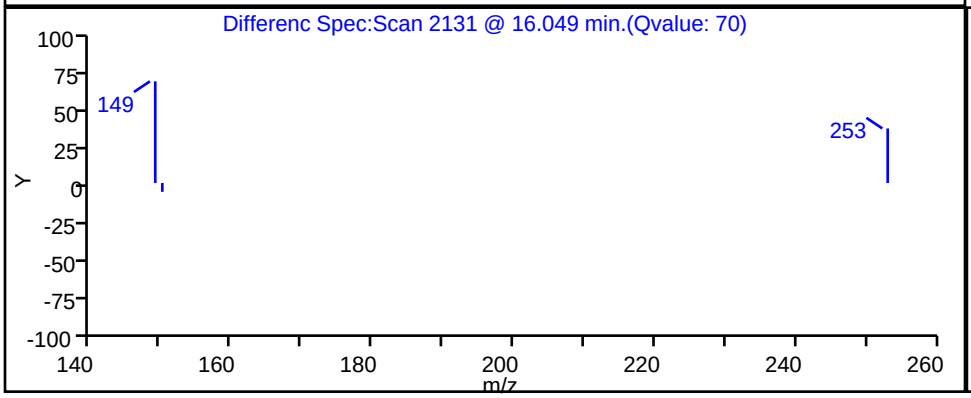


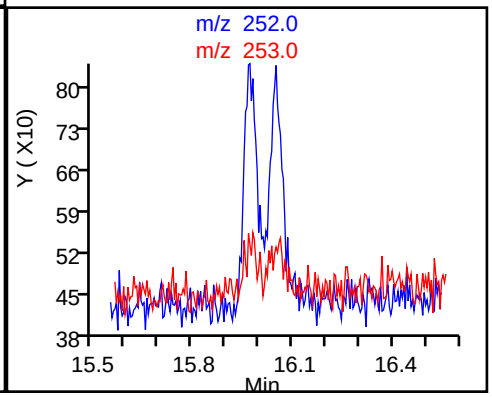












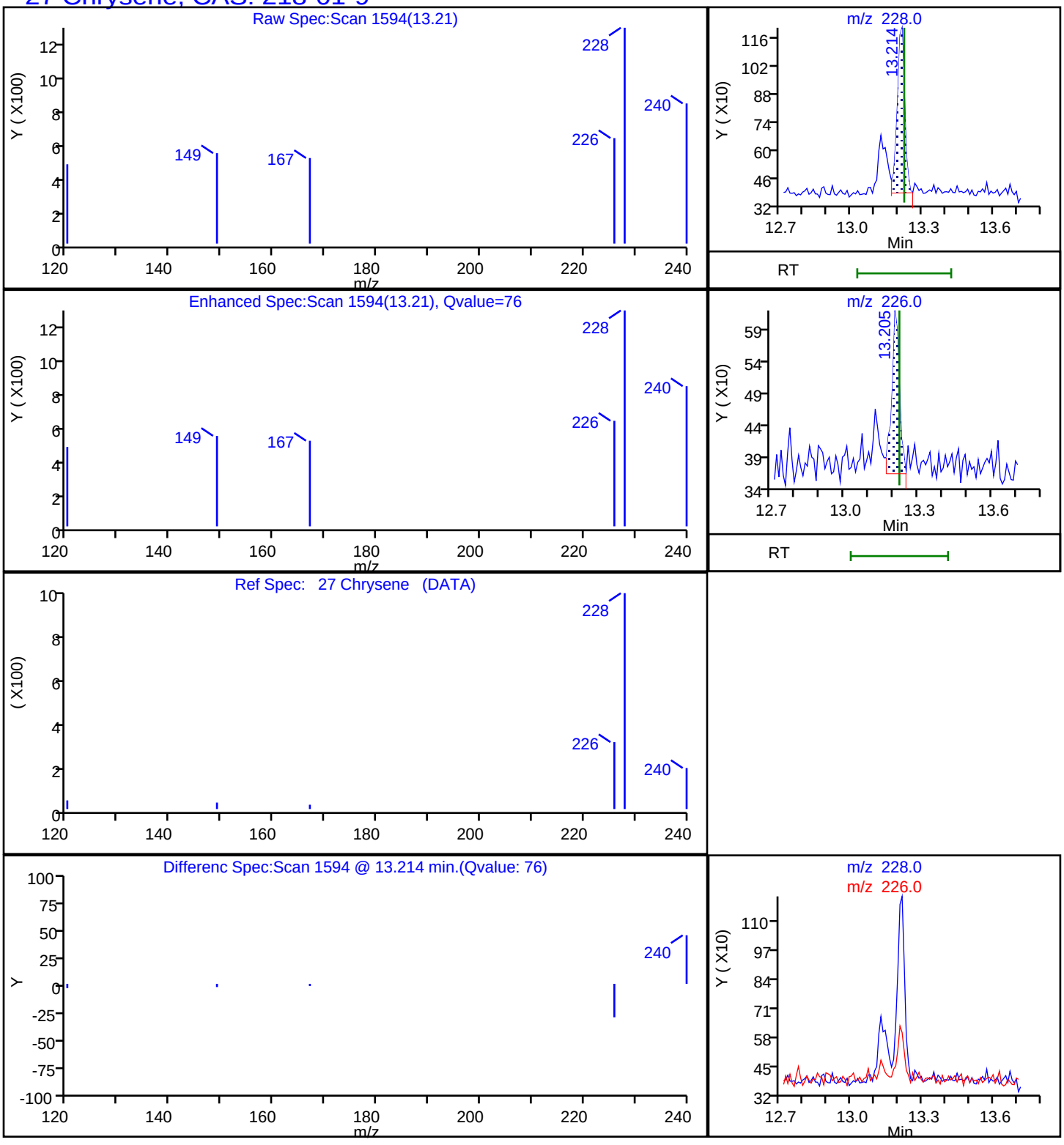
Report Date: 09-Nov-2018 21:27:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D

Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	19	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

27 Chrysene, CAS: 218-01-9



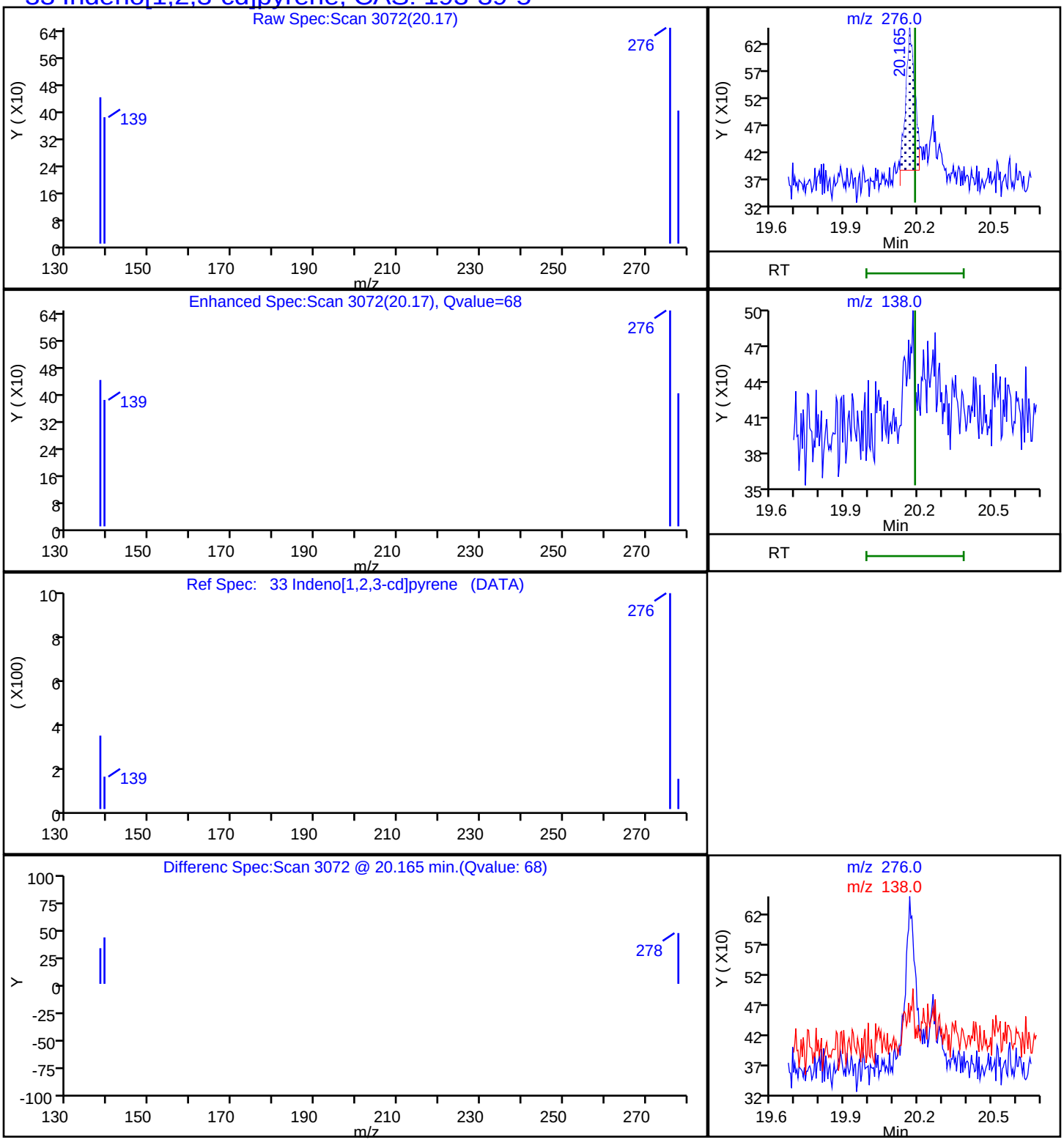
Report Date: 09-Nov-2018 21:27:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D

Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	19	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

33 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5



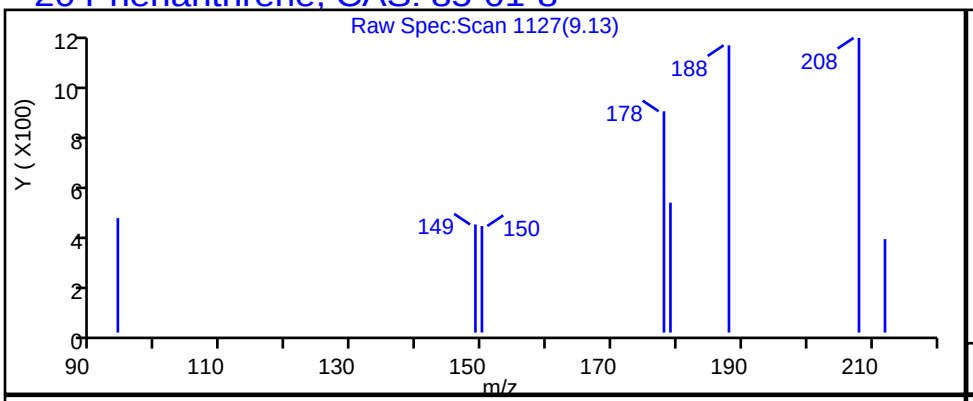
Report Date: 09-Nov-2018 21:27:29 Chrom Revision: 2.3 12-Oct-2018 08:24:38

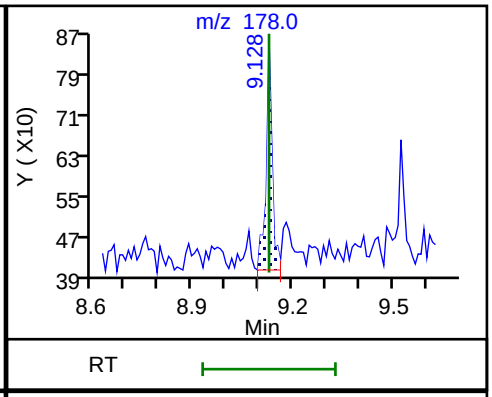
TestAmerica Denver

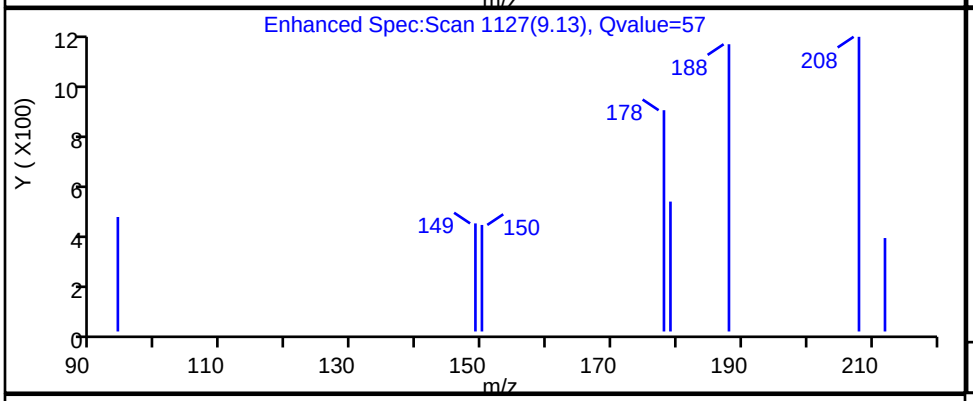
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D

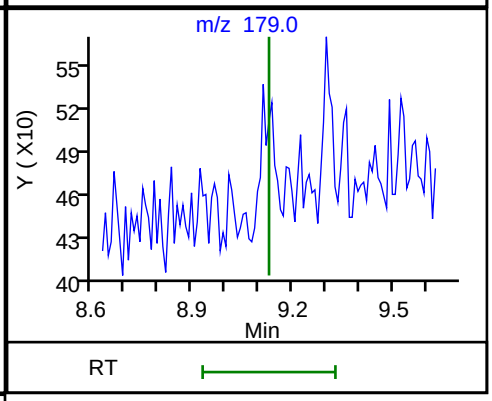
Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	19	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

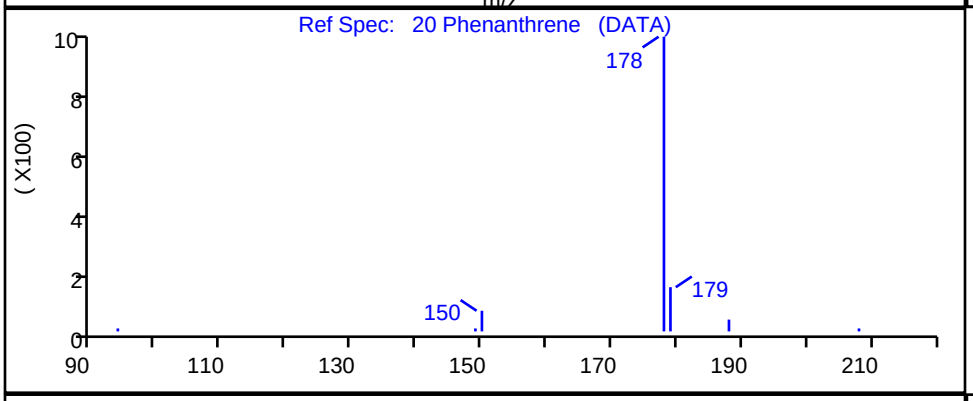
20 Phenanthrene, CAS: 85-01-8

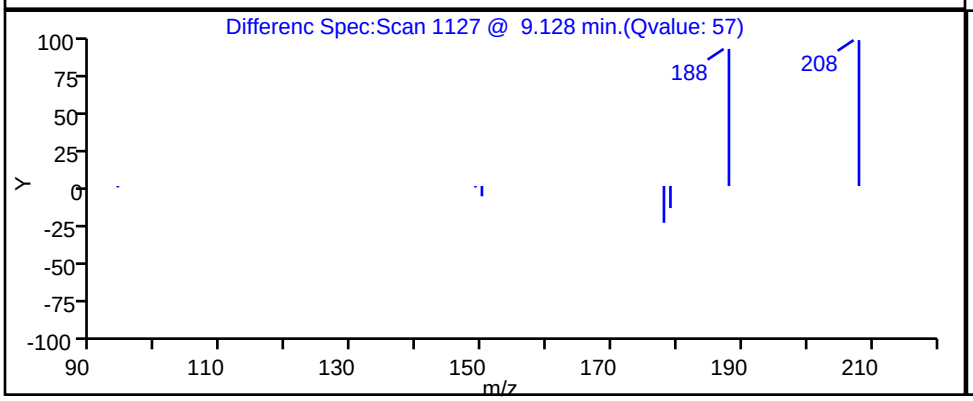


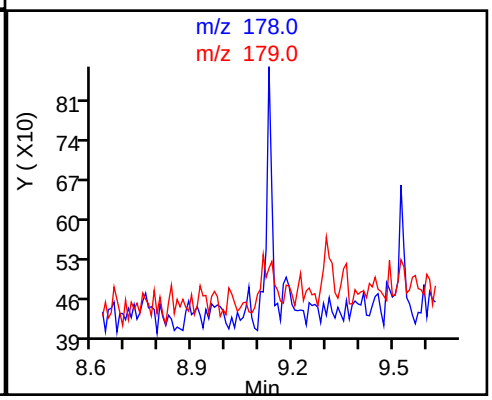












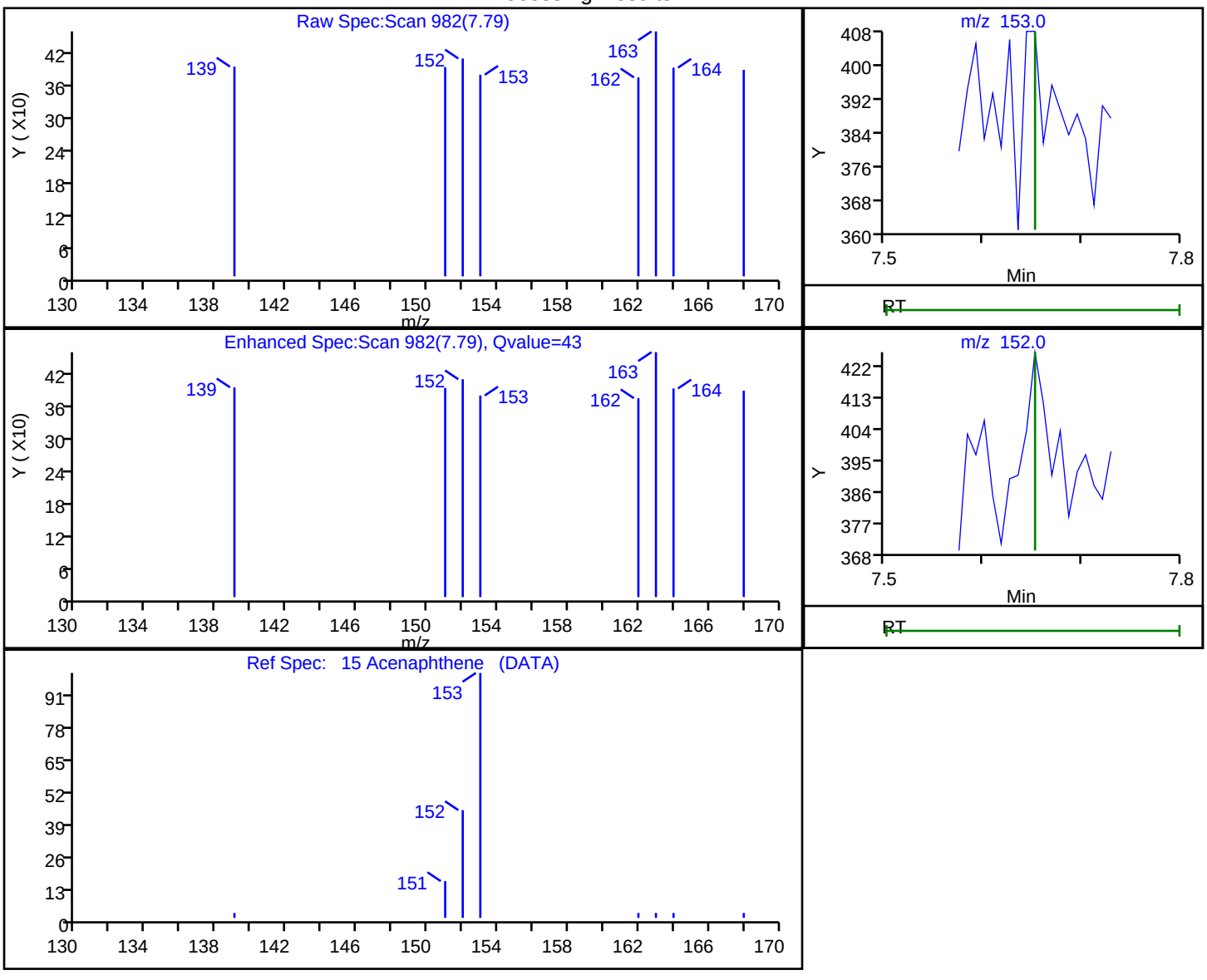
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D				
Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	19	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

15 Acenaphthene, CAS: 83-32-9

Processing Results



RT	Mass	Response	Amount
7.79	153.00	576	6.157274
7.79	152.00	598	

Reviewer: wickhamm, 09-Nov-2018 19:30:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

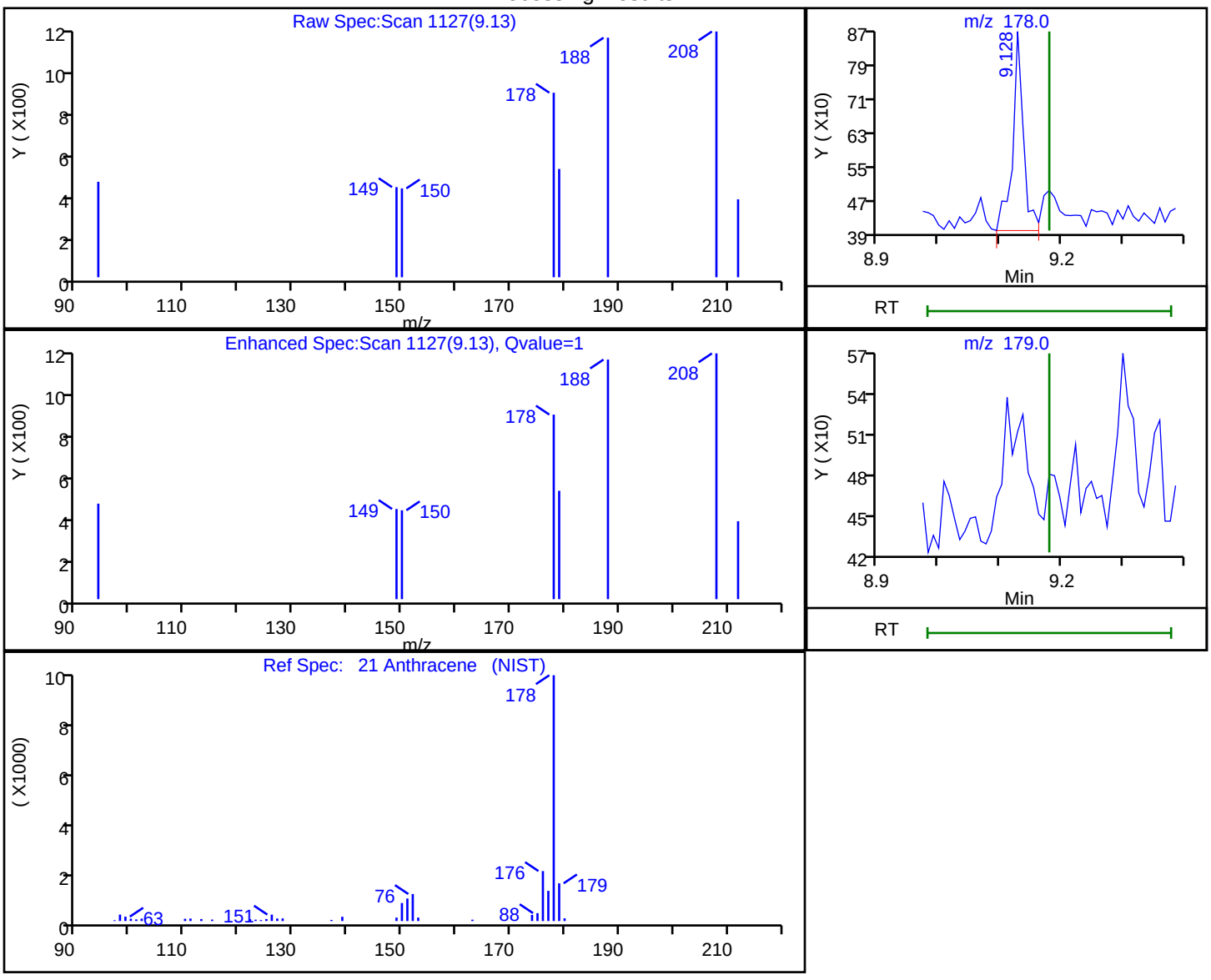
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D				
Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	19	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

21 Anthracene, CAS: 120-12-7

Processing Results



RT	Mass	Response	Amount
9.13	178.00	572	3.550206
9.18	179.00	0	

Reviewer: wickhamm, 09-Nov-2018 19:30:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

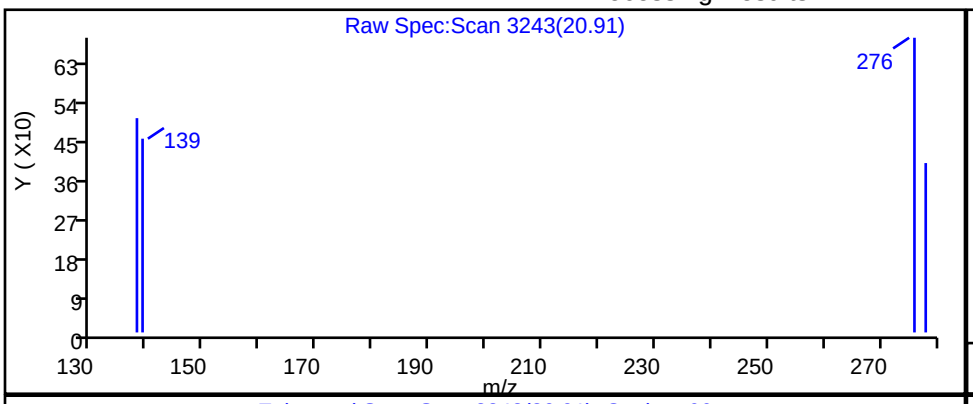
User Disabled Compound Report

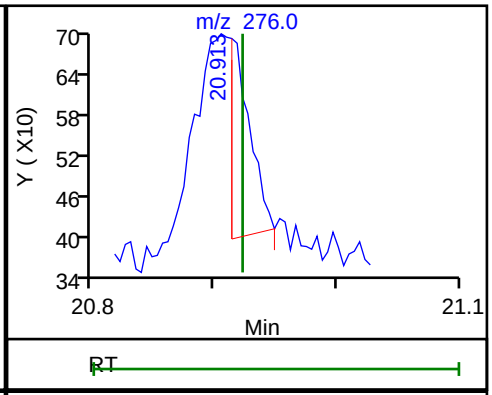
TestAmerica Denver

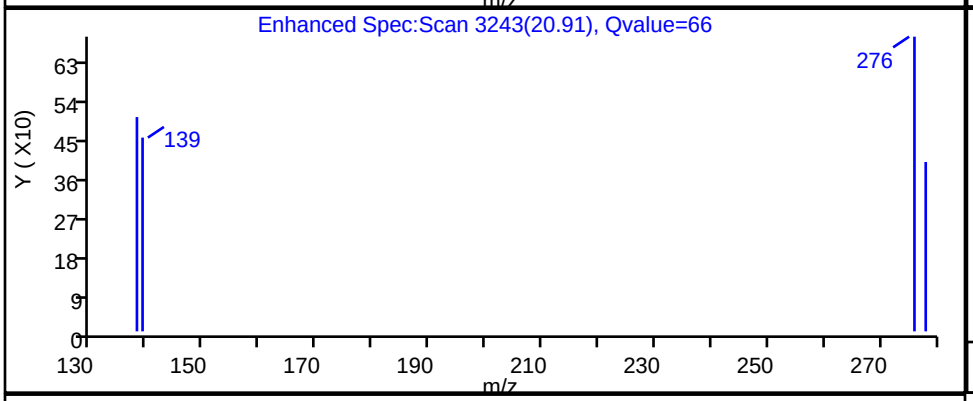
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D				
Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	19	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

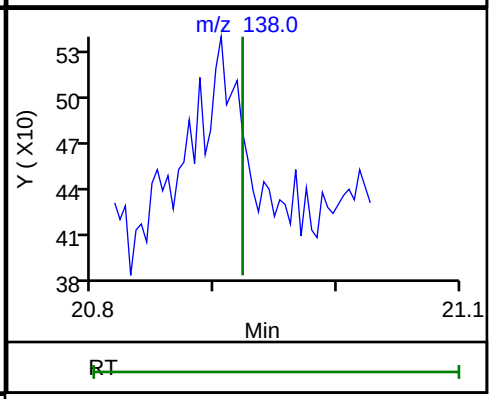
35 Benzo[g,h,i]perylene, CAS: 191-24-2

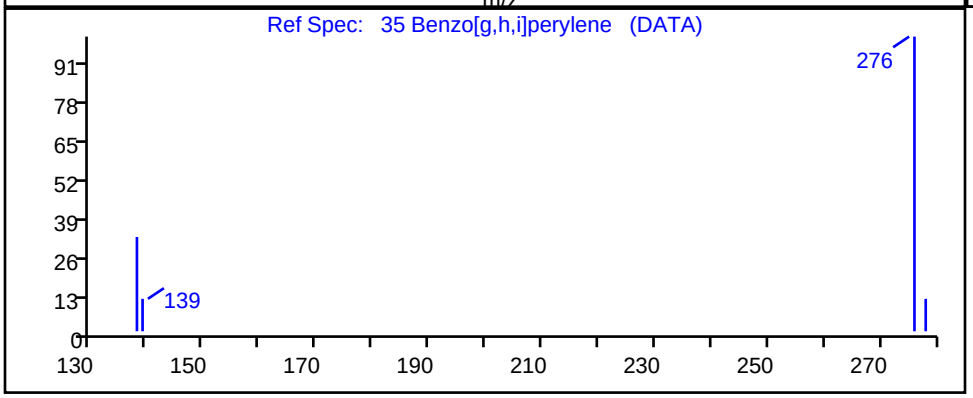
Processing Results











RT	Mass	Response	Amount
20.91	276.00	330	2.105544
20.92	138.00	0	

Reviewer: wickhamm, 09-Nov-2018 19:30:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

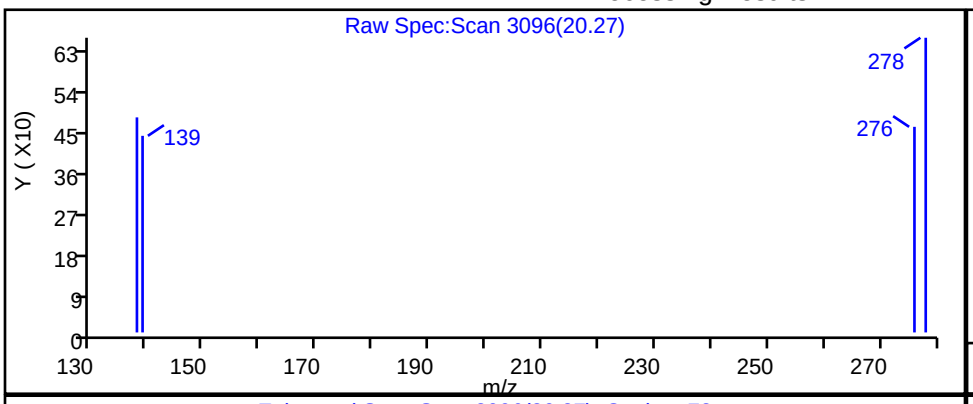
User Disabled Compound Report

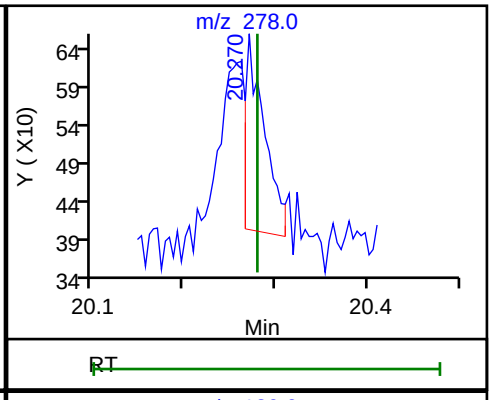
TestAmerica Denver

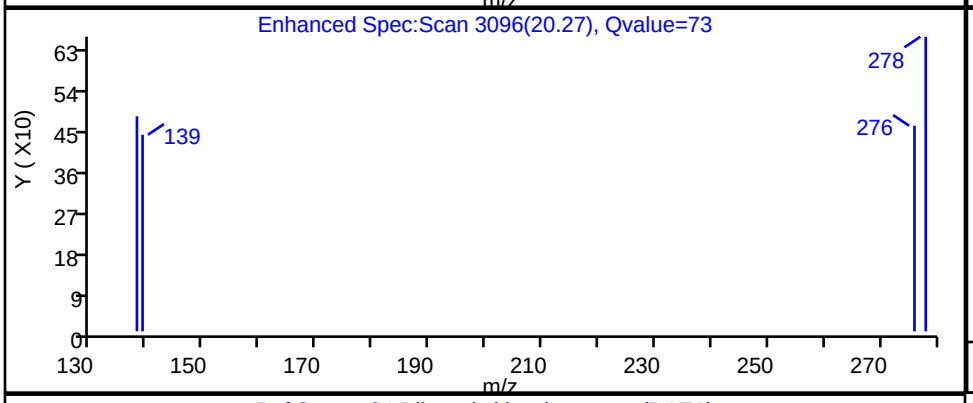
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4571.D				
Injection Date:	09-Nov-2018 00:53:30	Instrument ID:	SMS_F		
Lims ID:	280-116538-L-2-A	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	WICKHAMM	ALS Bottle#:	19	Worklist Smp#:	20
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

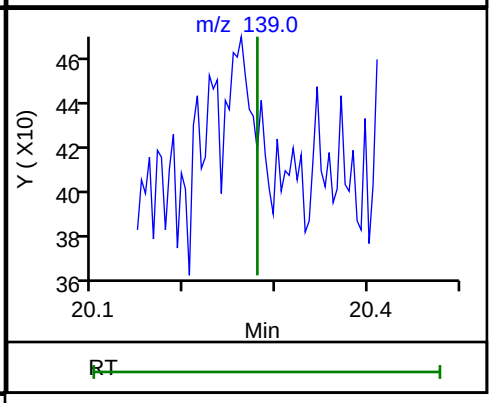
34 Dibenz(a,h)anthracene, CAS: 53-70-3

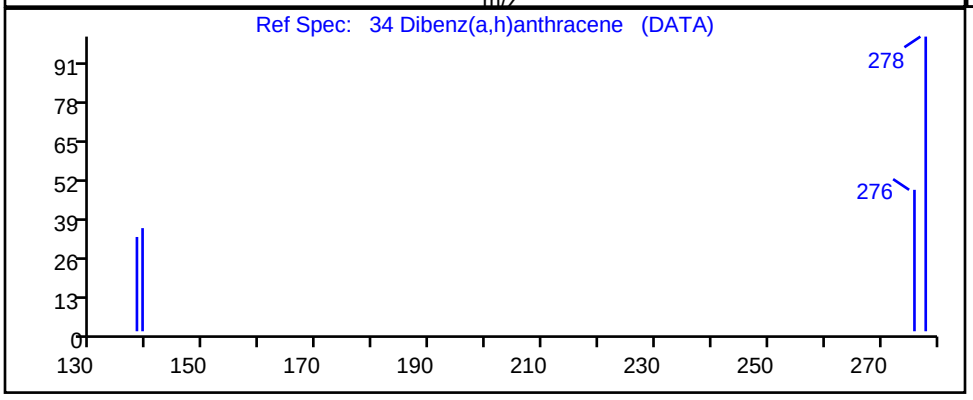
Processing Results











RT	Mass	Response	Amount
20.27	278.00	372	2.752490
20.28	139.00	0	

Reviewer: wickhamm, 09-Nov-2018 19:30:43

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 436730

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/07/2018 20:06 Calibration End Date: 11/07/2018 23:58 Calibration ID: 34235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0001 280-436730/4	F4565.D
Level 2	STD0002 280-436730/5	F4566.D
Level 3	STD0500 280-436730/6	F4563.D
Level 4	STD0100 280-436730/7	F4564.D
Level 5	STD0300 280-436730/8	F4567.D
Level 6	ICIS 280-436730/3	F4562.D
Level 7	STD1200 280-436730/9	F4568.D
Level 8	STD2500 280-436730/10	F4569.D
Level 9	STD5000 280-436730/11	F4570.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Naphthalene	+++++ 1.8896	2.1445 1.9283	1.8733 2.1472	2.0062 1.9422	2.0484	Ave		1.9975			0.7000	5.4		15.0			
2-Methylnaphthalene	1.4121 1.2881	1.4812 1.3250	1.2890 1.4983	1.3505 1.3533	1.3876	Ave		1.3761			0.4000	5.5		15.0			
1-Methylnaphthalene	1.2373 1.1598	1.2609 1.1851	1.1389 1.3562	1.2138 1.2277	1.2346	Ave		1.2238			0.0500	5.2		15.0			
Acenaphthylene	2.0557 1.8704	1.9111 1.9164	1.7864 2.2096	1.8440 2.0341	1.8556	Ave		1.9426			0.9000	6.8		15.0			
Acenaphthene	1.3846 1.2538	1.4309 1.2692	1.2663 1.4486	1.3013 1.3430	1.2817	Ave		1.3310			0.9000	5.6		15.0			
Fluorene	1.4755 1.4770	1.6314 1.5007	1.4111 1.7794	1.4645 1.6087	1.5055	Ave		1.5393			0.9000	7.4		15.0			
Phenanthrene	1.5559 1.1431	1.3529 1.2083	1.1510 1.3733	1.1974 1.2205	1.1733	Ave		1.2640			0.7000	10.8		15.0			
Anthracene	1.0647 1.0518	1.0666 1.1000	1.0081 1.2876	1.0478 1.1985	1.0139	Ave		1.0932			0.7000	8.4		15.0			
Fluoranthene	1.4740 1.2536	1.2830 1.3030	1.2061 1.5028	1.2501 1.3841	1.2193	Ave		1.3196			0.6000	8.3		15.0			
Pyrene	1.5814 1.2634	1.4571 1.3103	1.2488 1.4932	1.2865 1.3806	1.2522	Ave		1.3637			0.6000	8.9		15.0			
Benzo[a]anthracene	1.3256 1.2631	1.2655 1.2310	1.1954 1.3991	1.2238 1.2580	1.1780	Ave		1.2599			0.8000	5.4		15.0			
Chrysene	1.4756 1.3029	1.3345 1.3269	1.2660 1.4946	1.2611 1.3421	1.3097	Ave		1.3459			0.7000	6.2		15.0			
Benzo[b]fluoranthene	1.4376 1.2782	1.2842 1.2455	1.1758 1.3823	1.2521 1.2641	1.2064	Ave		1.2807			0.7000	6.4		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 436730

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/07/2018 20:06 Calibration End Date: 11/07/2018 23:58 Calibration ID: 34235

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo[k]fluoranthene	1.2799 1.3088	1.2030 1.3172	1.2013 1.5013	1.2502 1.3642	1.2593	Ave		1.2984			0.7000	7.1		15.0			
Benzo[a]pyrene	+++++ 1.2189	1.1369 1.1335	1.0920 1.3162	1.1304 1.2017	1.0709	Ave		1.1625			0.7000	6.8		15.0			
Indeno[1,2,3-cd]pyrene	1.3353 1.1911	1.1375 1.1079	1.0948 1.2392	1.1615 1.1268	1.1113	Ave		1.1673			0.5000	6.7		15.0			
Dibenz(a,h)anthracene	1.3678 1.2218	1.1217 1.1740	1.0670 1.3046	1.1162 1.2094	1.1299	Ave		1.1903			0.4000	8.1		15.0			
Benzo[g,h,i]perylene	1.6478 1.3491	1.3496 1.3131	1.2345 1.4731	1.3460 1.3399	1.3695	Ave		1.3803			0.5000	8.5		15.0			
Nitrobenzene-d5	1.0490 0.7833	0.9117 0.7750	0.7731 0.8917	0.8244 0.8169	0.8171	Ave		0.8491				10.5		15.0			
2-methylnaphthalene-d10	1.1681 0.9653	1.1268 0.9730	0.9501 1.0997	1.0166 1.0110	1.0320	Ave		1.0381				7.4		15.0			
2-Fluorobiphenyl	1.5203 1.4095	1.5278 1.4115	1.3584 1.6404	1.4539 1.4457	1.4777	Ave		1.4717				5.7		15.0			
Fluoranthene-d10	1.1114 0.9574	1.0017 0.9849	0.9490 1.1231	0.9687 1.0341	0.9430	Ave		1.0081				6.7		15.0			
Terphenyl-d14	0.8185 0.7228	0.7818 0.7439	0.7009 0.8711	0.7474 0.7899	0.8171	Ave		0.7771				6.9		15.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 436730

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/07/2018 20:06 Calibration End Date: 11/07/2018 23:58 Calibration ID: 34235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD0001 280-436730/4	F4565.D
Level 2	STD0002 280-436730/5	F4566.D
Level 3	STD0500 280-436730/6	F4563.D
Level 4	STD0100 280-436730/7	F4564.D
Level 5	STD0300 280-436730/8	F4567.D
Level 6	ICIS 280-436730/3	F4562.D
Level 7	STD1200 280-436730/9	F4568.D
Level 8	STD2500 280-436730/10	F4569.D
Level 9	STD5000 280-436730/11	F4570.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Naphthalene	ANT	Ave	+++++ 95508	3519 270997	8561 420014	16960 820904	49708	+++++ 600	20.0 1200	50.0 2500	100 5000	300
2-Methylnaphthalene	ANT	Ave	2205 130204	4861 372422	11782 586180	22834 1143934	67346	20.0 1200	40.0 2400	100 5000	200 10000	600
1-Methylnaphthalene	ANT	Ave	966 58619	2069 166552	5205 265288	10261 518905	29960	10.0 600	20.0 1200	50.0 2500	100 5000	300
Acenaphthylene	ANT	Ave	1605 94536	3136 269313	8164 432217	15589 859733	45029	10.0 600	20.0 1200	50.0 2500	100 5000	300
Acenaphthene	ANT	Ave	1081 63373	2348 178359	5787 283364	11001 567640	31103	10.0 600	20.0 1200	50.0 2500	100 5000	300
Fluorene	ANT	Ave	1152 74650	2677 210897	6449 348073	12381 679941	36533	10.0 600	20.0 1200	50.0 2500	100 5000	300
Phenanthrene	PHN	Ave	2433 123691	4608 351768	11032 566782	21223 1080892	61549	10.0 600	20.0 1200	50.0 2500	100 5000	300
Anthracene	PHN	Ave	1665 113808	3633 320239	9662 531403	18572 1061361	53190	10.0 600	20.0 1200	50.0 2500	100 5000	300
Fluoranthene	PHN	Ave	2305 135646	4370 379350	11560 620225	22157 1225720	63964	10.0 600	20.0 1200	50.0 2500	100 5000	300
Pyrene	PHN	Ave	2473 136701	4963 381466	11969 616287	22803 1222666	65687	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[a]anthracene	CRY	Ave	1917 126806	3926 335416	10619 553378	20161 1104438	56147	10.0 600	20.0 1200	50.0 2500	100 5000	300
Chrysene	CRY	Ave	2134 130792	4140 361542	11246 591161	20775 1178276	62423	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[b]fluoranthene	CRY	Ave	2079 128320	3984 339373	10445 546727	20627 1109773	57496	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[k]fluoranthene	CRY	Ave	1851 131391	3732 358923	10672 593793	20596 1197691	60021	10.0 600	20.0 1200	50.0 2500	100 5000	300

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 436730

SDG No.:

Instrument ID: SMS_F GC Column: Rxi-5Sil MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/07/2018 20:06 Calibration End Date: 11/07/2018 23:58 Calibration ID: 34235

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Benzo[a]pyrene	CRY	Ave	+++++ 122360	3527 308843	9701 520578	18623 1055000	51040	+++++ 600	20.0 1200	50.0 2500	100 5000	300
Indeno[1,2,3-cd]pyrene	CRY	Ave	1931 119573	3529 301879	9726 490132	19135 989234	52968	10.0 600	20.0 1200	50.0 2500	100 5000	300
Dibenz(a,h)anthracene	CRY	Ave	1978 122657	3480 319889	9479 515992	18388 1061813	53851	10.0 600	20.0 1200	50.0 2500	100 5000	300
Benzo[g,h,i]perylene	CRY	Ave	2383 135436	4187 357796	10967 582641	22175 1176381	65273	10.0 600	20.0 1200	50.0 2500	100 5000	300
Nitrobenzene-d5	ANT	Ave	819 39588	1496 108907	3533 174434	6969 345279	19828	10.0 600	20.0 1200	50.0 2500	100 5000	300
2-methylnaphthalene-d10	ANT	Ave	912 48789	1849 136733	4342 215119	8594 427312	25043	10.0 600	20.0 1200	50.0 2500	100 5000	300
2-Fluorobiphenyl	ANT	Ave	1187 71242	2507 198363	6208 320884	12291 611045	35859	10.0 600	20.0 1200	50.0 2500	100 5000	300
Fluoranthene-d10	PHN	Ave	1738 103591	3412 286731	9096 463531	17169 915739	49470	10.0 600	20.0 1200	50.0 2500	100 5000	300
Terphenyl-d14	PHN	Ave	1280 78215	2663 216583	6718 359524	13247 699494	42862	10.0 600	20.0 1200	50.0 2500	100 5000	300

Curve Type Legend:
Ave = Average ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4562.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 07-Nov-2018 20:06:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: icis
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 20:59:52 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: wickhamm Date: 07-Nov-2018 20:46:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	84	50543	600.0	600.0	
* 2 Phenanthrene-d10	188	9.119	9.119	0.000	98	108205	600.0	600.0	
* 3 Chrysene-d12	240	13.178	13.178	0.000	99	100389	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.169	5.169	0.000	98	39588	600.0	553.5	
$ 5 2-Fluorobiphenyl	172	6.943	6.943	0.000	99	71242	600.0	574.7	
$ 6 Terphenyl-d14	244	11.073	11.073	0.000	100	78215	600.0	558.1	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.407	2.407	0.000	41	25196	600.0	569.8	
10 Naphthalene	128	5.904	5.904	0.000	100	95508	600.0	567.6	
11 2-Methylnaphthalene	142	6.579	6.579	0.000	97	130204	1200.0	1123.2	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	98	58619	600.0	568.6	
13 Dimethyl phthalate	163	7.332	7.332	0.000	1	144962	1200.0	1144.9	
14 Acenaphthylene	152	7.488	7.488	0.000	98	94536	600.0	577.7	
15 Acenaphthene	153	7.661	7.661	0.000	100	63373	600.0	565.2	
16 Dibenzofuran	168	7.827	7.827	0.000	99	92246	600.6	571.7	
17 Diethyl phthalate	149	8.031	8.031	0.000	98	148384	1204.8	1048.1	
18 Fluorene	166	8.177	8.177	0.000	98	74650	600.0	575.7	
19 N-Nitrosodiphenylamine	169	8.274	8.274	0.000	100	53346	600.0	572.5	
20 Phenanthrene	178	9.137	9.137	0.000	100	123691	600.0	542.6	
21 Anthracene	178	9.197	9.197	0.000	1	113808	600.0	577.3	
22 Di-n-butyl phthalate	149	9.681	9.681	0.000	1	283262	1200.0	1317.1	
23 Fluoranthene	202	10.511	10.511	0.000	100	135646	600.0	570.0	
24 Pyrene	202	10.848	10.848	0.000	100	136701	600.0	555.8	
25 Butyl benzyl phthalate	149	11.946	11.946	0.000	1	109816	1200.0	1276.0	a
26 Benzo[a]anthracene	228	13.160	13.160	0.000	48	126806	600.0	601.5	
27 Chrysene	228	13.241	13.241	0.000	95	130792	600.0	580.8	
28 Bis(2-ethylhexyl) phthalat	149	13.304	13.304	0.000	1	142281	1200.0	1302.6	a
29 Di-n-octyl phthalate	149	15.096	15.096	0.000	1	231074	1200.0	1184.1	
30 Benzo[b]fluoranthene	252	16.014	16.014	0.000	98	128320	600.0	598.9	
31 Benzo[k]fluoranthene	252	16.089	16.089	0.000	98	131391	600.0	604.8	
32 Benzo[a]pyrene	252	16.937	16.937	0.000	95	122360	600.0	629.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.218	20.218	0.000	93	119573	600.0	612.2	
34 Dibenz(a,h)anthracene	278	20.314	20.314	0.000	87	122657	600.0	615.9	
35 Benzo[g,h,i]perylene	276	20.957	20.957	0.000	96	135436	600.0	586.4	
$ 53 2-methylnaphthalene-d10	152	6.549	6.549	0.000	96	48789	600.0	557.9	
$ 54 Fluoranthene-d10	212	10.485	10.485	0.000	100	103591	600.0	569.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

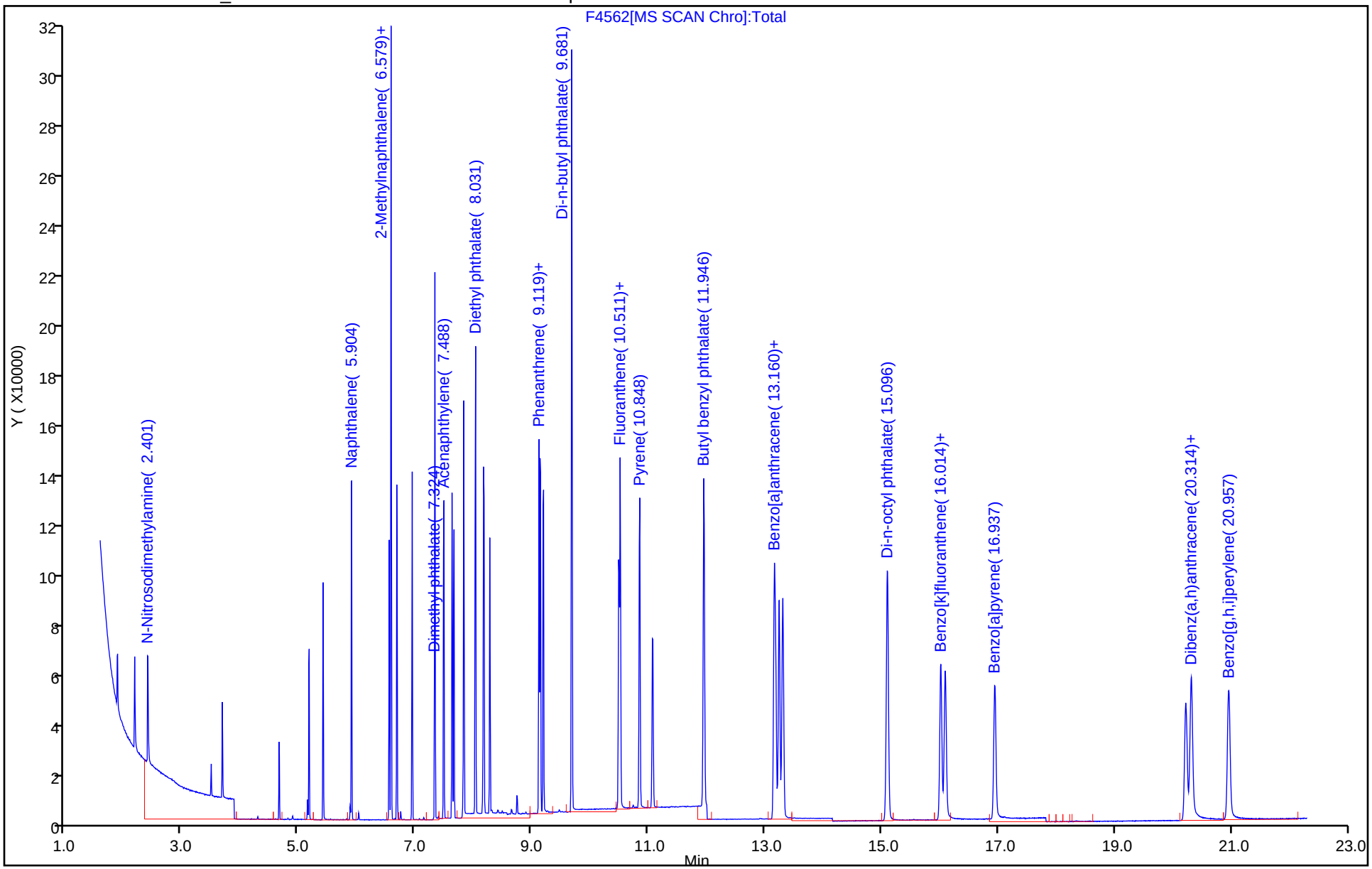
MS-SIMSL 0.6_00144 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 20:59:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4562.D

Injection Date:	07-Nov-2018 20:06:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	icis			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4565.D
Lims ID: STD0001
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 07-Nov-2018 21:34:30 ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0001
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:00:01 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: wickhamm Date: 09-Nov-2018 20:58:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	93	46845	600.0	600.0	
* 2 Phenanthrene-d10	188	9.119	9.120	-0.001	97	93826	600.0	600.0	
* 3 Chrysene-d12	240	13.169	13.169	0.000	91	86770	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.169	5.169	0.000	92	819	10.0	12.4	a
$ 5 2-Fluorobiphenyl	172	6.943	6.943	0.000	95	1187	10.0	10.3	a
$ 6 Terphenyl-d14	244	11.064	11.065	-0.001	40	1280	10.0	10.5	a
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.414	2.414	0.000	1	379	10.0	9.25	
10 Naphthalene	128	5.898	5.898	0.000	96	1684	10.0	10.8	
11 2-Methylnaphthalene	142	6.579	6.580	-0.001	98	2205	20.0	20.5	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	96	966	10.0	10.1	
13 Dimethyl phthalate	163	7.332	7.333	-0.001	1	4286	20.0	26.2	
14 Acenaphthylene	152	7.479	7.480	-0.001	91	1605	10.0	10.6	
15 Acenaphthene	153	7.652	7.652	0.000	78	1081	10.0	10.4	
16 Dibenzofuran	168	7.827	7.827	0.000	93	1653	10.0	11.1	
17 Diethyl phthalate	149	8.021	8.022	-0.001	99	3806	20.1	29.0	
18 Fluorene	166	8.167	8.167	0.000	80	1152	10.0	9.59	
19 N-Nitrosodiphenylamine	169	8.274	8.274	0.000	89	935	10.0	11.6	
20 Phenanthrene	178	9.137	9.137	-0.001	91	2433	10.0	12.3	
21 Anthracene	178	9.188	9.189	-0.001	1	1665	10.0	9.74	
22 Di-n-butyl phthalate	149	9.672	9.673	-0.001	1	3897	20.0	20.9	
23 Fluoranthene	202	10.511	10.511	0.000	77	2305	10.0	11.2	
24 Pyrene	202	10.840	10.840	0.000	82	2473	10.0	11.6	
25 Butyl benzyl phthalate	149	11.938	11.938	0.000	1	1520	20.0	20.4	
26 Benzo[a]anthracene	228	13.142	13.142	0.000	76	1917	10.0	10.5	
27 Chrysene	228	13.232	13.232	0.000	79	2134	10.0	11.0	
28 Bis(2-ethylhexyl) phthalat	149	13.286	13.295	-0.009	1	2027	20.0	21.4	
29 Di-n-octyl phthalate	149	15.083	15.087	-0.004	1	2048	20.0	34.0	
30 Benzo[b]fluoranthene	252	16.001	16.001	0.000	74	2079	10.0	11.2	
31 Benzo[k]fluoranthene	252	16.080	16.076	0.004	73	1851	10.0	9.86	
32 Benzo[a]pyrene	252	16.928	16.929	-0.001	63	1906	10.0	11.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.200	20.201	-0.001	67	1931	10.0	11.4	M
34 Dibenz(a,h)anthracene	278	20.297	20.297	0.000	70	1978	10.0	11.5	M
35 Benzo[g,h,i]perylene	276	20.940	20.940	0.000	66	2383	10.0	11.9	
$ 53 2-methylnaphthalene-d10	152	6.549	6.549	0.000	99	912	10.0	11.3	
$ 54 Fluoranthene-d10	212	10.485	10.485	0.000	42	1738	10.0	11.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

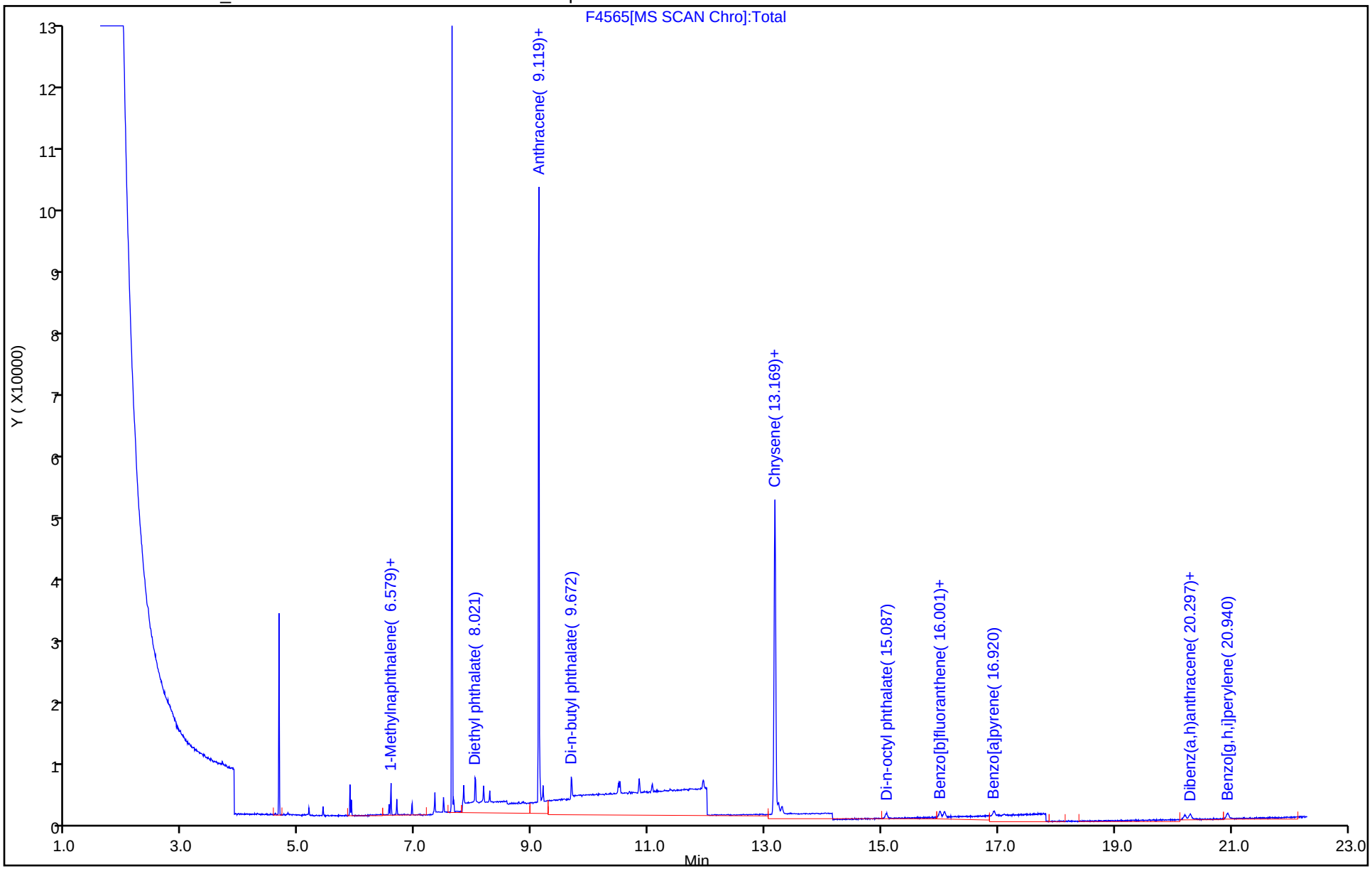
MS-SIMSL 0.01_00005 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 21:00:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4565.D

Injection Date:	07-Nov-2018 21:34:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0001			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

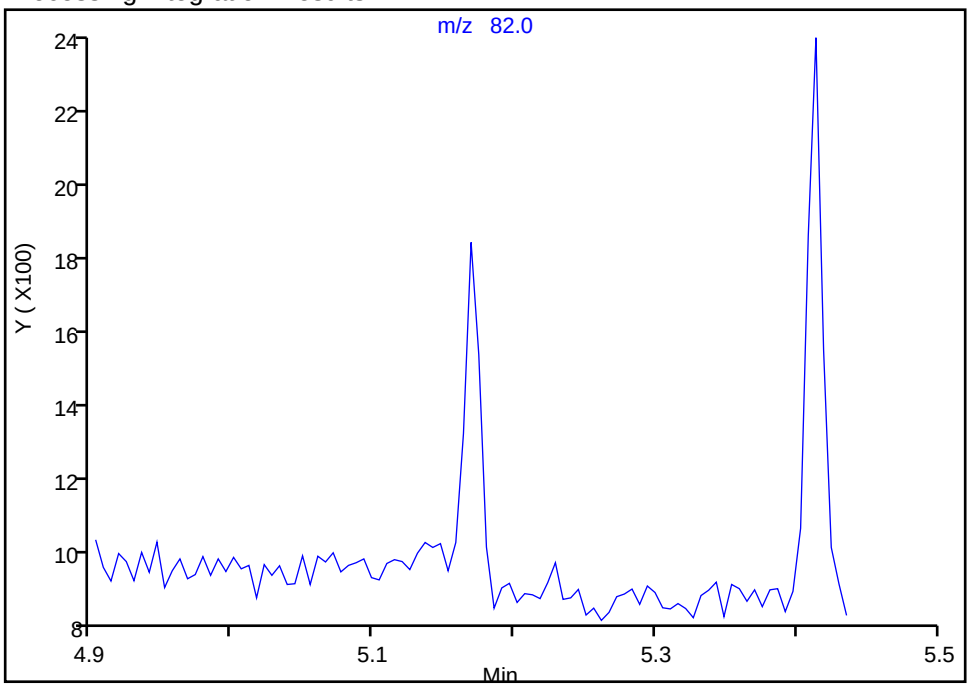
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4565.D
Injection Date: 07-Nov-2018 21:34:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 4 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

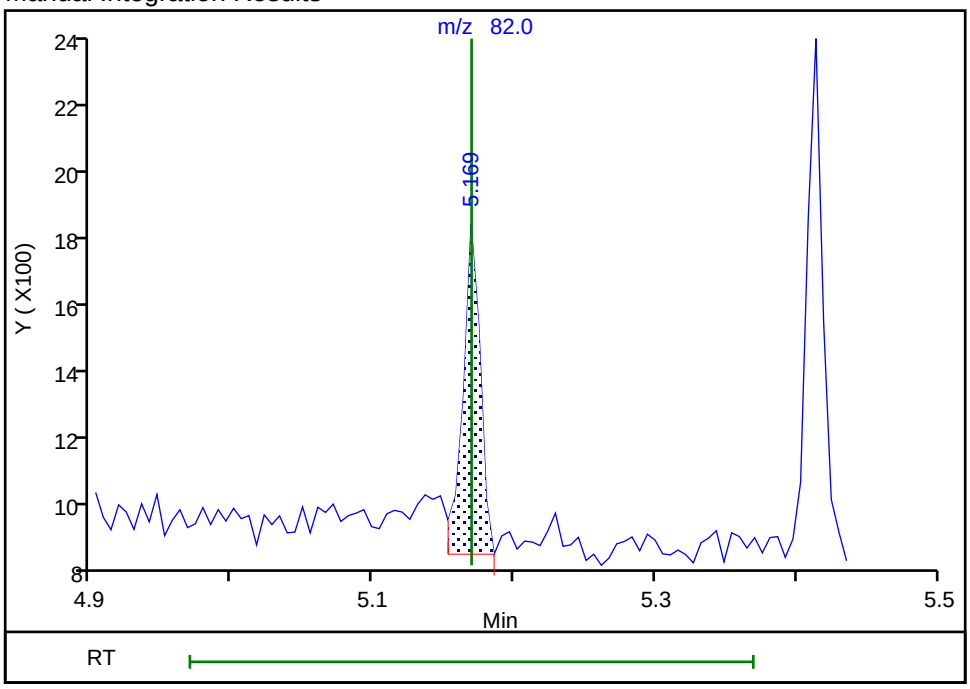
Not Detected
Expected RT: 5.17

Processing Integration Results



Manual Integration Results

RT: 5.17
Area: 819
Amount: 12.353910
Amount Units: ng/ml



Reviewer: wickhamm, 08-Nov-2018 17:21:54
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Denver

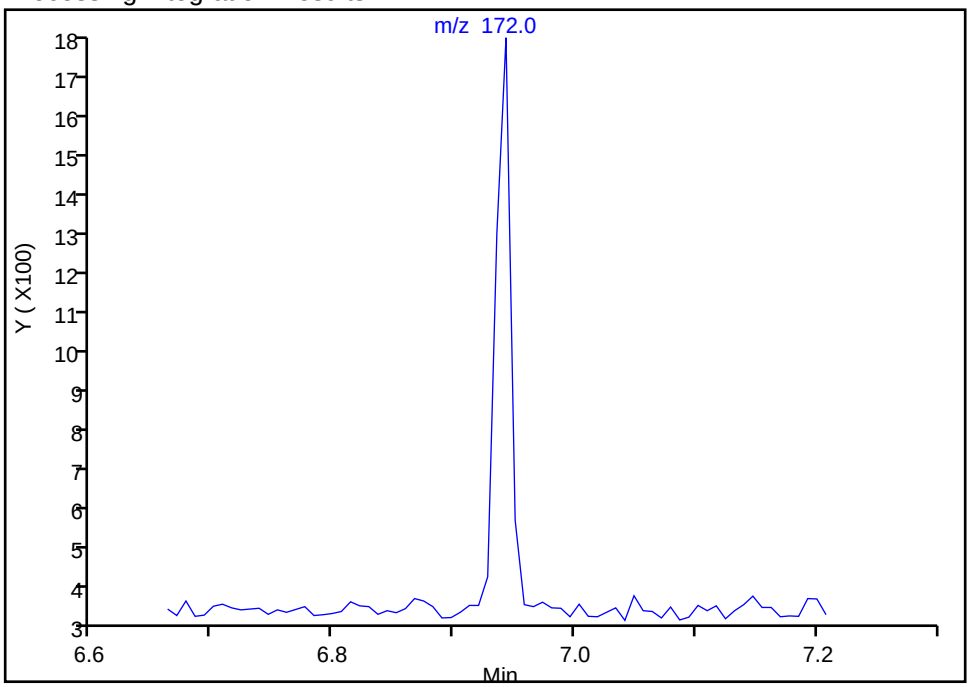
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4565.D
Injection Date: 07-Nov-2018 21:34:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 5 2-Fluorobiphenyl, CAS: 321-60-8

Signal: 1

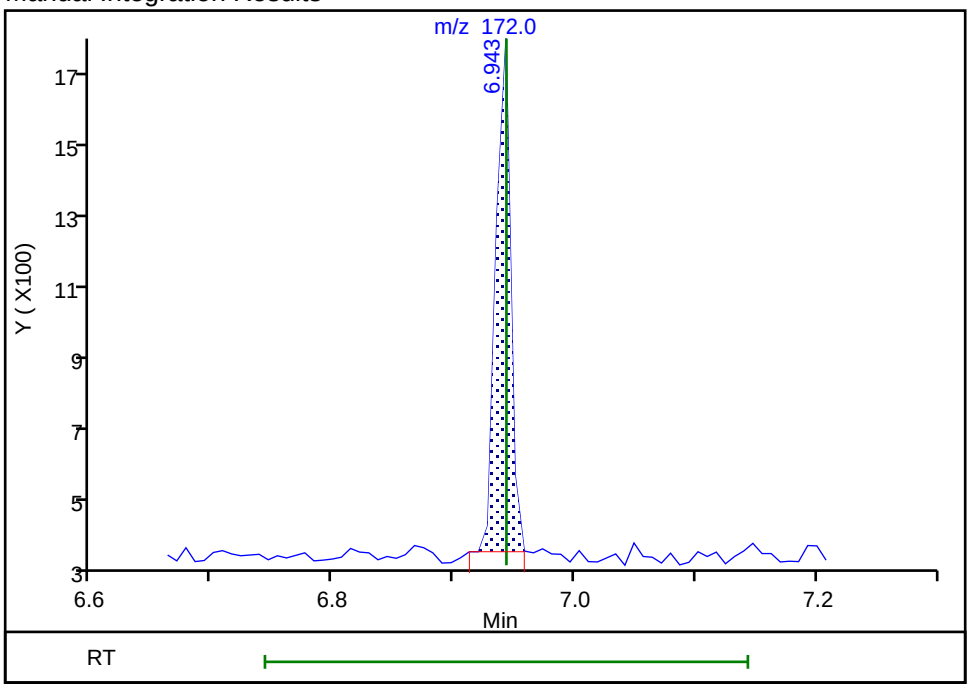
Not Detected
Expected RT: 6.94

Processing Integration Results



Manual Integration Results

RT: 6.94
Area: 1187
Amount: 10.330465
Amount Units: ng/ml



Reviewer: wickhamm, 08-Nov-2018 17:21:58
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Denver

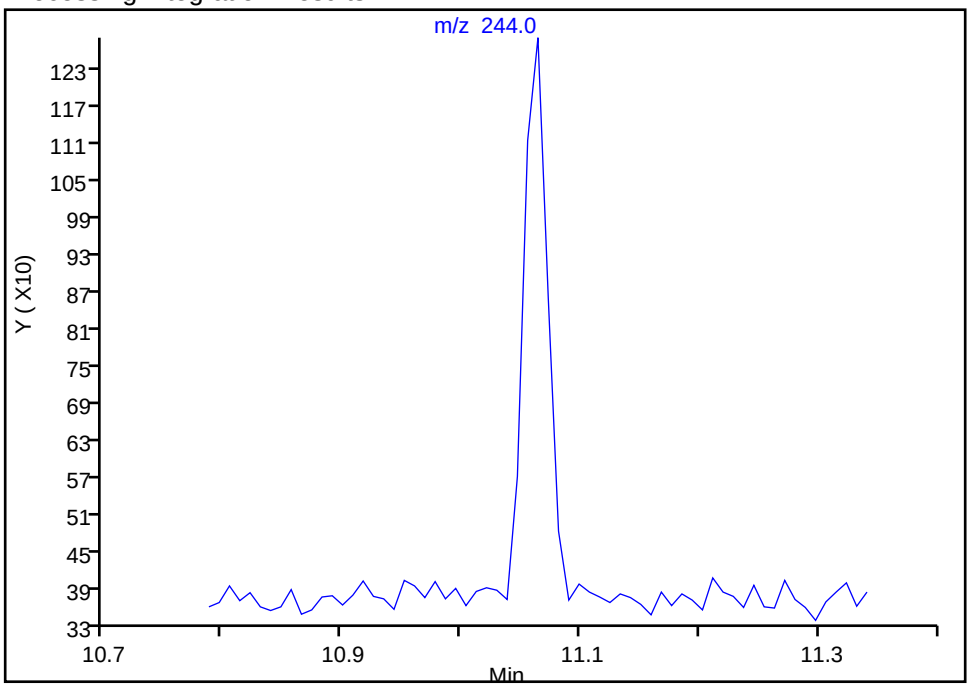
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4565.D
Injection Date: 07-Nov-2018 21:34:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

$ 6 Terphenyl-d14, CAS: 1718-51-0

Signal: 1

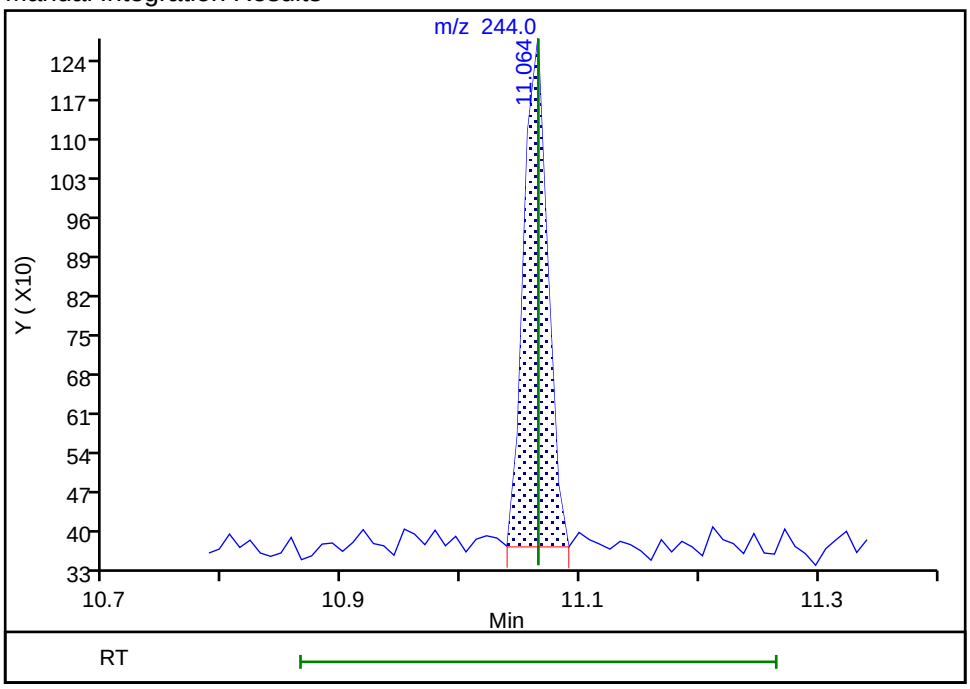
Not Detected
Expected RT: 11.06

Processing Integration Results



Manual Integration Results

RT: 11.06
Area: 1280
Amount: 10.533834
Amount Units: ng/ml



Reviewer: wickhamm, 08-Nov-2018 17:22:05
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Denver

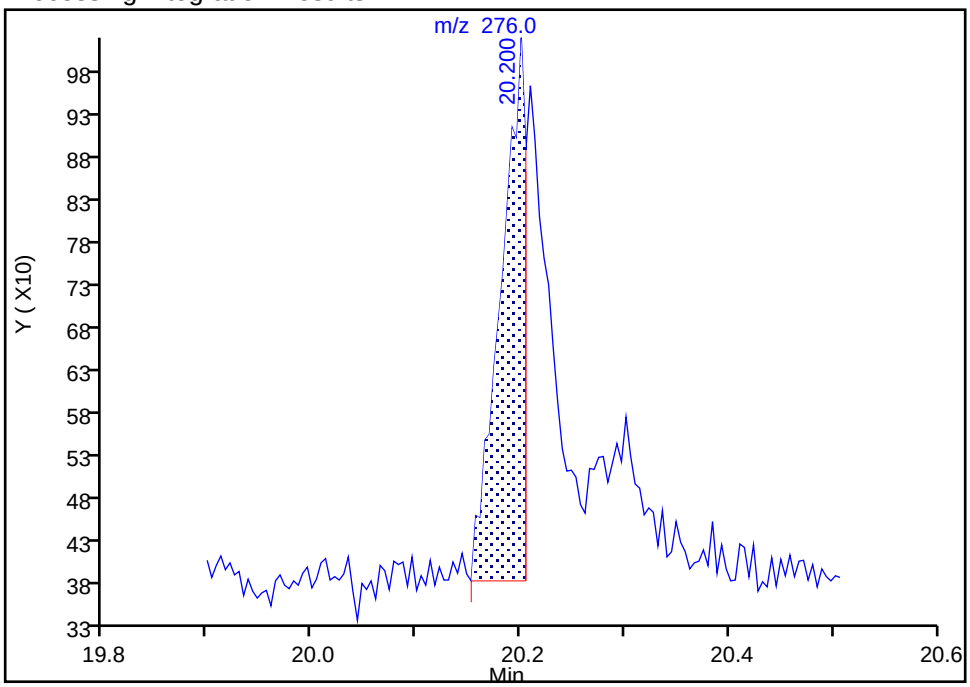
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4565.D
Injection Date: 07-Nov-2018 21:34:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

33 Indeno[1,2,3-cd]pyrene, CAS: 193-39-5

Signal: 1

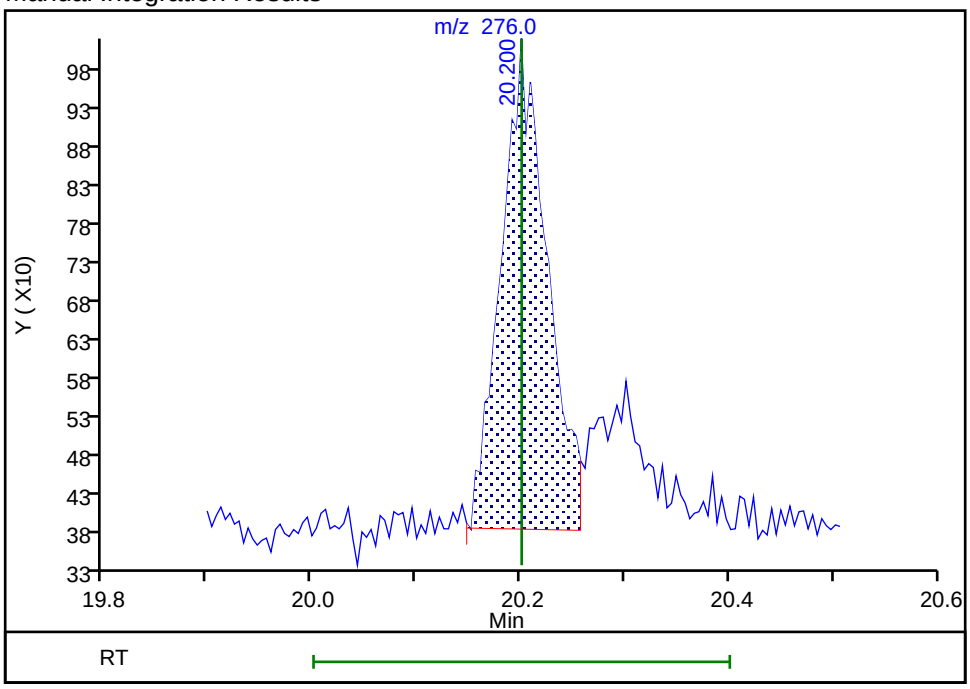
Processing Integration Results

RT: 20.20
Area: 1056
Amount: 6.637994
Amount Units: ng/ml



Manual Integration Results

RT: 20.20
Area: 1931
Amount: 11.439138
Amount Units: ng/ml



Reviewer: wickhamm, 08-Nov-2018 17:22:39
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

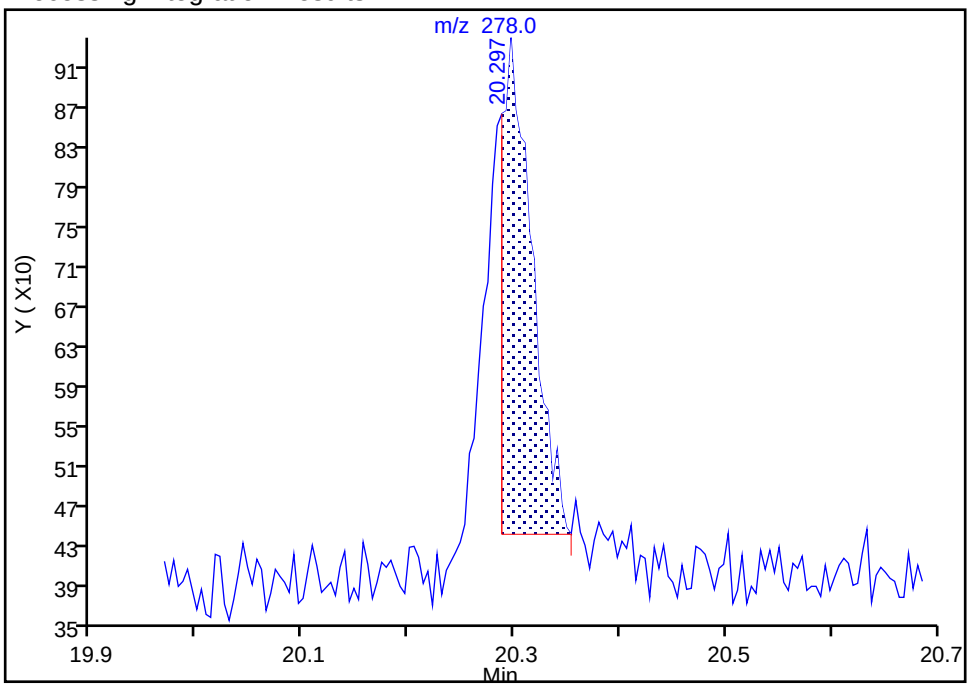
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4565.D
Injection Date: 07-Nov-2018 21:34:30 Instrument ID: SMS_F
Lims ID: STD0001
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 5 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

34 Dibenz(a,h)anthracene, CAS: 53-70-3

Signal: 1

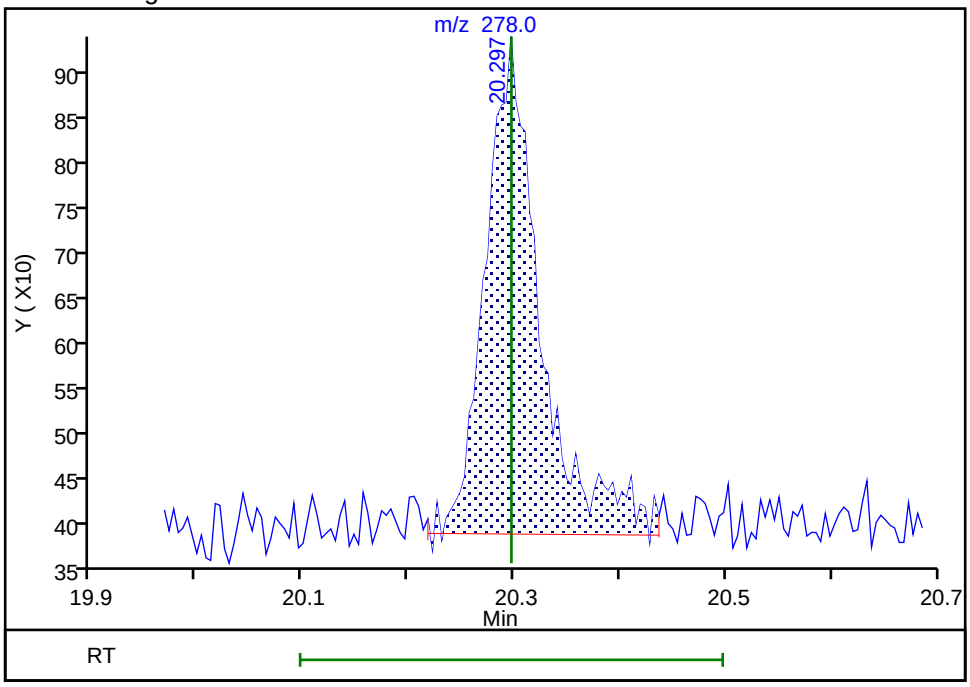
Processing Integration Results

RT: 20.30
Area: 974
Amount: 9.520668
Amount Units: ng/ml



Manual Integration Results

RT: 20.30
Area: 1978
Amount: 11.491193
Amount Units: ng/ml



Reviewer: wickhamm, 08-Nov-2018 17:22:45
Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4566.D
Lims ID: STD0002
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 07-Nov-2018 22:02:30 ALS Bottle#: 6 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0002
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:00:04 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: wickhamm Date: 08-Nov-2018 15:50:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	96	49228	600.0	600.0	
* 2 Phenanthrene-d10	188	9.119	9.120	-0.001	97	102182	600.0	600.0	
* 3 Chrysene-d12	240	13.169	13.169	0.000	91	93071	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.169	5.169	0.000	97	1496	20.0	21.5	a
$ 5 2-Fluorobiphenyl	172	6.943	6.943	0.000	97	2507	20.0	20.8	
$ 6 Terphenyl-d14	244	11.056	11.065	-0.009	67	2663	20.0	20.1	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.414	2.414	0.000	1	868	20.0	20.2	
10 Naphthalene	128	5.898	5.898	0.000	98	3519	20.0	21.5	
11 2-Methylnaphthalene	142	6.580	6.580	0.000	98	4861	40.0	43.1	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	97	2069	20.0	20.6	
13 Dimethyl phthalate	163	7.333	7.333	0.000	1	6408	40.0	41.7	
14 Acenaphthylene	152	7.479	7.480	-0.001	95	3136	20.0	19.7	
15 Acenaphthene	153	7.652	7.652	0.000	89	2348	20.0	21.5	
16 Dibenzofuran	168	7.827	7.827	0.000	97	3236	20.0	20.6	
17 Diethyl phthalate	149	8.021	8.022	-0.001	97	6641	40.2	48.2	
18 Fluorene	166	8.167	8.167	0.000	90	2677	20.0	21.2	
19 N-Nitrosodiphenylamine	169	8.274	8.274	0.000	91	1943	20.0	22.1	
20 Phenanthrene	178	9.137	9.137	0.000	96	4608	20.0	21.4	
21 Anthracene	178	9.189	9.189	0.000	1	3633	20.0	19.5	
22 Di-n-butyl phthalate	149	9.673	9.673	0.000	1	7611	40.0	37.5	
23 Fluoranthene	202	10.503	10.511	-0.008	90	4370	20.0	19.4	
24 Pyrene	202	10.840	10.840	0.000	91	4963	20.0	21.4	
25 Butyl benzyl phthalate	149	11.938	11.938	0.000	1	2842	40.0	35.0	
26 Benzo[a]anthracene	228	13.142	13.142	0.000	78	3926	20.0	20.1	
27 Chrysene	228	13.223	13.232	-0.009	89	4140	20.0	19.8	
28 Bis(2-ethylhexyl) phthalat	149	13.286	13.295	-0.009	1	3428	40.0	33.2	
29 Di-n-octyl phthalate	149	15.070	15.087	-0.017	1	3853	40.0	43.0	
30 Benzo[b]fluoranthene	252	16.001	16.001	0.000	85	3984	20.0	20.1	M
31 Benzo[k]fluoranthene	252	16.076	16.076	0.000	83	3732	20.0	18.5	
32 Benzo[a]pyrene	252	16.924	16.929	-0.005	80	3527	20.0	19.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.196	20.201	-0.005	82	3529	20.0	19.5	
34 Dibenz(a,h)anthracene	278	20.293	20.297	-0.005	87	3480	20.0	18.8	
35 Benzo[g,h,i]perylene	276	20.931	20.940	-0.009	81	4187	20.0	19.6	
$ 53 2-methylnaphthalene-d10	152	6.549	6.549	0.000	96	1849	20.0	21.7	
$ 54 Fluoranthene-d10	212	10.485	10.485	0.000	73	3412	20.0	19.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

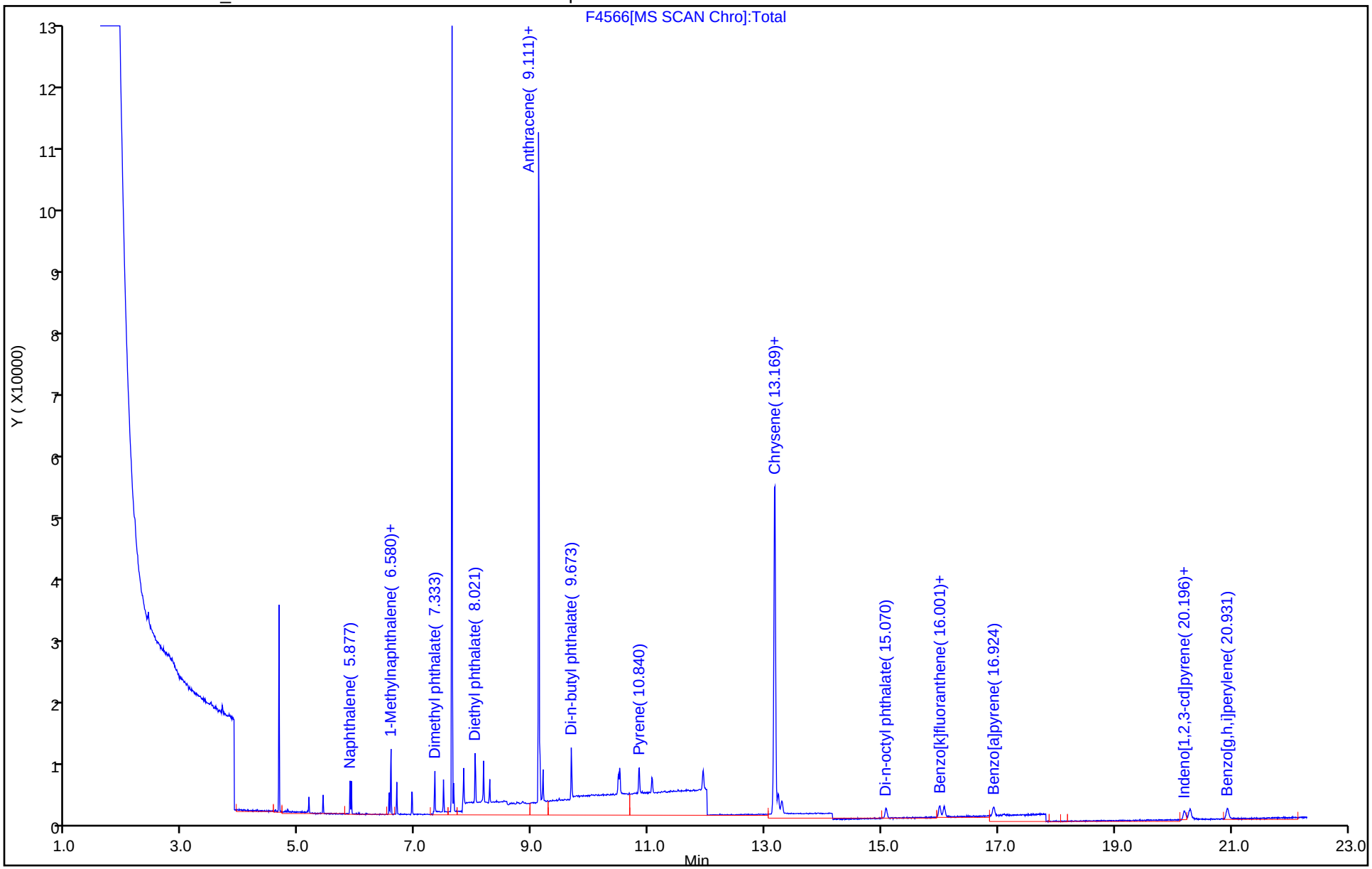
MS-SIMSL 0.02_00079 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 21:00:05 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4566.D

Injection Date:	07-Nov-2018 22:02:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0002			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



Manual Integration/User Assign Peak Report

TestAmerica Denver

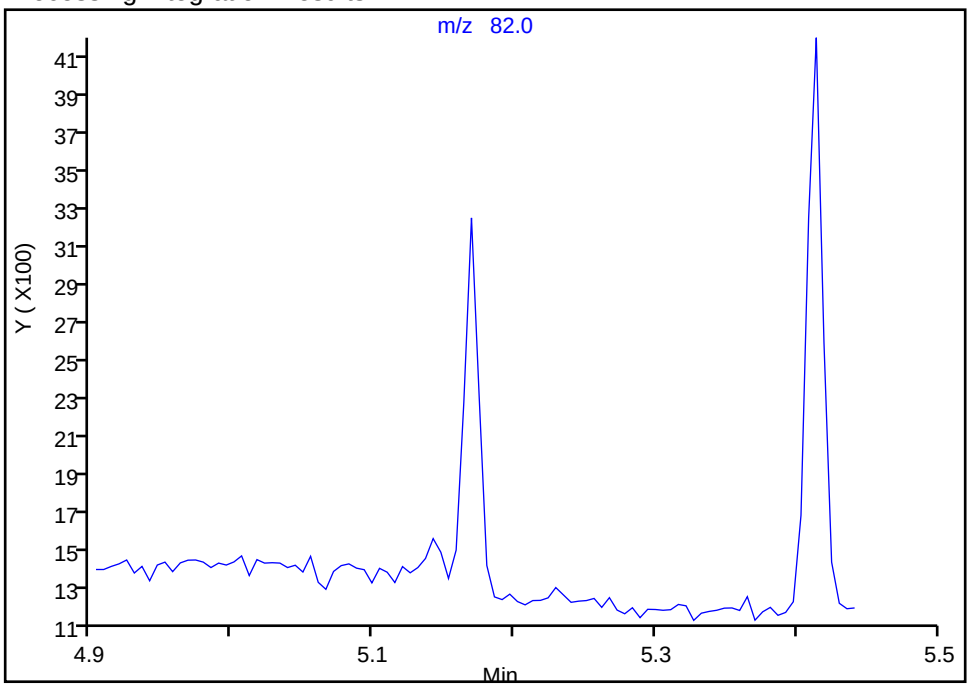
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4566.D				
Injection Date:	07-Nov-2018 22:02:30	Instrument ID:	SMS_F		
Lims ID:	STD0002				
Client ID:					
Operator ID:	WICKHAMM	ALS Bottle#:	6	Worklist Smp#:	5
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

$ 4 Nitrobenzene-d5, CAS: 4165-60-0

Signal: 1

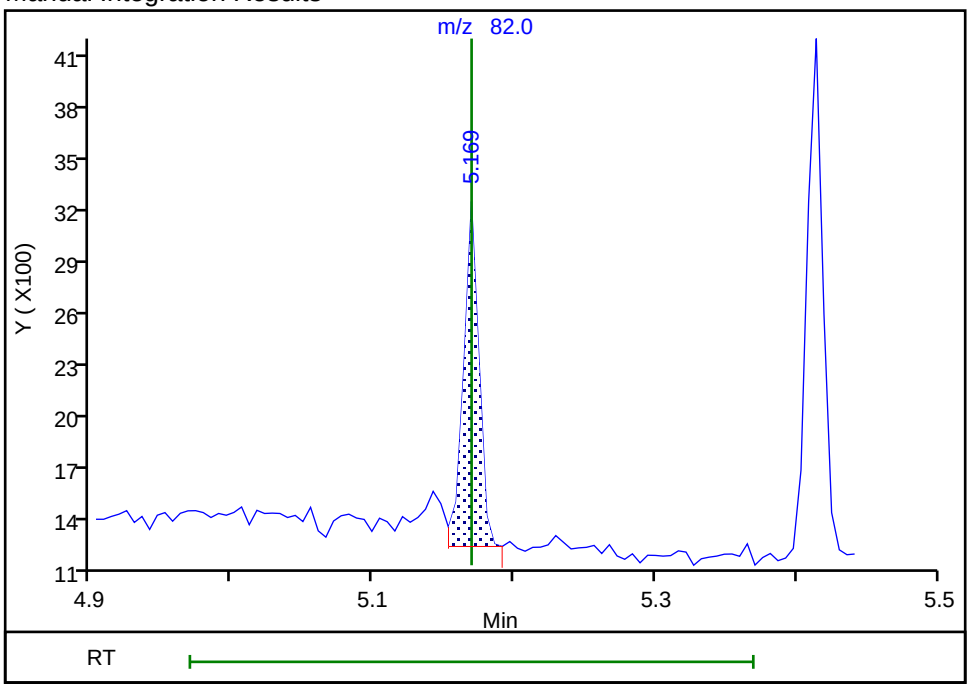
Not Detected
Expected RT: 5.17

Processing Integration Results



Manual Integration Results

RT: 5.17
Area: 1496
Amount: 21.473517
Amount Units: ng/ml



Reviewer: wickhamm, 08-Nov-2018 17:23:09
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Denver

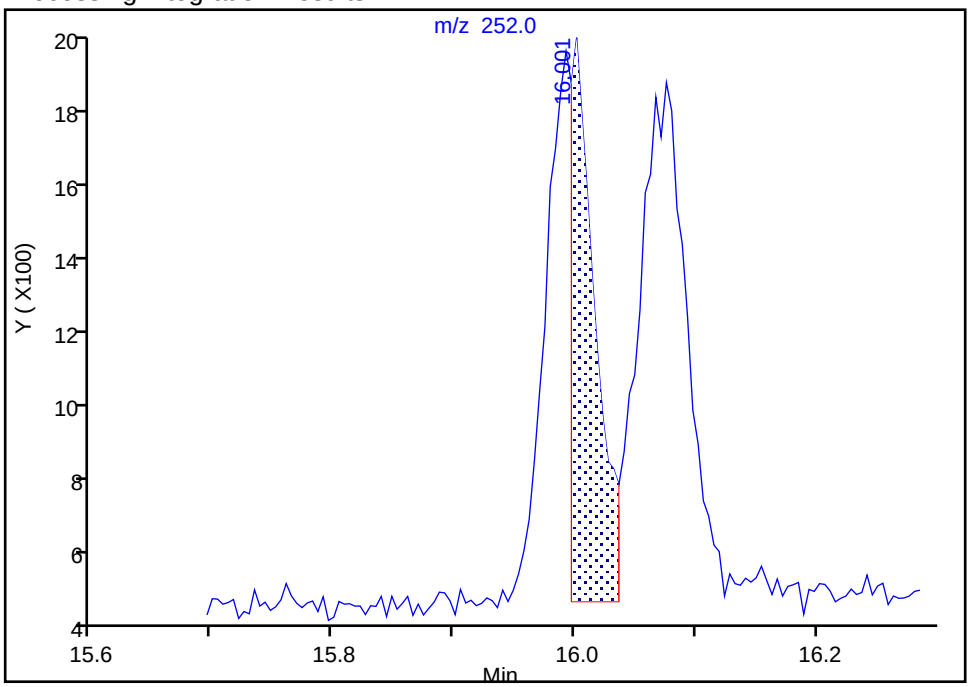
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4566.D
Injection Date: 07-Nov-2018 22:02:30 Instrument ID: SMS_F
Lims ID: STD0002
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 6 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

30 Benzo[b]fluoranthene, CAS: 205-99-2

Signal: 1

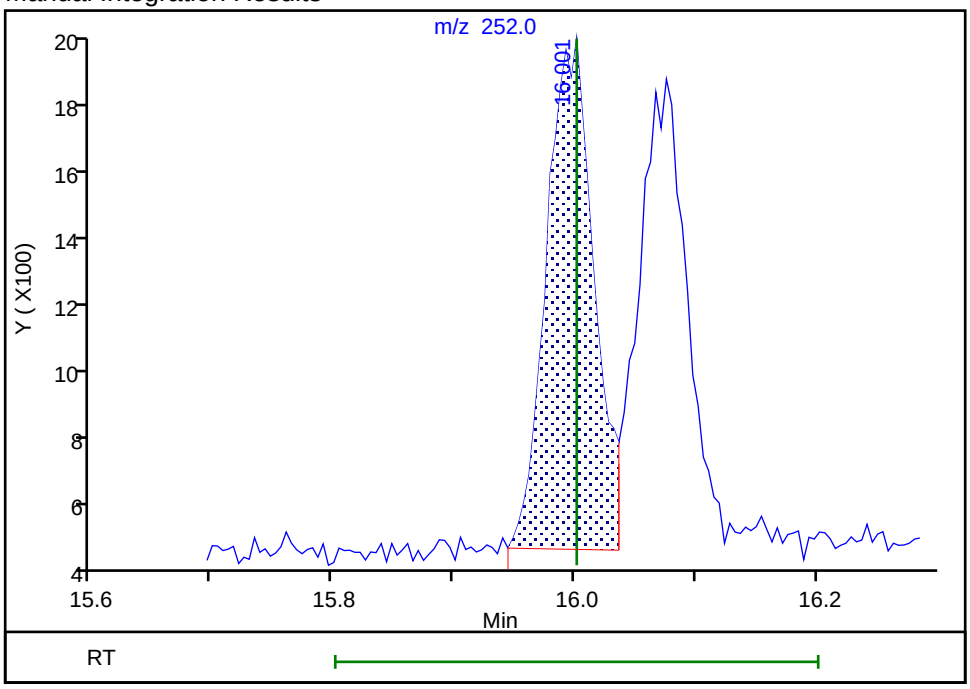
Processing Integration Results

RT: 16.00
Area: 2119
Amount: 13.519873
Amount Units: ng/ml



Manual Integration Results

RT: 16.00
Area: 3984
Amount: 20.054812
Amount Units: ng/ml



Reviewer: wickhamm, 08-Nov-2018 17:23:32
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4563.D
Lims ID: STD0500
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 07-Nov-2018 20:35:30 ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0001
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 20:59:55 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: wickhamm Date: 07-Nov-2018 21:56:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	88	54841	600.0	600.0	
* 2 Phenanthrene-d10	188	9.120	9.119	0.001	97	115013	600.0	600.0	
* 3 Chrysene-d12	240	13.169	13.178	-0.009	92	106601	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.169	5.169	0.000	98	3533	50.0	45.5	
$ 5 2-Fluorobiphenyl	172	6.943	6.943	0.000	99	6208	50.0	46.2	
$ 6 Terphenyl-d14	244	11.065	11.073	-0.008	87	6718	50.0	45.1	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.414	2.407	0.007	22	2440	50.0	50.9	
10 Naphthalene	128	5.898	5.904	-0.006	99	8561	50.0	46.9	
11 2-Methylnaphthalene	142	6.580	6.579	0.001	100	11782	100.0	93.7	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	97	5205	50.0	46.5	
13 Dimethyl phthalate	163	7.333	7.332	0.001	1	12767	100.0	83.1	
14 Acenaphthylene	152	7.480	7.488	-0.008	98	8164	50.0	46.0	
15 Acenaphthene	153	7.661	7.661	0.000	99	5787	50.0	47.6	
16 Dibenzofuran	168	7.827	7.827	0.000	99	8262	50.1	47.2	
17 Diethyl phthalate	149	8.022	8.031	-0.009	96	14140	100.4	92.0	
18 Fluorene	166	8.167	8.177	-0.010	84	6449	50.0	45.8	
19 N-Nitrosodiphenylamine	169	8.274	8.274	0.000	96	4749	50.0	48.0	
20 Phenanthrene	178	9.137	9.137	0.000	99	11032	50.0	45.5	
21 Anthracene	178	9.189	9.197	-0.008	1	9662	50.0	46.1	
22 Di-n-butyl phthalate	149	9.673	9.681	-0.008	1	20336	100.0	89.0	
23 Fluoranthene	202	10.511	10.511	0.000	97	11560	50.0	45.7	
24 Pyrene	202	10.840	10.848	-0.008	96	11969	50.0	45.8	
25 Butyl benzyl phthalate	149	11.946	11.946	0.000	1	7869	100.0	86.0	
26 Benzo[a]anthracene	228	13.151	13.160	-0.009	85	10619	50.0	47.4	
27 Chrysene	228	13.232	13.241	-0.009	97	11246	50.0	47.0	
28 Bis(2-ethylhexyl) phthalat	149	13.295	13.304	-0.009	1	10147	100.0	87.4	
29 Di-n-octyl phthalate	149	15.087	15.096	-0.009	1	14362	100.0	90.1	
30 Benzo[b]fluoranthene	252	16.006	16.014	-0.008	95	10445	50.0	45.9	
31 Benzo[k]fluoranthene	252	16.080	16.089	-0.009	94	10672	50.0	46.3	
32 Benzo[a]pyrene	252	16.933	16.937	-0.004	93	9701	50.0	47.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.205	20.218	-0.013	93	9726	50.0	46.9	
34 Dibenz(a,h)anthracene	278	20.301	20.314	-0.013	92	9479	50.0	44.8	
35 Benzo[g,h,i]perylene	276	20.940	20.957	-0.017	91	10967	50.0	44.7	
$ 53 2-methylnaphthalene-d10	152	6.549	6.549	0.000	96	4342	50.0	45.8	
$ 54 Fluoranthene-d10	212	10.485	10.485	0.000	90	9096	50.0	47.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

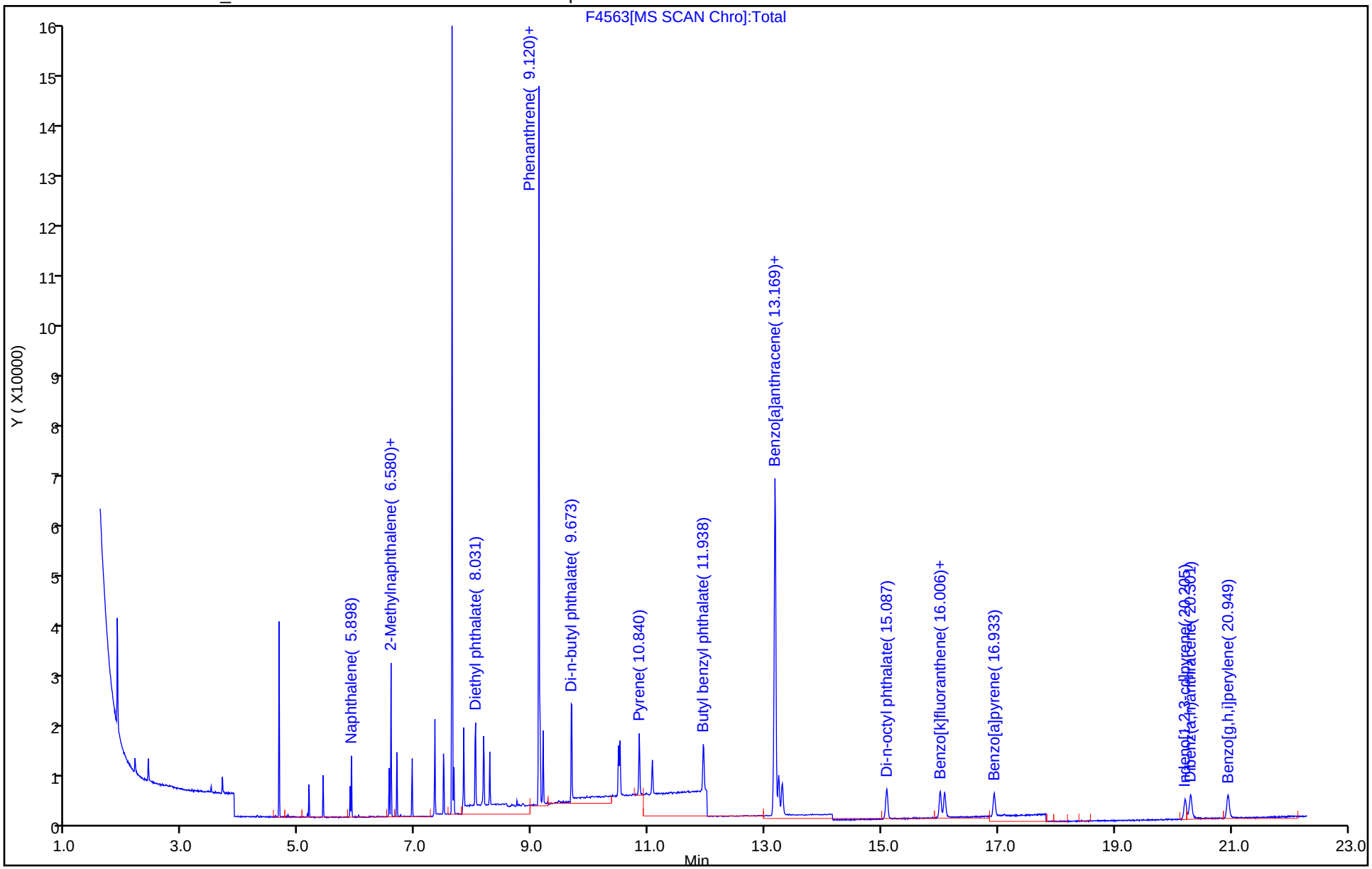
MS-SIMSL 0.05_00007 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 20:59:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4563.D

Injection Date:	07-Nov-2018 20:35:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0500			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4564.D
Lims ID: STD0100
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 07-Nov-2018 21:05:30 ALS Bottle#: 4 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0002
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 20:59:58 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: wickhamm Date: 07-Nov-2018 21:56:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	91	50723	600.0	600.0	
* 2 Phenanthrene-d10	188	9.120	9.120	0.000	97	106347	600.0	600.0	
* 3 Chrysene-d12	240	13.169	13.169	0.000	93	98846	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.169	5.169	0.000	100	6969	100.0	97.1	
$ 5 2-Fluorobiphenyl	172	6.943	6.943	0.000	98	12291	100.0	98.8	
$ 6 Terphenyl-d14	244	11.065	11.065	0.000	95	13247	100.0	96.2	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.414	2.414	0.000	10	4483	100.0	101.0	
10 Naphthalene	128	5.898	5.898	0.000	100	16960	100.0	100.4	
11 2-Methylnaphthalene	142	6.580	6.580	0.000	100	22834	200.0	196.3	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	99	10261	100.0	99.2	
13 Dimethyl phthalate	163	7.333	7.333	0.000	1	23782	200.0	178.2	
14 Acenaphthylene	152	7.480	7.480	0.000	100	15589	100.0	94.9	
15 Acenaphthene	153	7.652	7.652	0.000	92	11001	100.0	97.8	
16 Dibenzofuran	168	7.827	7.827	0.000	98	15857	100.1	97.9	
17 Diethyl phthalate	149	8.022	8.022	0.000	96	25217	200.8	177.5	
18 Fluorene	166	8.167	8.167	0.000	90	12381	100.0	95.1	
19 N-Nitrosodiphenylamine	169	8.274	8.274	0.000	96	9123	100.0	99.6	
20 Phenanthrene	178	9.137	9.137	0.000	100	21223	100.0	94.7	
21 Anthracene	178	9.189	9.189	0.000	1	18572	100.0	95.8	
22 Di-n-butyl phthalate	149	9.673	9.673	0.000	1	38630	200.0	182.8	
23 Fluoranthene	202	10.511	10.511	0.000	99	22157	100.0	94.7	
24 Pyrene	202	10.840	10.840	0.000	98	22803	100.0	94.3	
25 Butyl benzyl phthalate	149	11.938	11.938	0.000	1	15014	200.0	177.5	
26 Benzo[a]anthracene	228	13.142	13.142	0.000	59	20161	100.0	97.1	
27 Chrysene	228	13.232	13.232	0.000	97	20775	100.0	93.7	
28 Bis(2-ethylhexyl) phthalat	149	13.295	13.295	0.000	1	17805	200.0	165.9	
29 Di-n-octyl phthalate	149	15.087	15.087	0.000	1	26210	200.0	156.0	
30 Benzo[b]fluoranthene	252	16.001	16.001	0.000	100	20627	100.0	97.8	
31 Benzo[k]fluoranthene	252	16.076	16.076	0.000	99	20596	100.0	96.3	
32 Benzo[a]pyrene	252	16.929	16.929	0.000	99	18623	100.0	97.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.201	20.201	0.000	98	19135	100.0	99.5	
34 Dibenz(a,h)anthracene	278	20.297	20.297	0.000	94	18388	100.0	93.8	
35 Benzo[g,h,i]perylene	276	20.940	20.940	0.000	97	22175	100.0	97.5	
$ 53 2-methylnaphthalene-d10	152	6.549	6.549	0.000	93	8594	100.0	97.9	
$ 54 Fluoranthene-d10	212	10.485	10.485	0.000	95	17169	100.0	96.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

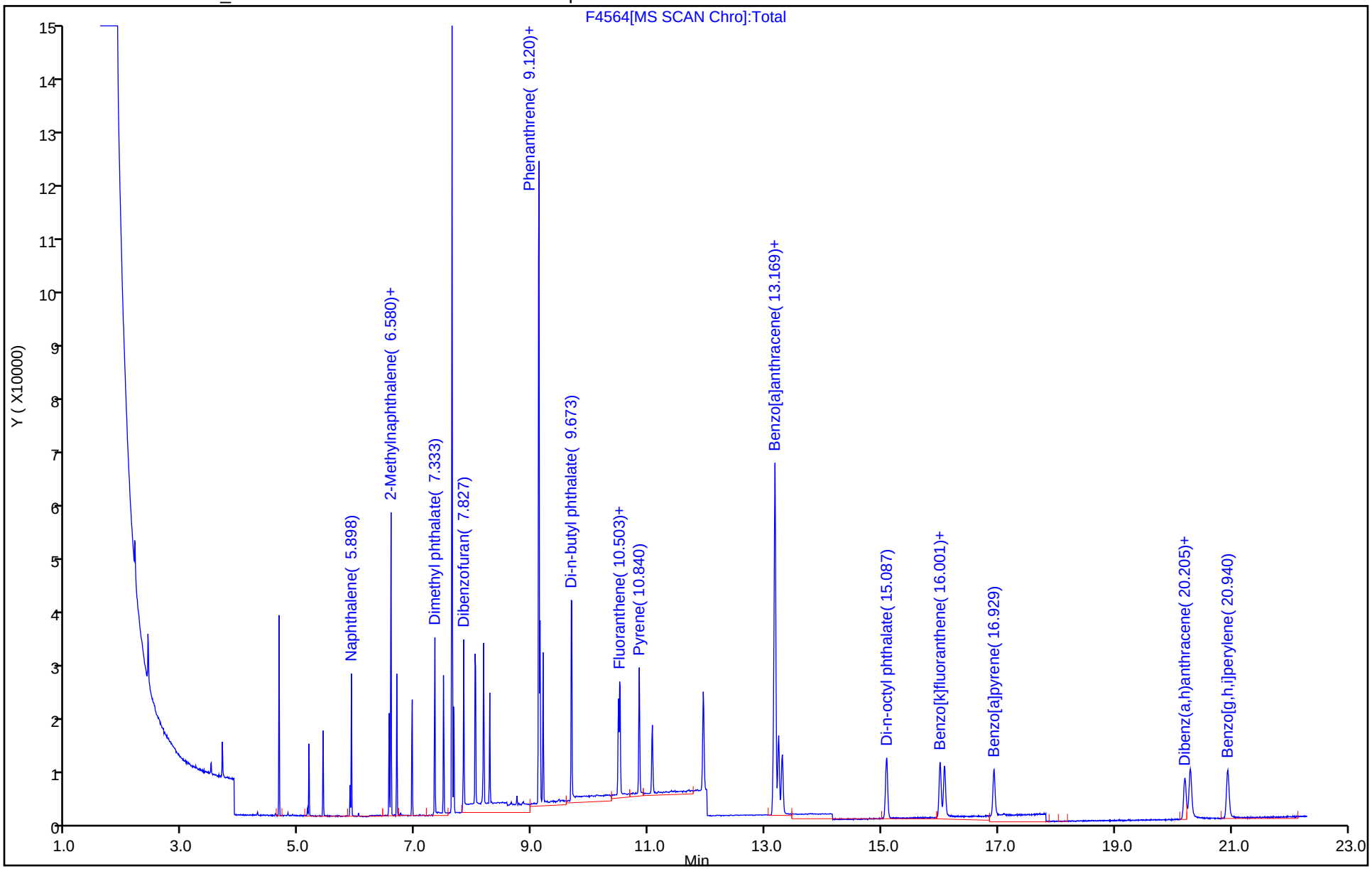
MS-SIMSL 0.1_00075 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 20:59:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4564.D

Injection Date:	07-Nov-2018 21:05:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0100			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4567.D
Lims ID: STD0300
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 07-Nov-2018 22:31:30 ALS Bottle#: 7 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std0300
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:00:10 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: wickhamm Date: 08-Nov-2018 15:51:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	95	48533	600.0	600.0	
* 2 Phenanthrene-d10	188	9.111	9.120	-0.009	100	104918	600.0	600.0	
* 3 Chrysene-d12	240	13.169	13.169	0.000	93	95322	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.169	5.169	0.000	100	19828	300.0	288.7	
$ 5 2-Fluorobiphenyl	172	6.943	6.943	0.000	97	35859	300.0	301.2	
$ 6 Terphenyl-d14	244	11.056	11.065	-0.009	98	42862	300.0	315.4	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.407	2.414	-0.007	31	12769	300.0	300.7	
10 Naphthalene	128	5.898	5.898	0.000	100	49708	300.0	307.7	
11 2-Methylnaphthalene	142	6.579	6.580	-0.001	98	67346	600.0	605.0	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	96	29960	300.0	302.7	
13 Dimethyl phthalate	163	7.324	7.333	-0.009	1	70019	600.0	570.6	
14 Acenaphthylene	152	7.479	7.480	-0.001	100	45029	300.0	286.6	
15 Acenaphthene	153	7.652	7.652	0.000	94	31103	300.0	288.9	
16 Dibenzofuran	168	7.827	7.827	0.000	95	45708	300.3	295.0	
17 Diethyl phthalate	149	8.021	8.022	-0.001	96	71092	602.4	522.9	
18 Fluorene	166	8.167	8.167	0.000	92	36533	300.0	293.4	
19 N-Nitrosodiphenylamine	169	8.274	8.274	0.000	95	25496	300.0	282.2	
20 Phenanthrene	178	9.137	9.137	0.000	100	61549	300.0	278.5	
21 Anthracene	178	9.189	9.189	0.000	1	53190	300.0	278.2	
22 Di-n-butyl phthalate	149	9.673	9.673	0.000	1	112057	600.0	537.3	
23 Fluoranthene	202	10.503	10.511	-0.008	99	63964	300.0	277.2	
24 Pyrene	202	10.840	10.840	0.000	100	65687	300.0	275.5	
25 Butyl benzyl phthalate	149	11.938	11.938	0.000	1	40371	600.0	483.8	
26 Benzo[a]anthracene	228	13.142	13.142	0.000	55	56147	300.0	280.5	
27 Chrysene	228	13.223	13.232	-0.009	96	62423	300.0	291.9	
28 Bis(2-ethylhexyl) phthalat	149	13.286	13.295	-0.009	1	46573	600.0	439.7	
29 Di-n-octyl phthalate	149	15.078	15.087	-0.009	1	66608	600.0	374.9	
30 Benzo[b]fluoranthene	252	15.997	16.001	-0.004	98	57496	300.0	282.6	
31 Benzo[k]fluoranthene	252	16.071	16.076	-0.005	98	60021	300.0	291.0	
32 Benzo[a]pyrene	252	16.920	16.929	-0.009	96	51040	300.0	276.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.201	20.201	0.000	93	52968	300.0	285.6	
34 Dibenz(a,h)anthracene	278	20.292	20.297	-0.005	87	53851	300.0	284.8	
35 Benzo[g,h,i]perylene	276	20.936	20.940	-0.004	97	65273	300.0	297.7	
$ 53 2-methylnaphthalene-d10	152	6.549	6.549	0.000	90	25043	300.0	298.2	
$ 54 Fluoranthene-d10	212	10.477	10.485	-0.008	99	49470	300.0	280.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

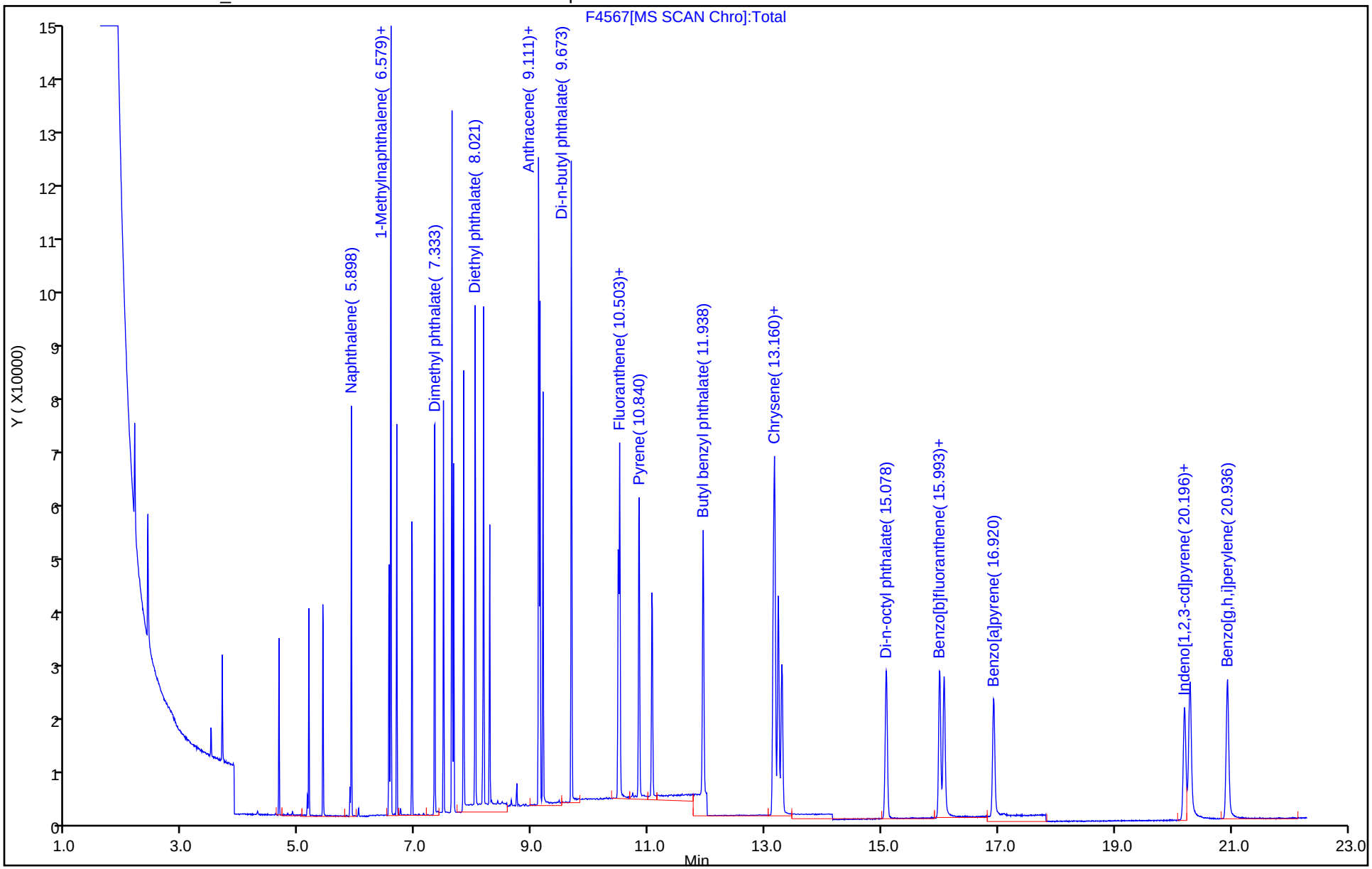
MS-SIMSL 0.3_00074 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 21:00:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4567.D

Injection Date:	07-Nov-2018 22:31:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD0300			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4568.D
Lims ID: STD1200
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 07-Nov-2018 23:00:30 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std1200
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:00:14 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: wickhamm Date: 08-Nov-2018 15:51:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	98	70267	600.0	600.0	
* 2 Phenanthrene-d10	188	9.111	9.120	-0.009	100	145567	600.0	600.0	
* 3 Chrysene-d12	240	13.169	13.169	0.000	98	136240	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.169	5.169	0.000	99	108907	1200.0	1095.2	
$ 5 2-Fluorobiphenyl	172	6.936	6.943	-0.007	100	198363	1200.0	1150.9	
$ 6 Terphenyl-d14	244	11.056	11.065	-0.009	98	216583	1200.0	1148.8	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.394	2.414	-0.020	35	74163	1200.0	1206.5	
10 Naphthalene	128	5.898	5.898	0.000	100	270997	1200.0	1158.5	
11 2-Methylnaphthalene	142	6.580	6.580	0.000	97	372422	2400.0	2310.9	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	96	166552	1200.0	1162.1	
13 Dimethyl phthalate	163	7.324	7.333	-0.009	1	400986	2400.0	2288.7	
14 Acenaphthylene	152	7.479	7.480	-0.001	99	269313	1200.0	1183.8	
15 Acenaphthene	153	7.652	7.652	0.000	97	178359	1200.0	1144.2	
16 Dibenzofuran	168	7.827	7.827	0.000	93	254474	1201.2	1134.3	
17 Diethyl phthalate	149	8.021	8.022	-0.001	97	413926	2409.6	2102.9	
18 Fluorene	166	8.167	8.167	0.000	95	210897	1200.0	1169.9	
19 N-Nitrosodiphenylamine	169	8.274	8.274	0.000	93	140602	1200.0	1121.7	
20 Phenanthrene	178	9.137	9.137	0.000	100	351768	1200.0	1147.1	
21 Anthracene	178	9.189	9.189	0.000	1	320239	1200.0	1207.4	
22 Di-n-butyl phthalate	149	9.673	9.673	0.000	1	687156	2400.0	2375.0	
23 Fluoranthene	202	10.503	10.511	-0.008	99	379350	1200.0	1185.0	
24 Pyrene	202	10.840	10.840	0.000	100	381466	1200.0	1153.0	
25 Butyl benzyl phthalate	149	11.938	11.938	0.000	1	289446	2400.0	2499.9	
26 Benzo[a]anthracene	228	13.142	13.142	0.000	40	335416	1200.0	1172.4	
27 Chrysene	228	13.223	13.232	-0.009	95	361542	1200.0	1183.0	
28 Bis(2-ethylhexyl) phthalat	149	13.286	13.295	-0.009	1	365456	2400.0	2487.0	
29 Di-n-octyl phthalate	149	15.079	15.087	-0.008	1	547551	2400.0	2051.1	
30 Benzo[b]fluoranthene	252	15.997	16.001	-0.004	97	339373	1200.0	1167.0	
31 Benzo[k]fluoranthene	252	16.076	16.076	0.000	97	358923	1200.0	1217.5	
32 Benzo[a]pyrene	252	16.920	16.929	-0.009	94	308843	1200.0	1170.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.196	20.201	-0.005	92	301879	1200.0	1139.0	
34 Dibenz(a,h)anthracene	278	20.288	20.297	-0.009	85	319889	1200.0	1183.6	
35 Benzo[g,h,i]perylene	276	20.936	20.940	-0.004	95	357796	1200.0	1141.6	
$ 53 2-methylnaphthalene-d10	152	6.549	6.549	0.000	89	136733	1200.0	1124.7	
$ 54 Fluoranthene-d10	212	10.477	10.485	-0.008	100	286731	1200.0	1172.3	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

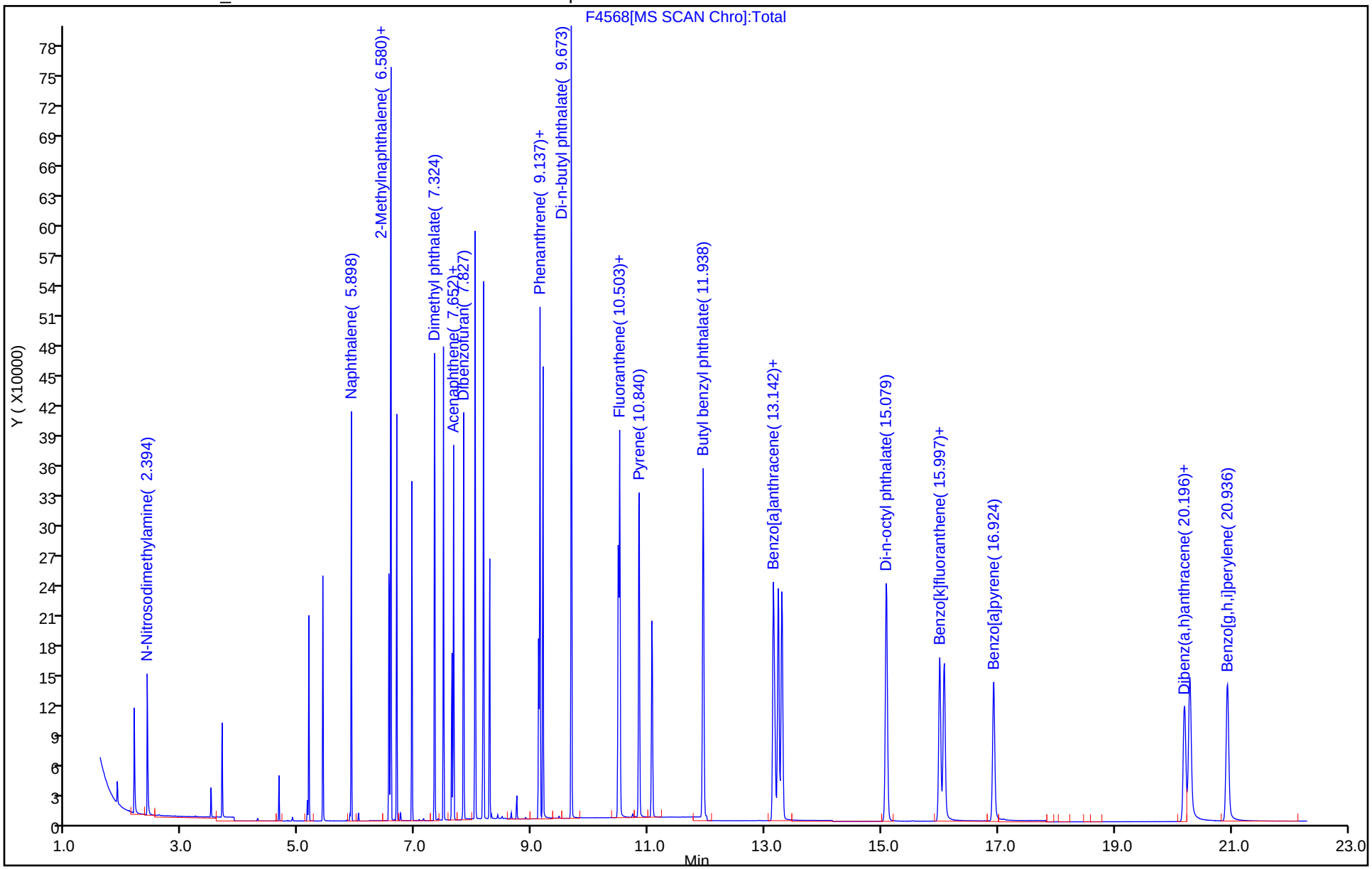
MS-SIMSL 1.2_00075 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 21:00:16 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4568.D

Injection Date:	07-Nov-2018 23:00:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD1200			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4569.D
Lims ID: STD2500
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 07-Nov-2018 23:29:30 ALS Bottle#: 9 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std2500
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:00:21 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: wickhamm Date: 08-Nov-2018 15:53:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	98	46947	600.0	600.0	
* 2 Phenanthrene-d10	188	9.111	9.120	-0.009	99	99053	600.0	600.0	
* 3 Chrysene-d12	240	13.160	13.169	-0.009	47	94926	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.169	5.169	0.000	98	174434	2500.0	2625.5	
$ 5 2-Fluorobiphenyl	172	6.935	6.943	-0.008	100	320884	2500.0	2786.6	
$ 6 Terphenyl-d14	244	11.056	11.065	-0.009	98	359524	2500.0	2802.6	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.394	2.414	-0.020	45	108846	2500.0	2650.3	
10 Naphthalene	128	5.898	5.898	0.000	100	420014	2500.0	2687.4	
11 2-Methylnaphthalene	142	6.579	6.580	-0.001	96	586180	5000.0	5444.0	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	95	265288	2500.0	2770.4	
13 Dimethyl phthalate	163	7.324	7.333	-0.009	1	636697	5000.0	5453.9	
14 Acenaphthylene	152	7.479	7.480	-0.001	99	432217	2500.0	2843.6	
15 Acenaphthene	153	7.652	7.652	0.000	97	283364	2500.0	2720.8	
16 Dibenzofuran	168	7.827	7.827	0.000	92	405448	2502.5	2705.1	
17 Diethyl phthalate	149	8.021	8.022	-0.001	98	679868	5020.0	5169.8	
18 Fluorene	166	8.167	8.167	0.000	97	348073	2500.0	2889.9	
19 N-Nitrosodiphenylamine	169	8.274	8.274	0.000	92	220669	2500.0	2587.1	
20 Phenanthrene	178	9.137	9.137	0.000	100	566782	2500.0	2716.2	
21 Anthracene	178	9.189	9.189	-0.001	1	531403	2500.0	2944.4	
22 Di-n-butyl phthalate	149	9.673	9.673	0.000	1	1138874	5000.0	5784.6	
23 Fluoranthene	202	10.503	10.511	-0.009	100	620225	2500.0	2847.1	
24 Pyrene	202	10.831	10.840	-0.009	99	616287	2500.0	2737.4	
25 Butyl benzyl phthalate	149	11.938	11.938	0.000	1	487995	5000.0	6194.0	
26 Benzo[a]anthracene	228	13.142	13.142	0.000	38	553378	2500.0	2776.1	
27 Chrysene	228	13.223	13.232	-0.009	94	591161	2500.0	2776.2	
28 Bis(2-ethylhexyl) phthalat	149	13.286	13.295	-0.009	1	631116	5000.0	6311.8	
29 Di-n-octyl phthalate	149	15.078	15.087	-0.009	1	964558	5000.0	5151.9	
30 Benzo[b]fluoranthene	252	15.992	16.001	-0.009	97	546727	2500.0	2698.4	
31 Benzo[k]fluoranthene	252	16.071	16.076	-0.005	97	593793	2500.0	2890.7	
32 Benzo[a]pyrene	252	16.919	16.929	-0.010	94	520578	2500.0	2830.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.196	20.201	-0.005	92	490132	2500.0	2654.0	
34 Dibenz(a,h)anthracene	278	20.288	20.297	-0.009	86	515992	2500.0	2740.1	
35 Benzo[g,h,i]perylene	276	20.931	20.940	-0.009	95	582641	2500.0	2668.0	
$ 53 2-methylnaphthalene-d10	152	6.542	6.549	-0.007	96	215119	2500.0	2648.5	
$ 54 Fluoranthene-d10	212	10.477	10.485	-0.008	100	463531	2500.0	2785.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

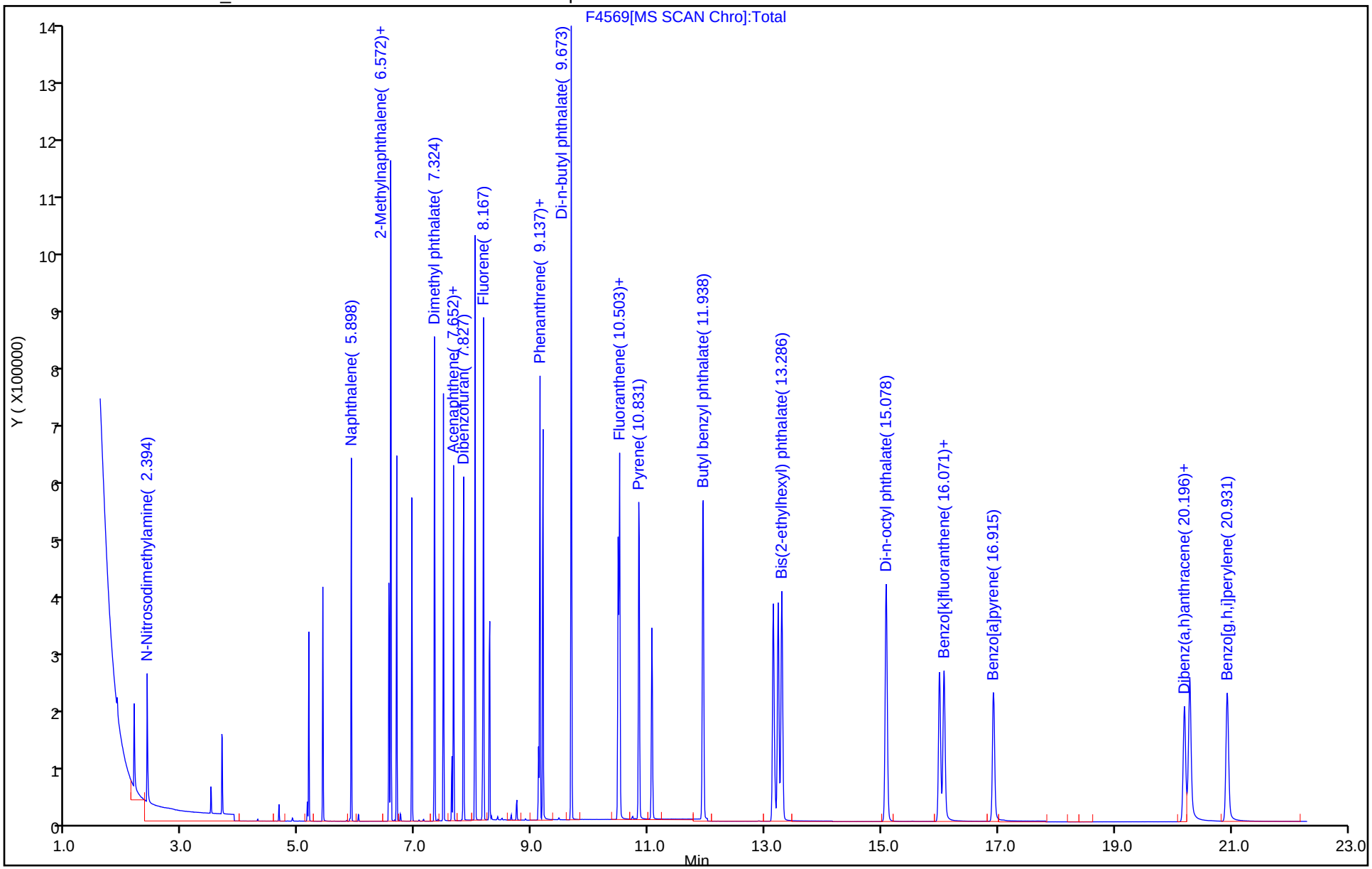
MS-SIMSL 2.5_00074 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 21:00:22 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4569.D

Injection Date:	07-Nov-2018 23:29:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD2500			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D
Lims ID: STD5000
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 07-Nov-2018 23:58:30 ALS Bottle#: 10 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: std5000
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:00:26 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: wickhamm Date: 08-Nov-2018 16:24:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	96	50719	600.0	600.0	
* 2 Phenanthrene-d10	188	9.111	9.120	-0.009	99	106270	600.0	600.0	
* 3 Chrysene-d12	240	13.160	13.169	-0.009	35	105354	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.169	5.169	0.000	96	345279	5000.0	4810.4	
$ 5 2-Fluorobiphenyl	172	6.936	6.943	-0.007	100	611045	5000.0	4911.7	
$ 6 Terphenyl-d14	244	11.056	11.065	-0.009	98	699494	5000.0	5082.4	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.388	2.414	-0.026	38	226780	5000.0	5111.1	
10 Naphthalene	128	5.898	5.898	0.000	100	820904	5000.0	4861.7	
11 2-Methylnaphthalene	142	6.572	6.580	-0.008	94	1143934	10000	9833.9	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	93	518905	5000.0	5016.0	
13 Dimethyl phthalate	163	7.324	7.333	-0.009	1	1231485	10000	9772.7	
14 Acenaphthylene	152	7.480	7.480	0.000	98	859733	5000.0	5235.6	
15 Acenaphthene	153	7.652	7.652	0.000	98	567640	5000.0	5045.0	
16 Dibenzofuran	168	7.827	7.827	0.000	91	799915	5005.0	4939.9	
17 Diethyl phthalate	149	8.021	8.022	-0.001	99	1305459	10040	9188.6	
18 Fluorene	166	8.167	8.167	0.000	97	679941	5000.0	5225.5	
19 N-Nitrosodiphenylamine	169	8.274	8.274	0.000	91	420439	5000.0	4594.5	
20 Phenanthrene	178	9.137	9.137	0.000	99	1080892	5000.0	4828.2	
21 Anthracene	178	9.189	9.189	0.000	1	1061361	5000.0	5481.4	
22 Di-n-butyl phthalate	149	9.673	9.673	0.000	1	2271515	10000	10754	
23 Fluoranthene	202	10.503	10.511	-0.008	100	1225720	5000.0	5244.5	
24 Pyrene	202	10.831	10.840	-0.009	99	1222666	5000.0	5062.0	
25 Butyl benzyl phthalate	149	11.938	11.938	0.000	1	1022536	10000	12097	
26 Benzo[a]anthracene	228	13.142	13.142	0.000	38	1104438	5000.0	4992.2	
27 Chrysene	228	13.223	13.232	-0.009	94	1178276	5000.0	4985.7	
28 Bis(2-ethylhexyl) phthalat	149	13.286	13.295	-0.009	1	1371909	10000	12789	
29 Di-n-octyl phthalate	149	15.074	15.087	-0.013	1	2181405	10000	10475	
30 Benzo[b]fluoranthene	252	15.993	16.001	-0.008	97	1109773	5000.0	4935.1	
31 Benzo[k]fluoranthene	252	16.067	16.076	-0.009	97	1197691	5000.0	5253.5	
32 Benzo[a]pyrene	252	16.915	16.929	-0.014	94	1055000	5000.0	5168.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.196	20.201	-0.005	91	989234	5000.0	4826.5	
34 Dibenz(a,h)anthracene	278	20.288	20.297	-0.009	85	1061813	5000.0	5080.5	
35 Benzo[g,h,i]perylene	276	20.931	20.940	-0.009	95	1176381	5000.0	4853.7	
$ 53 2-methylnaphthalene-d10	152	6.542	6.549	-0.007	100	427312	5000.0	4869.7	
$ 54 Fluoranthene-d10	212	10.477	10.485	-0.008	100	915739	5000.0	5128.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

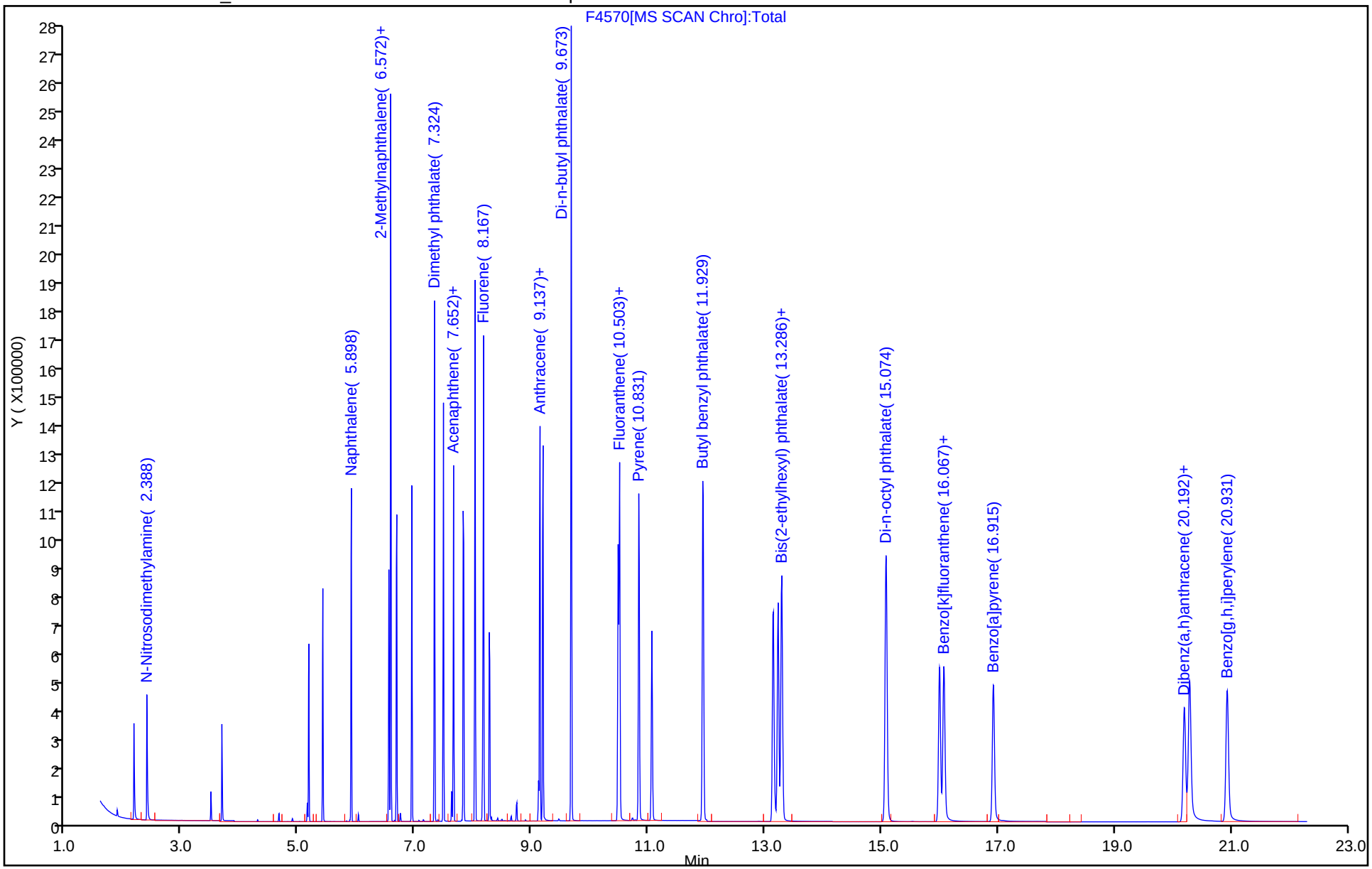
MS-SIMSL 5_00076 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 21:00:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Injection Date:	07-Nov-2018 23:58:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	STD5000			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-436730/12 Calibration Date: 11/08/2018 00:27

Instrument ID: SMS_F Calib Start Date: 11/07/2018 20:06

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/07/2018 23:58

Lab File ID: F4571.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	1.997	2.058	0.7000	618000	600000	3.0	20.0
2-Methylnaphthalene	Ave	1.376	1.382	0.4000	603000	600000	0.5	20.0
1-Methylnaphthalene	Ave	1.224	1.318	0.0500	646000	600000	7.7	20.0
Acenaphthylene	Ave	1.943	1.865	0.9000	576000	600000	-4.0	20.0
Acenaphthene	Ave	1.331	1.329	0.9000	599000	600000	-0.2	20.0
Fluorene	Ave	1.539	1.587	0.9000	619000	600000	3.1	20.0
Phenanthrene	Ave	1.264	1.228	0.7000	583000	600000	-2.8	20.0
Anthracene	Ave	1.093	1.042	0.7000	572000	600000	-4.6	20.0
Fluoranthene	Ave	1.320	1.208	0.6000	549000	600000	-8.5	20.0
Pyrene	Ave	1.364	1.255	0.6000	552000	600000	-8.0	20.0
Benzo[a]anthracene	Ave	1.260	1.148	0.8000	547000	600000	-8.9	20.0
Chrysene	Ave	1.346	1.417	0.7000	632000	600000	5.3	20.0
Benzo[b]fluoranthene	Ave	1.281	1.173	0.7000	549000	600000	-8.4	20.0
Benzo[k]fluoranthene	Ave	1.298	1.253	0.7000	579000	600000	-3.5	20.0
Benzo[a]pyrene	Ave	1.163	1.021	0.7000	527000	600000	-12.2	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.167	1.024	0.5000	526000	600000	-12.3	20.0
Dibenz(a,h)anthracene	Ave	1.190	1.106	0.4000	557000	600000	-7.1	20.0
Benzo[g,h,i]perylene	Ave	1.380	1.281	0.5000	557000	600000	-7.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4571.D
Lims ID: icv
Client ID:
Sample Type: ICV
Inject. Date: 08-Nov-2018 00:27:30 ALS Bottle#: 11 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: icv
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist:

Method: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:00:26 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: wickhamm Date: 08-Nov-2018 17:26:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	96	45866	600.0	600.0	
* 2 Phenanthrene-d10	188	9.111	9.120	-0.009	98	99357	600.0	600.0	
* 3 Chrysene-d12	240	13.160	13.169	-0.009	100	87955	600.0	600.0	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.401	2.414	-0.013	40	25370	600.0	632.3	
10 Naphthalene	128	5.898	5.898	0.000	100	94409	600.0	618.3	
11 2-Methylnaphthalene	142	6.572	6.580	-0.008	93	63404	600.0	602.7	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	93	60457	600.0	646.2	
13 Dimethyl phthalate	163	7.324	7.333	-0.009	1	66167	600.0	570.6	
14 Acenaphthylene	152	7.480	7.480	0.000	99	85537	600.0	576.0	
15 Acenaphthene	153	7.652	7.652	0.000	98	60949	600.0	599.0	
16 Dibenzofuran	168	7.827	7.827	0.000	92	88643	600.0	605.3	
17 Diethyl phthalate	149	8.022	8.022	0.000	98	68147	600.0	530.4	
18 Fluorene	166	8.167	8.167	0.000	98	72801	600.0	618.7	
19 N-Nitrosodiphenylamine	169	8.274	8.274	0.000	91	49601	600.0	579.7	
20 Phenanthrene	178	9.137	9.137	0.000	99	122042	600.0	583.1	
21 Anthracene	178	9.189	9.189	0.000	1	103576	600.0	572.1	
22 Di-n-butyl phthalate	149	9.673	9.673	0.000	1	93675	600.0	474.3	
23 Fluoranthene	202	10.503	10.511	-0.008	100	119974	600.0	549.1	
24 Pyrene	202	10.831	10.840	-0.009	99	124692	600.0	552.2	
25 Butyl benzyl phthalate	149	11.938	11.938	0.000	1	31685	600.0	400.9	
26 Benzo[a]anthracene	228	13.133	13.142	-0.009	41	100943	600.0	546.5	
27 Chrysene	228	13.223	13.232	-0.009	95	124641	600.0	631.7	
28 Bis(2-ethylhexyl) phthalat	149	13.277	13.295	-0.018	1	35051	600.0	349.5	
29 Di-n-octyl phthalate	149	15.070	15.087	-0.017	1	46607	600.0	289.6	
30 Benzo[b]fluoranthene	252	15.988	16.001	-0.013	98	103139	600.0	549.4	
31 Benzo[k]fluoranthene	252	16.063	16.076	-0.013	97	110218	600.0	579.1	
32 Benzo[a]pyrene	252	16.916	16.929	-0.013	95	89817	600.0	527.0	
33 Indeno[1,2,3-cd]pyrene	276	20.188	20.201	-0.013	93	90075	600.0	526.4	
34 Dibenz(a,h)anthracene	278	20.279	20.297	-0.018	86	97262	600.0	557.4	
35 Benzo[g,h,i]perylene	276	20.927	20.940	-0.013	96	112702	600.0	557.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

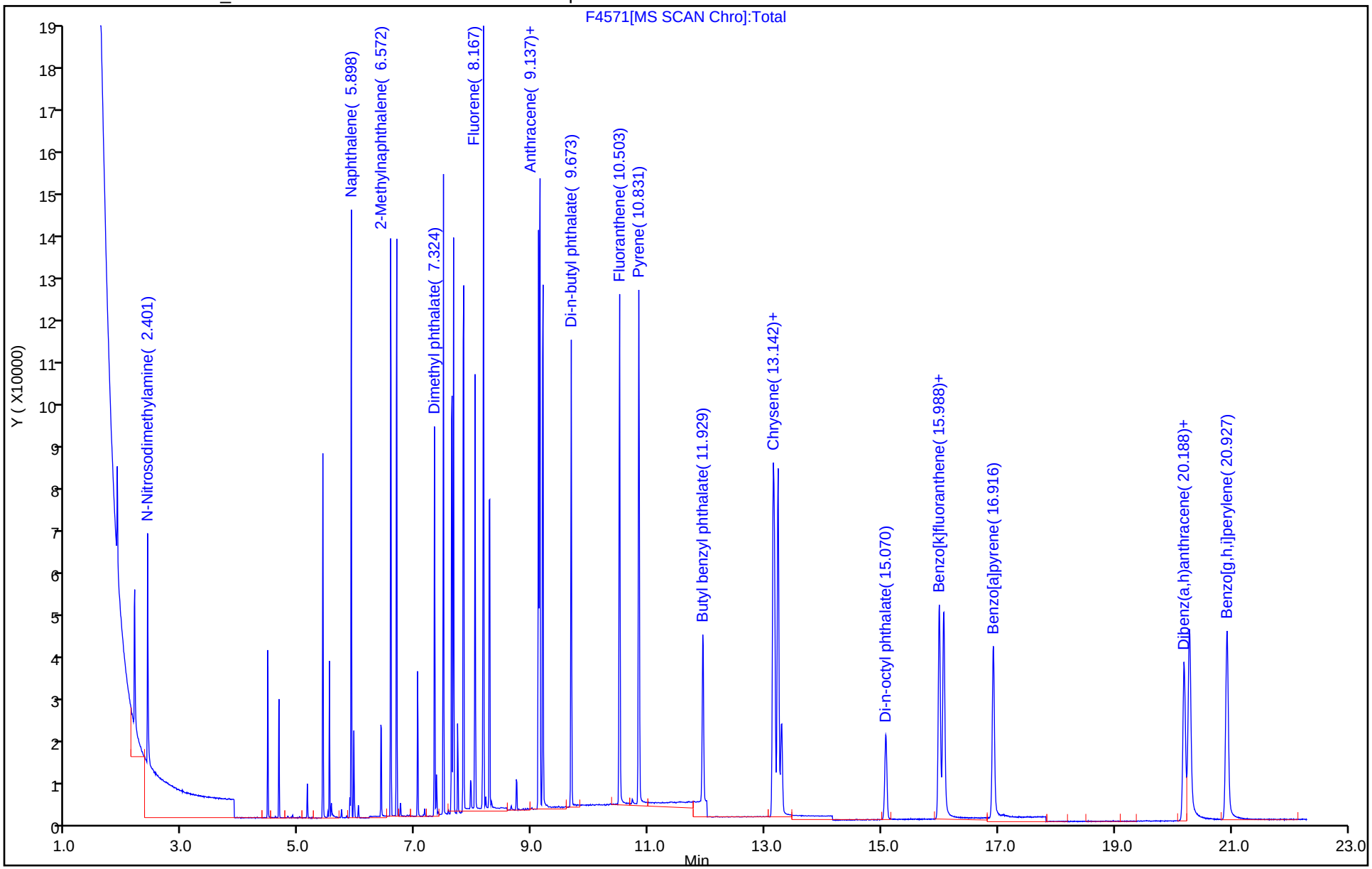
MS-SIM SSV2_00004 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 21:00:31 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4571.D

Injection Date:	08-Nov-2018 00:27:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	icv			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-436903/3 Calibration Date: 11/08/2018 15:54

Instrument ID: SMS_F Calib Start Date: 11/07/2018 20:06

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/07/2018 23:58

Lab File ID: F4554.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	1.997	2.217	0.7000	666000	600000	11.0	20.0
2-Methylnaphthalene	Ave	1.376	1.494	0.4000	1300000	1200000	8.5	20.0
1-Methylnaphthalene	Ave	1.224	1.337	0.0500	655000	600000	9.2	20.0
Acenaphthylene	Ave	1.943	1.825	0.9000	564000	600000	-6.1	20.0
Acenaphthene	Ave	1.331	1.371	0.9000	618000	600000	3.0	20.0
Fluorene	Ave	1.539	1.602	0.9000	624000	600000	4.0	20.0
Phenanthrene	Ave	1.264	1.311	0.7000	622000	600000	3.7	20.0
Anthracene	Ave	1.093	1.031	0.7000	566000	600000	-5.7	20.0
Fluoranthene	Ave	1.320	1.327	0.6000	603000	600000	0.5	20.0
Pyrene	Ave	1.364	1.299	0.6000	572000	600000	-4.7	20.0
Benzo[a]anthracene	Ave	1.260	1.104	0.8000	526000	600000	-12.4	20.0
Chrysene	Ave	1.346	1.411	0.7000	629000	600000	4.8	20.0
Benzo[b]fluoranthene	Ave	1.281	1.157	0.7000	542000	600000	-9.6	20.0
Benzo[k]fluoranthene	Ave	1.298	1.268	0.7000	586000	600000	-2.3	20.0
Benzo[a]pyrene	Ave	1.163	0.9384	0.7000	484000	600000	-19.3	20.0
Indeno[1,2,3-cd]pyrene	Ave	1.167	1.042	0.5000	536000	600000	-10.7	20.0
Dibenz(a,h)anthracene	Ave	1.190	1.125	0.4000	567000	600000	-5.5	20.0
Benzo[g,h,i]perylene	Ave	1.380	1.326	0.5000	576000	600000	-3.9	20.0
Nitrobenzene-d5	Ave	0.8491	0.8163		577000	600000	-3.9	20.0
2-methylnaphthalene-d10	Ave	1.038	1.101		636000	600000	6.1	35.0
2-Fluorobiphenyl	Ave	1.472	1.594		650000	600000	8.3	20.0
Fluoranthene-d10	Ave	1.008	0.9803		583000	600000	-2.8	35.0
Terphenyl-d14	Ave	0.7771	0.7473		577000	600000	-3.8	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4554.D
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 08-Nov-2018 15:54:30 ALS Bottle#: 2 Worklist Smp#: 3
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:26:54 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: wickhamm Date: 08-Nov-2018 18:40:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	94	45662	600.0	600.0	
* 2 Phenanthrene-d10	188	9.111	9.111	0.000	98	92694	600.0	600.0	
* 3 Chrysene-d12	240	13.160	13.160	0.000	99	80280	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.169	5.169	0.000	98	37274	600.0	576.8	
$ 5 2-Fluorobiphenyl	172	6.935	6.935	0.000	100	72770	600.0	649.7	
$ 6 Terphenyl-d14	244	11.056	11.056	0.000	99	69270	600.0	577.0	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.401	2.401	0.000	33	26837	600.0	671.8	
10 Naphthalene	128	5.898	5.898	0.000	100	101243	600.0	666.0	
11 2-Methylnaphthalene	142	6.572	6.572	0.000	94	136393	1200.0	1302.4	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	93	61033	600.0	655.3	
13 Dimethyl phthalate	163	7.324	7.324	0.000	1	126130	1200.0	1102.3	
14 Acenaphthylene	152	7.479	7.479	0.000	98	83335	600.0	563.7	
15 Acenaphthene	153	7.652	7.652	0.000	98	62625	600.0	618.2	
16 Dibenzofuran	168	7.827	7.827	0.000	91	91937	600.6	630.6	
17 Diethyl phthalate	149	8.021	8.021	0.000	99	125127	1204.8	978.3	
18 Fluorene	166	8.167	8.167	0.000	100	73130	600.0	624.3	
19 N-Nitrosodiphenylamine	169	8.264	8.264	0.000	98	44288	600.0	554.9	
20 Phenanthrene	178	9.128	9.128	0.000	100	121524	600.0	622.3	
21 Anthracene	178	9.180	9.180	0.000	1	95580	600.0	565.9	
22 Di-n-butyl phthalate	149	9.673	9.673	0.000	1	167334	1200.0	908.2	
23 Fluoranthene	202	10.502	10.502	0.000	100	122970	600.0	603.2	
24 Pyrene	202	10.831	10.831	0.000	99	120436	600.0	571.6	
25 Butyl benzyl phthalate	149	11.929	11.929	0.000	1	53840	1200.0	730.3	
26 Benzo[a]anthracene	228	13.133	13.133	0.000	42	88615	600.0	525.7	
27 Chrysene	228	13.223	13.223	0.000	95	113290	600.0	629.1	
28 Bis(2-ethylhexyl) phthalat	149	13.277	13.277	0.000	1	58682	1200.0	627.1	
29 Di-n-octyl phthalate	149	15.070	15.070	0.000	1	84927	1200.0	556.2	
30 Benzo[b]fluoranthene	252	15.988	15.988	0.000	98	92909	600.0	542.2	
31 Benzo[k]fluoranthene	252	16.062	16.062	0.000	98	101794	600.0	586.0	
32 Benzo[a]pyrene	252	16.911	16.911	0.000	95	75334	600.0	484.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.187	20.187	0.000	92	83643	600.0	535.6	
34 Dibenz(a,h)anthracene	278	20.279	20.279	0.000	86	90275	600.0	566.9	
35 Benzo[g,h,i]perylene	276	20.922	20.922	0.000	96	106439	600.0	576.3	
$ 53 2-methylnaphthalene-d10	152	6.542	6.542	0.000	100	50277	600.0	636.4	
$ 54 Fluoranthene-d10	212	10.477	10.477	0.000	100	90872	600.0	583.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

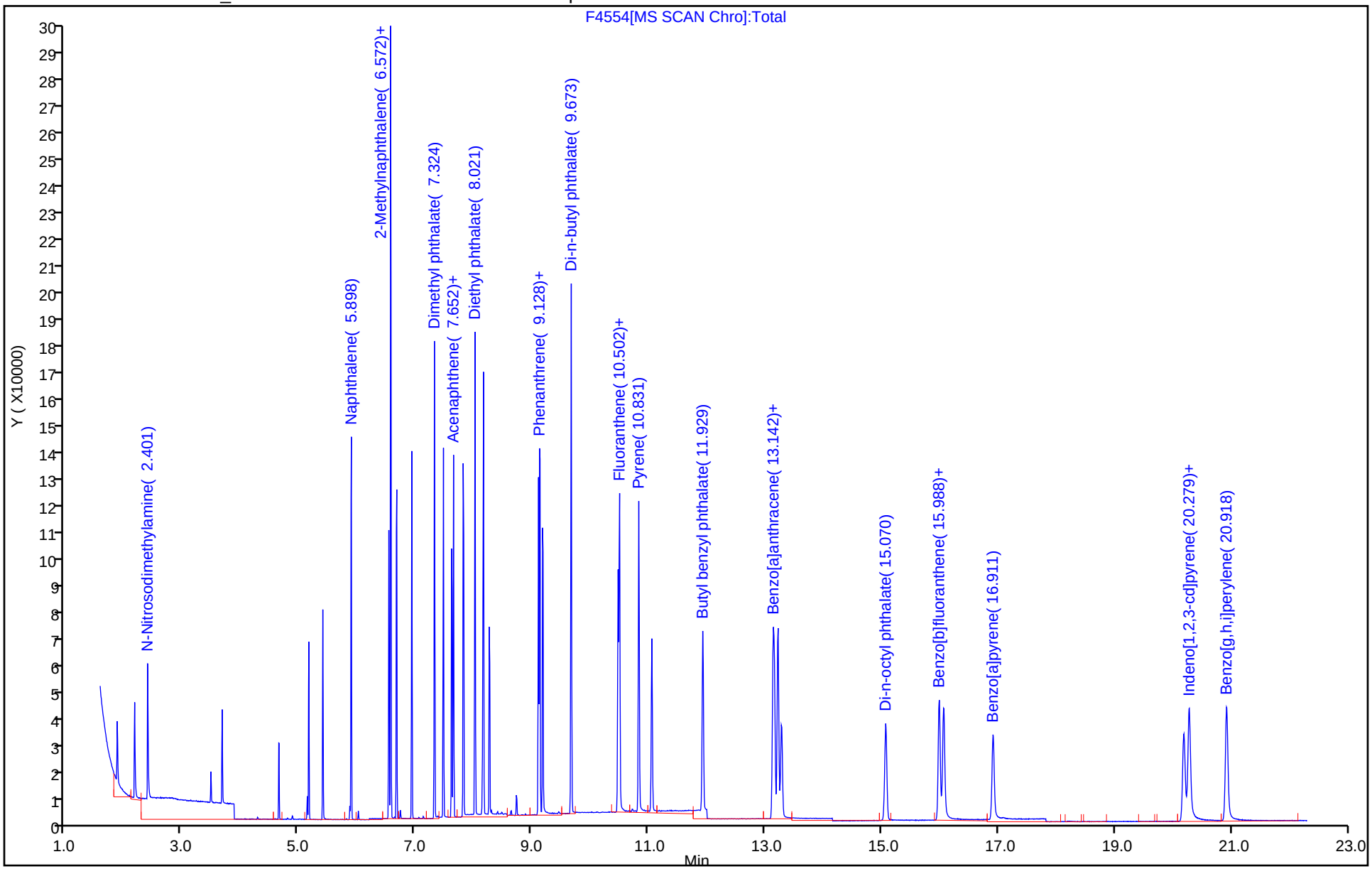
MS-SIMSL 0.6_00144 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 21:26:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4554.D

Injection Date:	08-Nov-2018 15:54:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	ccv			Worklist Smp#:	3
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVC 280-436903/23 Calibration Date: 11/09/2018 02:22

Instrument ID: SMS_F Calib Start Date: 11/07/2018 20:06

GC Column: Rxi-5Sil MS ID: 0.25(mm) Calib End Date: 11/07/2018 23:58

Lab File ID: F4574.D Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	1.997	2.266	0.7000	681000	600000	13.4	50.0
2-Methylnaphthalene	Ave	1.376	1.509	0.4000	1320000	1200000	9.7	50.0
1-Methylnaphthalene	Ave	1.224	1.330	0.0500	652000	600000	8.7	50.0
Acenaphthylene	Ave	1.943	1.774	0.9000	548000	600000	-8.7	50.0
Acenaphthene	Ave	1.331	1.365	0.9000	615000	600000	2.5	50.0
Fluorene	Ave	1.539	1.542	0.9000	601000	600000	0.2	50.0
Phenanthrene	Ave	1.264	1.334	0.7000	633000	600000	5.5	50.0
Anthracene	Ave	1.093	1.004	0.7000	551000	600000	-8.2	50.0
Fluoranthene	Ave	1.320	1.295	0.6000	589000	600000	-1.8	50.0
Pyrene	Ave	1.364	1.247	0.6000	549000	600000	-8.5	50.0
Benzo[a]anthracene	Ave	1.260	0.9840	0.8000	469000	600000	-21.9	50.0
Chrysene	Ave	1.346	1.448	0.7000	645000	600000	7.6	50.0
Benzo[b]fluoranthene	Ave	1.281	1.045	0.7000	490000	600000	-18.4	50.0
Benzo[k]fluoranthene	Ave	1.298	1.146	0.7000	530000	600000	-11.7	50.0
Benzo[a]pyrene	Ave	1.163	0.7432	0.7000	384000	600000	-36.1	50.0
Indeno[1,2,3-cd]pyrene	Ave	1.167	0.8150	0.5000	419000	600000	-30.2	50.0
Dibenz(a,h)anthracene	Ave	1.190	0.9346	0.4000	471000	600000	-21.5	50.0
Benzo[g,h,i]perylene	Ave	1.380	1.162	0.5000	505000	600000	-15.8	50.0
Nitrobenzene-d5	Ave	0.8491	0.7933		561000	600000	-6.6	50.0
2-methylnaphthalene-d10	Ave	1.038	1.091		631000	600000	5.1	50.0
2-Fluorobiphenyl	Ave	1.472	1.598		651000	600000	8.5	50.0
Fluoranthene-d10	Ave	1.008	0.9324		555000	600000	-7.5	50.0
Terphenyl-d14	Ave	0.7771	0.7197		556000	600000	-7.4	50.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4574.D
Lims ID: ccvc
Client ID:
Sample Type: CCVC
Inject. Date: 09-Nov-2018 02:22:30 ALS Bottle#: 22 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVC
Operator ID: WICKHAMM Instrument ID: SMS_F
Sublist: chrom-SMSF_8270SIMX*sub8

Method: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:27:34 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: wickhamm Date: 09-Nov-2018 15:53:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.618	7.626	-0.008	88	41494	600.0	600.0	
* 2 Phenanthrene-d10	188	9.111	9.111	0.000	97	82505	600.0	600.0	
* 3 Chrysene-d12	240	13.151	13.160	-0.009	97	68666	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.164	5.169	-0.005	99	32918	600.0	560.6	
$ 5 2-Fluorobiphenyl	172	6.936	6.935	0.001	98	66287	600.0	651.3	
$ 6 Terphenyl-d14	244	11.047	11.056	-0.009	99	59375	600.0	555.7	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.401	2.401	0.000	42	23594	600.0	650.0	
10 Naphthalene	128	5.893	5.898	-0.005	100	94025	600.0	680.7	
11 2-Methylnaphthalene	142	6.572	6.572	0.000	100	125227	1200.0	1315.9	
12 1-Methylnaphthalene	142	6.670	6.678	-0.008	100	55205	600.0	652.3	
13 Dimethyl phthalate	163	7.324	7.324	0.000	1	111344	1200.0	1070.5	
14 Acenaphthylene	152	7.471	7.479	-0.008	100	73611	600.0	547.9	
15 Acenaphthene	153	7.652	7.652	0.000	99	56633	600.0	615.2	
16 Dibenzofuran	168	7.818	7.827	-0.009	100	85971	600.6	649.0	
17 Diethyl phthalate	149	8.012	8.021	-0.009	95	103375	1204.8	889.4	
18 Fluorene	166	8.157	8.167	-0.010	89	63981	600.0	601.0	
19 N-Nitrosodiphenylamine	169	8.264	8.264	0.000	97	37665	600.0	530.2	
20 Phenanthrene	178	9.128	9.128	0.000	100	110024	600.0	633.0	
21 Anthracene	178	9.180	9.180	0.000	1	82814	600.0	550.9	
22 Di-n-butyl phthalate	149	9.664	9.673	-0.009	1	121863	1200.0	743.1	
23 Fluoranthene	202	10.494	10.502	-0.008	100	106867	600.0	589.0	
24 Pyrene	202	10.823	10.831	-0.009	99	102906	600.0	548.8	
25 Butyl benzyl phthalate	149	11.920	11.929	-0.009	1	34926	1200.0	532.2	
26 Benzo[a]anthracene	228	13.124	13.133	-0.009	47	67570	600.0	468.6	
27 Chrysene	228	13.205	13.223	-0.018	95	99422	600.0	645.5	
28 Bis(2-ethylhexyl) phthalat	149	13.268	13.277	-0.009	1	37008	1200.0	444.3	
29 Di-n-octyl phthalate	149	15.057	15.070	-0.013	1	49624	1200.0	386.9	
30 Benzo[b]fluoranthene	252	15.971	15.988	-0.017	98	71787	600.0	489.8	
31 Benzo[k]fluoranthene	252	16.049	16.062	-0.013	98	78698	600.0	529.6	
32 Benzo[a]pyrene	252	16.894	16.911	-0.017	95	51029	600.0	383.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
33 Indeno[1,2,3-cd]pyrene	276	20.170	20.187	-0.017	93	55965	600.0	418.9	
34 Dibenz(a,h)anthracene	278	20.262	20.279	-0.017	88	64178	600.0	471.1	
35 Benzo[g,h,i]perylene	276	20.905	20.922	-0.017	96	79778	600.0	505.0	
$ 53 2-methylnaphthalene-d10	152	6.542	6.542	0.000	93	45268	600.0	630.6	
$ 54 Fluoranthene-d10	212	10.468	10.477	-0.009	100	76924	600.0	554.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

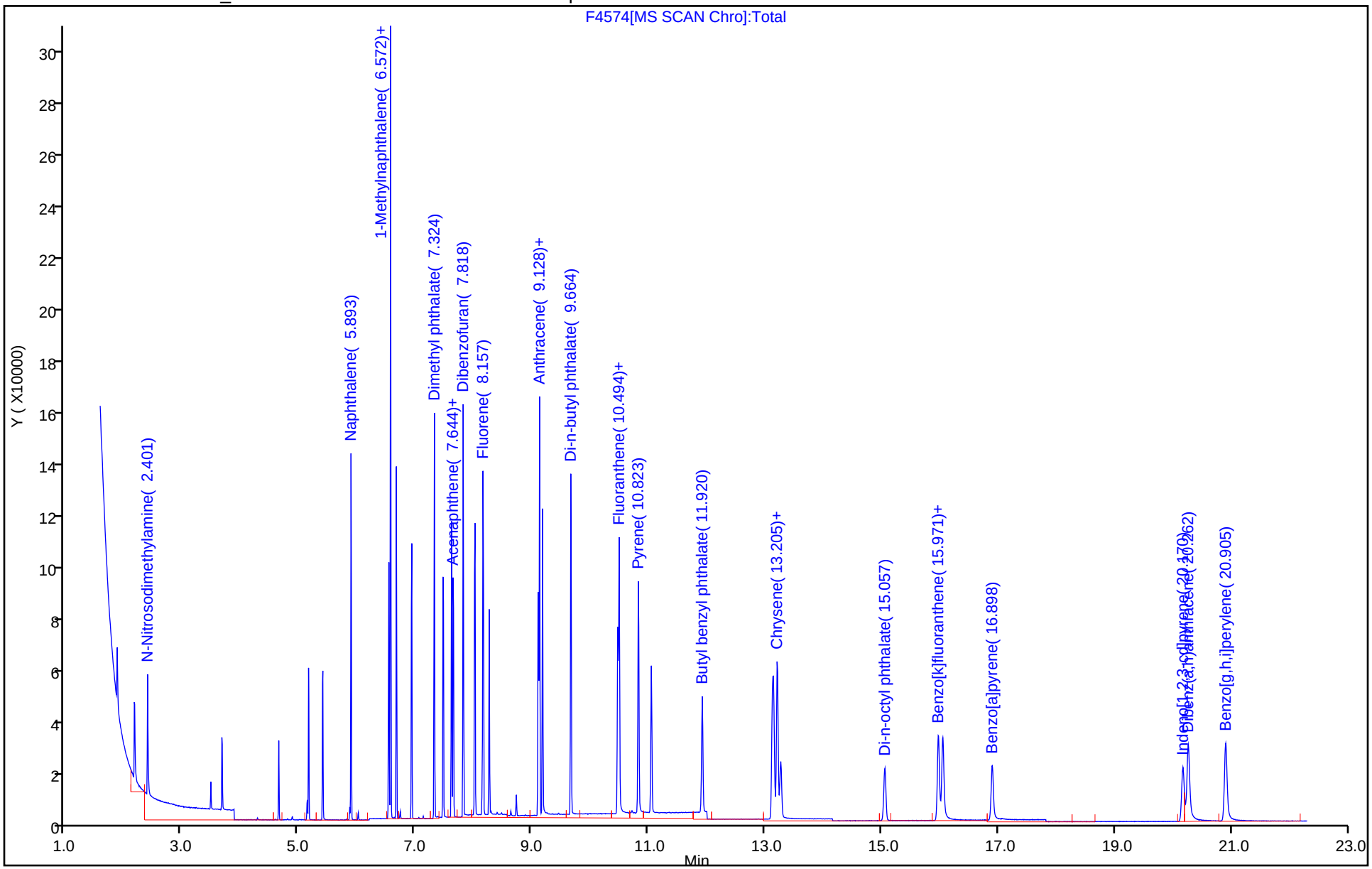
MS-SIMSL 0.6_00144 Amount Added: 200.00 Units: uL

Report Date: 09-Nov-2018 21:27:34 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4574.D

Injection Date:	09-Nov-2018 02:22:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	ccvc			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4561.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 07-Nov-2018 19:54:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 20:59:49 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: hoeflera Date: 09-Nov-2018 16:33:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
38 Pentachlorophenol_T	266	3.807	3.807	0.000	73	842871	NR	NR	
39 DFTPP									
40 Benzidine_T	184	4.894	4.894	0.000	94	6440830	NR	NR	e
41 4,4'-DDE	246	4.080	4.080	0.000	39	17995	NR	NR	
42 4,4'-DDD	235	5.316	5.316	0.000	87	36197	NR	NR	a
43 4,4'-DDT	235	5.537	5.537	0.000	95	2713193	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
e - Potential Peak Saturated
Review Flags
a - User Assigned ID

Reagents:

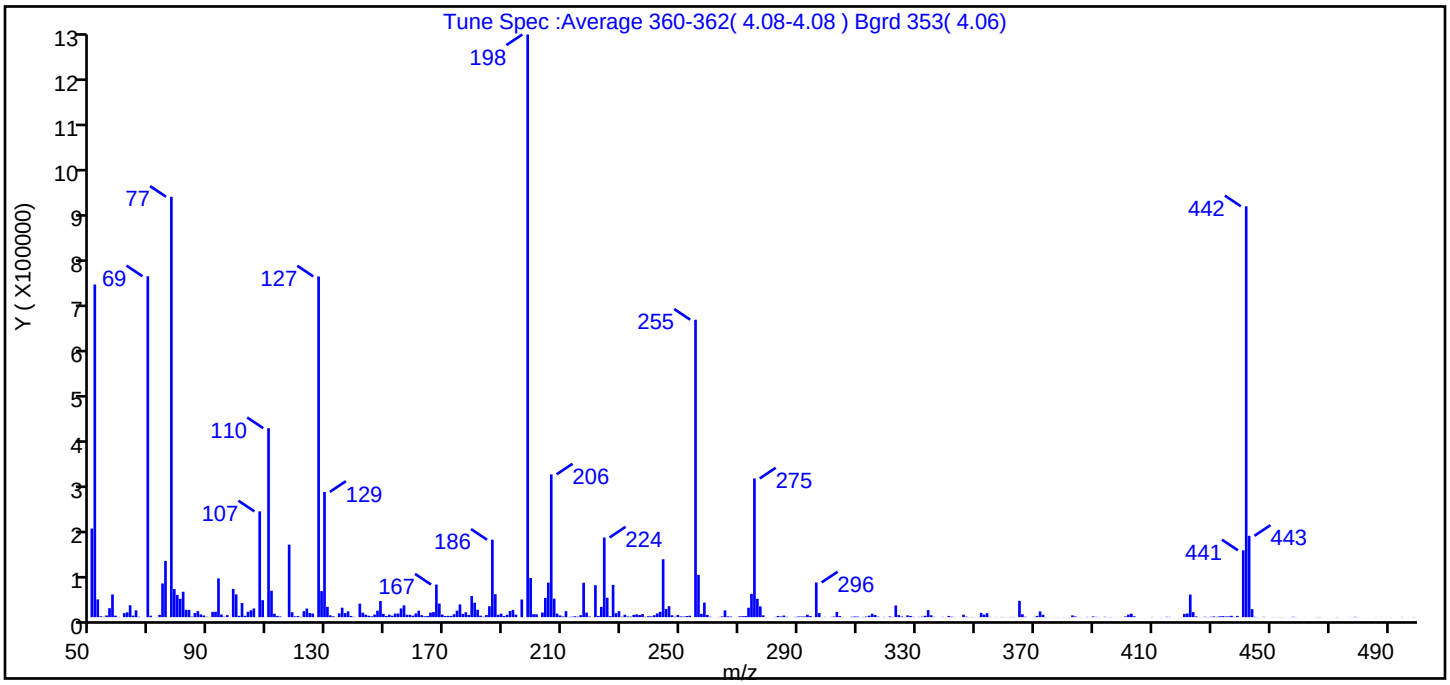
MS-DFTPP_00047 Amount Added: 0.50 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4561.D
Injection Date: 07-Nov-2018 19:54:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Tune Method: DFTPP Method 8270

39 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	57.1
68	<2% of mass 69	0.0 (0.0)
69	Present	58.5
70	<2% of mass 69	0.2 (0.4)
127	40-60% of mass 198	58.5
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.7
275	10-30% of mass 198	23.8
365	>1% of mass 198	2.8
441	Present but less than mass 443	11.5 (82.1)
442	>40% of mass 198	70.5
443	17-23% of mass 442	14.0 (19.8)

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4561.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 07-Nov-2018 19:54:30
Spectrum: Tune Spec :Average 360-362(4.08-4.08) Bgrd 353(4.06)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 367

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	191296	155.00	18816	251.00	1112	361.00	222
51.00	718144	156.00	25384	252.00	2526	362.00	379
52.00	38256	157.00	5149	253.00	3067	363.00	403
53.00	1898	158.00	5066	255.00	642176	365.00	35232
54.00	711	159.00	3309	256.00	91280	366.00	6169
55.00	3679	160.00	7894	257.00	7237	367.00	821
56.00	19352	161.00	13918	258.00	31456	369.00	60
57.00	49008	162.00	4256	259.00	4799	370.00	541
58.00	3238	163.00	1962	260.00	860	371.00	2602
59.00	548	164.00	2535	261.00	177	372.00	12345
61.00	8677	165.00	9747	263.00	468	373.00	5186
62.00	10388	166.00	11000	264.00	1508	374.00	391
63.00	25752	167.00	70320	265.00	14626	375.00	191
64.00	3252	168.00	29216	266.00	1784	377.00	138
65.00	14758	169.00	5473	267.00	1184	378.00	249
66.00	928	170.00	2421	270.00	1733	380.00	284
69.00	735936	171.00	2803	271.00	2005	382.00	26
70.00	3108	172.00	2699	272.00	2422	383.00	3759
72.00	224	173.00	6295	273.00	20296	384.00	1448
73.00	4991	174.00	14045	274.00	50280	385.00	153
74.00	72744	175.00	27416	275.00	299456	386.00	226
75.00	121448	176.00	6850	276.00	39672	388.00	523
77.00	907648	177.00	10540	277.00	23176	390.00	1576
78.00	60600	178.00	4611	278.00	3806	391.00	649
79.00	48160	179.00	45472	279.00	224	392.00	367
80.00	39584	180.00	31072	282.00	470	394.00	714
81.00	54824	181.00	15882	283.00	2681	395.00	149
82.00	15734	182.00	3206	284.00	1519	396.00	346
83.00	15741	183.00	771	285.00	3448	397.00	111
84.00	1100	184.00	4568	286.00	728	398.00	89
85.00	8900	185.00	23744	289.00	678	399.00	125
86.00	12974	186.00	167168	290.00	1406	401.00	1547
87.00	5809	187.00	49576	291.00	1385	402.00	5410

Report Date: 09-Nov-2018 20:59:50 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4561.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 07-Nov-2018 19:54:30
Spectrum: Tune Spec :Average 360-362(4.08-4.08) Bgrd 353(4.06)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 367

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	3446	188.00	5153	292.00	1461	403.00	7496
89.00	709	189.00	7553	293.00	5248	404.00	1869
90.00	273	190.00	2326	294.00	2512	405.00	55
91.00	11404	191.00	4996	296.00	74952	406.00	19
92.00	11609	192.00	13239	297.00	8843	410.00	460
93.00	83696	193.00	15600	299.00	528	413.00	291
94.00	5740	194.00	5339	301.00	553	415.00	745
95.00	841	196.00	38144	302.00	1274	416.00	503
96.00	4323	198.00	1257984	303.00	11079	418.00	58
98.00	60952	199.00	84616	304.00	2387	421.00	7094
99.00	49104	200.00	6449	305.00	331	422.00	7901
100.00	2883	201.00	6138	306.00	166	423.00	48792
101.00	30512	203.00	10000	308.00	860	424.00	10807
102.00	2853	204.00	41560	309.00	1469	425.00	1564
103.00	11489	205.00	74568	310.00	1313	426.00	158
104.00	14675	206.00	308224	311.00	242	427.00	235
105.00	18744	207.00	40024	312.00	548	428.00	865
107.00	228416	208.00	7618	313.00	1319	429.00	258
108.00	36656	209.00	3669	314.00	3230	430.00	822
110.00	408000	210.00	1546	315.00	7339	431.00	1506
111.00	56984	211.00	12896	316.00	4450	432.00	610
112.00	7373	212.00	423	317.00	1066	433.00	1768
113.00	2521	213.00	1003	319.00	506	434.00	2162
114.00	1375	214.00	1927	320.00	100	435.00	1550
117.00	156480	215.00	1004	321.00	1526	436.00	1702
118.00	10613	216.00	4280	322.00	408	437.00	2891
119.00	1714	217.00	74280	323.00	25176	438.00	542
120.00	2251	218.00	9706	324.00	4383	439.00	2671
121.00	493	219.00	1276	325.00	1243	441.00	144256
122.00	12992	221.00	68992	326.00	285	442.00	887040
123.00	18624	222.00	2660	327.00	3879	443.00	175616
124.00	9147	223.00	22096	328.00	2608	444.00	17272
125.00	7637	224.00	171968	329.00	706	445.00	685
127.00	735552	225.00	41872	330.00	73	446.00	259

Report Date: 09-Nov-2018 20:59:50 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4561.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 07-Nov-2018 19:54:30
Spectrum: Tune Spec :Average 360-362(4.08-4.08) Bgrd 353(4.06)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 367

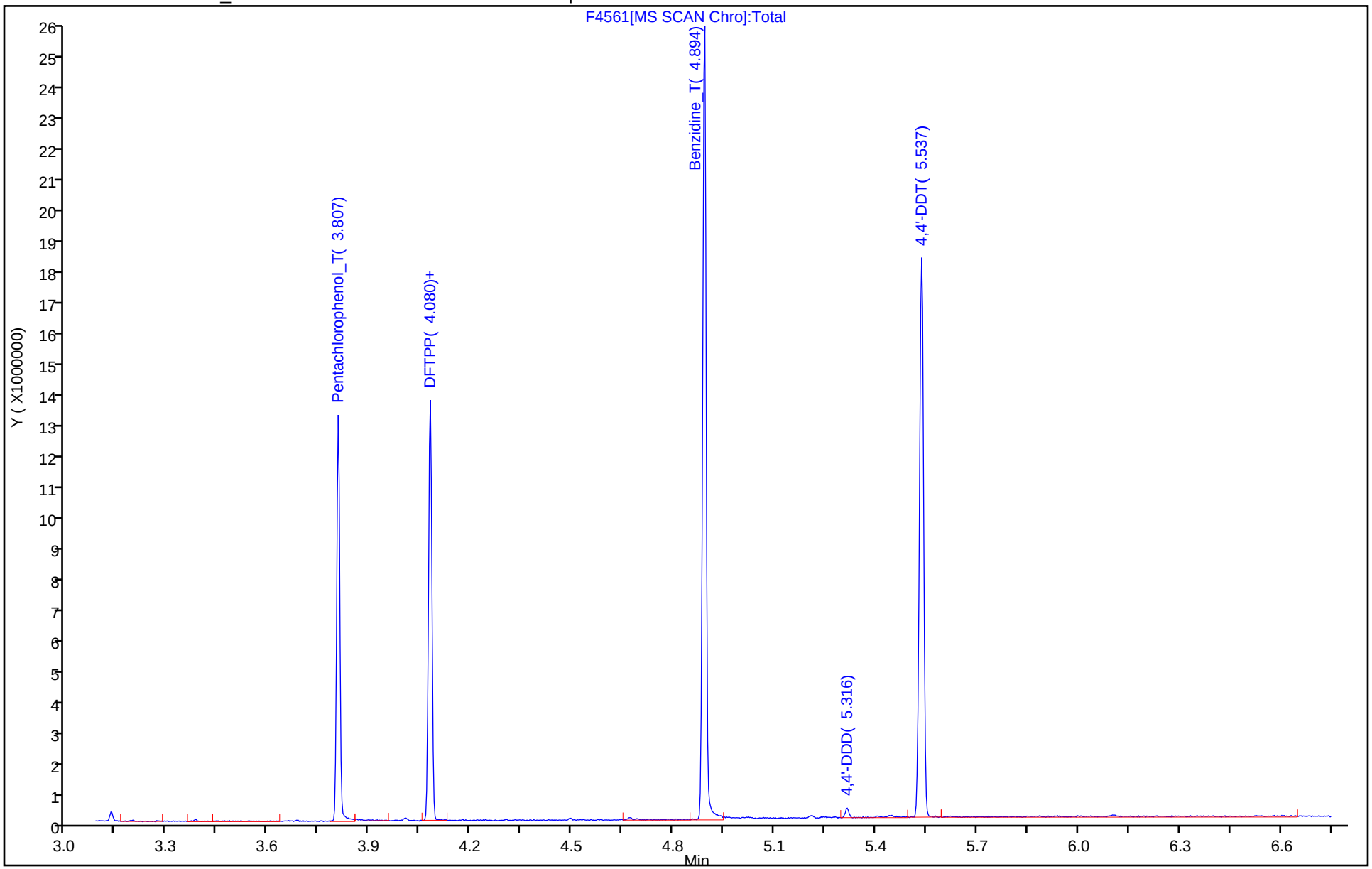
m/z	Y	m/z	Y	m/z	Y	m/z	Y
128.00	56248	226.00	2139	331.00	649	448.00	620
129.00	270400	227.00	69656	332.00	1012	451.00	298
130.00	22288	228.00	8502	333.00	2921	452.00	161
131.00	3851	229.00	12956	334.00	15332	453.00	323
132.00	1823	230.00	894	335.00	4057	454.00	291
134.00	8282	231.00	5046	336.00	669	455.00	156
135.00	20368	232.00	1372	337.00	11	457.00	205
136.00	8622	233.00	1039	338.00	188	458.00	754
137.00	12488	234.00	5007	339.00	550	459.00	338
138.00	2708	235.00	5945	341.00	2618	462.00	181
139.00	687	236.00	4629	342.00	941	466.00	298
141.00	29168	237.00	6467	343.00	376	467.00	416
142.00	9664	238.00	633	346.00	5276	473.00	416
143.00	5323	239.00	2072	347.00	1103	476.00	68
144.00	3028	240.00	1751	348.00	242	477.00	98
145.00	1802	241.00	4164	349.00	424	478.00	285
146.00	5482	242.00	7966	350.00	246	479.00	659
147.00	13915	243.00	11621	351.00	253	480.00	217
148.00	34744	244.00	125032	352.00	9241	483.00	84
149.00	7136	245.00	17712	353.00	5508	486.00	232
150.00	2514	246.00	23592	354.00	8543	488.00	241
151.00	5197	247.00	4075	355.00	592	491.00	140
152.00	3156	248.00	954	357.00	358	495.00	388
153.00	7664	249.00	4752	359.00	444	499.00	357
154.00	7771	250.00	1552	360.00	93		

Report Date: 09-Nov-2018 20:59:50 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4561.D

Injection Date:	07-Nov-2018 19:54:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		

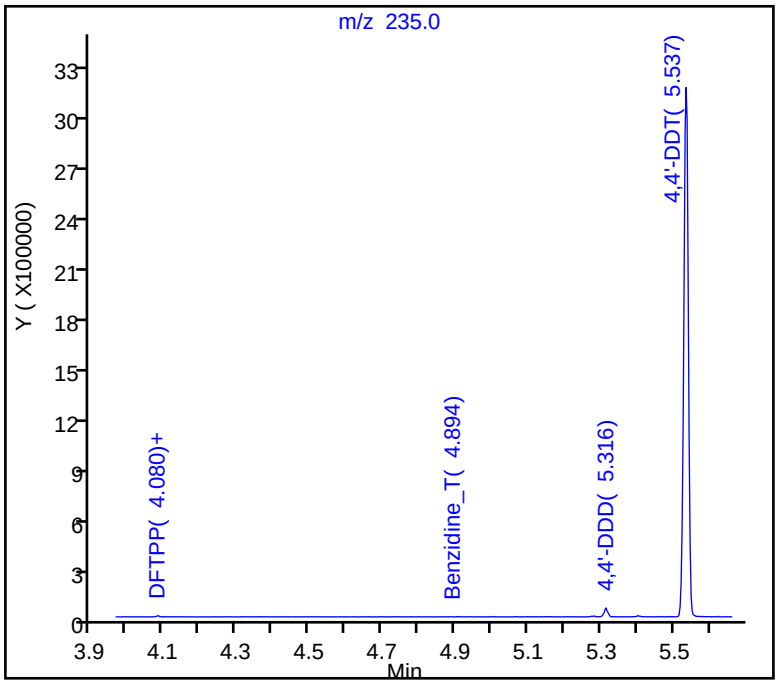


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4561.D
Injection Date: 07-Nov-2018 19:54:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

43 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

43 4,4'-DDT, Area = 2713193
41 4,4'-DDE, Area = 17995
42 4,4'-DDD, Area = 36197

%Breakdown: 1.96%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

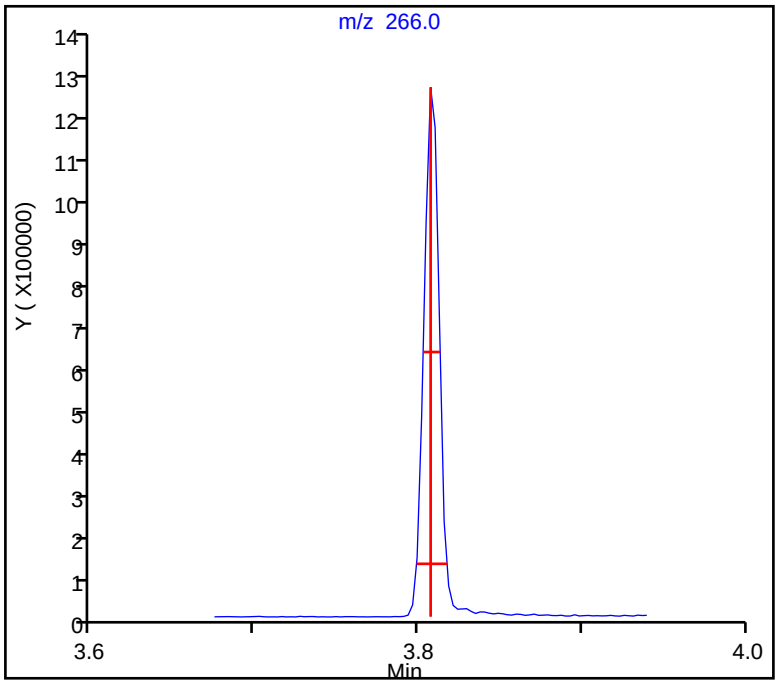
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4561.D
Injection Date: 07-Nov-2018 19:54:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

38 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.010 (min.)
Front Width = 0.009 (min.)

Tailing Factor = 1.2, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Denver

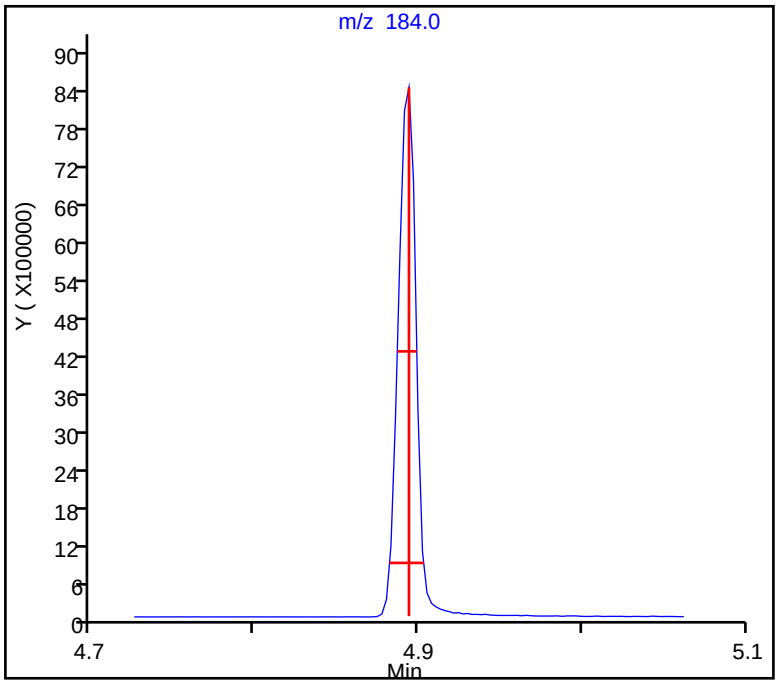
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4561.D
Injection Date: 07-Nov-2018 19:54:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

40 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.009 (min.)
Front Width = 0.012 (min.)

Tailing Factor = 0.8, Max. Tailing < 2.00
Passed



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4553.D
Lims ID: DFTPP
Client ID:
Sample Type: DFTPP
Inject. Date: 08-Nov-2018 15:41:30 ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: DFTPP
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:26:51 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: wickhamm Date: 08-Nov-2018 18:33:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
38 Pentachlorophenol_T	266	3.788	3.788	0.000	71	789726	NR	NR	a
39 DFTPP									
40 Benzidine_T	184	4.869	4.869	0.000	94	6032001	NR	NR	
41 4,4'-DDE	246	4.058	4.058	0.000	31	17453	NR	NR	
42 4,4'-DDD	235	5.286	5.286	0.000	87	31779	NR	NR	a
43 4,4'-DDT	235	5.504	5.504	0.000	94	2676839	NR	NR	a

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
Review Flags
a - User Assigned ID

Reagents:

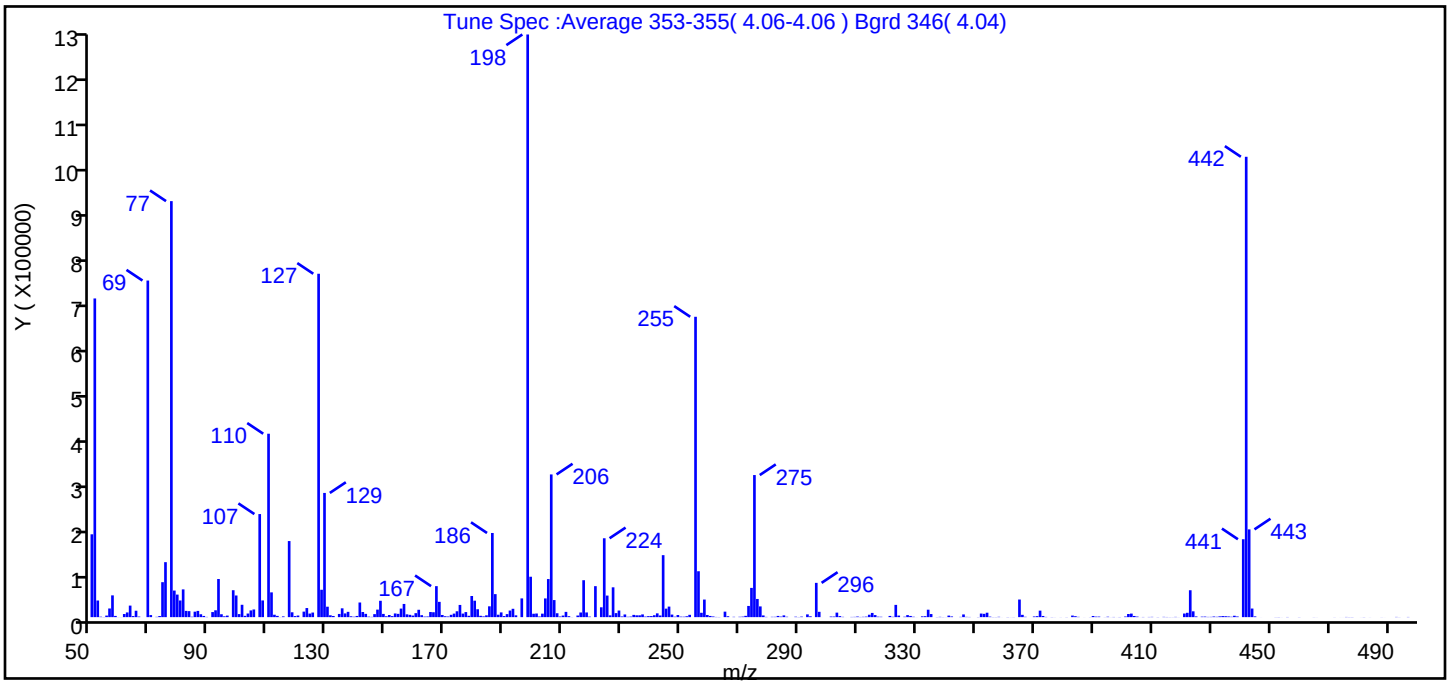
MS-DFTPP_00047 Amount Added: 0.50 Units: uL

MS Tune Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4553.D
Injection Date: 08-Nov-2018 15:41:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Tune Method: DFTPP Method 8270

39 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	54.7
68	<2% of mass 69	0.0 (0.0)
69	Present	57.8
70	<2% of mass 69	0.4 (0.6)
127	40-60% of mass 198	58.9
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.9
275	10-30% of mass 198	24.4
365	>1% of mass 198	3.0
441	Present but less than mass 443	13.4 (88.8)
442	>40% of mass 198	79.0
443	17-23% of mass 442	15.1 (19.1)

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4553.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 08-Nov-2018 15:41:30
Spectrum: Tune Spec :Average 353-355(4.06-4.06) Bgrd 346(4.04)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 364

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	177920	152.00	2203	248.00	967	359.00	64
51.00	684416	153.00	7902	249.00	4544	361.00	285
52.00	35728	154.00	7079	250.00	1049	362.00	106
53.00	965	155.00	18392	251.00	936	363.00	209
54.00	281	156.00	28344	252.00	1892	365.00	37840
55.00	3349	157.00	6031	253.00	4990	366.00	4969
56.00	18600	158.00	4964	255.00	645056	367.00	735
57.00	46768	159.00	3381	256.00	98568	370.00	1451
58.00	2636	160.00	8558	257.00	9365	371.00	2090
59.00	142	161.00	15824	258.00	37768	372.00	13947
60.00	156	162.00	4202	259.00	4663	373.00	2533
61.00	6719	163.00	1137	260.00	2561	374.00	490
62.00	10102	164.00	1378	261.00	1439	376.00	256
63.00	24784	165.00	10999	262.00	442	377.00	117
64.00	2298	166.00	10544	263.00	341	379.00	128
65.00	13743	167.00	66584	265.00	11806	381.00	223
66.00	1232	168.00	32832	266.00	1930	383.00	3378
69.00	722880	169.00	4649	268.00	697	384.00	2023
70.00	4406	170.00	1906	270.00	780	385.00	650
71.00	29	171.00	1381	271.00	1141	387.00	82
72.00	617	172.00	5006	272.00	2779	389.00	202
73.00	2387	173.00	7586	273.00	24048	390.00	2475
74.00	75088	174.00	12614	274.00	62800	391.00	1147
75.00	118072	175.00	26216	275.00	305152	392.00	1168
77.00	893440	176.00	7635	276.00	39056	394.00	154
78.00	57080	177.00	10880	277.00	23048	395.00	908
79.00	48424	178.00	2930	278.00	3643	396.00	96
80.00	35792	179.00	45408	279.00	536	397.00	398
81.00	59608	180.00	35328	281.00	701	398.00	66
82.00	13422	181.00	17000	282.00	722	399.00	333
83.00	12891	182.00	2907	283.00	2626	401.00	1366
84.00	878	183.00	1609	284.00	1147	402.00	6739
85.00	11750	184.00	3881	285.00	3775	403.00	7636

Report Date: 09-Nov-2018 21:26:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4553.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 08-Nov-2018 15:41:30
Spectrum: Tune Spec :Average 353-355(4.06-4.06) Bgrd 346(4.04)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 364

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	13401	185.00	23272	286.00	865	404.00	2493
87.00	6202	186.00	180736	289.00	944	405.00	1169
88.00	2579	187.00	49432	290.00	345	406.00	55
89.00	491	188.00	5210	291.00	1168	407.00	388
91.00	10880	189.00	10179	293.00	5928	409.00	413
92.00	14715	190.00	2313	294.00	1811	410.00	580
93.00	81896	191.00	6489	296.00	73624	412.00	271
94.00	6233	192.00	14160	297.00	11442	414.00	572
95.00	1780	193.00	17944	298.00	34	415.00	362
96.00	3324	194.00	3885	301.00	1327	416.00	221
98.00	57832	196.00	40264	302.00	1269	417.00	187
99.00	46512	198.00	1251328	303.00	9687	418.00	536
100.00	6558	199.00	86784	304.00	2209	419.00	127
101.00	26544	200.00	7291	305.00	656	421.00	7744
102.00	2785	201.00	7788	306.00	38	422.00	9337
103.00	7757	202.00	1385	307.00	11	423.00	57776
104.00	14445	203.00	7484	308.00	463	424.00	12515
105.00	16488	204.00	40192	309.00	582	425.00	1535
107.00	221376	205.00	81792	310.00	1288	427.00	1047
108.00	35880	206.00	306496	311.00	439	428.00	1190
110.00	393920	207.00	36648	312.00	736	429.00	542
111.00	53200	208.00	8357	313.00	1089	430.00	610
112.00	5187	209.00	1353	314.00	5171	431.00	1366
113.00	2701	210.00	3416	315.00	9069	432.00	741
114.00	187	211.00	11302	316.00	4411	433.00	1671
115.00	1587	212.00	2023	317.00	1039	434.00	2285
117.00	163392	213.00	180	318.00	801	435.00	1985
118.00	10435	215.00	3461	321.00	2590	436.00	1512
119.00	2299	216.00	9979	322.00	738	437.00	862
120.00	3438	217.00	79312	323.00	26320	438.00	2990
122.00	11854	218.00	10080	324.00	3342	439.00	1431
123.00	19536	219.00	1164	326.00	927	441.00	167296
124.00	7656	221.00	66544	327.00	4398	442.00	988672
125.00	9875	223.00	21152	328.00	2576	443.00	188480

Report Date: 09-Nov-2018 21:26:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4553.D\SMSF_8270SIMX.rslt\spectra.d
Injection Date: 08-Nov-2018 15:41:30
Spectrum: Tune Spec :Average 353-355(4.06-4.06) Bgrd 346(4.04)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 364

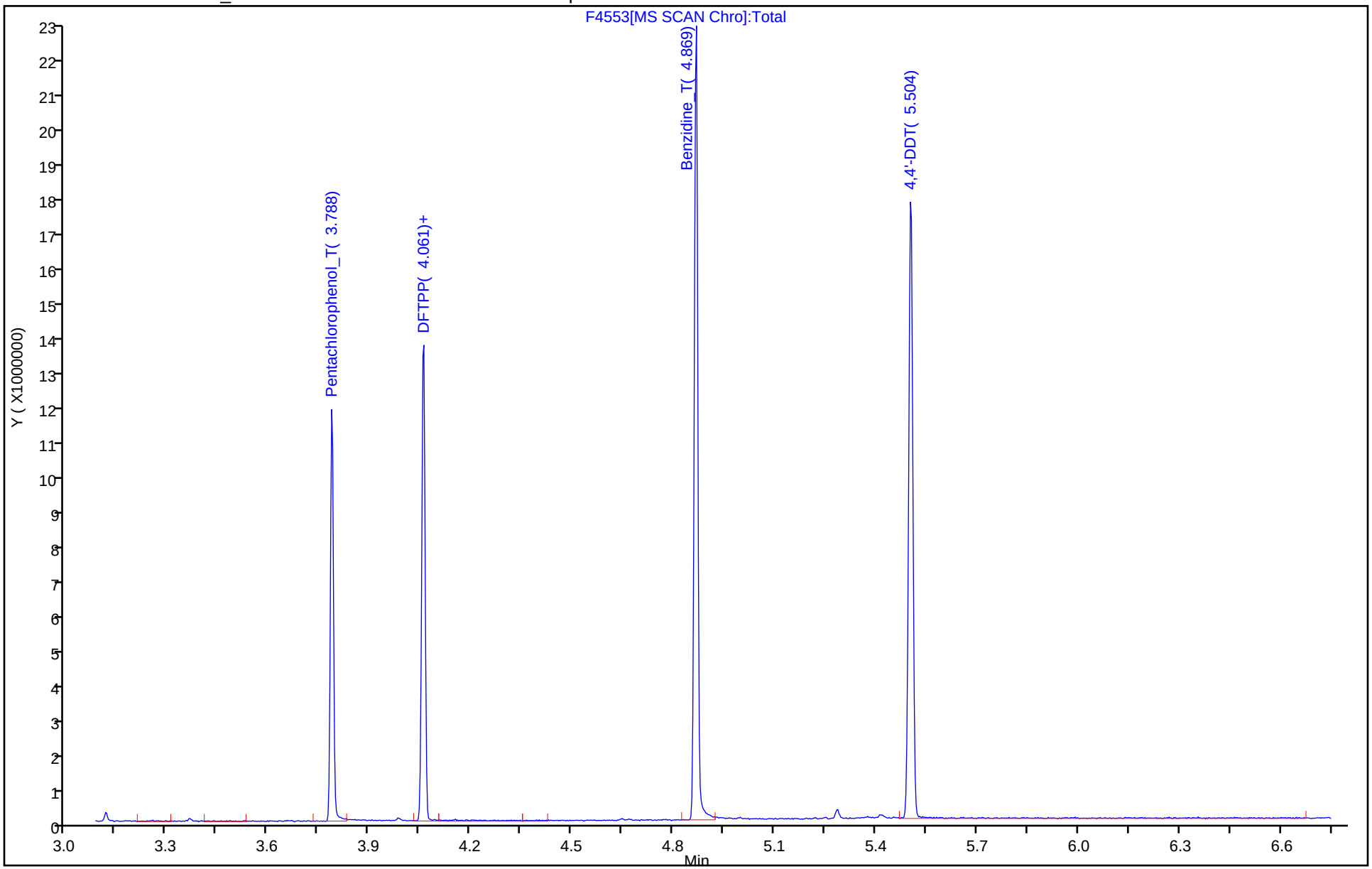
m/z	Y	m/z	Y	m/z	Y	m/z	Y
127.00	737472	224.00	169408	329.00	846	444.00	18480
128.00	58808	225.00	46320	330.00	90	445.00	1583
129.00	266752	226.00	3838	332.00	1718	447.00	57
130.00	22416	227.00	64056	333.00	2017	452.00	213
131.00	3997	228.00	8653	334.00	15980	453.00	302
132.00	2486	229.00	14175	335.00	6636	454.00	85
134.00	6864	230.00	1419	337.00	284	456.00	355
135.00	18960	231.00	5764	338.00	632	460.00	233
136.00	7960	232.00	777	339.00	244	465.00	158
137.00	11387	233.00	1193	340.00	136	466.00	82
138.00	1839	234.00	4847	341.00	3303	472.00	144
139.00	893	235.00	3919	342.00	1494	474.00	59
140.00	2549	236.00	3923	345.00	570	475.00	49
141.00	31448	237.00	5862	346.00	5817	476.00	412
142.00	11025	238.00	1178	347.00	617	477.00	261
143.00	7034	239.00	2158	348.00	428	478.00	275
144.00	1108	240.00	2278	351.00	309	481.00	66
145.00	562	241.00	4065	352.00	7694	482.00	229
146.00	6456	242.00	8147	353.00	7116	484.00	97
147.00	16175	243.00	3534	354.00	9508	488.00	131
148.00	35128	244.00	133120	355.00	1114	489.00	48
149.00	6970	245.00	18240	356.00	256	493.00	477
150.00	1837	246.00	22664	357.00	262	494.00	165
151.00	4590	247.00	5496	358.00	698	497.00	408

Report Date: 09-Nov-2018 21:26:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4553.D

Injection Date:	08-Nov-2018 15:41:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	DFTPP			Worklist Smp#:	2
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		

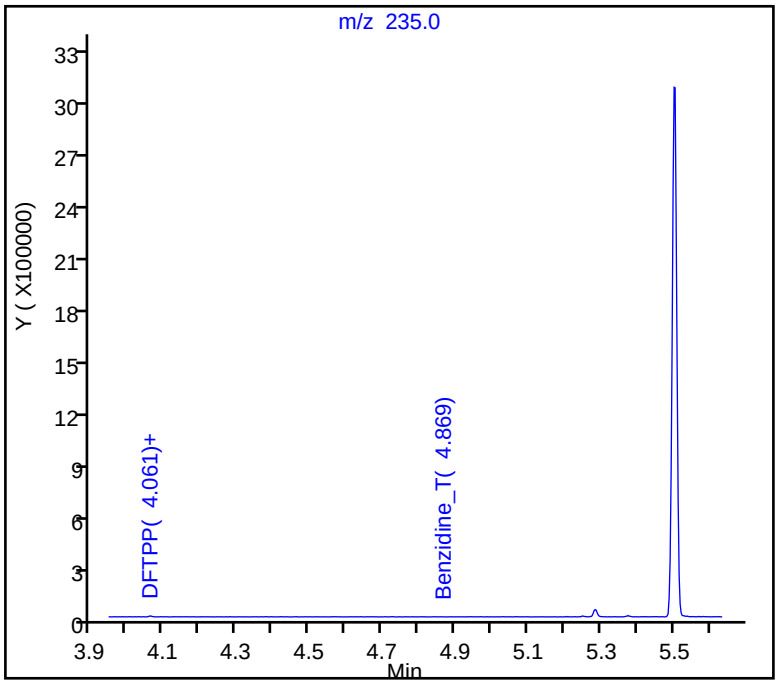


Breakdown Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4553.D
Injection Date: 08-Nov-2018 15:41:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

43 4,4'-DDT, Detector: MS SCAN



SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

43 4,4'-DDT, Area = 2676839
41 4,4'-DDE, Area = 17453
42 4,4'-DDD, Area = 31779

%Breakdown: 1.81%, Max Limit: 20.00%
Passed

Peak Tailing Report

TestAmerica Denver

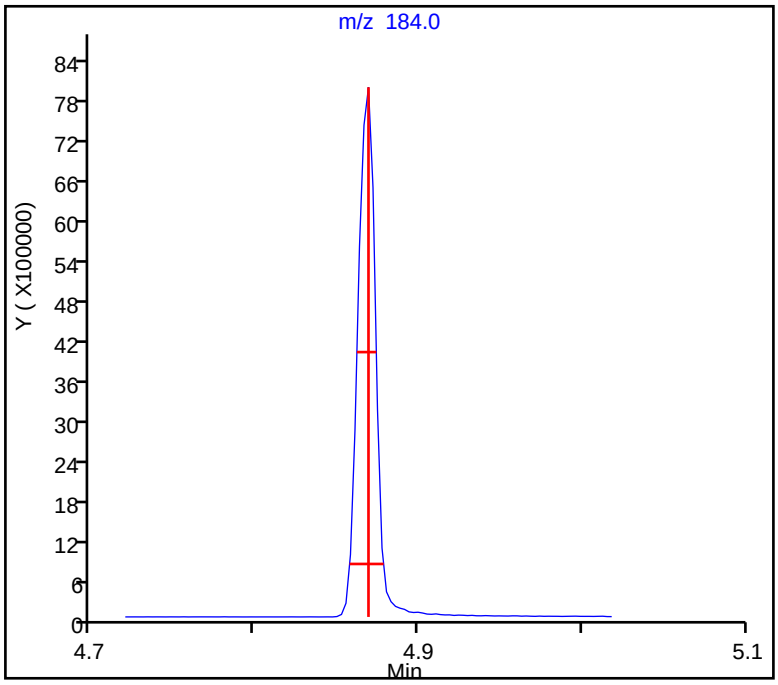
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4553.D
Injection Date: 08-Nov-2018 15:41:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

40 Benzidine_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.009 (min.)
Front Width = 0.012 (min.)

Tailing Factor = 0.8, Max. Tailing < 2.00
Passed



Peak Tailing Report

TestAmerica Denver

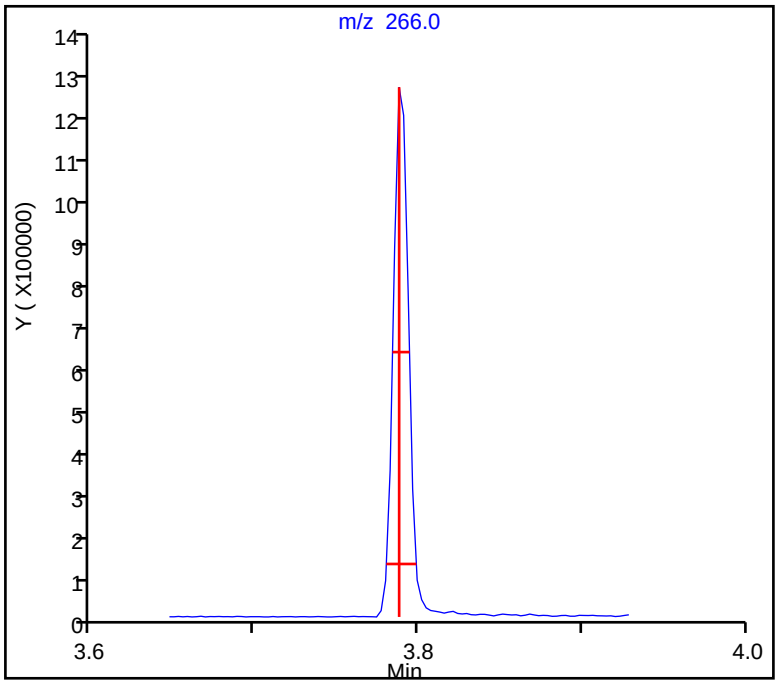
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4553.D
Injection Date: 08-Nov-2018 15:41:30 Instrument ID: SMS_F
Lims ID: DFTPP
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 1 Worklist Smp#: 2
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

38 Pentachlorophenol_T, Detector: MS SCAN

Peak Tailing Factor =
BackWidth/FrontWidth @ 10% Peak Height

Back Width = 0.011 (min.)
Front Width = 0.008 (min.)

Tailing Factor = 1.3, Max. Tailing < 2.00
Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436346/1-A

Matrix: Water | Lab File ID: F4555.D

Analysis Method: 8270D SIM | Date Collected:

Extract. Method: 3510C | Date Extracted: 11/05/2018 13:07

Sample wt/vol: 250(mL) | Date Analyzed: 11/08/2018 16:59

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436903 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.012	U	0.10	0.012	0.0059
91-57-6	2-Methylnaphthalene	0.012	U	0.10	0.012	0.0060
83-32-9	Acenaphthene	0.040	U	0.10	0.040	0.0042
208-96-8	Acenaphthylene	0.040	U	0.10	0.040	0.0051
120-12-7	Anthracene	0.040	U M	0.10	0.040	0.0056
56-55-3	Benzo[a]anthracene	0.012	U	0.10	0.012	0.0042
50-32-8	Benzo[a]pyrene	0.012	U M	0.10	0.012	0.0069
205-99-2	Benzo[b]fluoranthene	0.012	U	0.10	0.012	0.0031
191-24-2	Benzo[g,h,i]perylene	0.012	U	0.10	0.012	0.0062
207-08-9	Benzo[k]fluoranthene	0.012	U	0.10	0.012	0.0063
218-01-9	Chrysene	0.012	U	0.10	0.012	0.0033
53-70-3	Dibenz(a,h)anthracene	0.012	U	0.10	0.012	0.0041
206-44-0	Fluoranthene	0.0120	J	0.10	0.012	0.0048
86-73-7	Fluorene	0.040	U	0.10	0.040	0.0055
193-39-5	Indeno[1,2,3-cd]pyrene	0.040	U	0.10	0.040	0.0045
91-20-3	Naphthalene	0.012	U	0.10	0.012	0.0080
85-01-8	Phenanthrene	0.0158	J	0.10	0.020	0.0093
129-00-0	Pyrene	0.020	U	0.10	0.020	0.0061

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	80		53-106
4165-60-0	Nitrobenzene-d5	70		55-111
1718-51-0	Terphenyl-d14	78		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4555.D
Lims ID: MB 280-436346/1-A
Client ID:
Sample Type: MB
Inject. Date: 08-Nov-2018 16:59:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: mb280-436346_1-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:26:54 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: wickhamm Date: 09-Nov-2018 19:22:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.626	7.626	0.000	97	43628	600.0	600.0	
* 2 Phenanthrene-d10	188	9.111	9.111	0.000	99	92369	600.0	600.0	
* 3 Chrysene-d12	240	13.169	13.160	0.009	91	73383	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.169	5.169	0.000	99	21656	500.0	350.7	
$ 5 2-Fluorobiphenyl	172	6.935	6.935	0.000	100	42649	500.0	398.5	
$ 6 Terphenyl-d14	244	11.064	11.056	0.008	100	46820	500.0	391.4	
8 1,4-Dioxane	88		1.692					ND	
9 N-Nitrosodimethylamine	74		2.401					ND	U
10 Naphthalene	128		5.898					ND	
11 2-Methylnaphthalene	142		6.572					ND	
12 1-Methylnaphthalene	142		6.678					ND	
13 Dimethyl phthalate	163		7.324					ND	
14 Acenaphthylene	152		7.479					ND	
15 Acenaphthene	153		7.652					ND	
16 Dibenzofuran	168		7.827					ND	
17 Diethyl phthalate	149	8.021	8.021	0.000	98	6325		51.8	
18 Fluorene	166		8.167					ND	
19 N-Nitrosodiphenylamine	169		8.264					ND	
20 Phenanthrene	178	9.137	9.128	0.009	57	769		3.95	
21 Anthracene	178		9.180					ND	U
22 Di-n-butyl phthalate	149	9.673	9.673	0.000	1	4216		23.0	
23 Fluoranthene	202	10.502	10.502	0.000	28	607		2.99	
24 Pyrene	202		10.831					ND	
25 Butyl benzyl phthalate	149		11.929					ND	
26 Benzo[a]anthracene	228		13.133					ND	
27 Chrysene	228		13.223					ND	
28 Bis(2-ethylhexyl) phthalat	149	13.286	13.277	0.009	1	14180		152.1	
29 Di-n-octyl phthalate	149	15.218	15.070	0.148	1	5215		58.0	
30 Benzo[b]fluoranthene	252		15.988					ND	
31 Benzo[k]fluoranthene	252		16.062					ND	
32 Benzo[a]pyrene	252		16.911					ND	U
33 Indeno[1,2,3-cd]pyrene	276		20.187					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
34 Dibenz(a,h)anthracene	278		20.279					ND	
35 Benzo[g,h,i]perylene	276		20.922					ND	
$ 53 2-methylnaphthalene-d10	152	6.549	6.542	0.007	90	29220	500.0	387.1	
$ 54 Fluoranthene-d10	212	10.477	10.477	0.000	99	60653	500.0	390.8	
38 Pentachlorophenol_T	266		3.788					ND	
40 Benzidine_T	184		4.869					ND	
41 4,4'-DDE	246		4.058					ND	
42 4,4'-DDD	235		5.286					ND	
43 4,4'-DDT	235		5.504					ND	
S 44 TPAH	1		0.000					ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

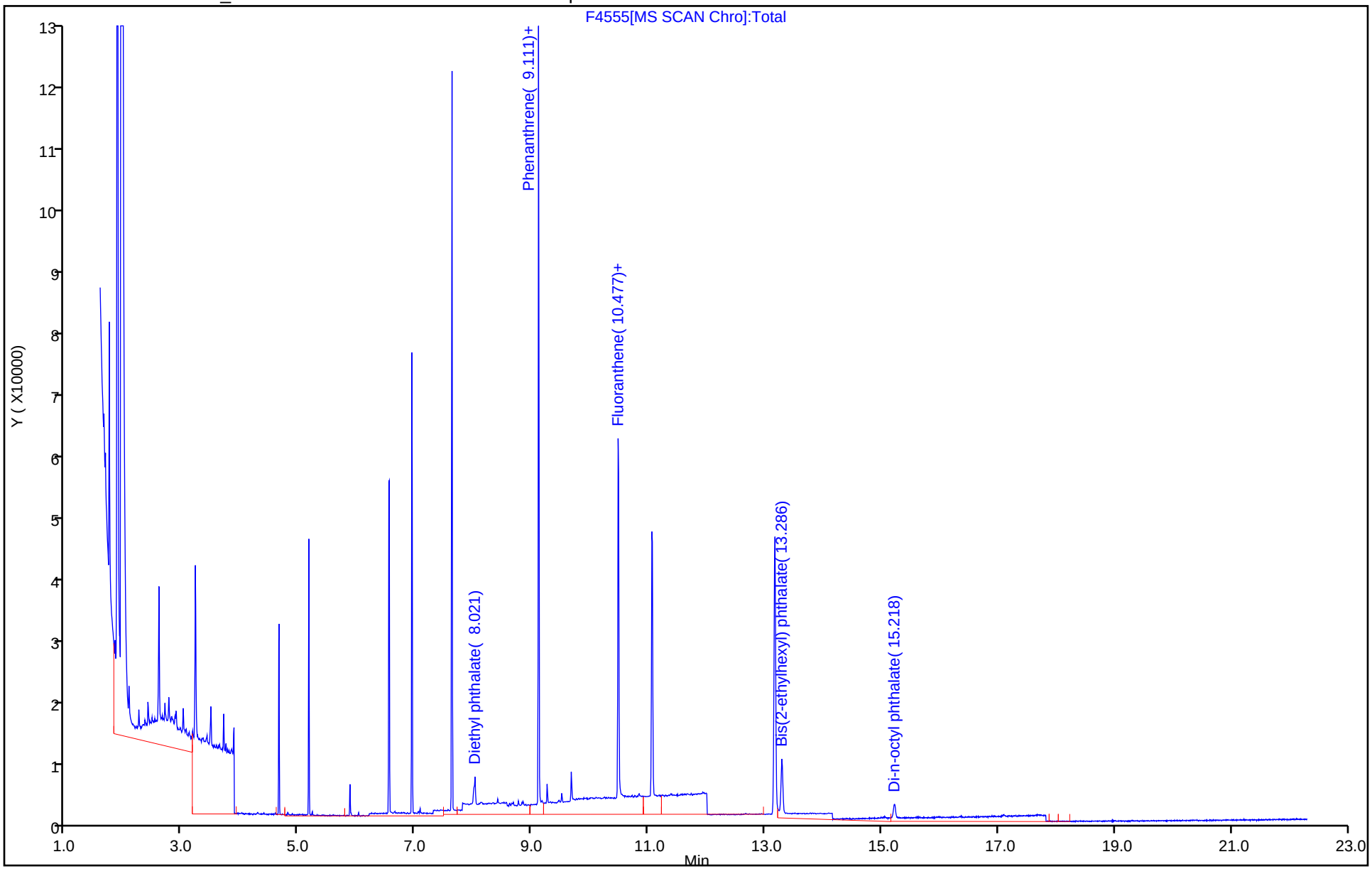
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 09-Nov-2018 21:26:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4555.D

Injection Date:	08-Nov-2018 16:59:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	MB 280-436346/1-A			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4555.D
Lims ID: MB 280-436346/1-A
Client ID:
Sample Type: MB
Inject. Date: 08-Nov-2018 16:59:30 ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: mb280-436346_1-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:26:54 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: wickhamm Date: 09-Nov-2018 19:22:27

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	350.7	70.15
$ 5 2-Fluorobiphenyl	500.0	398.5	79.71
$ 6 Terphenyl-d14	500.0	391.4	78.28
$ 53 2-methylnaphthalene-d10	500.0	387.1	77.42
$ 54 Fluoranthene-d10	500.0	390.8	78.16

Report Date: 09-Nov-2018 21:26:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4555.D

Injection Date: 08-Nov-2018 16:59:30 Instrument ID: SMS_F

Lims ID: MB 280-436346/1-A

Client ID:

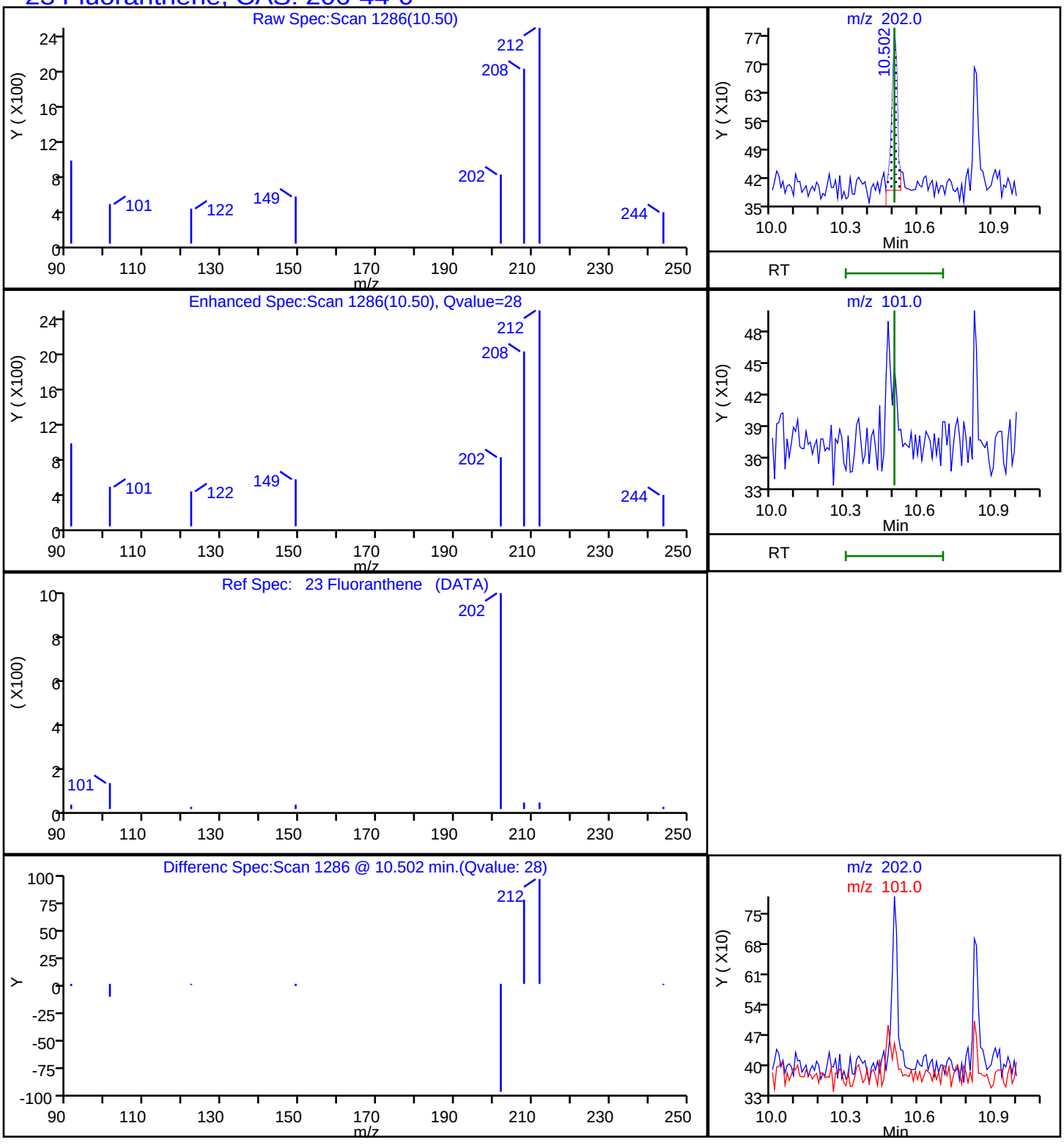
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

Column: Detector MS SCAN

23 Fluoranthene, CAS: 206-44-0



Report Date: 09-Nov-2018 21:26:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4555.D

Injection Date: 08-Nov-2018 16:59:30 Instrument ID: SMS_F

Lims ID: MB 280-436346/1-A

Client ID:

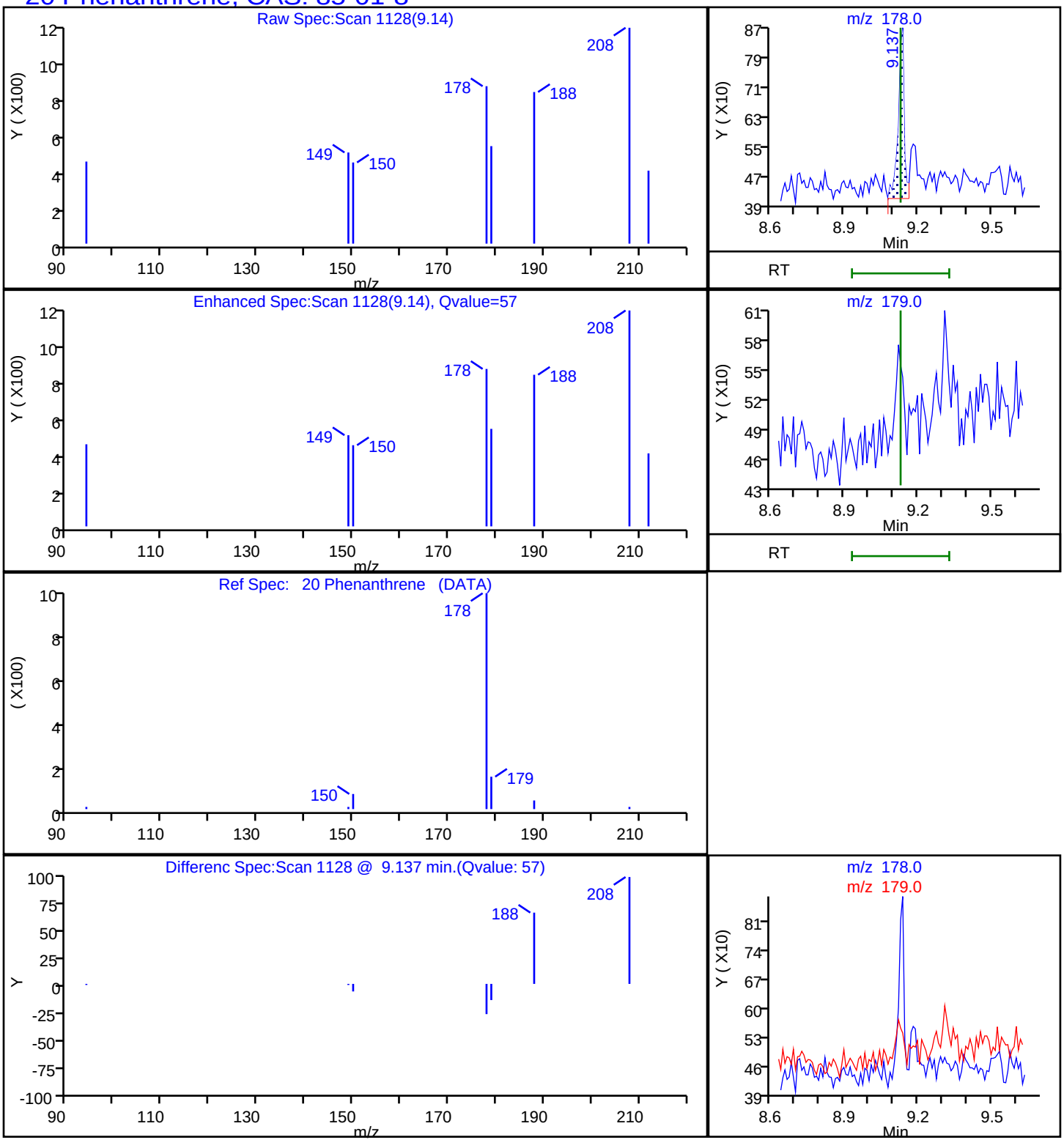
Operator ID: WICKHAMM ALS Bottle#: 3 Worklist Smp#: 4

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM

Column: Detector MS SCAN

20 Phenanthrene, CAS: 85-01-8



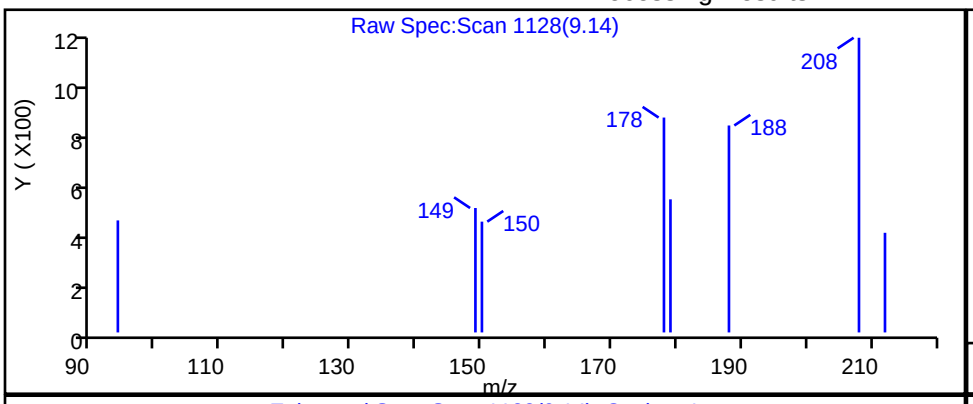
User Disabled Compound Report

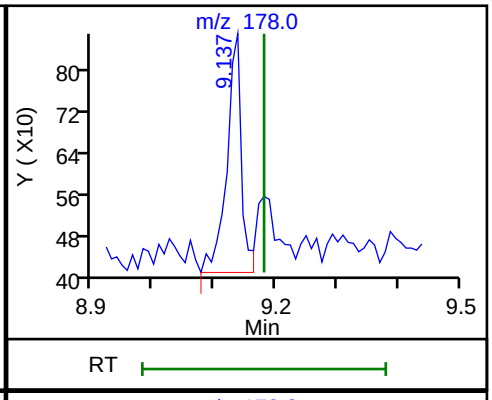
TestAmerica Denver

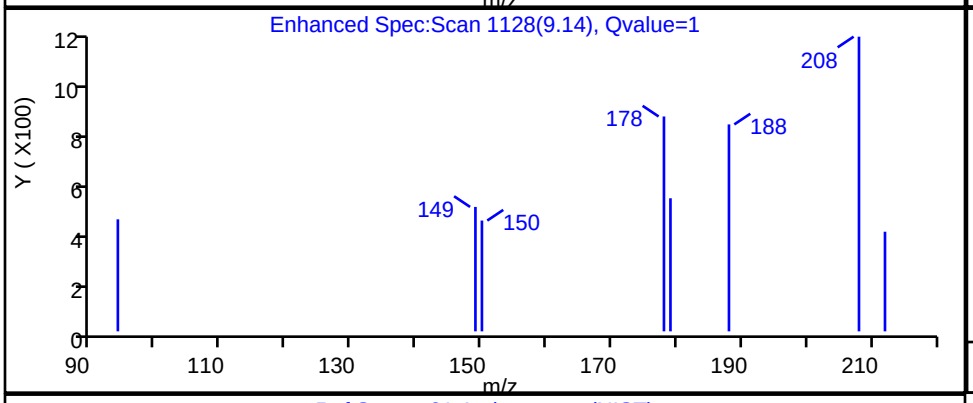
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4555.D				
Injection Date:	08-Nov-2018 16:59:30	Instrument ID:	SMS_F		
Lims ID:	MB 280-436346/1-A				
Client ID:					
Operator ID:	WICKHAMM	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

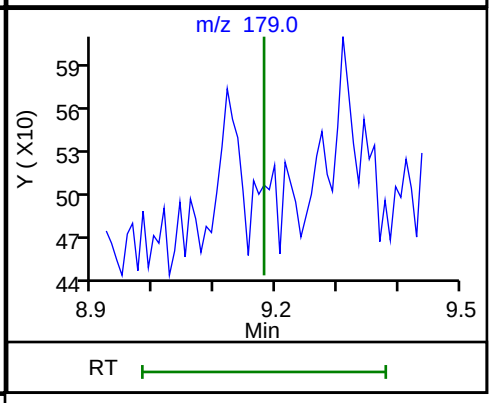
21 Anthracene, CAS: 120-12-7

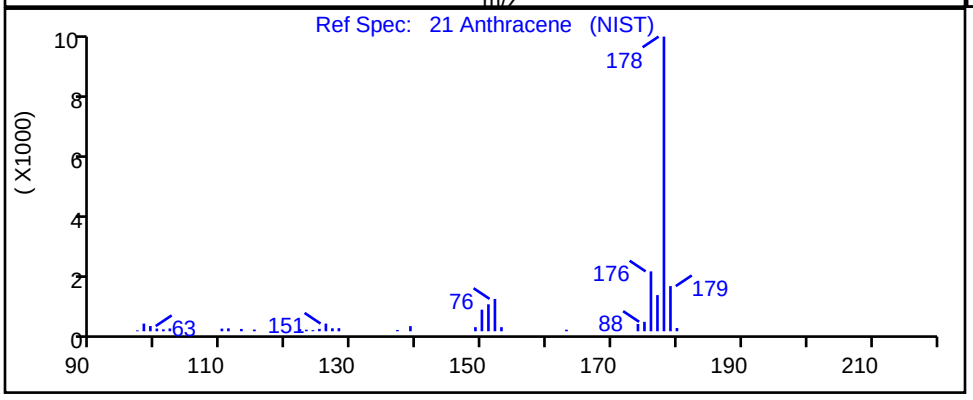
Processing Results











RT	Mass	Response	Amount
9.14	178.00	769	4.569225
9.18	179.00	0	

Reviewer: wickhamm, 09-Nov-2018 19:22:10

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

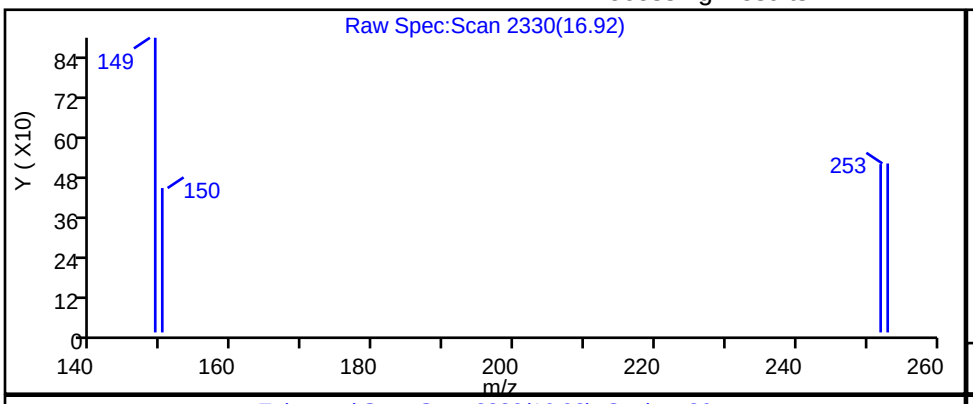
User Disabled Compound Report

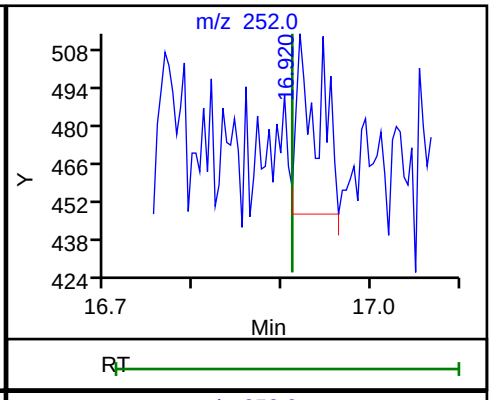
TestAmerica Denver

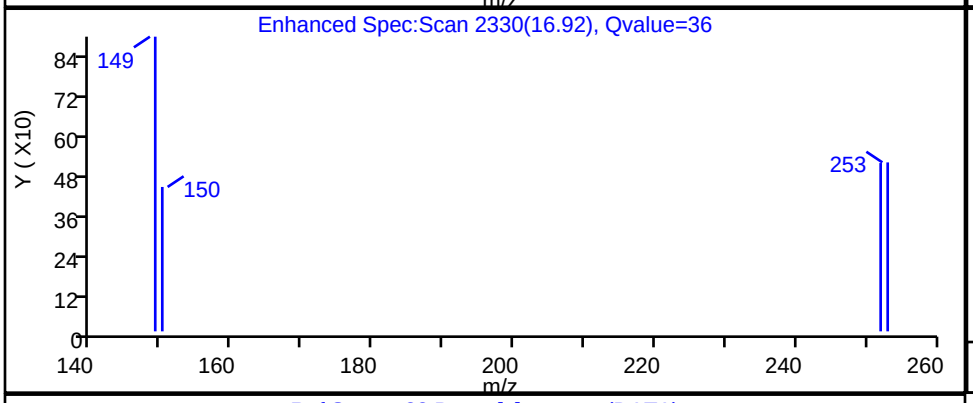
Data File:	\\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4555.D				
Injection Date:	08-Nov-2018 16:59:30	Instrument ID:	SMS_F		
Lims ID:	MB 280-436346/1-A				
Client ID:					
Operator ID:	WICKHAMM	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		
Column:		Detector	MS SCAN		

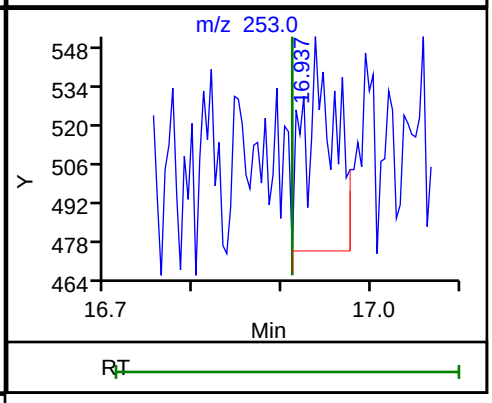
32 Benzo[a]pyrene, CAS: 50-32-8

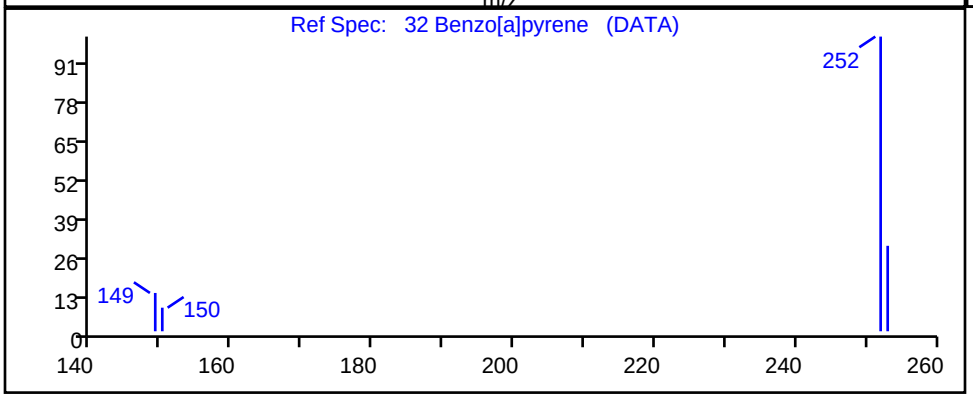
Processing Results











RT	Mass	Response	Amount
16.92	252.00	118	0.829903
16.94	253.00	181	

Reviewer: wickhamm, 09-Nov-2018 19:22:20

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436346/2-A

Matrix: Water | Lab File ID: F4556.D

Analysis Method: 8270D SIM | Date Collected:

Extract. Method: 3510C | Date Extracted: 11/05/2018 13:07

Sample wt/vol: 250(mL) | Date Analyzed: 11/08/2018 17:28

Con. Extract Vol.: 1(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436903 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
90-12-0	1-Methylnaphthalene	0.701		0.10	0.012	0.0059
91-57-6	2-Methylnaphthalene	0.661		0.10	0.012	0.0060
83-32-9	Acenaphthene	0.660		0.10	0.040	0.0042
208-96-8	Acenaphthylene	0.547		0.10	0.040	0.0051
120-12-7	Anthracene	0.747	M	0.10	0.040	0.0056
56-55-3	Benzo[a]anthracene	0.800		0.10	0.012	0.0042
50-32-8	Benzo[a]pyrene	0.656		0.10	0.012	0.0069
205-99-2	Benzo[b]fluoranthene	0.715		0.10	0.012	0.0031
191-24-2	Benzo[g,h,i]perylene	0.576		0.10	0.012	0.0062
207-08-9	Benzo[k]fluoranthene	0.728		0.10	0.012	0.0063
218-01-9	Chrysene	0.864		0.10	0.012	0.0033
53-70-3	Dibenz(a,h)anthracene	0.532		0.10	0.012	0.0041
206-44-0	Fluoranthene	0.794		0.10	0.012	0.0048
86-73-7	Fluorene	0.700		0.10	0.040	0.0055
193-39-5	Indeno[1,2,3-cd]pyrene	0.547		0.10	0.040	0.0045
91-20-3	Naphthalene	0.682		0.10	0.012	0.0080
85-01-8	Phenanthrene	0.826	M	0.10	0.020	0.0093
129-00-0	Pyrene	0.878		0.10	0.020	0.0061

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl	76		53-106
4165-60-0	Nitrobenzene-d5	68		55-111
1718-51-0	Terphenyl-d14	86		58-132

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4556.D
Lims ID: LCS 280-436346/2-A
Client ID:
Sample Type: LCS
Inject. Date: 08-Nov-2018 17:28:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcs280-436346_2-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:26:54 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: wickhamm Date: 09-Nov-2018 19:23:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 1 Acenaphthene-d10	164	7.618	7.626	-0.008	84	45057	600.0	600.0	
* 2 Phenanthrene-d10	188	9.111	9.111	0.000	97	103489	600.0	600.0	
* 3 Chrysene-d12	240	13.151	13.160	-0.009	96	91350	600.0	600.0	
$ 4 Nitrobenzene-d5	82	5.164	5.169	-0.005	98	21689	500.0	340.1	
$ 5 2-Fluorobiphenyl	172	6.936	6.935	0.001	99	41917	500.0	379.3	
$ 6 Terphenyl-d14	244	11.056	11.056	0.000	100	57486	500.0	428.9	
8 1,4-Dioxane	88		1.692				ND	ND	
9 N-Nitrosodimethylamine	74	2.407	2.401	0.006	25	5773	225.0	146.5	
10 Naphthalene	128	5.893	5.898	-0.005	100	25585	225.0	170.6	
11 2-Methylnaphthalene	142	6.572	6.572	0.000	97	17086	225.0	165.3	
12 1-Methylnaphthalene	142	6.678	6.678	0.000	91	16104	225.0	175.2	
13 Dimethyl phthalate	163	7.324	7.324	0.000	1	18269	225.0	152.7	
14 Acenaphthylene	152	7.479	7.479	0.000	98	19948	225.0	136.7	
15 Acenaphthene	153	7.652	7.652	0.000	100	16486	225.0	164.9	
16 Dibenzofuran	168	7.818	7.827	-0.009	96	24790	225.0	172.3	
17 Diethyl phthalate	149	8.021	8.021	0.000	98	19024	225.0	150.7	
18 Fluorene	166	8.167	8.167	0.000	99	20217	225.0	174.9	
19 N-Nitrosodiphenylamine	169	8.264	8.264	0.000	98	18126	225.0	203.4	
20 Phenanthrene	178	9.128	9.128	0.000	100	45028	225.0	206.5	M
21 Anthracene	178	9.180	9.180	0.000	1	35218	225.0	186.8	M
22 Di-n-butyl phthalate	149	9.664	9.673	-0.009	1	36232	225.0	176.1	
23 Fluoranthene	202	10.494	10.502	-0.008	97	45175	225.0	198.5	
24 Pyrene	202	10.831	10.831	0.000	99	51629	225.0	219.5	
25 Butyl benzyl phthalate	149	11.929	11.929	0.000	1	10738	225.0	130.5	
26 Benzo[a]anthracene	228	13.133	13.133	0.000	65	38381	225.0	200.1	
27 Chrysene	228	13.214	13.223	-0.009	96	44249	225.0	215.9	
28 Bis(2-ethylhexyl) phthalat	149	13.277	13.277	0.000	1	34350	225.0	328.8	
29 Di-n-octyl phthalate	149	15.061	15.070	-0.009	1	10364	225.0	79.4	
30 Benzo[b]fluoranthene	252	15.979	15.988	-0.009	100	34877	225.0	178.9	
31 Benzo[k]fluoranthene	252	16.058	16.062	-0.004	100	35998	225.0	182.1	
32 Benzo[a]pyrene	252	16.902	16.911	-0.009	98	29038	225.0	164.1	
33 Indeno[1,2,3-cd]pyrene	276	20.179	20.187	-0.008	96	24318	225.0	136.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
34 Dibenz(a,h)anthracene	278	20.271	20.279	-0.008	90	24114	225.0	133.1	
35 Benzo[g,h,i]perylene	276	20.918	20.922	-0.004	98	30239	225.0	143.9	
$ 53 2-methylnaphthalene-d10	152	6.542	6.542	0.000	99	27898	500.0	357.9	
$ 54 Fluoranthene-d10	212	10.477	10.477	0.000	100	78021	500.0	448.7	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

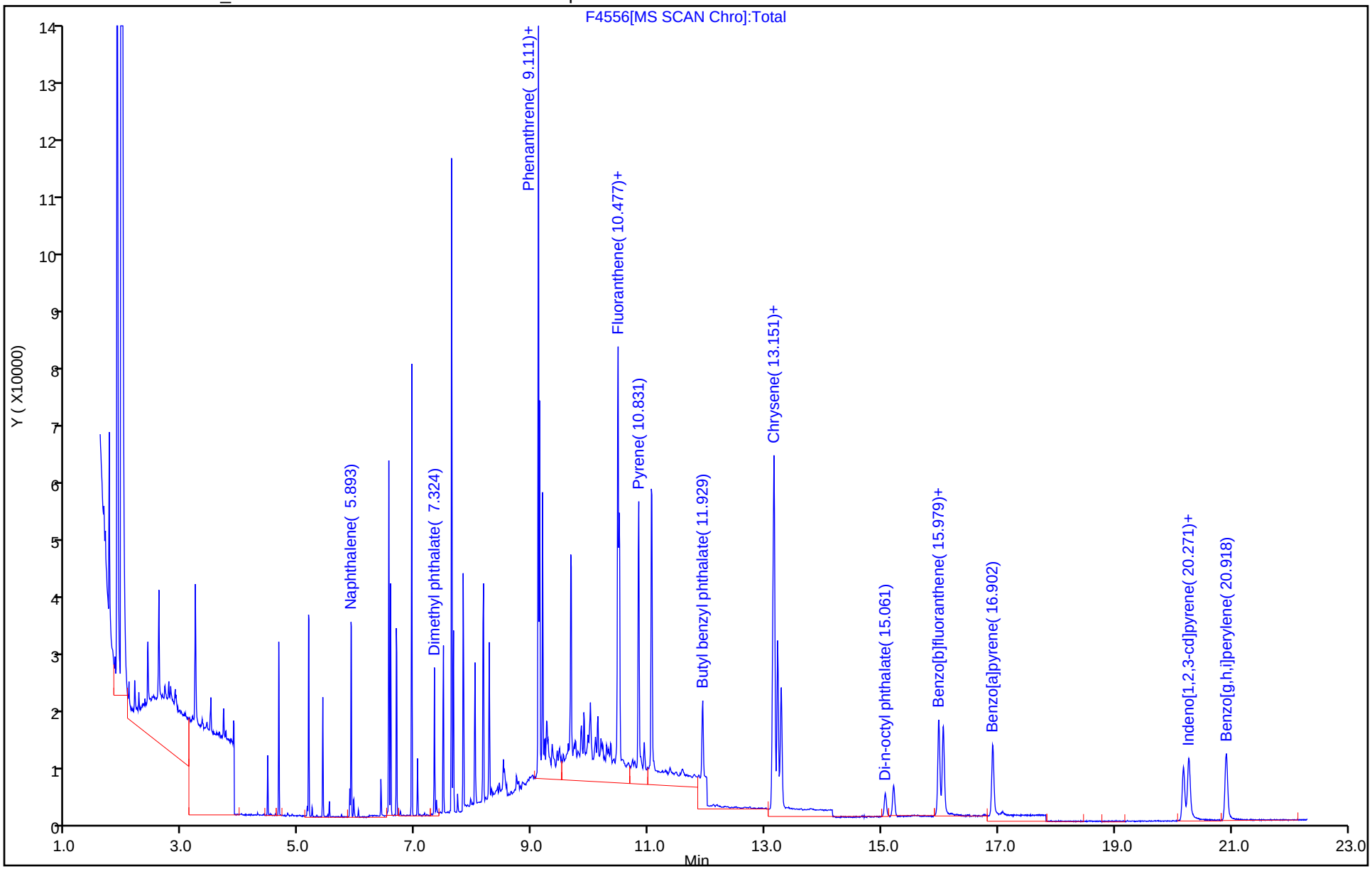
MS-SIM IS_00033 Amount Added: 20.00 Units: uL Run Reagent

Report Date: 09-Nov-2018 21:26:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4556.D

Injection Date:	08-Nov-2018 17:28:30	Instrument ID:	SMS_F	Operator ID:	WICKHAMM
Lims ID:	LCS 280-436346/2-A			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	SMSF_8270SIMX	Limit Group:	MSSV - 8270C-SIM		



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4556.D
Lims ID: LCS 280-436346/2-A
Client ID:
Sample Type: LCS
Inject. Date: 08-Nov-2018 17:28:30 ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: lcs280-436346_2-a
Operator ID: WICKHAMM Instrument ID: SMS_F

Method: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\SMSF_8270SIMX.m
Limit Group: MSSV - 8270C-SIM
Last Update: 09-Nov-2018 21:26:54 Calib Date: 07-Nov-2018 23:58:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SMS_F\20181107-75951.b\F4570.D

Column 1 : Det: MS SCAN
Process Host: CTX0302

First Level Reviewer: wickhamm Date: 09-Nov-2018 19:23:14

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Nitrobenzene-d5	500.0	340.1	68.03
$ 5 2-Fluorobiphenyl	500.0	379.3	75.86
$ 6 Terphenyl-d14	500.0	428.9	85.78
$ 53 2-methylnaphthalene-d10	500.0	357.9	71.58
$ 54 Fluoranthene-d10	500.0	448.7	89.74

Manual Integration/User Assign Peak Report

TestAmerica Denver

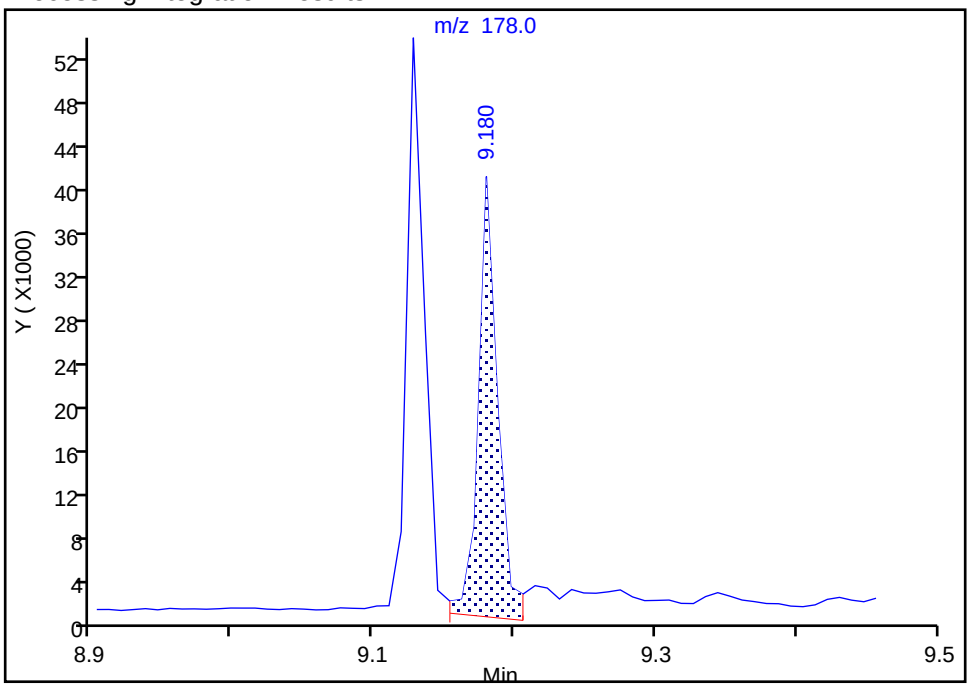
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4556.D
Injection Date: 08-Nov-2018 17:28:30 Instrument ID: SMS_F
Lims ID: LCS 280-436346/2-A
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

21 Anthracene, CAS: 120-12-7

Signal: 1

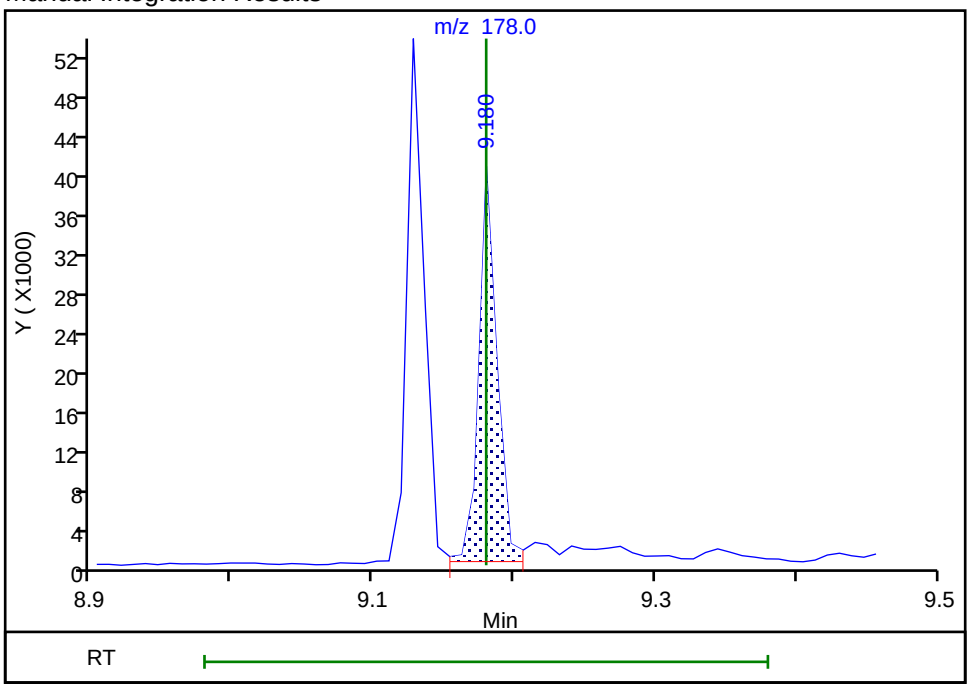
Processing Integration Results

RT: 9.18
Area: 38634
Amount: 204.8887
Amount Units: ng/ml



Manual Integration Results

RT: 9.18
Area: 35218
Amount: 186.7725
Amount Units: ng/ml



Reviewer: wickhamm, 09-Nov-2018 19:23:00
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

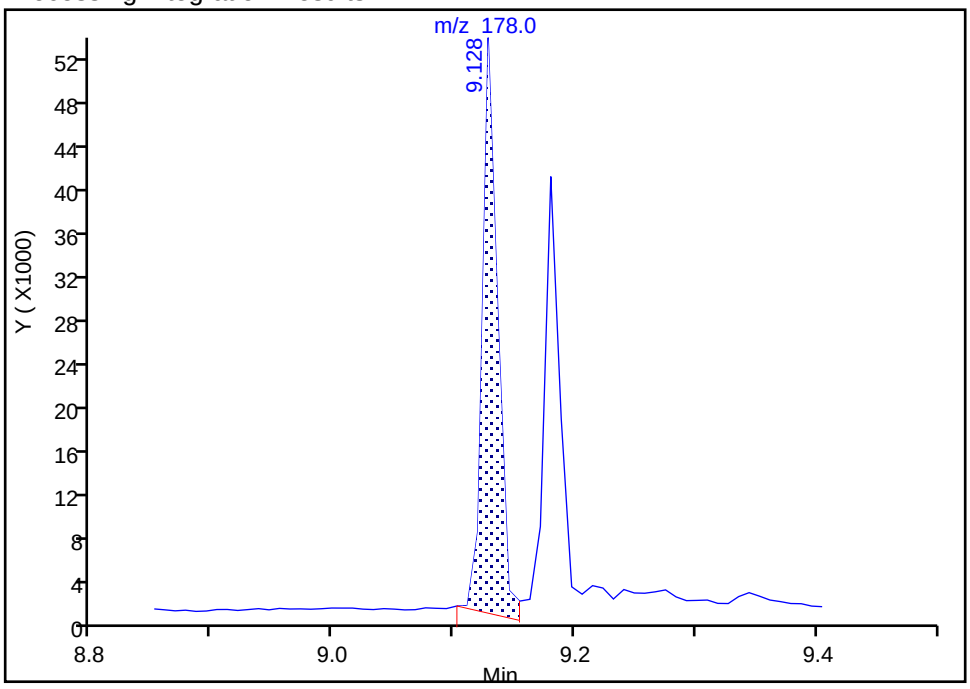
Data File: \\ChromNA\Denver\ChromData\SMS_F\20181108-75997.b\F4556.D
Injection Date: 08-Nov-2018 17:28:30 Instrument ID: SMS_F
Lims ID: LCS 280-436346/2-A
Client ID:
Operator ID: WICKHAMM ALS Bottle#: 4 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: SMSF_8270SIMX Limit Group: MSSV - 8270C-SIM
Column: Detector MS SCAN

20 Phenanthrene, CAS: 85-01-8

Signal: 1

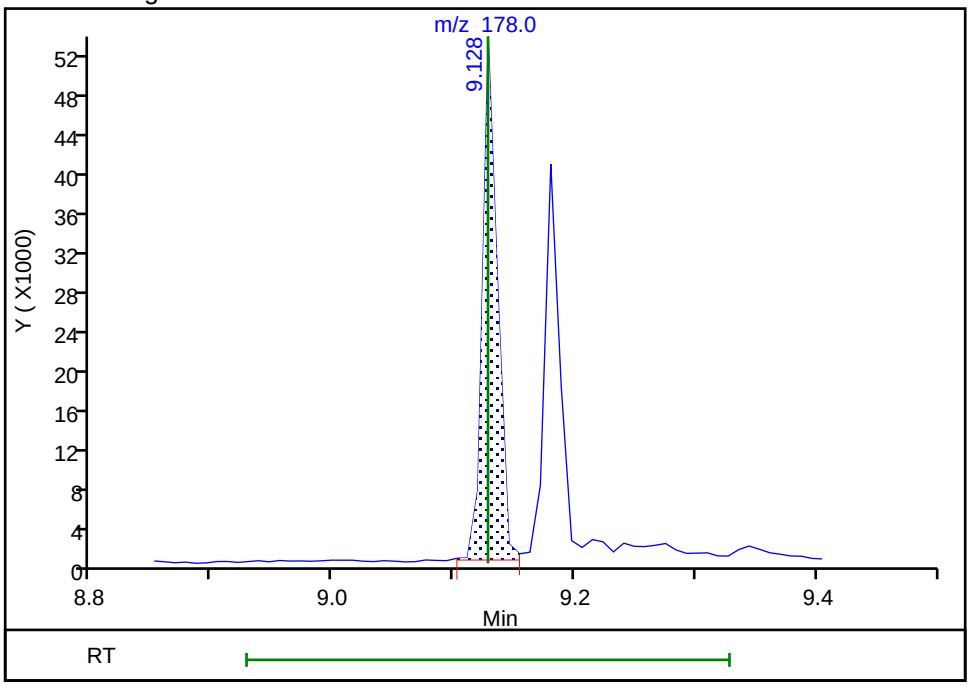
Processing Integration Results

RT: 9.13
Area: 46790
Amount: 214.6232
Amount Units: ng/ml



Manual Integration Results

RT: 9.13
Area: 45028
Amount: 206.5410
Amount Units: ng/ml



Reviewer: wickhamm, 09-Nov-2018 19:22:55
Audit Action: Assigned New Baseline Audit Reason: Baseline

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SMS_F Start Date: 11/07/2018 19:54

Analysis Batch Number: 436730 End Date: 11/08/2018 00:27

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-436730/2		11/07/2018 19:54	1	F4561.D	Rxi-5Sil MS 0.25(mm)
ICIS 280-436730/3		11/07/2018 20:06	1	F4562.D	Rxi-5Sil MS 0.25(mm)
STD0500 280-436730/6 IC		11/07/2018 20:35	1	F4563.D	Rxi-5Sil MS 0.25(mm)
STD0100 280-436730/7 IC		11/07/2018 21:05	1	F4564.D	Rxi-5Sil MS 0.25(mm)
STD0001 280-436730/4 IC		11/07/2018 21:34	1	F4565.D	Rxi-5Sil MS 0.25(mm)
STD0002 280-436730/5 IC		11/07/2018 22:02	1	F4566.D	Rxi-5Sil MS 0.25(mm)
STD0300 280-436730/8 IC		11/07/2018 22:31	1	F4567.D	Rxi-5Sil MS 0.25(mm)
STD1200 280-436730/9 IC		11/07/2018 23:00	1	F4568.D	Rxi-5Sil MS 0.25(mm)
STD2500 280-436730/10 IC		11/07/2018 23:29	1	F4569.D	Rxi-5Sil MS 0.25(mm)
STD5000 280-436730/11 IC		11/07/2018 23:58	1	F4570.D	Rxi-5Sil MS 0.25(mm)
ICV 280-436730/12		11/08/2018 00:27	1	F4571.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SMS_F Start Date: 11/08/2018 15:41

Analysis Batch Number: 436903 End Date: 11/09/2018 02:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 280-436903/2		11/08/2018 15:41	1	F4553.D	Rxi-5Sil MS 0.25(mm)
CCV 280-436903/3		11/08/2018 15:54	1	F4554.D	Rxi-5Sil MS 0.25(mm)
MB 280-436346/1-A		11/08/2018 16:59	1	F4555.D	Rxi-5Sil MS 0.25(mm)
LCS 280-436346/2-A		11/08/2018 17:28	1	F4556.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 17:58	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 18:27	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 18:57	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 19:26	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 19:56	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 20:26	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 20:55	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 21:25	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 21:55	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 22:25	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 22:54	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 23:24	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/08/2018 23:54	1		Rxi-5Sil MS 0.25(mm)
280-116538-1		11/09/2018 00:23	1	F4570.D	Rxi-5Sil MS 0.25(mm)
280-116538-2		11/09/2018 00:53	1	F4571.D	Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/09/2018 01:23	1		Rxi-5Sil MS 0.25(mm)
ZZZZZ		11/09/2018 01:53	1		Rxi-5Sil MS 0.25(mm)
CCVC 280-436903/23		11/09/2018 02:22	1	F4574.D	Rxi-5Sil MS 0.25(mm)

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436346 Batch Start Date: 11/05/18 13:07 Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C Batch End Date: 11/06/18 19:47

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	8270BO-SIMLCS 00031
MB 280-436346/1		3510C, 8270D SIM				250 mL	1 mL	7 SU	
LCS 280-436346/2		3510C, 8270D SIM				250 mL	1 mL	7 SU	0.25 mL
280-116538-L-1	SCLmw-001-181001-GW	3510C, 8270D SIM	T	397.0 g	182.5 g	214.5 mL	1 mL	7 SU	
280-116538-L-2	SCLmw-003-181001-GW	3510C, 8270D SIM	T	405.5 g	181.7 g	223.8 mL	1 mL	7 SU	

Lab Sample ID	Client Sample ID	Method Chain	Basis	SIM_LVI_SURR 00006					
MB 280-436346/1		3510C, 8270D SIM		0.25 mL					
LCS 280-436346/2		3510C, 8270D SIM		0.25 mL					
280-116538-L-1	SCLmw-001-181001-GW	3510C, 8270D SIM	T	0.25 mL					
280-116538-L-2	SCLmw-003-181001-GW	3510C, 8270D SIM	T	0.25 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436346 Batch Start Date: 11/05/18 13:07 Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C Batch End Date: 11/06/18 19:47

Batch Notes	
Balance ID	24750399
Batch Comment	DV-OP-0006/0007
Analyst ID - Concentration	CR/MM
Concentration 1 Corrected Temperature	84 Degrees C
Equipment ID - Concentration 1	A
Analyst ID - Extraction	AAG (trainer)/ KS (trainee)
Method/Fraction	3510C_LVI/8270D_SIM_DOD5
Na2SO4 ID	0000205461_00009
NaCl ID	17383
Pipette/Syringe/Dispenser ID	1n2s
Prep Solvent ID	MeCl2_Cycl_00411/412
Prep Solvent Volume Used	90 mL
Analyst ID - Spike Analyst	AAG
Analyst ID - Spike Witness Analyst	Reveiwer: AP
Sufficient Volume for Batch QC	yes
Concentration 1 Uncorrected Temperature	85 Degrees C
Reagent Water ID	S. Elga

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8081B_DOD5

Organochlorine Pesticides (GC)

FORM II
PESTICIDES SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low

GC Column (2): CLP2 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCX2 #	DCBP2 #
SCLmw-001-181001-GW	280-116538-1	83	91
SCLmw-003-181001-GW	280-116538-2	82	89
	MB 280-436649/1-A	84	84
	LCS 280-436649/2-A	84	90
	LCS 280-436649/6-A	77	97
	LCSD 280-436649/3-A	78	86

	QC LIMITS
TCX = Tetrachloro-m-xylene	44-124
DCBP = DCB Decachlorobiphenyl	34-122

Column to be used to flag recovery values

FORM II 8081B

FORM III
PESTICIDES LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11230028.D

Lab ID: LCS 280-436649/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
4,4'-DDD	0.500	0.456	91	56-143	
4,4'-DDE	0.500	0.435	87	57-135	
4,4'-DDT	0.500	0.498	100	51-143	
Aldrin	0.500	0.439	88	45-134	
alpha-BHC	0.500	0.374	75	54-138	
alpha-Chlordane	0.500	0.448	90	60-129	
beta-BHC	0.500	0.420	84	56-136	
delta-BHC	0.500	0.431	86	52-142	
Dieldrin	0.500	0.473	95	60-136	
Endosulfan I	0.500	0.436	87	62-126	
Endosulfan II	0.500	0.417	83	52-135	
Endosulfan sulfate	0.500	0.470	94	62-133	
Endrin	0.500	0.498	100	60-138	
Endrin aldehyde	0.500	0.387	77	51-132	
Endrin ketone	0.500	0.459	92	58-134	
gamma-BHC (Lindane)	0.500	0.430	86	59-134	
gamma-Chlordane	0.500	0.447	89	56-136	
Heptachlor	0.500	0.429	86	54-130	
Heptachlor epoxide	0.500	0.459	92	61-133	
Methoxychlor	0.500	0.529	106	54-145	

Column to be used to flag recovery and RPD values

FORM III 8081B

FORM III
PESTICIDES LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11230039.D

Lab ID: LCS 280-436649/6-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Toxaphene	2.00	3.01	150	33-134	Q

Column to be used to flag recovery and RPD values

FORM III 8081B

FORM III
PESTICIDES LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11230029.D

Lab ID: LCSD 280-436649/3-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
4,4'-DDD	0.500	0.425	85	7	30	56-143	
4,4'-DDE	0.500	0.408	82	6	30	57-135	
4,4'-DDT	0.500	0.462	92	7	30	51-143	
Aldrin	0.500	0.418	84	5	30	45-134	
alpha-BHC	0.500	0.359	72	4	30	54-138	
alpha-Chlordane	0.500	0.422	84	6	30	60-129	
beta-BHC	0.500	0.408	82	3	30	56-136	
delta-BHC	0.500	0.418	84	3	30	52-142	
Dieldrin	0.500	0.445	89	6	30	60-136	
Endosulfan I	0.500	0.409	82	6	30	62-126	
Endosulfan II	0.500	0.392	78	6	30	52-135	
Endosulfan sulfate	0.500	0.438	88	7	30	62-133	
Endrin	0.500	0.469	94	6	30	60-138	
Endrin aldehyde	0.500	0.365	73	6	30	51-132	
Endrin ketone	0.500	0.425	85	8	30	58-134	
gamma-BHC (Lindane)	0.500	0.416	83	3	30	59-134	
gamma-Chlordane	0.500	0.423	85	6	30	56-136	
Heptachlor	0.500	0.422	84	2	30	54-130	
Heptachlor epoxide	0.500	0.434	87	6	30	61-133	
Methoxychlor	0.500	0.483	97	9	30	54-145	

Column to be used to flag recovery and RPD values

FORM III 8081B

FORM IV
PESTICIDES METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: MB 280-436649/1-A

Matrix: Water Date Extracted: 11/07/2018 10:54

Lab File ID:(1) 11230027.D Lab File ID:(2) 11230027.D

Date Analyzed:(1) 11/24/2018 00:00 Date Analyzed:(2) 11/24/2018 00:00

Instrument ID:(1) SGC_P2 Instrument ID:(2) SGC_P2

GC Column:(1) CLP1 ID: 0.32(mm) GC Column:(2) CLP2 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-436649/2-A	11/24/2018 00:17	11/24/2018 00:17
	LCSD 280-436649/3-A	11/24/2018 00:35	11/24/2018 00:35
SCLmw-001-181001-GW	280-116538-1	11/24/2018 02:38	11/24/2018 02:38
SCLmw-003-181001-GW	280-116538-2	11/24/2018 02:55	11/24/2018 02:55
	LCS 280-436649/6-A	11/24/2018 03:30	11/24/2018 03:30

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: STD4 280-433303/29 Date Analyzed: 10/13/2018 19:57

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 024F3201.D Heated Purge: (Y/N) N

Calibration ID: 33989

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1639866372	3.02				
UPPER LIMIT		3279732744	3.52				
LOWER LIMIT		819933186	2.52				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-433303/33		1735793263	3.02				
ICV 280-433303/34		1963980017	3.02				
ICV 280-433303/35		1776097136	3.02				
ICV 280-433303/36		1833818877	3.02				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: STD4 280-433303/29 Date Analyzed: 10/13/2018 19:57

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 024F3201.D Heated Purge: (Y/N) N

Calibration ID: 33990

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		184249474	2.84				
UPPER LIMIT		368498948	3.34				
LOWER LIMIT		92124737	2.34				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-433303/33		195320590	2.84				
ICV 280-433303/34		209759075	2.84				
ICV 280-433303/35		196652802	2.84				
ICV 280-433303/36		196779319	2.84				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: CCVIS 280-438595/13 Date Analyzed: 11/23/2018 19:54

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 11230013.D Heated Purge: (Y/N) N

Calibration ID: 33989

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1583147211	3.01				
UPPER LIMIT		3166294422	3.51				
LOWER LIMIT		791573606	2.51				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 280-438595/24		1566520737	3.01				
CCV 280-438595/26		1634780219	3.01				
MB 280-436649/1-A		1658419346	3.01				
LCS 280-436649/2-A		1592027959	3.01				
LCSD 280-436649/3-A		1624552569	3.01				
280-116538-1	SCLmw-001-181001-GW	1626915892	3.01				
280-116538-2	SCLmw-003-181001-GW	1741119798	3.01				
LCS 280-436649/6-A		1747731087	3.01				
CCV 280-438595/41		1608163082	3.01				
CCV 280-438595/43		1593983218	3.01				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM VIII
PESTICIDES INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: CCVIS 280-438595/13 Date Analyzed: 11/23/2018 19:54

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 11230013.D Heated Purge: (Y/N) N

Calibration ID: 33990

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		215658534	2.81				
UPPER LIMIT		431317068	3.31				
LOWER LIMIT		107829267	2.31				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 280-438595/24		218889998	2.81				
CCV 280-438595/26		227836204	2.81				
MB 280-436649/1-A		227541077	2.81				
LCS 280-436649/2-A		225008878	2.81				
LCSD 280-436649/3-A		227168054	2.81				
280-116538-1	SCLmw-001-181001-GW	223896583	2.81				
280-116538-2	SCLmw-003-181001-GW	234095053	2.81				
LCS 280-436649/6-A		228557801	2.81				
CCV 280-438595/41		219764267	2.81				
CCV 280-438595/43		221485487	2.81				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8081B

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436649/2-A

Instrument ID (1): SGC_P2 Instrument ID (2): SGC_P2

Date Analyzed (1): 11/24/2018 00:17 Date Analyzed (2): 11/24/2018 00:17

GC Column (1): CLP1 ID: 0.32(mm) GC Column (2): CLP2 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
alpha-BHC	1		4.48	4.47	4.49	0.410		9.0
	2		4.41	4.40	4.43	0.374		
gamma-BHC (Lindane)	1		4.77	4.76	4.78	0.428		0.6
	2		4.73	4.71	4.74	0.430		
beta-BHC	1		4.85	4.83	4.86	0.393		6.8
	2		4.80	4.79	4.82	0.420		
delta-BHC	1		4.99	4.98	5.01	0.442		2.5
	2		5.03	5.02	5.05	0.431		
Heptachlor	1		5.17	5.16	5.18	0.413		3.7
	2		5.08	5.07	5.09	0.429		
Aldrin	1		5.44	5.43	5.45	0.406		7.9
	2		5.34	5.33	5.36	0.439		
Heptachlor epoxide	1		6.05	6.04	6.06	0.434		5.7
	2		5.88	5.87	5.89	0.459		
gamma-Chlordane	1		6.18	6.17	6.19	0.453		1.3
	2		6.08	6.07	6.09	0.447		
alpha-Chlordane	1		6.32	6.31	6.33	0.474		5.7
	2		6.23	6.22	6.25	0.448		
4,4'-DDE	1		6.39	6.38	6.41	0.358		19.4
	2		6.42	6.41	6.43	0.435		
Endosulfan I	1		6.47	6.46	6.48	0.459		5.3
	2		6.29	6.28	6.31	0.436		
Dieldrin	1		6.72	6.71	6.73	0.506		6.7
	2		6.58	6.57	6.60	0.473		
Endrin	1		6.97	6.96	6.98	0.500		0.4
	2		6.90	6.89	6.92	0.498		
4,4'-DDD	1		7.03	7.02	7.04	0.474		3.9
	2		7.03	7.02	7.05	0.456		
Endosulfan II	1		7.20	7.19	7.22	0.479		13.9
	2		7.13	7.12	7.14	0.417		
4,4'-DDT	1		7.32	7.31	7.34	0.472		5.3
	2		7.36	7.35	7.38	0.498		
Endrin aldehyde	1		7.65	7.64	7.66	0.403		4.0
	2		7.49	7.48	7.50	0.387		
Methoxychlor	1		7.83	7.82	7.84	0.573		8.0
	2		8.09	8.08	8.11	0.529		
Endosulfan sulfate	1		8.11	8.10	8.12	0.624		28.3
	2		7.78	7.77	7.79	0.470		
Endrin ketone	1		8.40	8.39	8.41	0.556		19.1
	2		8.33	8.32	8.35	0.459		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-436649/3-A

Instrument ID (1): SGC_P2 Instrument ID (2): SGC_P2

Date Analyzed (1): 11/24/2018 00:35 Date Analyzed (2): 11/24/2018 00:35

GC Column (1): CLP1 ID: 0.32(mm) GC Column (2): CLP2 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
alpha-BHC	1		4.48	4.47	4.49	0.389		8.1
	2		4.41	4.40	4.43	0.359		
gamma-BHC (Lindane)	1		4.77	4.76	4.78	0.408		2.0
	2		4.73	4.71	4.74	0.416		
beta-BHC	1		4.85	4.83	4.86	0.373		9.1
	2		4.80	4.79	4.82	0.408		
delta-BHC	1		4.99	4.98	5.01	0.421		0.9
	2		5.04	5.02	5.05	0.418		
Heptachlor	1		5.17	5.16	5.18	0.398		6.0
	2		5.08	5.07	5.09	0.422		
Aldrin	1		5.44	5.43	5.45	0.381		9.2
	2		5.34	5.33	5.36	0.418		
Heptachlor epoxide	1		6.05	6.04	6.06	0.402		7.5
	2		5.88	5.87	5.89	0.434		
gamma-Chlordane	1		6.18	6.17	6.19	0.416		1.5
	2		6.08	6.07	6.09	0.423		
alpha-Chlordane	1		6.32	6.31	6.33	0.434		2.7
	2		6.23	6.22	6.25	0.422		
4,4'-DDE	1		6.40	6.38	6.41	0.338		18.6
	2		6.42	6.41	6.43	0.408		
Endosulfan I	1		6.47	6.46	6.48	0.417		2.1
	2		6.29	6.28	6.31	0.409		
Dieldrin	1		6.72	6.71	6.73	0.462		3.7
	2		6.58	6.57	6.60	0.445		
Endrin	1		6.97	6.96	6.98	0.462		1.6
	2		6.90	6.89	6.92	0.469		
4,4'-DDD	1		7.03	7.02	7.04	0.432		1.6
	2		7.03	7.02	7.05	0.425		
Endosulfan II	1		7.21	7.19	7.22	0.436		10.7
	2		7.13	7.12	7.14	0.392		
4,4'-DDT	1		7.32	7.31	7.34	0.427		8.1
	2		7.36	7.35	7.38	0.462		
Endrin aldehyde	1		7.65	7.64	7.66	0.376		3.0
	2		7.49	7.48	7.50	0.365		
Methoxychlor	1		7.83	7.82	7.84	0.513		6.1
	2		8.09	8.08	8.11	0.483		
Endosulfan sulfate	1		8.11	8.10	8.12	0.555		23.4
	2		7.78	7.77	7.79	0.438		
Endrin ketone	1		8.40	8.39	8.41	0.497		15.6
	2		8.33	8.32	8.35	0.425		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436649/6-A

Instrument ID (1): SGC_P2 Instrument ID (2): SGC_P2

Date Analyzed (1): 11/24/2018 03:30 Date Analyzed (2): 11/24/2018 03:30

GC Column (1): CLP1 ID: 0.32(mm) GC Column (2): CLP2 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
Toxaphene	1	2	6.82	6.81	6.83	1.69	2.52	17.8
		3	7.49	7.48	7.51	2.33		
		4	7.86	7.84	7.87	2.61		
		5	8.18	8.16	8.18	3.43		
	2	1	5.72	5.72	5.74	4.84	3.01	
		2	7.08	7.07	7.09	2.08		
		3	7.22	7.21	7.23	1.99		
		4	7.73	7.72	7.75	3.57		
		5	8.03	8.02	8.04	2.55		

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW | Lab Sample ID: 280-116538-1

Matrix: Water | Lab File ID: 11230036.D

Analysis Method: 8081B | Date Collected: 11/02/2018 10:45

Extraction Method: 3510C | Date Extracted: 11/07/2018 10:54

Sample wt/vol: 903.8(mL) | Date Analyzed: 11/24/2018 02:38

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438595 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
72-54-8	4,4'-DDD	0.022	U	0.055	0.022	0.0085
72-55-9	4,4'-DDE	0.022	U	0.055	0.022	0.0083
50-29-3	4,4'-DDT	0.055	U	0.055	0.055	0.016
309-00-2	Aldrin	0.022	U	0.055	0.022	0.0065
319-84-6	alpha-BHC	0.022	U	0.055	0.022	0.0059
5103-71-9	alpha-Chlordane	0.022	U	0.055	0.022	0.0059
319-85-7	beta-BHC	0.022	U M	0.055	0.022	0.0096
319-86-8	delta-BHC	0.022	U	0.055	0.022	0.0064
60-57-1	Dieldrin	0.022	U	0.055	0.022	0.0070
959-98-8	Endosulfan I	0.022	U	0.055	0.022	0.0064
33213-65-9	Endosulfan II	0.022	U	0.055	0.022	0.0077
1031-07-8	Endosulfan sulfate	0.022	U	0.055	0.022	0.0063
72-20-8	Endrin	0.022	U	0.055	0.022	0.0087
7421-93-4	Endrin aldehyde	0.022	U	0.055	0.022	0.0097
53494-70-5	Endrin ketone	0.022	U	0.055	0.022	0.0077
58-89-9	gamma-BHC (Lindane)	0.022	U	0.055	0.022	0.0076
5103-74-2	gamma-Chlordane	0.022	U	0.055	0.022	0.010
76-44-8	Heptachlor	0.022	U M	0.055	0.022	0.0085
1024-57-3	Heptachlor epoxide	0.022	U	0.055	0.022	0.0083
72-43-5	Methoxychlor	0.055	U	0.055	0.055	0.014
8001-35-2	Toxaphene	0.89	U Q	2.2	0.89	0.41

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	91		34-122
877-09-8	Tetrachloro-m-xylene	83		44-124

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230036.D
Lims ID: 280-116538-D-1-B
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 24-Nov-2018 02:38:20 ALS Bottle#: 30 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-D-1-B
Misc. Info.: 280-0076490-036
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:09 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 19:27:48

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical						
1		1.000			ND	
2		0.000				
* 2 1-Bromo-2-nitrobenzene						
1	3.006	3.005	0.001	1626915892	150.0	
2	2.807	2.807	-0.001	223896583	150.0	
$ 4 Tetrachloro-m-xylene						
1	3.902	3.902	0.000	209791094	17.8	
2	3.789	3.790	-0.001	31091945	16.7	
					RPD = 6.62	
5 Hexachlorobenzene						
1	4.312	4.310	0.002	2772621	0.5134	
2	4.267	4.268	-0.001	787705	-0.1601	
					RPD = 381.25	
6 Diallate						
1		4.336			ND	
2		4.221				
7 Propachlor						
1	4.467	4.477	-0.010	459122	-2.53	
2	4.094	4.099	-0.005	734246	1.34	
					RPD = -654.55	
8 alpha-BHC						
1		4.480			ND	
2		4.413				
9 gamma-BHC (Lindane)						
1		4.769			ND	
2		4.726				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
10 beta-BHC						U
1	4.846				ND	
2	4.803					
11 2,4,5-Trichlorophenol						
1	4.861				ND	
2	4.772					
12 delta-BHC						
1	4.995				ND	
2	5.035					
14 Chlordane (technical)						
1	5.101				ND	
1	5.568					
1	6.179					
1	6.317					
1	7.132					
2	4.963					
2	5.483					
2	6.079					
2	6.235					
2	7.179					
13 Technical Chlordane						
1	5.101				ND	
1	5.568					
1	6.179					
1	6.317					
1	7.132					
2	4.963					
2	5.483					
2	6.079					
2	6.235					
2	7.179					
15 Heptachlor						U
1	5.169				ND	
2	5.077					
16 Aldrin						
1	5.438				ND	
2	5.345					
17 Chlorpyrifos						
1	5.669				ND	
2	5.565					
18 Isodrin						
1	5.762				ND	
2	5.703					
19 Dicofol						
1	5.801				ND	
2	5.663					
20 2,4'-DDE						
1	6.031				ND	
2	6.086					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
21 Heptachlor epoxide						
1		6.048			ND	
2		5.881				
22 trans-Chlordane						
1		6.179			ND	
2		6.080				
28 Toxaphene						
1		6.215			ND	
1		6.821				
1		7.494				
1		7.853				
1		8.171				
2		5.728				
2		7.082				
2		7.221				
2		7.736				
2		8.031				
23 cis-Chlordane						
1		6.320			ND	
2		6.235				
24 4,4'-DDE						
1		6.395			ND	
2		6.418				
25 Endosulfan I						
1		6.468			ND	
2		6.294				
26 2,4'-DDD						
1		6.581			ND	
2		6.631				
27 Dieldrin						
1		6.722			ND	
2		6.584				
29 2,4'-DDT						
1		6.848			ND	
2		6.953				
30 Endrin						
1		6.970			ND	
2		6.905				
31 Kepone						
1		7.012			ND	
2		7.022				
32 4,4'-DDD						
1		7.031			ND	
2		7.033				
33 Chlorobenzilate						
1	7.051	7.045	0.006	143777	-3.84	
2	6.894	6.900	-0.006	232745	-3.41	
					RPD = -11.95	

LOD = 0.1500

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
34 Endosulfan II						
1		7.206			ND	
2		7.131				
35 4,4'-DDT						
1		7.325			ND	
2		7.364				
36 Endrin aldehyde						
1		7.650			ND	
2		7.490				
37 Methoxychlor						
1		7.830			ND	
2		8.094				
38 Mirex						
1		7.988			ND	
2		8.285				
39 Endosulfan sulfate						
1		8.109			ND	
2		7.782				
40 Endrin ketone						
1		8.400			ND	
2		8.335				
$ 41 DCB Decachlorobiphenyl						
1	9.414	9.415	-0.001	133267021	21.5	
2	9.604	9.605	-0.001	20272414	18.2	
					RPD = 16.63	
42 Tris(2,3-dibromopropyl)phosphate						
1		11.209			ND	
2		11.380				
S 3 Endosulfan, Total						
1		0.000			ND	
2		0.000				

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

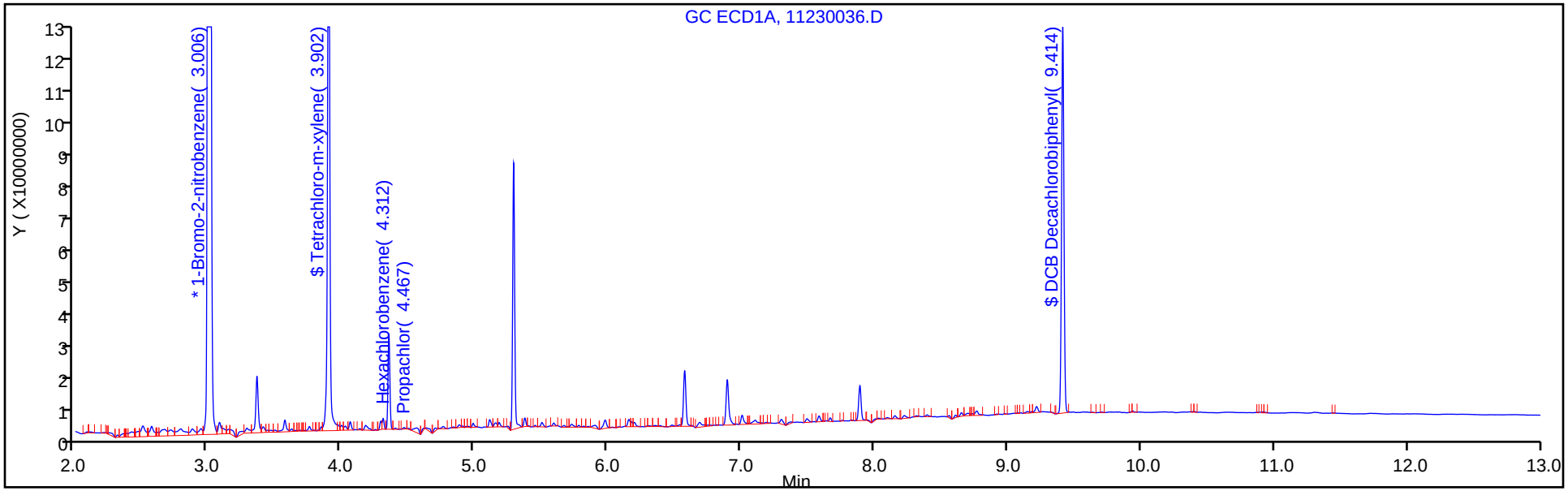
Report Date: 25-Nov-2018 19:32:18 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

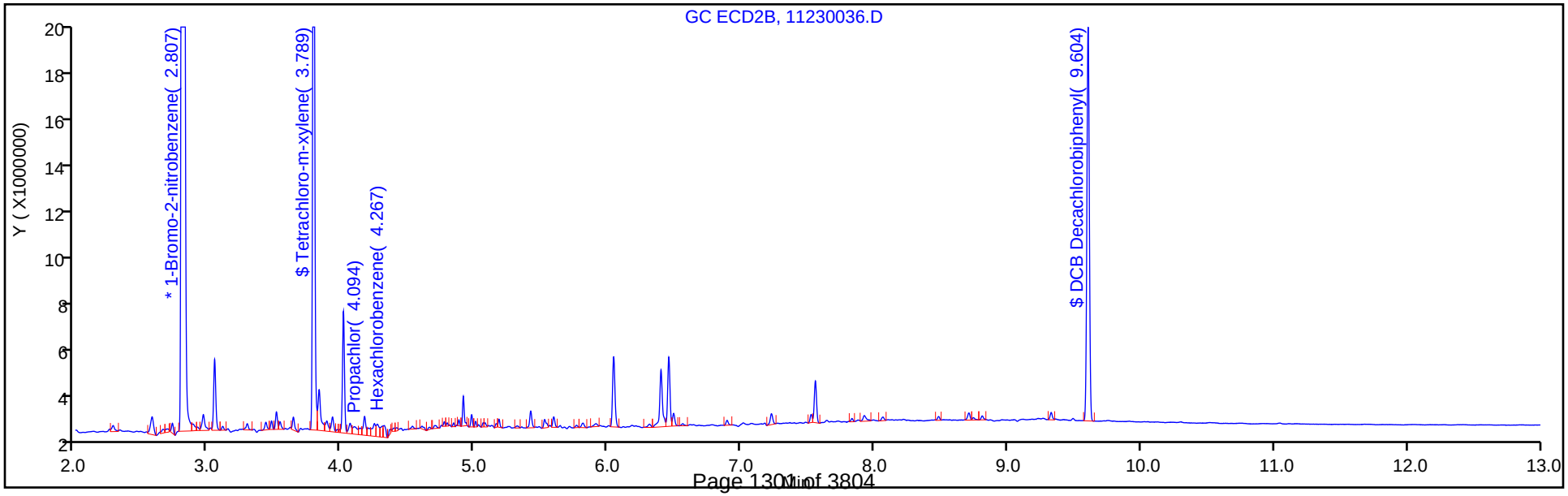
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230036.D

Injection Date:	24-Nov-2018 02:38:20	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	280-116538-D-1-B	Lab Sample ID:	280-116538-1	Worklist Smp#:	36
Client ID:	SCLmw-001-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230036.D				
Lims ID:	280-116538-D-1-B				
Client ID:	SCLmw-001-181001-GW				
Sample Type:	Client				
Inject. Date:	24-Nov-2018 02:38:20	ALS Bottle#:	30	Worklist Smp#:	36
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-D-1-B				
Misc. Info.:	280-0076490-036				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 19:32:09	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				
First Level Reviewer: mooret		Date:	25-Nov-2018 19:27:48		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	17.8	89.00
$ 41 DCB Decachlorobiphenyl	20.0	21.5	107.52

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	16.7	83.30
$ 41 DCB Decachlorobiphenyl	20.0	18.2	91.01

User Disabled Compound Report

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230036.D

Injection Date: 24-Nov-2018 02:38:20 Instrument ID: SGC_P2

Lims ID: 280-116538-D-1-B Lab Sample ID: 280-116538-1

Client ID: SCLmw-001-181001-GW

Operator ID: TEM ALS Bottle#: 30 Worklist Smp#: 36

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

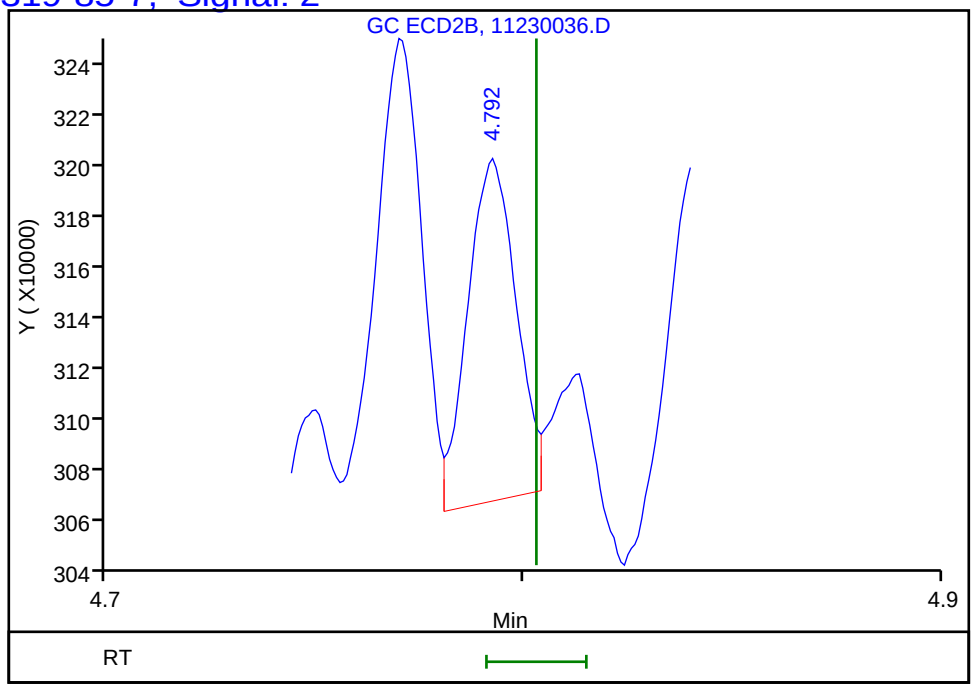
Column: CLP2 (0.32 mm) Detector GC ECD2B

10 beta-BHC, CAS: 319-85-7, Signal: 2

RT: 4.79

Response: 106074

Amount: -0.678248



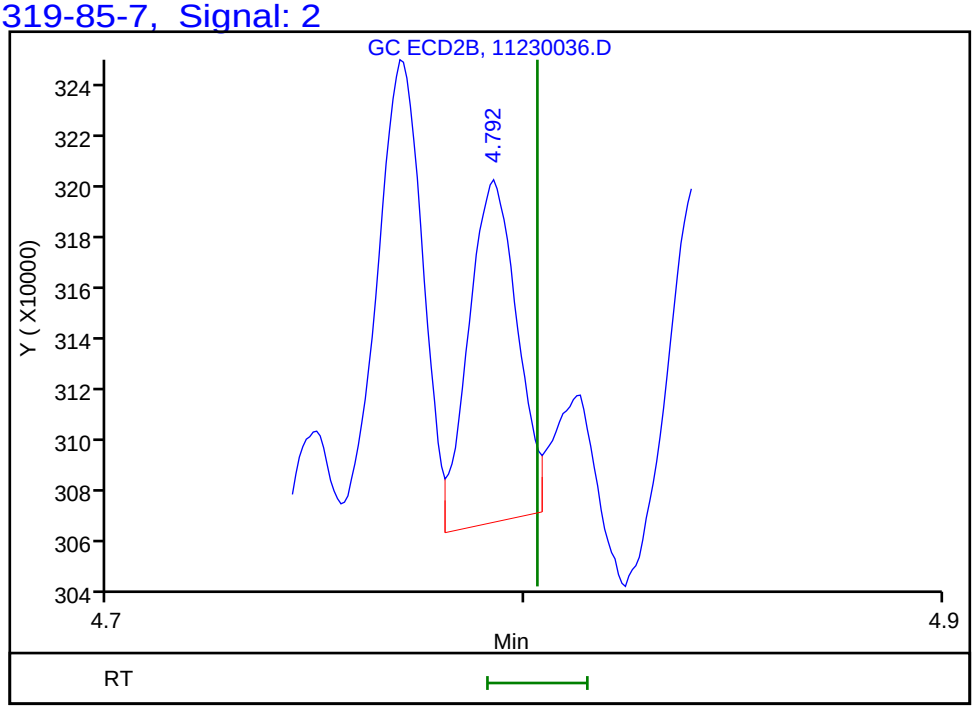
Column: CLP2 (0.32 mm) Detector GC ECD2B

10 beta-BHC, CAS: 319-85-7, Signal: 2

RT: 4.79

Response: 106074

Amount: -0.678248



Reviewer: mooret, 25-Nov-2018 19:27:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

User Disabled Compound Report

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230036.D

Injection Date: 24-Nov-2018 02:38:20 Instrument ID: SGC_P2

Lims ID: 280-116538-D-1-B Lab Sample ID: 280-116538-1

Client ID: SCLmw-001-181001-GW

Operator ID: TEM ALS Bottle#: 30 Worklist Smp#: 36

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

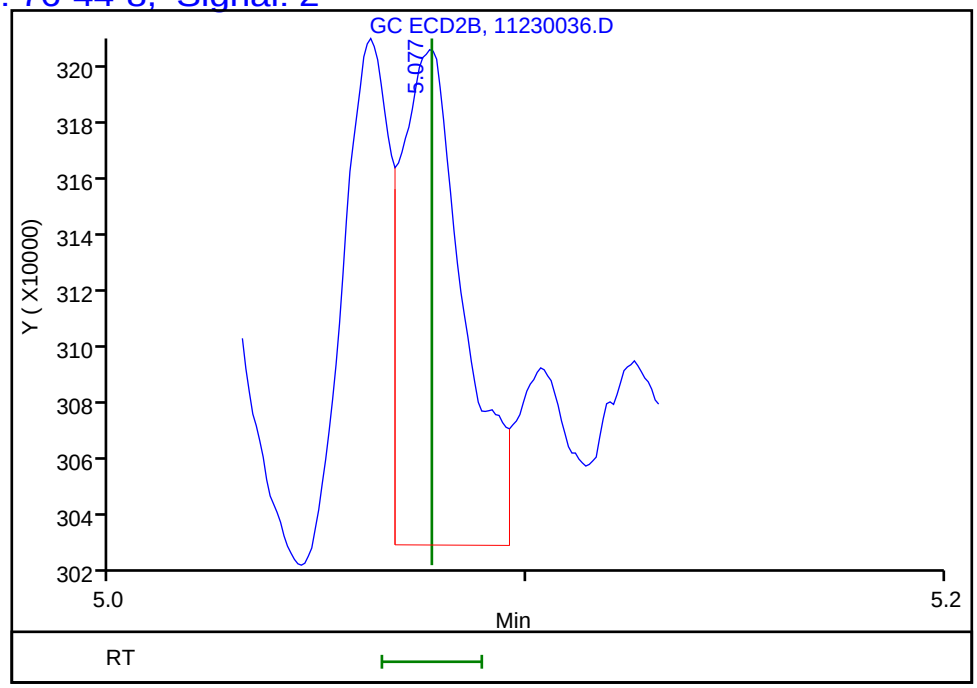
Column: CLP2 (0.32 mm) Detector GC ECD2B

15 Heptachlor, CAS: 76-44-8, Signal: 2

RT: 5.08

Response: 167931

Amount: -0.256509



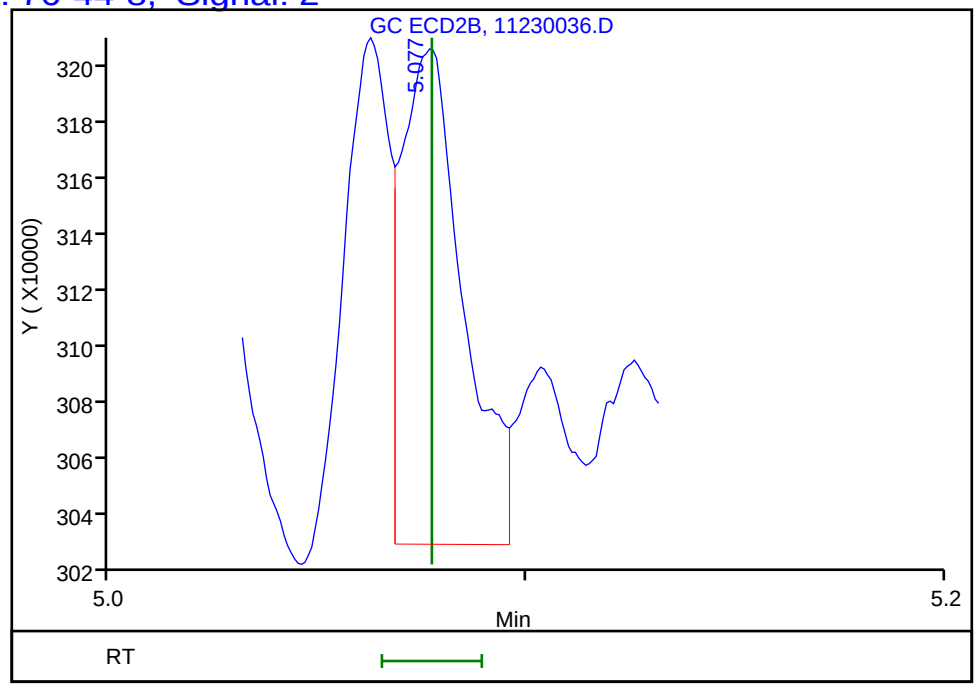
Column: CLP2 (0.32 mm) Detector GC ECD2B

15 Heptachlor, CAS: 76-44-8, Signal: 2

RT: 5.08

Response: 167931

Amount: -0.256509



Reviewer: mooret, 25-Nov-2018 19:27:48

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-003-181001-GW | Lab Sample ID: 280-116538-2

Matrix: Water | Lab File ID: 11230037.D

Analysis Method: 8081B | Date Collected: 11/02/2018 11:10

Extraction Method: 3510C | Date Extracted: 11/07/2018 10:54

Sample wt/vol: 923.7(mL) | Date Analyzed: 11/24/2018 02:55

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438595 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
72-54-8	4,4'-DDD	0.022	U	0.054	0.022	0.0083
72-55-9	4,4'-DDE	0.022	U	0.054	0.022	0.0081
50-29-3	4,4'-DDT	0.054	U	0.054	0.054	0.016
309-00-2	Aldrin	0.022	U	0.054	0.022	0.0064
319-84-6	alpha-BHC	0.022	U	0.054	0.022	0.0057
5103-71-9	alpha-Chlordane	0.022	U	0.054	0.022	0.0057
319-85-7	beta-BHC	0.022	U	0.054	0.022	0.0094
319-86-8	delta-BHC	0.022	U	0.054	0.022	0.0063
60-57-1	Dieldrin	0.022	U	0.054	0.022	0.0068
959-98-8	Endosulfan I	0.022	U	0.054	0.022	0.0063
33213-65-9	Endosulfan II	0.022	U	0.054	0.022	0.0076
1031-07-8	Endosulfan sulfate	0.022	U	0.054	0.022	0.0062
72-20-8	Endrin	0.022	U	0.054	0.022	0.0086
7421-93-4	Endrin aldehyde	0.022	U	0.054	0.022	0.0095
53494-70-5	Endrin ketone	0.022	U	0.054	0.022	0.0076
58-89-9	gamma-BHC (Lindane)	0.022	U	0.054	0.022	0.0075
5103-74-2	gamma-Chlordane	0.022	U	0.054	0.022	0.0099
76-44-8	Heptachlor	0.022	U	0.054	0.022	0.0083
1024-57-3	Heptachlor epoxide	0.022	U	0.054	0.022	0.0081
72-43-5	Methoxychlor	0.054	U	0.054	0.054	0.014
8001-35-2	Toxaphene	0.87	U Q	2.2	0.87	0.40

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	89		34-122
877-09-8	Tetrachloro-m-xylene	82		44-124

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230037.D
Lims ID: 280-116538-D-2-B
Client ID: SCLmw-003-181001-GW
Sample Type: Client
Inject. Date: 24-Nov-2018 02:55:50 ALS Bottle#: 31 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-D-2-B
Misc. Info.: 280-0076490-037
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:09 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 19:28:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical						
1					-0.3410	
2					-0.6619	
					RPD = -63.99	
LOD = 0.002000						
* 2 1-Bromo-2-nitrobenzene						
1	3.005	3.005	0.000	1741119798	150.0	
2	2.807	2.807	0.000	234095053	150.0	
$ 4 Tetrachloro-m-xylene						
1	3.902	3.902	0.000	206124326	16.4	
2	3.790	3.790	0.000	32001150	16.4	
					RPD = 0.10	
5 Hexachlorobenzene						
1	4.311	4.310	0.001	3963603	0.5874	
2	4.266	4.268	-0.002	242234	-0.4527	
					RPD = 1544.88	
6 Diallate						
1		4.336			ND	
2		4.221				
7 Propachlor						
1		4.477			ND	
2		4.099				
8 alpha-BHC						
1		4.480			ND	
2		4.413				
9 gamma-BHC (Lindane)						
1		4.769			ND	
2		4.726				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
10 beta-BHC						
1	4.838	4.846	-0.008	578132	-0.3410	
2	4.812	4.803	0.009	126462	-0.6619	
					RPD = -63.99	
LOD = 0.002000						
11 2,4,5-Trichlorophenol						
1		4.861			ND	
2		4.772				
12 delta-BHC						
1		4.995			ND	
2		5.035				
14 Chlordane (technical)						
1		5.101			ND	
1		5.568				
1		6.179				
1		6.317				
1		7.132				
2		4.963				
2		5.483				
2		6.079				
2		6.235				
2		7.179				
13 Technical Chlordane						
1		5.101			ND	
1		5.568				
1		6.179				
1		6.317				
1		7.132				
2		4.963				
2		5.483				
2		6.079				
2		6.235				
2		7.179				
15 Heptachlor						
1		5.169			ND	
2		5.077				
16 Aldrin						
1		5.438			ND	
2		5.345				
17 Chlorpyrifos						
1		5.669			ND	
2		5.565				
18 Isodrin						
1		5.762			ND	
2		5.703				
19 Dicofol						
1		5.801			ND	
2		5.663				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
20 2,4'-DDE						
1		6.031			ND	
2		6.086				
21 Heptachlor epoxide						
1		6.048			ND	
2		5.881				
22 trans-Chlordane						
1		6.179			ND	
2		6.080				
28 Toxaphene						
1		6.215			ND	
1		6.821				
1		7.494				
1		7.853				
1		8.171				
2		5.728				
2		7.082				
2		7.221				
2		7.736				
2		8.031				
23 cis-Chlordane						
1		6.320			ND	
2		6.235				
24 4,4'-DDE						
1		6.395			ND	
2		6.418				
25 Endosulfan I						
1		6.468			ND	
2		6.294				
26 2,4'-DDD						
1		6.581			ND	
2		6.631				
27 Dieldrin						
1		6.722			ND	
2		6.584				
29 2,4'-DDT						
1		6.848			ND	
2		6.953				
30 Endrin						
1		6.970			ND	
2		6.905				
31 Kepone						
1		7.012			ND	
2		7.022				
32 4,4'-DDD						
1	7.029	7.031	-0.002	2074195	0.6397	
2	7.032	7.033	-0.001	291469	-0.0942	
					RPD = 269.07	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/mL	Flags
33 Chlorobenzilate						
1		7.045			ND	
2		6.900				
34 Endosulfan II						
1		7.206			ND	
2		7.131				
35 4,4'-DDT						
1		7.325			ND	
2		7.364				
36 Endrin aldehyde						
1		7.650			ND	
2		7.490				
37 Methoxychlor						
1		7.830			ND	
2		8.094				
38 Mirex						
1		7.988			ND	
2		8.285				
39 Endosulfan sulfate						
1		8.109			ND	
2		7.782				
40 Endrin ketone						
1		8.400			ND	
2		8.335				
$ 41 DCB Decachlorobiphenyl						
1	9.415	9.415	0.000	139789348	21.1	
2	9.605	9.605	0.000	20844888	17.9	
					RPD = 16.37	
42 Tris(2,3-dibromopropyl)phosphate						
1		11.209			ND	
2		11.380				
S 3 Endosulfan, Total						
1		0.000			ND	
2		0.000				

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

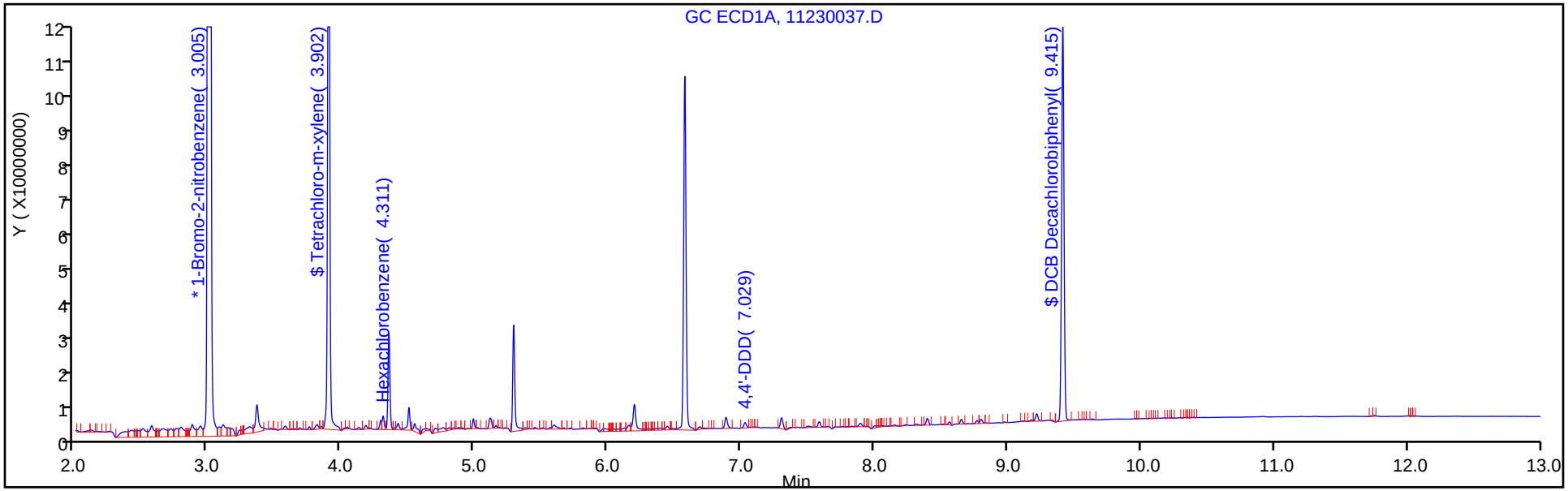
Report Date: 25-Nov-2018 19:32:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

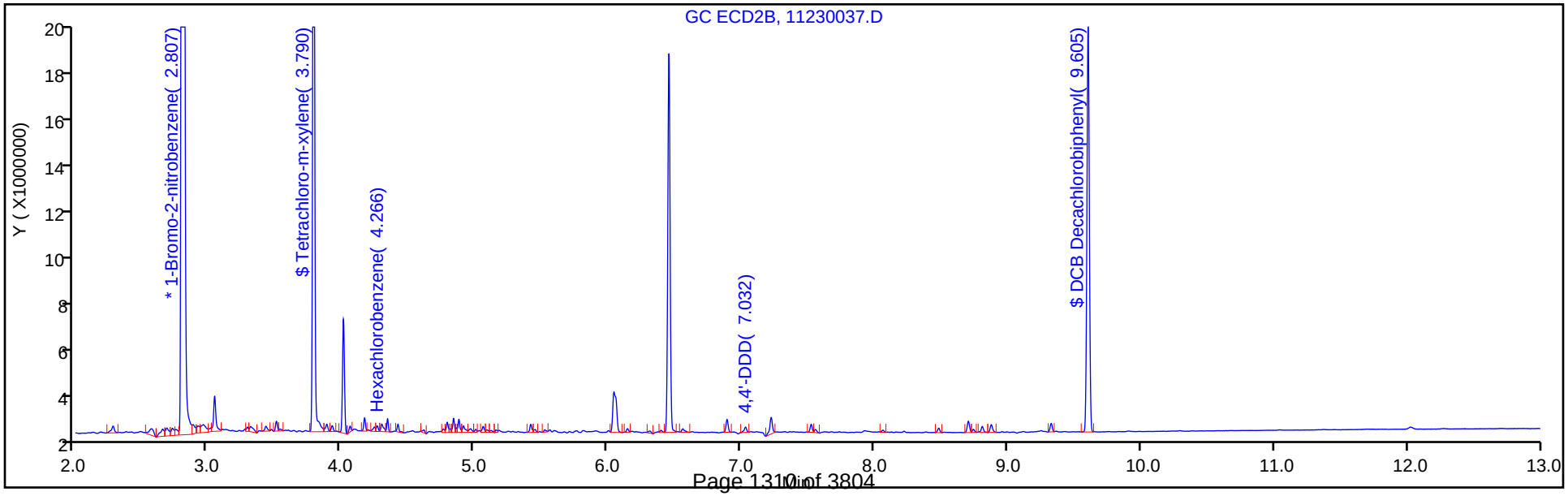
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230037.D

Injection Date:	24-Nov-2018 02:55:50	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	280-116538-D-2-B	Lab Sample ID:	280-116538-2	Worklist Smp#:	37
Client ID:	SCLmw-003-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230037.D				
Lims ID:	280-116538-D-2-B				
Client ID:	SCLmw-003-181001-GW				
Sample Type:	Client				
Inject. Date:	24-Nov-2018 02:55:50	ALS Bottle#:	31	Worklist Smp#:	37
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-D-2-B				
Misc. Info.:	280-0076490-037				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 19:32:09	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				
First Level Reviewer: mooret		Date:	25-Nov-2018 19:28:37		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	16.4	81.86
$ 41 DCB Decachlorobiphenyl	20.0	21.1	105.37

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	16.4	81.95
$ 41 DCB Decachlorobiphenyl	20.0	17.9	89.42

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33997

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Toxaphene Peak 1	0.0059 0.0071	0.0062	0.0067	0.0068	0.0071	Lin2	-0.239	0.0070							0.9990		0.9900
Toxaphene Peak 2	0.0143 0.0181	0.0151	0.0166	0.0176	0.0185	Lin2	-0.823	0.0179							0.9980		0.9900
Toxaphene Peak 3	0.0141 0.0205	0.0164	0.0179	0.0201	0.0204	Lin2	-1.318	0.0202							0.9980		0.9900
Toxaphene Peak 4	0.0054 0.0083	0.0062	0.0073	0.0079	0.0083	Lin2	-0.605	0.0081							0.9970		0.9900
Toxaphene Peak 5	0.0045 0.0085	0.0056	0.0071	0.0079	0.0086	Lin2	-0.840	0.0083							0.9930		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33997

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Toxaphene Peak 1	BNB	Lin2	13484316 984914164	36757841	77218443	157400259	444953077	200 10000	500	1000	2000	5000
Toxaphene Peak 2	BNB	Lin2	32829722 2531832439	89263703	193181281	408359221	1162405972	200 10000	500	1000	2000	5000
Toxaphene Peak 3	BNB	Lin2	32415828 2860362835	96759589	207813969	466543962	1283190101	200 10000	500	1000	2000	5000
Toxaphene Peak 4	BNB	Lin2	12391302 1164606715	36941603	84522297	184785693	519294161	200 10000	500	1000	2000	5000
Toxaphene Peak 5	BNB	Lin2	10296721 1187453780	33168067	82441591	182989462	541962755	200 10000	500	1000	2000	5000

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D
Lims ID: STD6 TOX
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 16:10:51 ALS Bottle#: 11 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:12 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:36:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	2093632714	150.0	150.0	
2	2.840	2.839	0.000	210457864	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	984914164	10000	10176	
1	6.853	6.854	-0.001	2531832439	10000	10174	
1	7.528	7.528	0.000	2860362835	10000	10232	
1	7.885	7.886	-0.001	1164606715	10000	10334	
1	8.203	8.204	-0.001	1187453780	10000	10397	
		Average of Peak Amounts =				10263	
2	5.776	5.778	-0.002	60549286	10000	9540.5	M
2	7.143	7.145	-0.002	273869350	10000	9445.5	M
2	7.284	7.286	-0.002	756947570	10000	9410.3	M
2	7.798	7.800	-0.002	219585664	10000	9519.4	M
2	8.094	8.096	-0.002	429283014	10000	9559.5	M
		Average of Peak Amounts =				9495.0	
						RPD = 7.77	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL6_00023 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

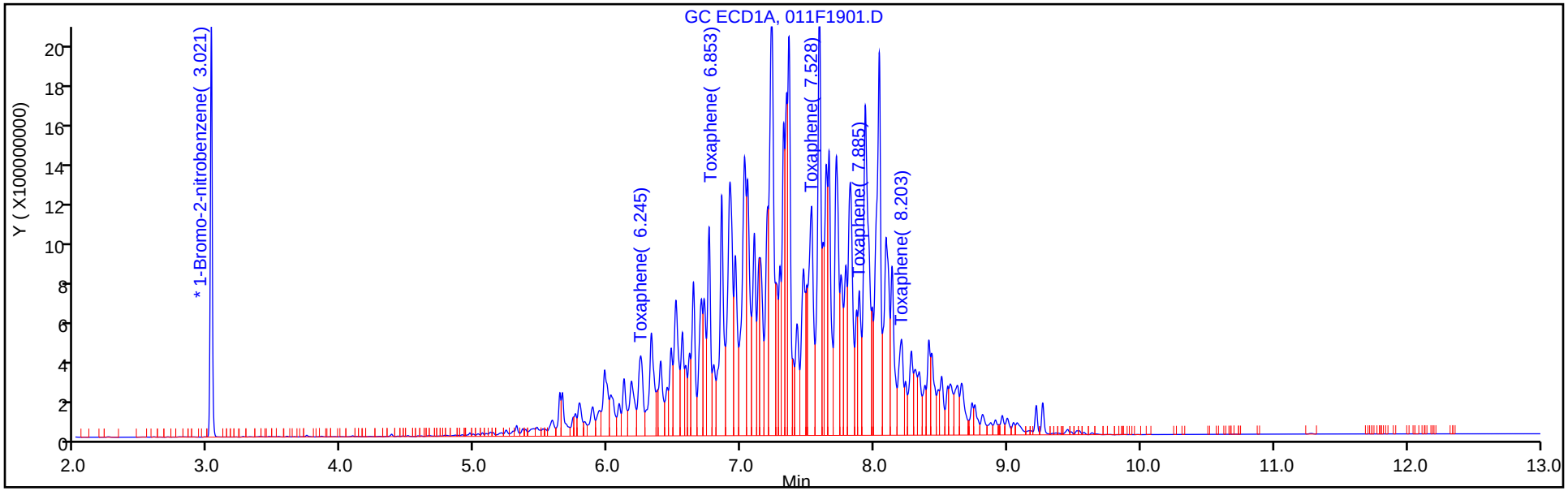
Report Date: 14-Oct-2018 22:11:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

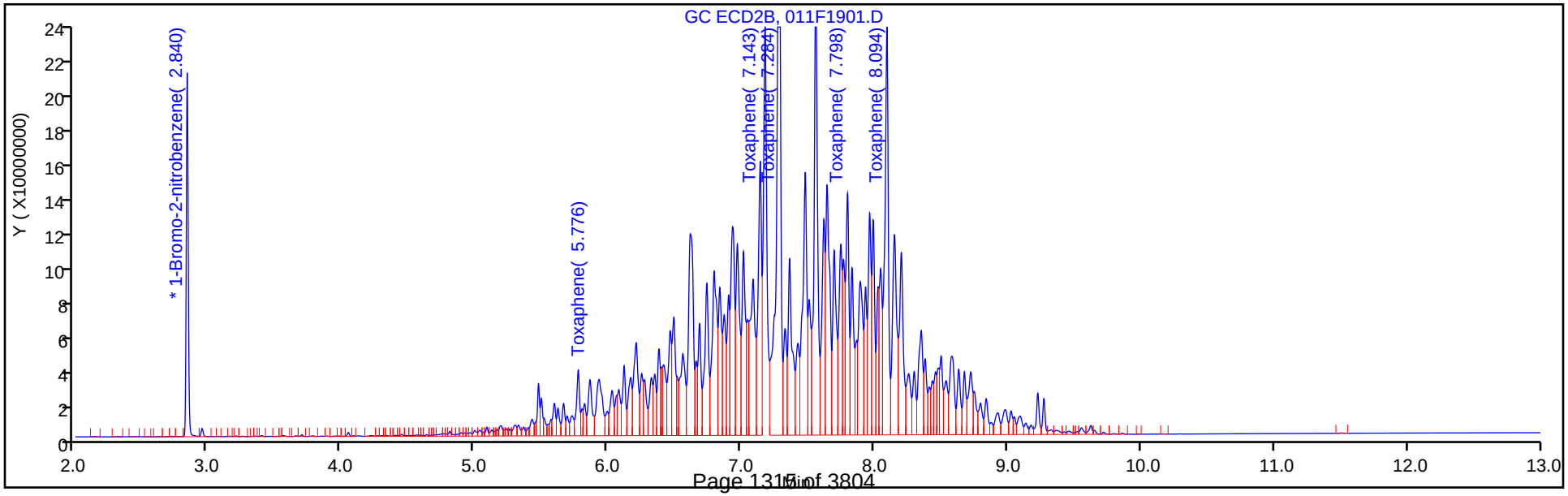
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D

Injection Date:	13-Oct-2018 16:10:51	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 TOX			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D
Lims ID: STD5 TOX
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 16:28:15 ALS Bottle#: 12 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:15 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	1887409806	150.0	150.0	
2	2.840	2.839	0.001	194682264	150.0	150.0	
28 Toxaphene							
1	6.246	6.246	0.000	444953077	5000.0	5116.5	
1	6.853	6.854	-0.001	1162405972	5000.0	5203.9	
1	7.526	7.528	-0.002	1283190101	5000.0	5124.6	
1	7.886	7.886	0.000	519294161	5000.0	5149.2	
1	8.204	8.204	0.000	541962755	5000.0	5314.1	
		Average of Peak Amounts =				5181.6	
2	5.777	5.778	-0.001	30052469	5000.0	5094.6	
2	7.143	7.145	-0.002	136167822	5000.0	5072.1	
2	7.284	7.286	-0.002	377922017	5000.0	5079.7	
2	7.799	7.800	-0.001	110390772	5000.0	5177.3	
2	8.095	8.096	-0.001	210568110	5000.0	5070.0	
		Average of Peak Amounts =				5098.7	
						RPD = 1.61	

Reagents:

8081ToxL5_00021 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

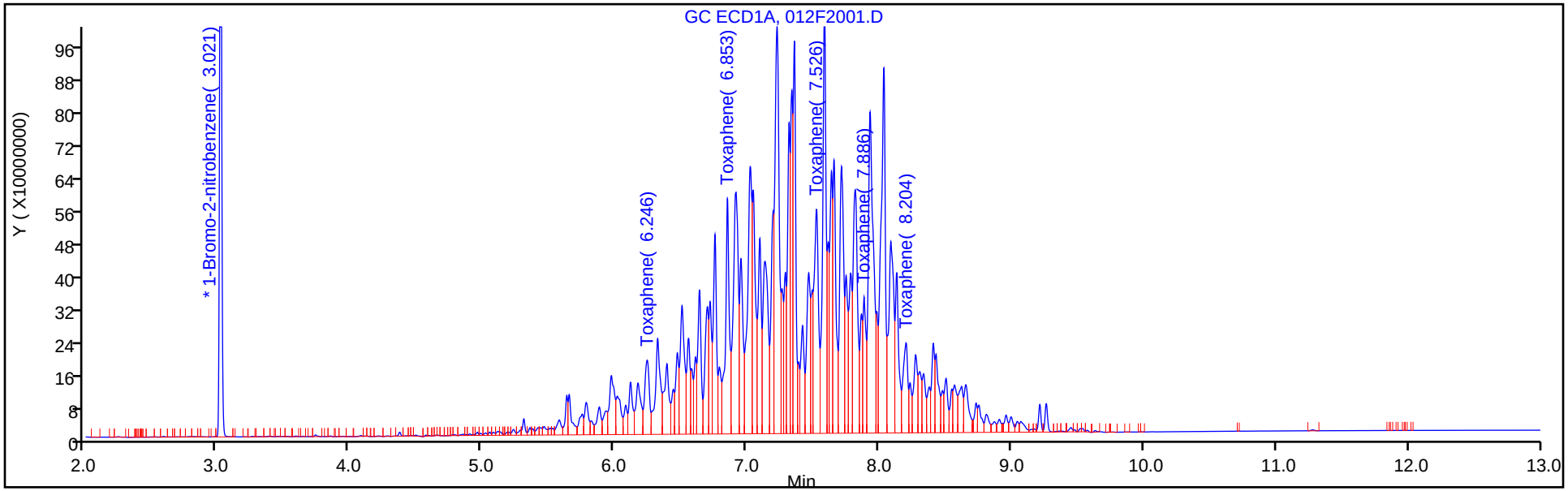
Report Date: 14-Oct-2018 22:11:16 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

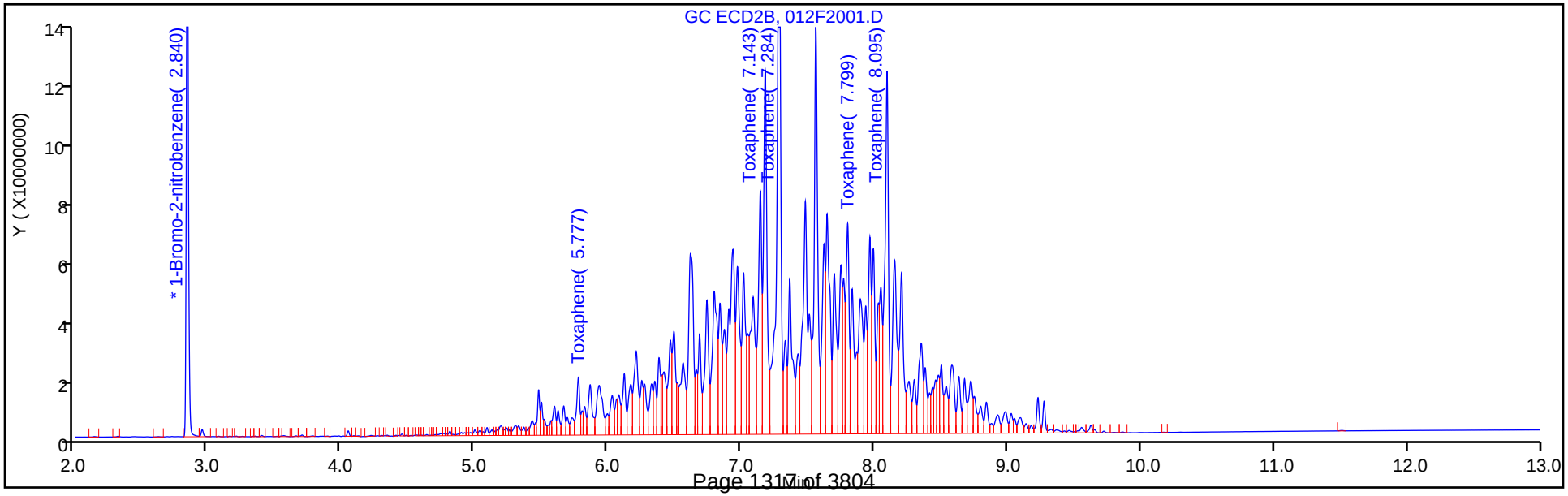
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D

Injection Date:	13-Oct-2018 16:28:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 TOX			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D
Lims ID: STD4 TOX
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Oct-2018 16:45:38 ALS Bottle#: 13 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:18 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:28:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	0.000	1744551294	150.0	150.0	
2	2.841	2.841	0.000	183459712	150.0	150.0	
28 Toxaphene							M
1	6.246	6.246	0.000	157400259	2000.0	1979.4	M
1	6.854	6.854	0.000	408359221	2000.0	2006.3	M
1	7.528	7.528	0.000	466543962	2000.0	2055.4	M
1	7.886	7.886	0.000	184785693	2000.0	2028.0	M
1	8.204	8.204	0.000	182989462	2000.0	2005.7	M
		Average of Peak Amounts =				2015.0	
2	5.778	5.778	0.000	12064651	2000.0	2140.2	M
2	7.145	7.145	0.000	52352055	2000.0	2063.3	M
2	7.286	7.286	0.000	145561454	2000.0	2077.1	M
2	7.800	7.800	0.000	41885928	2000.0	2089.7	M
2	8.096	8.096	0.000	80317017	2000.0	2053.4	M
		Average of Peak Amounts =				2084.7	
						RPD = 3.40	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00014 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

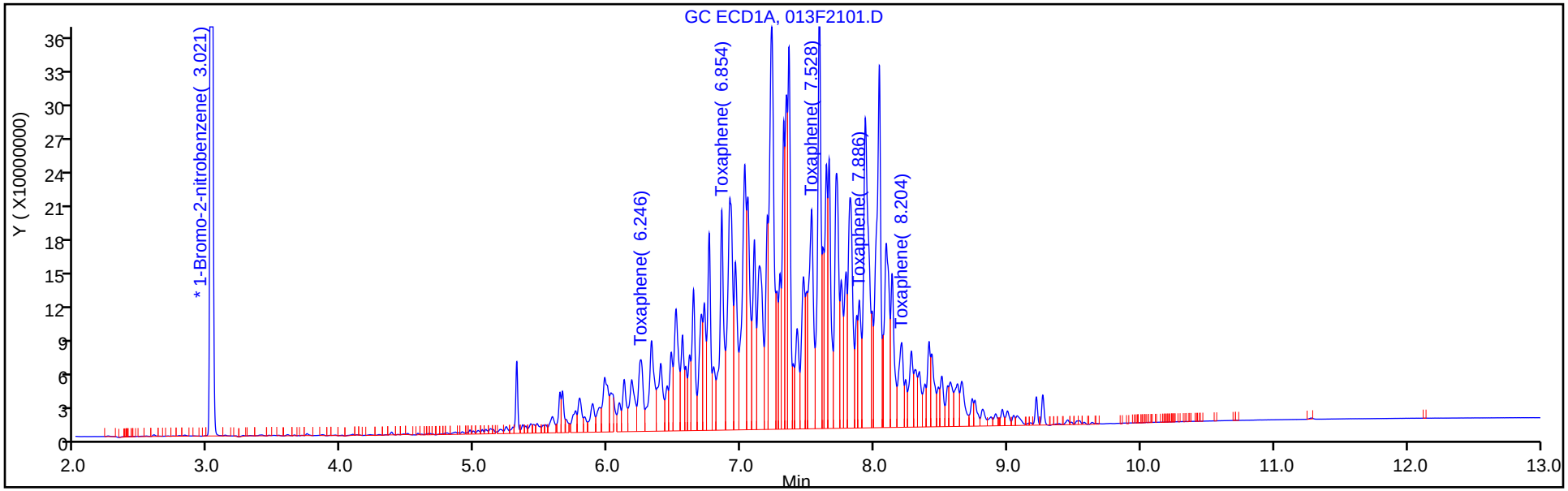
Report Date: 14-Oct-2018 22:11:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

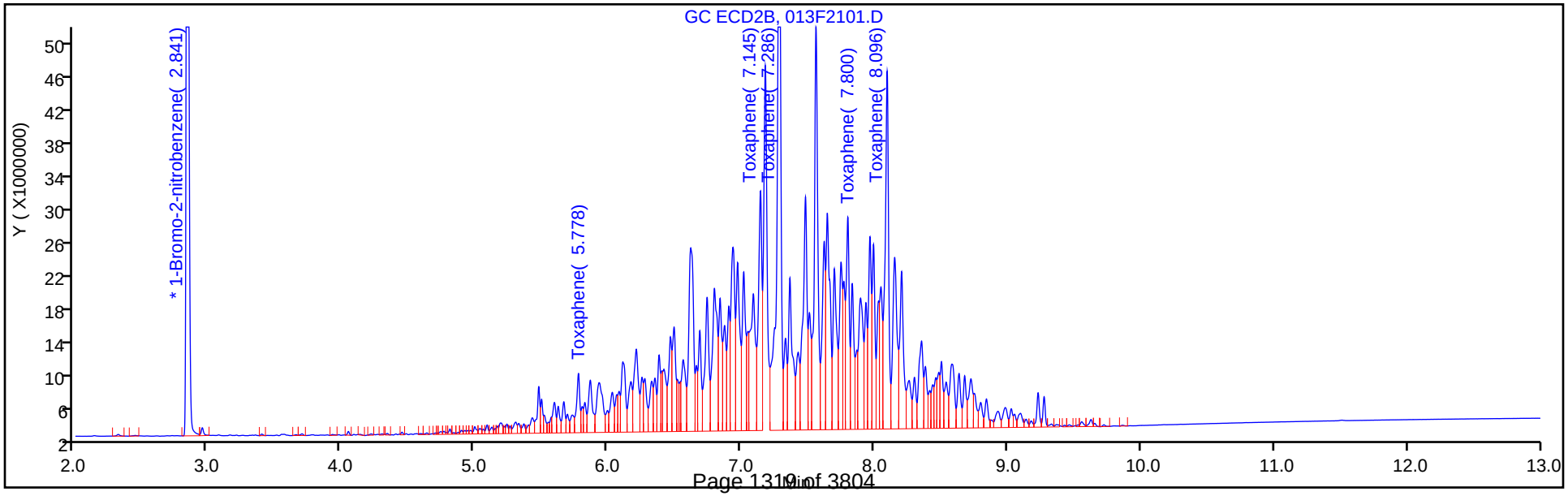
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

Injection Date:	13-Oct-2018 16:45:38	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 TOX			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

Injection Date: 13-Oct-2018 16:45:38 Instrument ID: SGC_P2

Lims ID: STD4 TOX

Client ID:

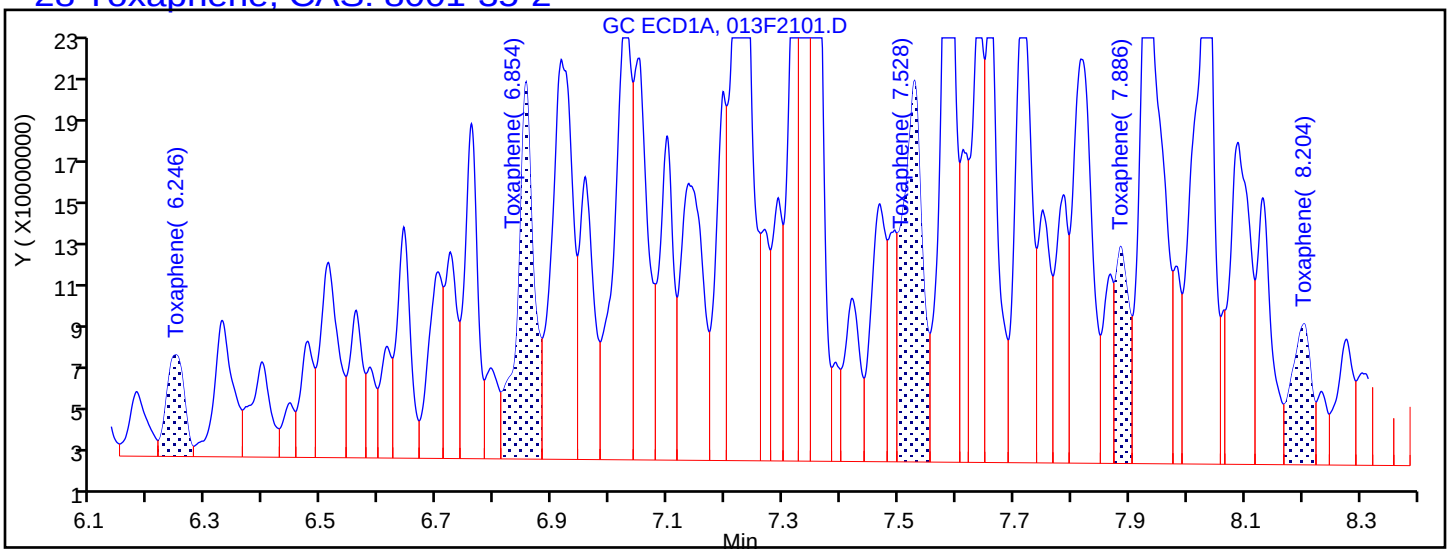
Operator ID: TEM ALS Bottle#: 13 Worklist Smp#: 18

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

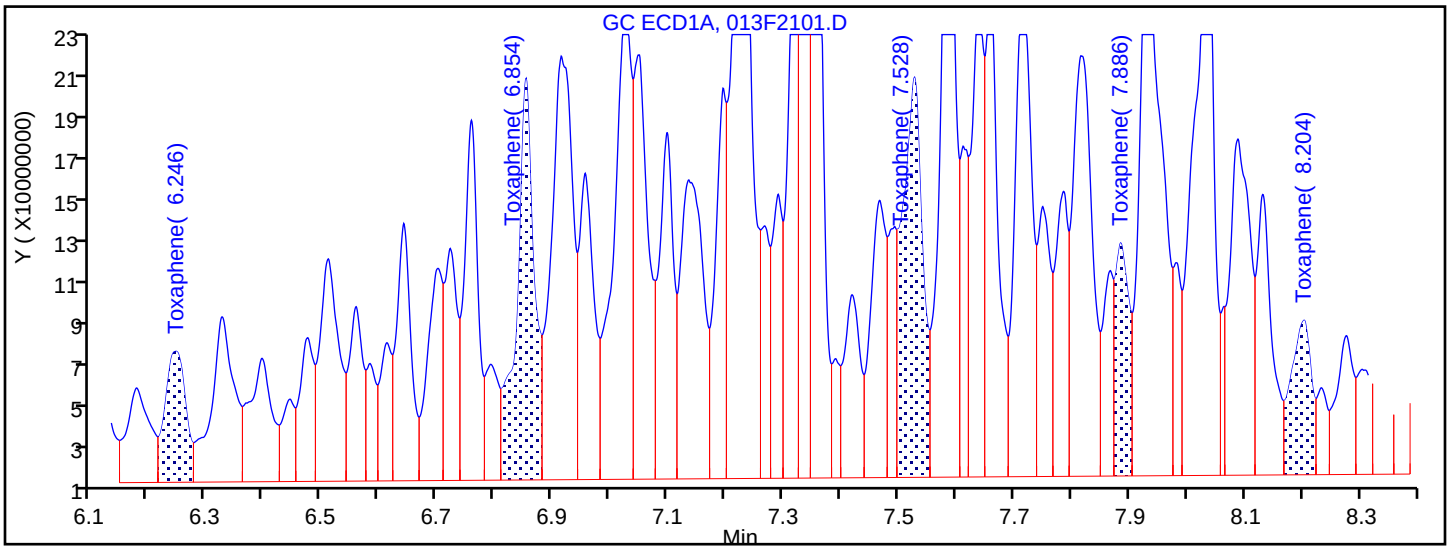
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.246	Response = 105015082
6.854	Response = 357524871
7.528	Response = 434898456
7.886	Response = 170048760
8.204	Response = 161011474



Manual Integration Results

6.246	Response = 157400259	M
6.854	Response = 408359221	M
7.528	Response = 466543962	M
7.886	Response = 184785693	M
8.204	Response = 182989462	M

Reviewer: mooret, 14-Oct-2018 21:37:36

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D
Lims ID: STD3 TOX
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 17:03:01 ALS Bottle#: 14 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:21 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	-0.001	1741058857	150.0	150.0	
2	2.841	2.841	-0.001	184005886	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	77218443	1000.0	990.5	M
1	6.854	6.854	0.000	193181281	1000.0	975.2	M
1	7.527	7.528	-0.001	207813969	1000.0	953.6	M
1	7.887	7.886	0.001	84522297	1000.0	969.8	M
1	8.204	8.204	0.000	82441591	1000.0	961.2	M
		Average of Peak Amounts =				970.0	
2	5.777	5.778	-0.001	5366684	1000.0	919.9	
2	7.143	7.145	-0.002	26089503	1000.0	1020.0	
2	7.285	7.286	-0.001	72036294	1000.0	1025.7	
2	7.800	7.800	0.000	19681560	1000.0	983.5	
2	8.095	8.096	-0.001	40124523	1000.0	1023.9	
		Average of Peak Amounts =				994.6	
						RPD = 2.50	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL3_00020	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

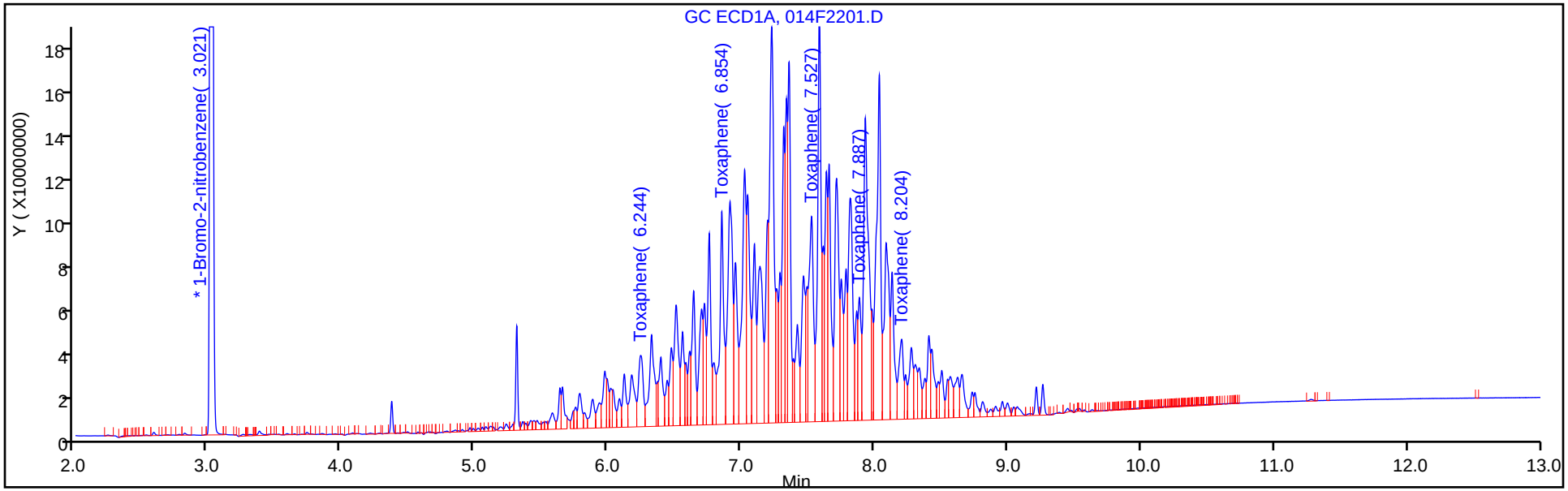
Report Date: 14-Oct-2018 22:11:22 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

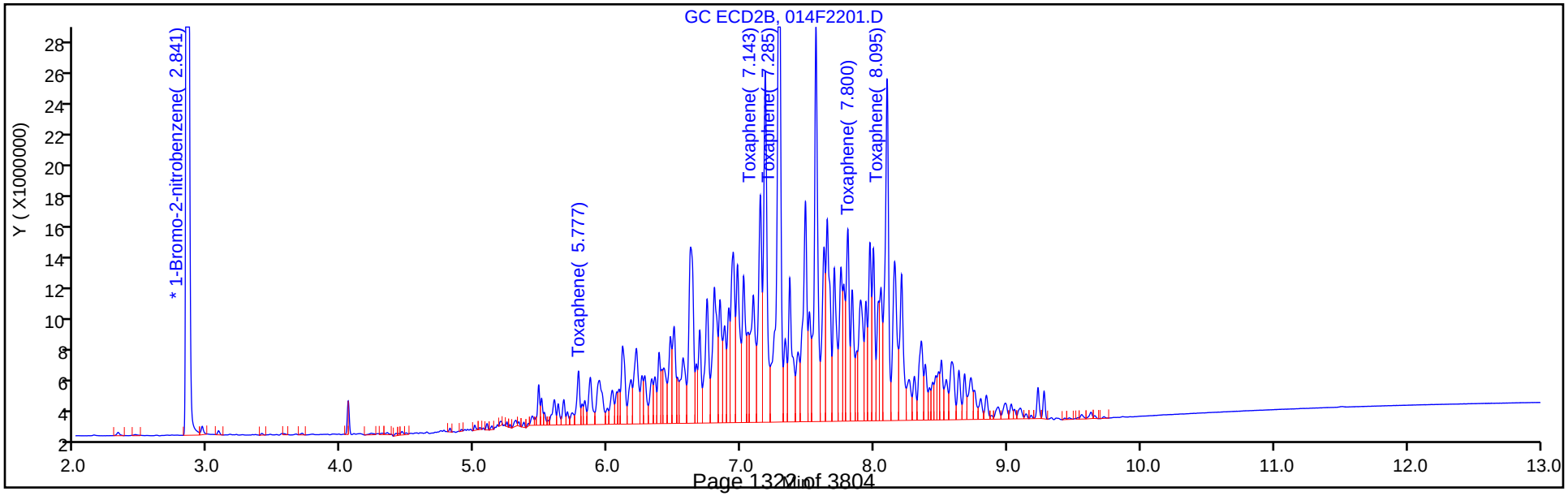
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D

Injection Date:	13-Oct-2018 17:03:01	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 TOX			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:22 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D

Injection Date: 13-Oct-2018 17:03:01 Instrument ID: SGC_P2

Lims ID: STD3 TOX

Client ID:

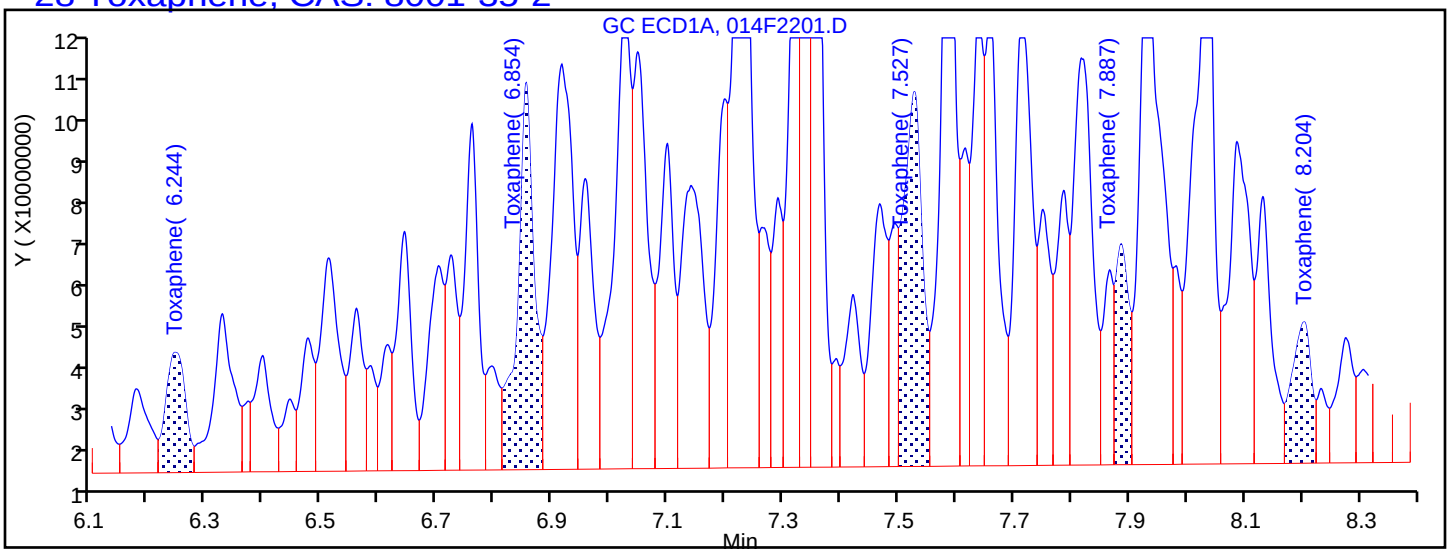
Operator ID: TEM ALS Bottle#: 14 Worklist Smp#: 19

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

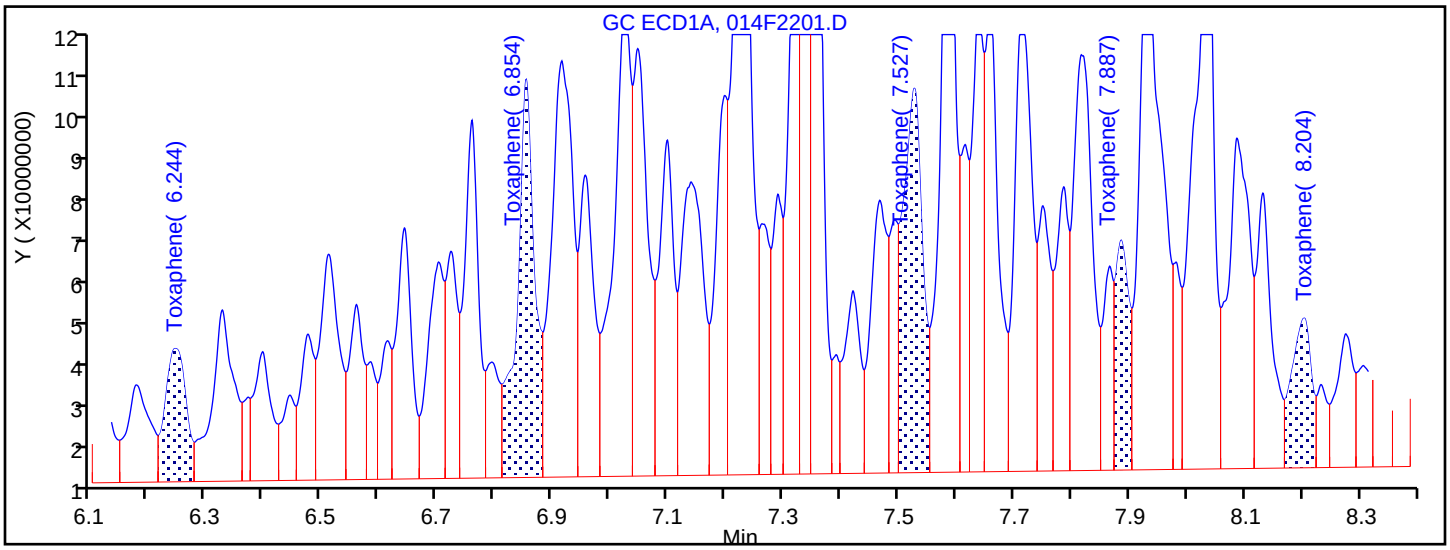
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.244	Response = 65861941
6.854	Response = 181685271
7.527	Response = 200210988
7.887	Response = 80538237
8.204	Response = 75933852



Manual Integration Results

6.244	Response = 77218443	M
6.854	Response = 193181281	M
7.527	Response = 207813969	M
7.887	Response = 84522297	M
8.204	Response = 82441591	M

Reviewer: mooret, 14-Oct-2018 21:33:21

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D
Lims ID: STD2 TOX
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 17:20:32 ALS Bottle#: 15 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:24 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:48

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.000	1773925252	150.0	150.0	
2	2.841	2.841	0.000	187588077	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	36757841	500.0	481.1	M
1	6.854	6.854	0.000	89263703	500.0	467.4	M
1	7.528	7.528	0.000	96759589	500.0	471.3	M
1	7.887	7.886	0.001	36941603	500.0	458.5	M
1	8.204	8.204	0.000	33168067	500.0	441.0	M
		Average of Peak Amounts =				463.8	
2	5.778	5.778	0.000	3239492	500.0	523.2	M
2	7.144	7.145	-0.001	13088271	500.0	496.7	M
2	7.284	7.286	-0.002	34980187	500.0	489.4	M
2	7.799	7.800	-0.001	9872826	500.0	488.2	M
2	8.095	8.096	-0.001	19482419	500.0	488.8	M
		Average of Peak Amounts =				497.3	
						RPD = 6.96	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL2_00021	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

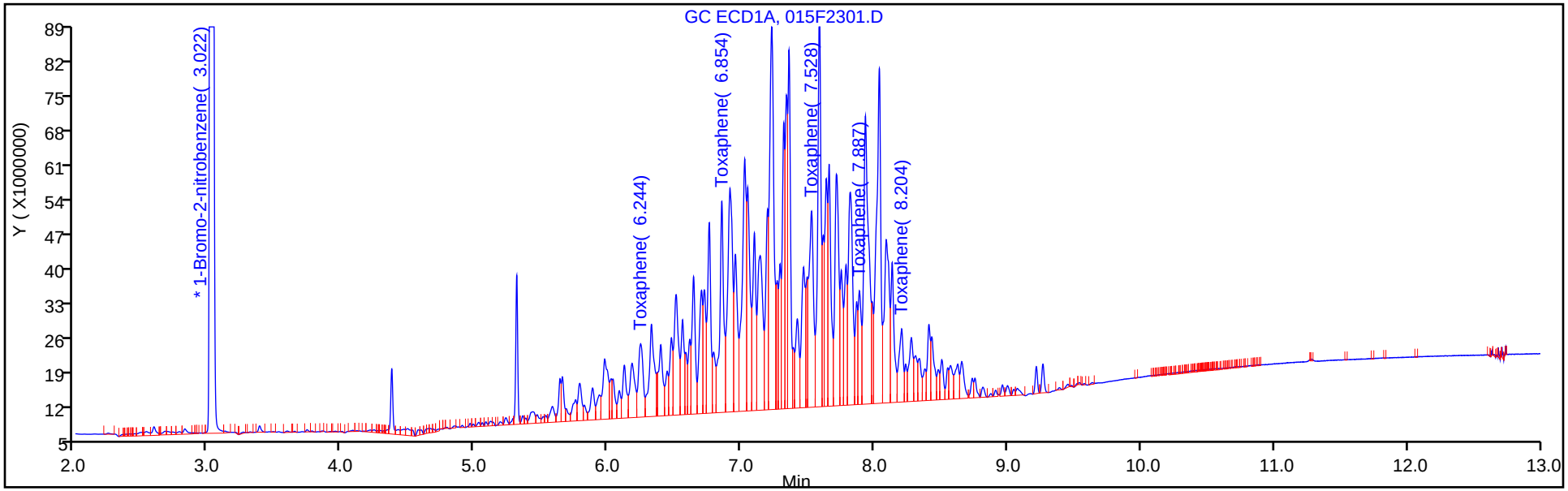
Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

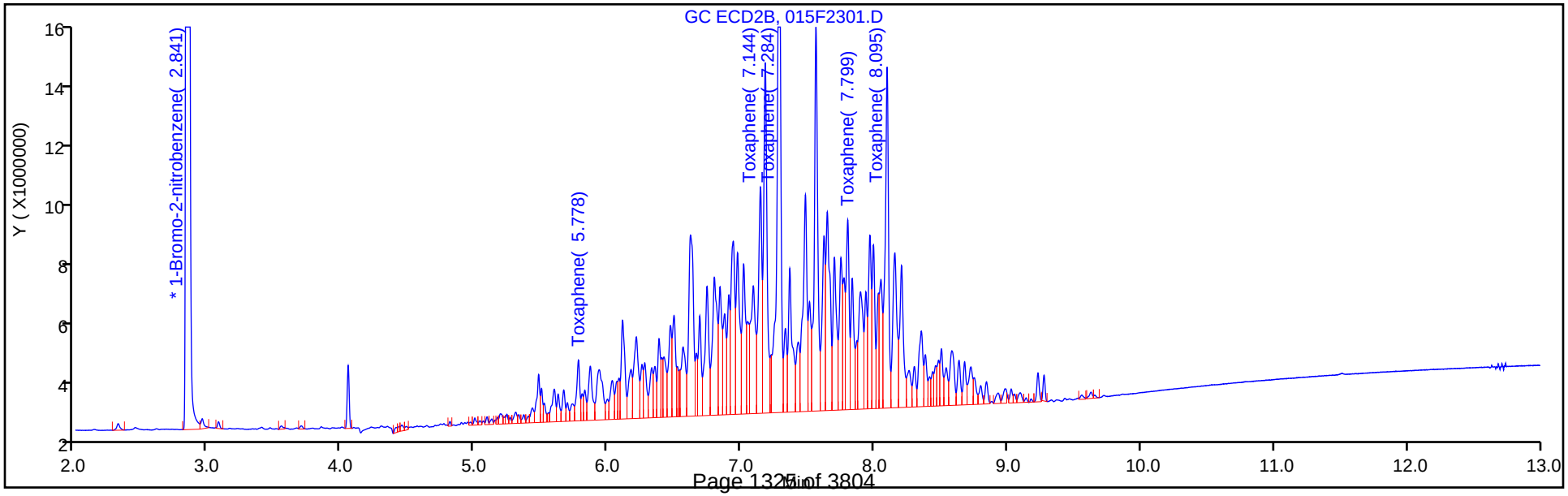
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date:	13-Oct-2018 17:20:32	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 TOX			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date: 13-Oct-2018 17:20:32 Instrument ID: SGC_P2

Lims ID: STD2 TOX

Client ID:

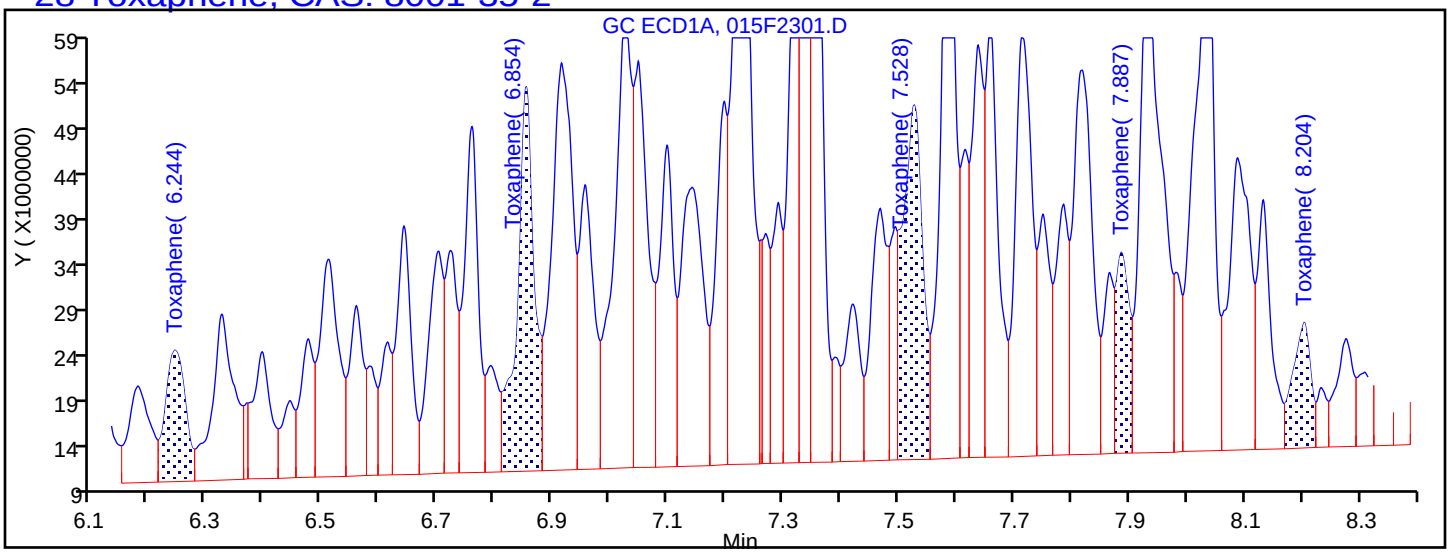
Operator ID: TEM ALS Bottle#: 15 Worklist Smp#: 20

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

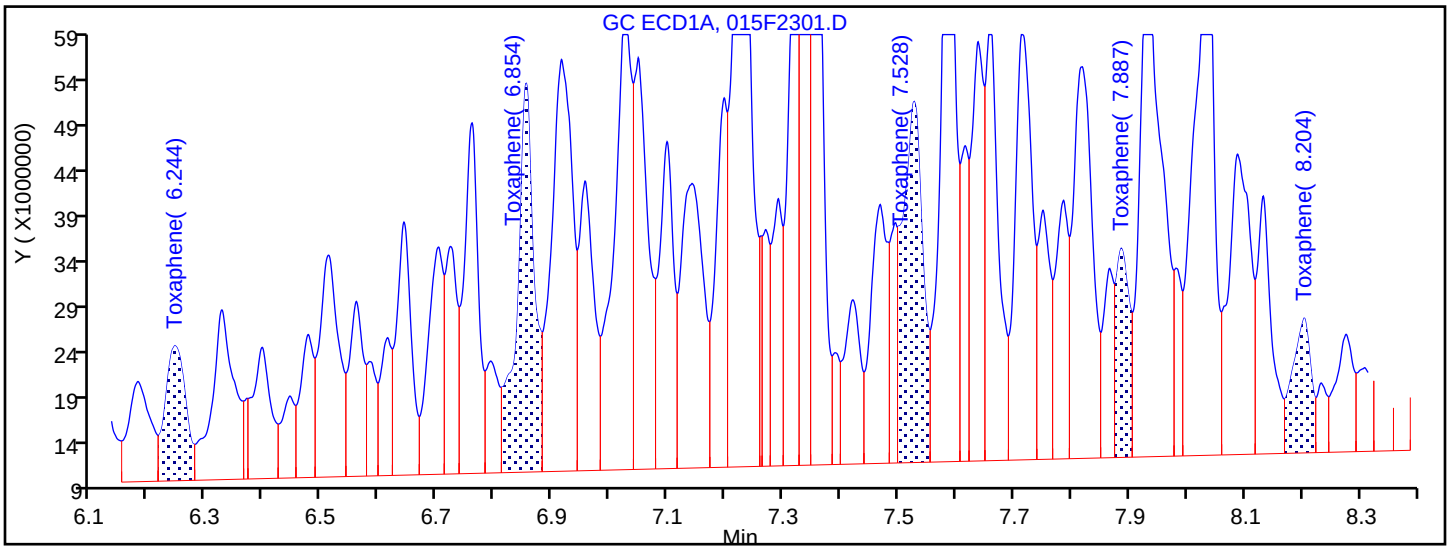
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.244	Response = 35050970
6.854	Response = 86556064
7.528	Response = 93843579
7.887	Response = 35112670
8.204	Response = 29712914



Manual Integration Results

6.244	Response = 36757841	M
6.854	Response = 89263703	M
7.528	Response = 96759589	M
7.887	Response = 36941603	M
8.204	Response = 33168067	M

Reviewer: mooret, 14-Oct-2018 21:33:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D
Lims ID: STD1 TOX
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 17:37:55 ALS Bottle#: 16 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:27 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:34:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.001	1720287810	150.0	150.0	
2	2.842	2.841	0.001	182087225	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	13484316	200.0	203.4	M
1	6.854	6.854	0.000	32829722	200.0	205.8	M
1	7.528	7.528	0.000	32415828	200.0	205.6	M
1	7.887	7.886	0.001	12391302	200.0	207.2	M
1	8.204	8.204	0.000	10296721	200.0	210.3	M
		Average of Peak Amounts =				206.4	
2	5.778	5.778	0.000	1369118	200.0	198.1	M
2	7.144	7.145	-0.001	5249471	200.0	199.2	M
2	7.284	7.286	-0.002	13813356	200.0	200.0	M
2	7.800	7.800	0.000	3856571	200.0	201.6	M
2	8.095	8.096	-0.001	7701963	200.0	200.4	M
		Average of Peak Amounts =				199.8	
						RPD = 3.24	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL1_00020 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

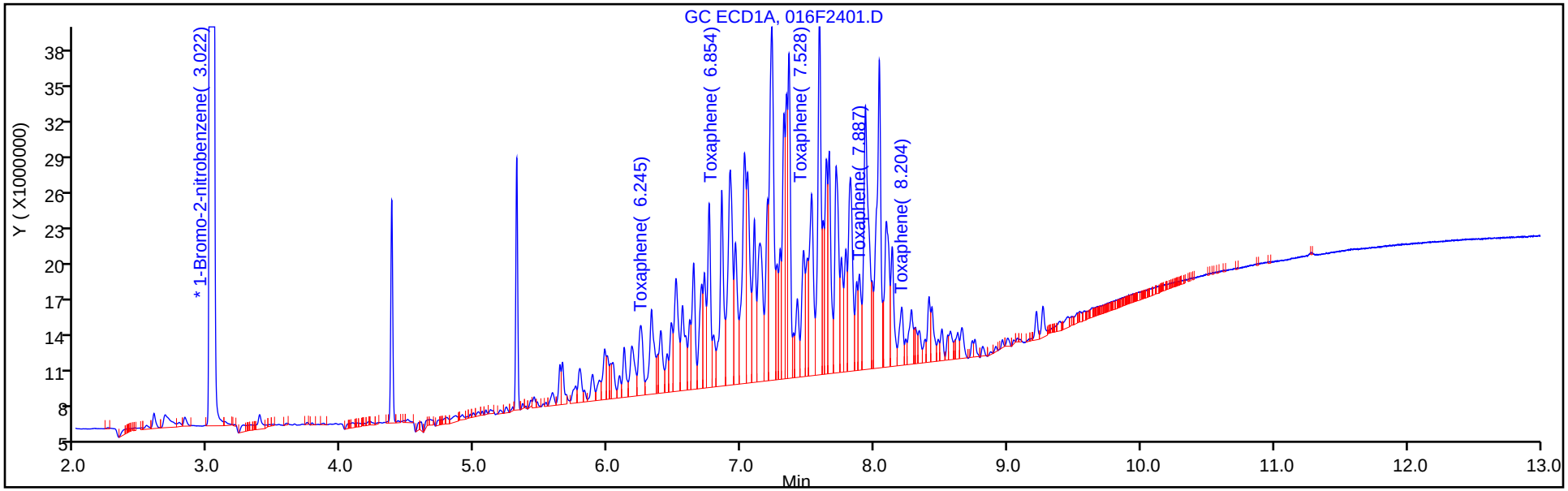
Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

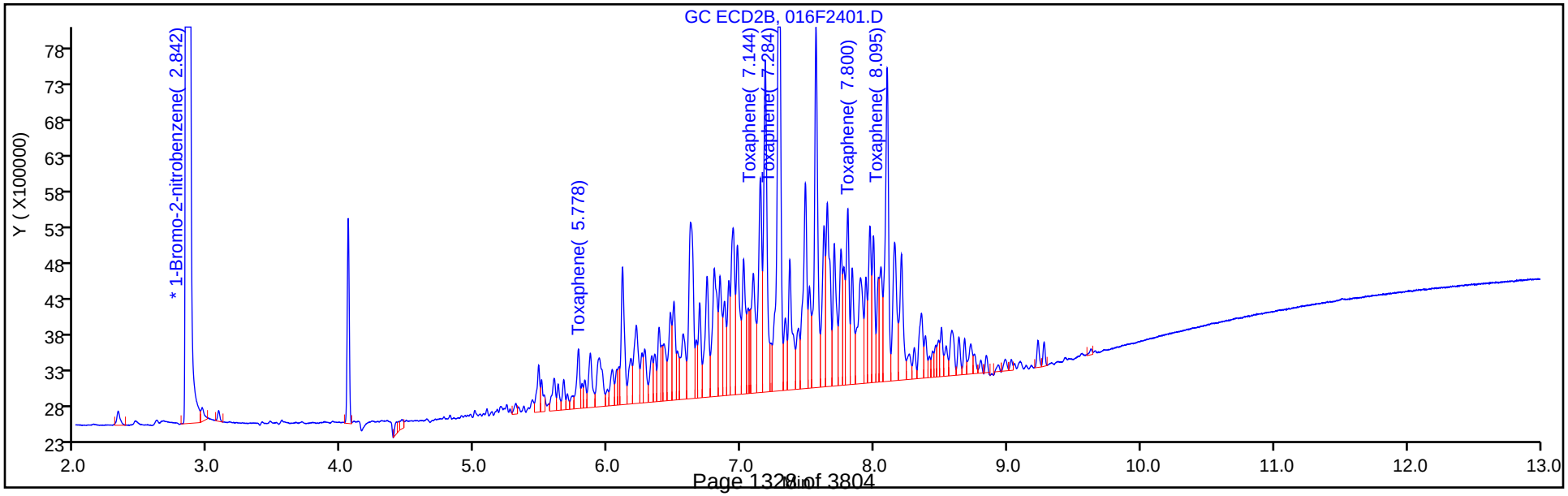
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date:	13-Oct-2018 17:37:55	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 TOX			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date: 13-Oct-2018 17:37:55 Instrument ID: SGC_P2

Lims ID: STD1 TOX

Client ID:

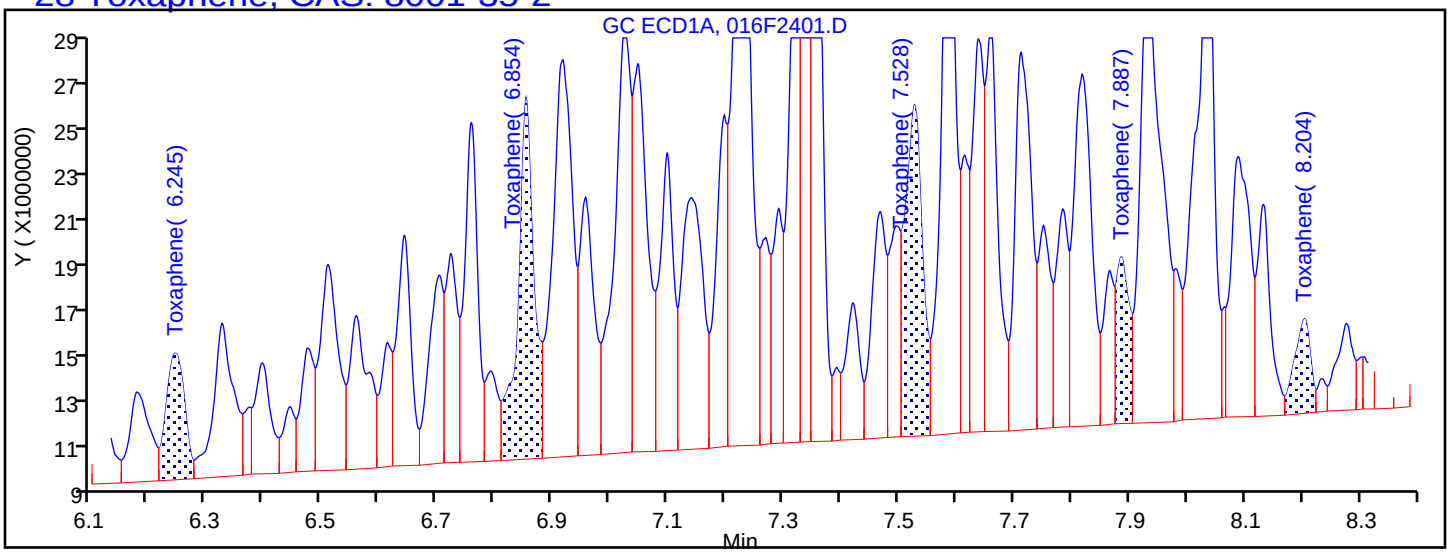
Operator ID: TEM ALS Bottle#: 16 Worklist Smp#: 21

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

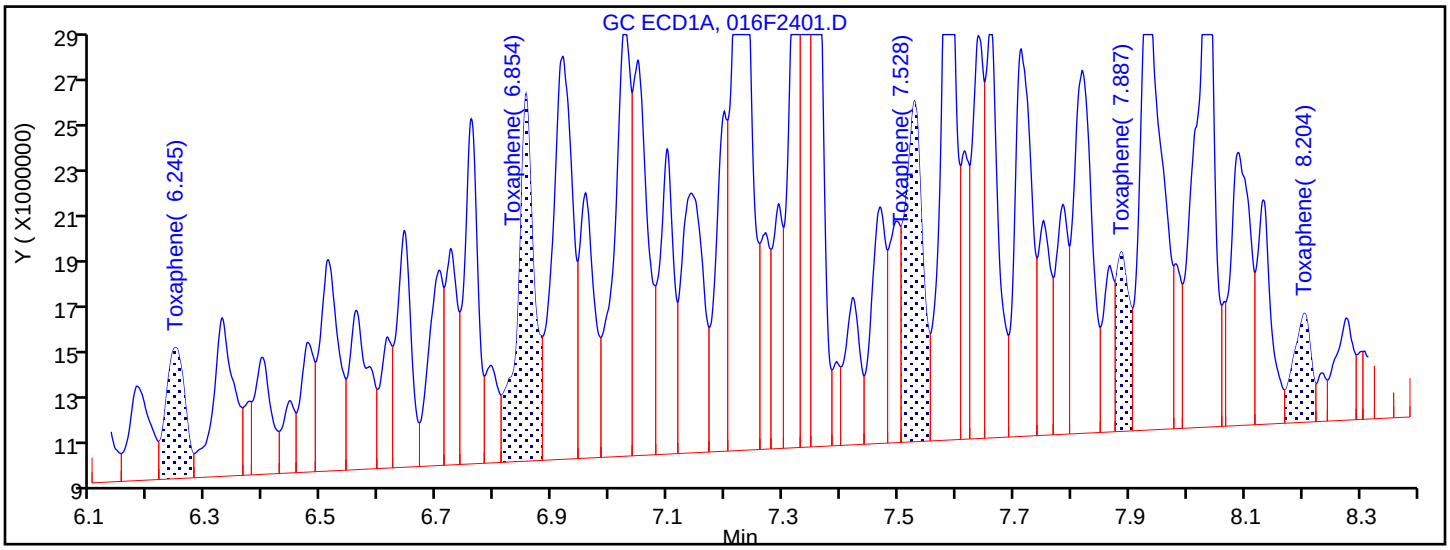
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.245	Response = 12595640
6.854	Response = 31226336
7.528	Response = 30814368
7.887	Response = 11278282
8.204	Response = 8153489



Manual Integration Results

6.245	Response = 13484316	M
6.854	Response = 32829722	M
7.528	Response = 32415828	M
7.887	Response = 12391302	M
8.204	Response = 10296721	M

Reviewer: mooret, 14-Oct-2018 21:34:03

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33998

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Toxaphene Peak 1	0.0056 0.0043	0.0052	0.0044	0.0049	0.0046	Lin2	0.2366	0.0045							0.9950		0.9900
Toxaphene Peak 2	0.0216 0.0195	0.0209	0.0213	0.0214	0.0210	Lin2	0.2123	0.0206							0.9990		0.9900
Toxaphene Peak 3	0.0569 0.0540	0.0559	0.0587	0.0595	0.0582	Lin2	-0.090	0.0573							0.9980		0.9900
Toxaphene Peak 4	0.0159 0.0157	0.0158	0.0160	0.0171	0.0170	Lin2	-0.140	0.0165							0.9980		0.9900
Toxaphene Peak 5	0.0317 0.0306	0.0312	0.0327	0.0328	0.0324	Lin2	-0.070	0.0320							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 16:10 Calibration End Date: 10/13/2018 17:37 Calibration ID: 33998

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/21	016F2401.D
Level 2	STD2 280-433303/20	015F2301.D
Level 3	STD3 280-433303/19	014F2201.D
Level 4	STD4 280-433303/18	013F2101.D
Level 5	STD5 280-433303/17	012F2001.D
Level 6	STD6 280-433303/16	011F1901.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Toxaphene Peak 1	BNB	Lin2	1369118 60549286	3239492	5366684	12064651	30052469	200 10000	500	1000	2000	5000
Toxaphene Peak 2	BNB	Lin2	5249471 273869350	13088271	26089503	52352055	136167822	200 10000	500	1000	2000	5000
Toxaphene Peak 3	BNB	Lin2	13813356 756947570	34980187	72036294	145561454	377922017	200 10000	500	1000	2000	5000
Toxaphene Peak 4	BNB	Lin2	3856571 219585664	9872826	19681560	41885928	110390772	200 10000	500	1000	2000	5000
Toxaphene Peak 5	BNB	Lin2	7701963 429283014	19482419	40124523	80317017	210568110	200 10000	500	1000	2000	5000

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D
Lims ID: STD6 TOX
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 16:10:51 ALS Bottle#: 11 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:12 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:36:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	2093632714	150.0	150.0	
2	2.840	2.839	0.000	210457864	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	984914164	10000	10176	
1	6.853	6.854	-0.001	2531832439	10000	10174	
1	7.528	7.528	0.000	2860362835	10000	10232	
1	7.885	7.886	-0.001	1164606715	10000	10334	
1	8.203	8.204	-0.001	1187453780	10000	10397	
		Average of Peak Amounts =				10263	
2	5.776	5.778	-0.002	60549286	10000	9540.5	M
2	7.143	7.145	-0.002	273869350	10000	9445.5	M
2	7.284	7.286	-0.002	756947570	10000	9410.3	M
2	7.798	7.800	-0.002	219585664	10000	9519.4	M
2	8.094	8.096	-0.002	429283014	10000	9559.5	M
		Average of Peak Amounts =				9495.0	
						RPD = 7.77	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL6_00023	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

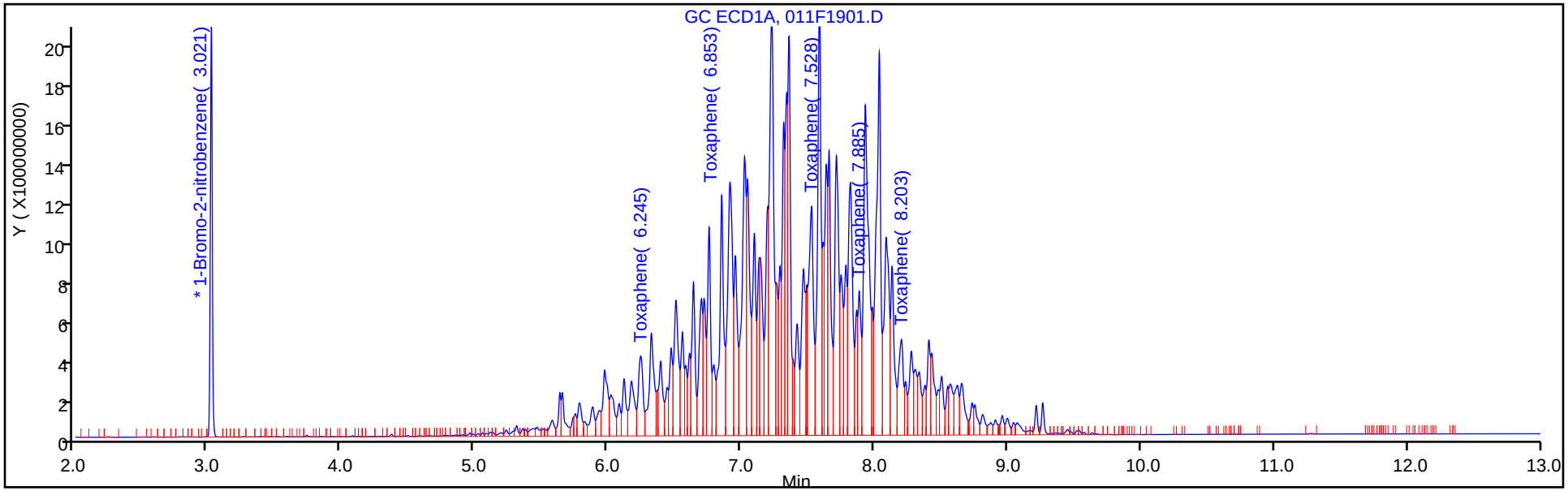
Report Date: 14-Oct-2018 22:11:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

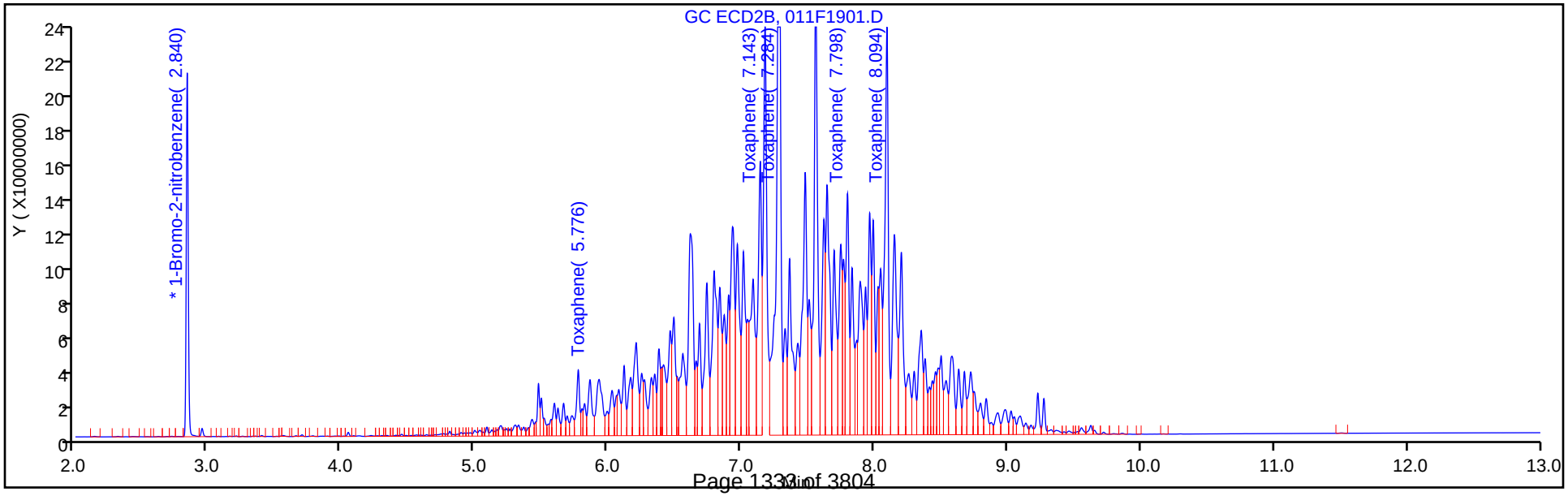
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D

Injection Date:	13-Oct-2018 16:10:51	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 TOX			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:14 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\011F1901.D

Injection Date: 13-Oct-2018 16:10:51 Instrument ID: SGC_P2

Lims ID: STD6 TOX

Client ID:

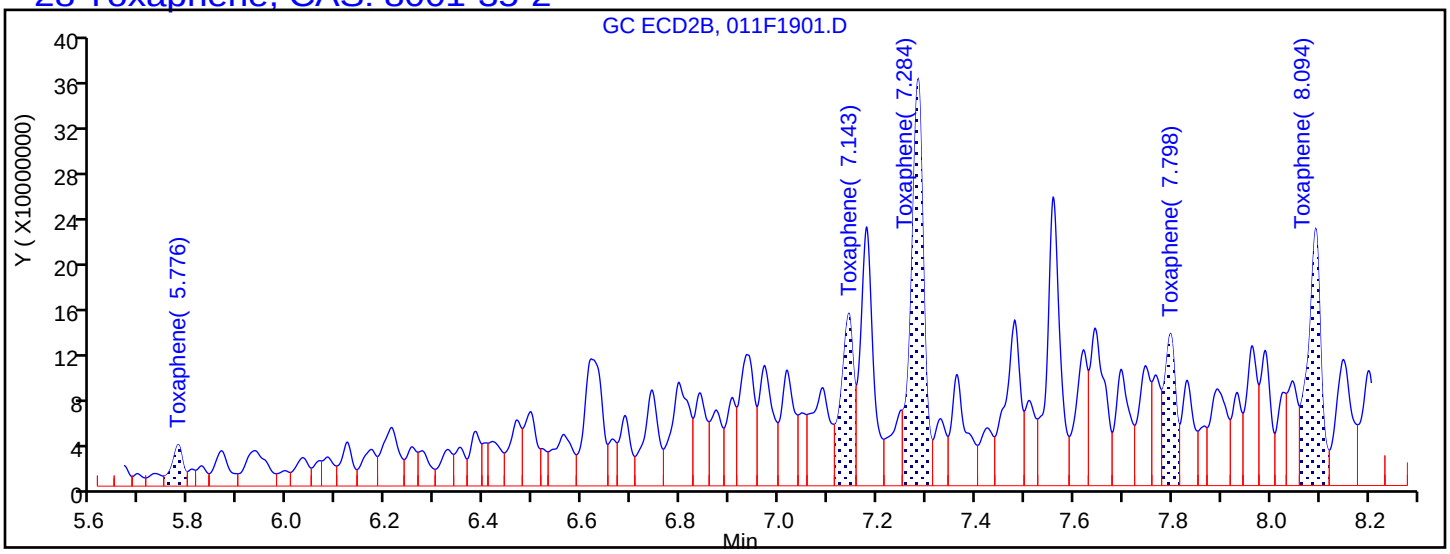
Operator ID: TEM ALS Bottle#: 11 Worklist Smp#: 16

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

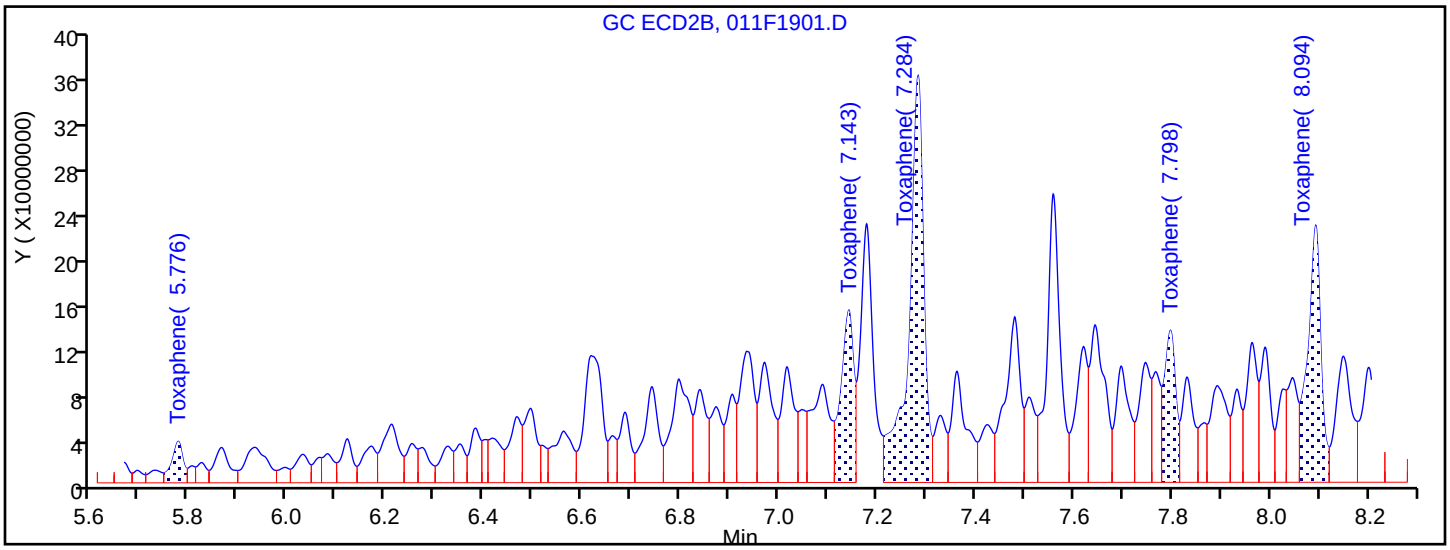
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.776	Response = 60552821
7.143	Response = 273886955
7.284	Response = 640399513
7.798	Response = 219597728
8.094	Response = 429322900



Manual Integration Results

5.776	Response = 60549286	M
7.143	Response = 273869350	M
7.284	Response = 756947570	M
7.798	Response = 219585664	M
8.094	Response = 429283014	M

Reviewer: mooret, 14-Oct-2018 21:36:53

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D
Lims ID: STD5 TOX
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 16:28:15 ALS Bottle#: 12 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:15 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.020	0.001	1887409806	150.0	150.0	
2	2.840	2.839	0.001	194682264	150.0	150.0	
28 Toxaphene							
1	6.246	6.246	0.000	444953077	5000.0	5116.5	
1	6.853	6.854	-0.001	1162405972	5000.0	5203.9	
1	7.526	7.528	-0.002	1283190101	5000.0	5124.6	
1	7.886	7.886	0.000	519294161	5000.0	5149.2	
1	8.204	8.204	0.000	541962755	5000.0	5314.1	
		Average of Peak Amounts =				5181.6	
2	5.777	5.778	-0.001	30052469	5000.0	5094.6	
2	7.143	7.145	-0.002	136167822	5000.0	5072.1	
2	7.284	7.286	-0.002	377922017	5000.0	5079.7	
2	7.799	7.800	-0.001	110390772	5000.0	5177.3	
2	8.095	8.096	-0.001	210568110	5000.0	5070.0	
		Average of Peak Amounts =				5098.7	
						RPD = 1.61	

Reagents:

8081ToxL5_00021 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

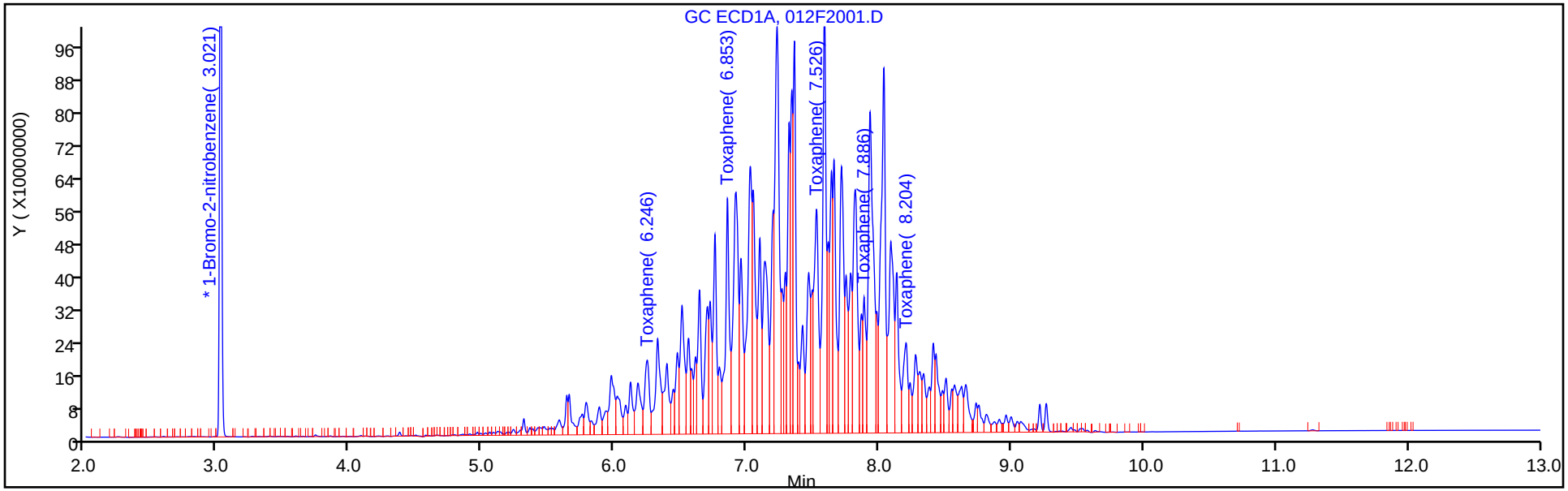
Report Date: 14-Oct-2018 22:11:17 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

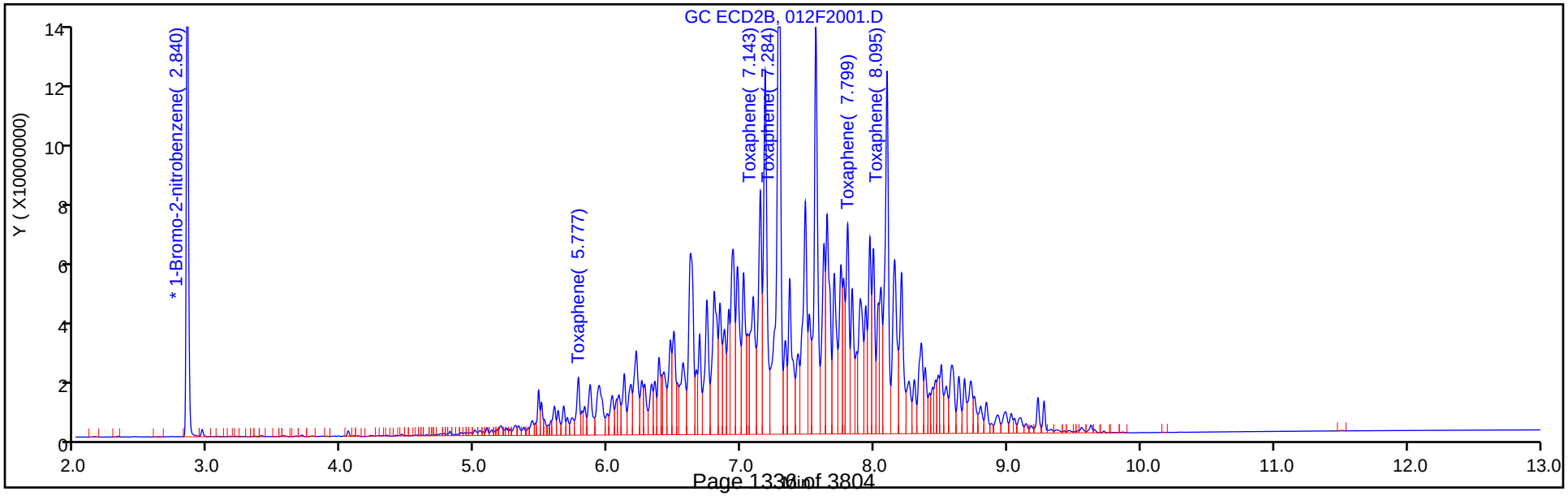
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\012F2001.D

Injection Date:	13-Oct-2018 16:28:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 TOX			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D
Lims ID: STD4 TOX
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 13-Oct-2018 16:45:38 ALS Bottle#: 13 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:18 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:28:32

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	0.000	1744551294	150.0	150.0	
2	2.841	2.841	0.000	183459712	150.0	150.0	
28 Toxaphene							M
1	6.246	6.246	0.000	157400259	2000.0	1979.4	M
1	6.854	6.854	0.000	408359221	2000.0	2006.3	M
1	7.528	7.528	0.000	466543962	2000.0	2055.4	M
1	7.886	7.886	0.000	184785693	2000.0	2028.0	M
1	8.204	8.204	0.000	182989462	2000.0	2005.7	M
		Average of Peak Amounts =				2015.0	
2	5.778	5.778	0.000	12064651	2000.0	2140.2	M
2	7.145	7.145	0.000	52352055	2000.0	2063.3	M
2	7.286	7.286	0.000	145561454	2000.0	2077.1	M
2	7.800	7.800	0.000	41885928	2000.0	2089.7	M
2	8.096	8.096	0.000	80317017	2000.0	2053.4	M
		Average of Peak Amounts =				2084.7	
						RPD = 3.40	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00014 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

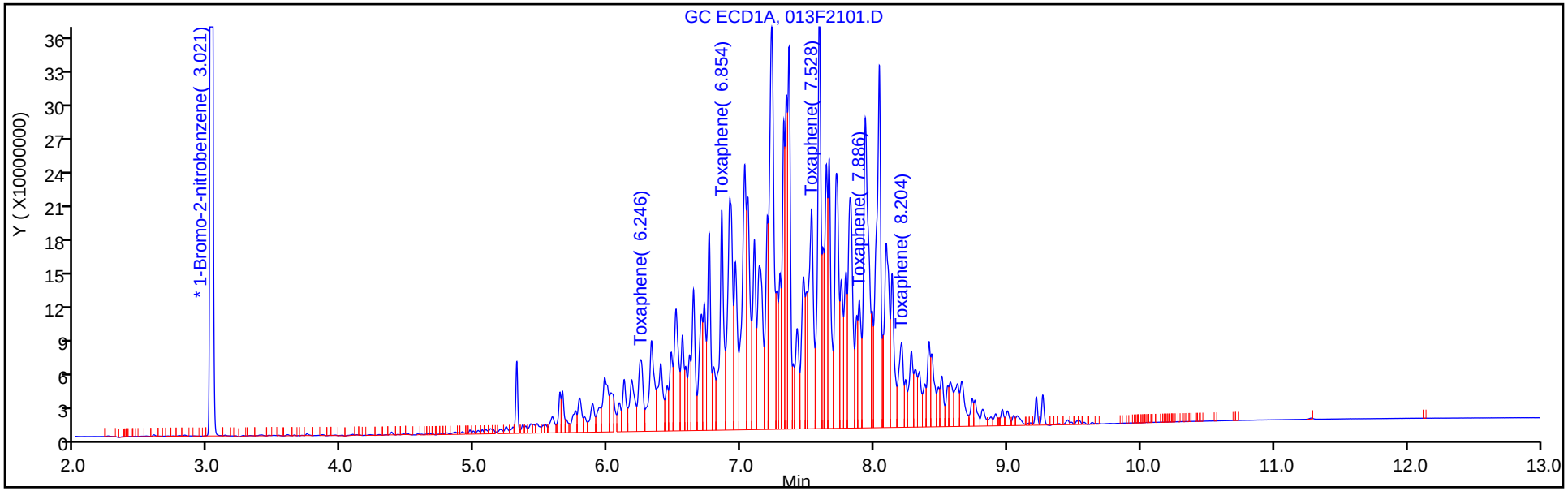
Report Date: 14-Oct-2018 22:11:20 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

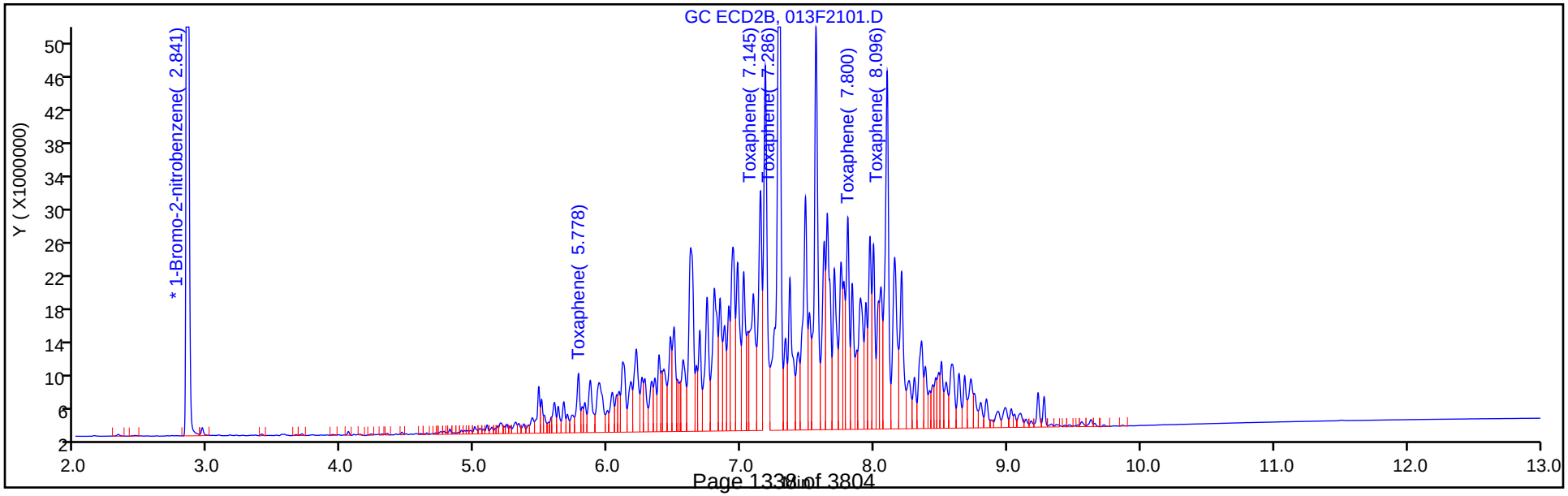
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

Injection Date:	13-Oct-2018 16:45:38	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 TOX			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



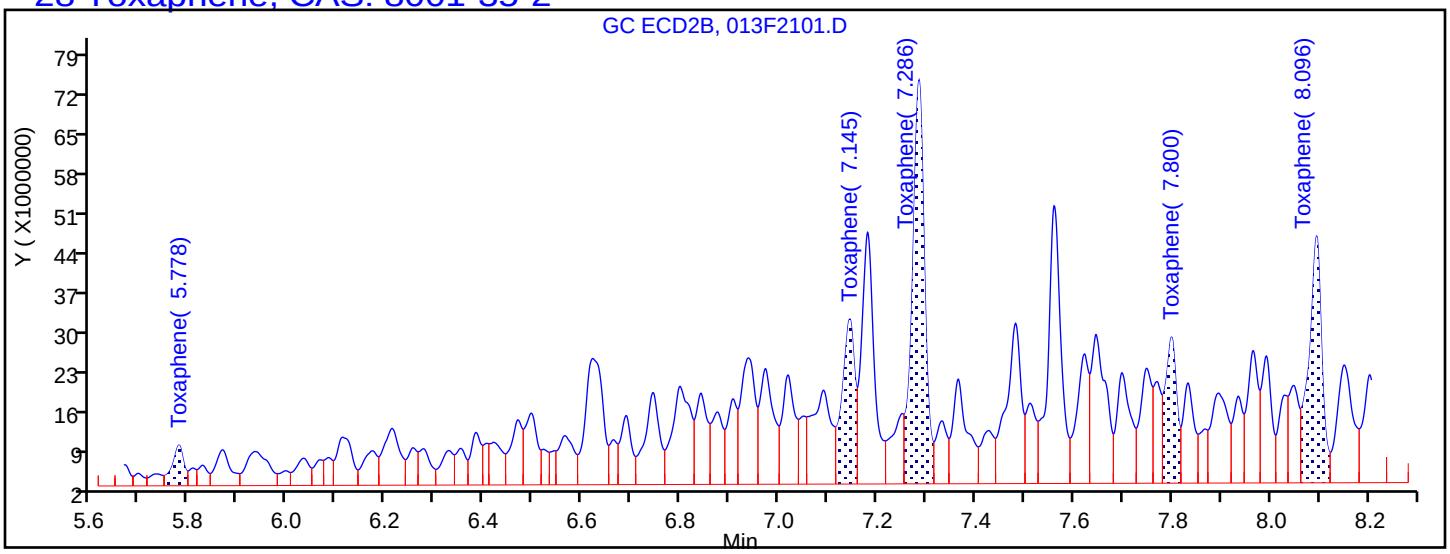
Report Date: 14-Oct-2018 22:11:20 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\013F2101.D

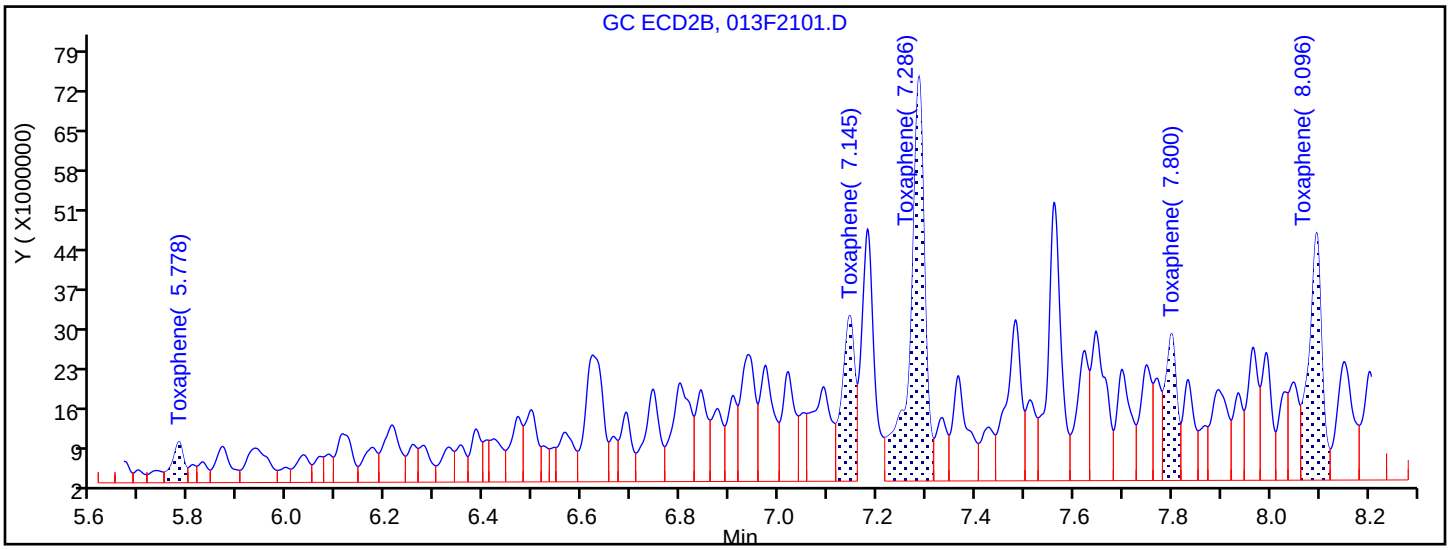
Injection Date:	13-Oct-2018 16:45:38	Instrument ID:	SGC_P2		
Lims ID:	STD4 TOX				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	13	Worklist Smp#:	18
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP2 (0.32 mm)	Detector	GC ECD2B		

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.778	Response = 11889868
7.145	Response = 52091638
7.286	Response = 122916584
7.800	Response = 41613365
8.096	Response = 79867523



Manual Integration Results

5.778	Response = 12064651	M
7.145	Response = 52352055	M
7.286	Response = 145561454	M
7.800	Response = 41885928	M
8.096	Response = 80317017	M

Reviewer: mooret, 14-Oct-2018 21:37:56

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D
Lims ID: STD3 TOX
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 17:03:01 ALS Bottle#: 14 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:21 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.021	-0.001	1741058857	150.0	150.0	
2	2.841	2.841	-0.001	184005886	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	77218443	1000.0	990.5	M
1	6.854	6.854	0.000	193181281	1000.0	975.2	M
1	7.527	7.528	-0.001	207813969	1000.0	953.6	M
1	7.887	7.886	0.001	84522297	1000.0	969.8	M
1	8.204	8.204	0.000	82441591	1000.0	961.2	M
		Average of Peak Amounts =				970.0	
2	5.777	5.778	-0.001	5366684	1000.0	919.9	
2	7.143	7.145	-0.002	26089503	1000.0	1020.0	
2	7.285	7.286	-0.001	72036294	1000.0	1025.7	
2	7.800	7.800	0.000	19681560	1000.0	983.5	
2	8.095	8.096	-0.001	40124523	1000.0	1023.9	
		Average of Peak Amounts =				994.6	
						RPD = 2.50	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL3_00020	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

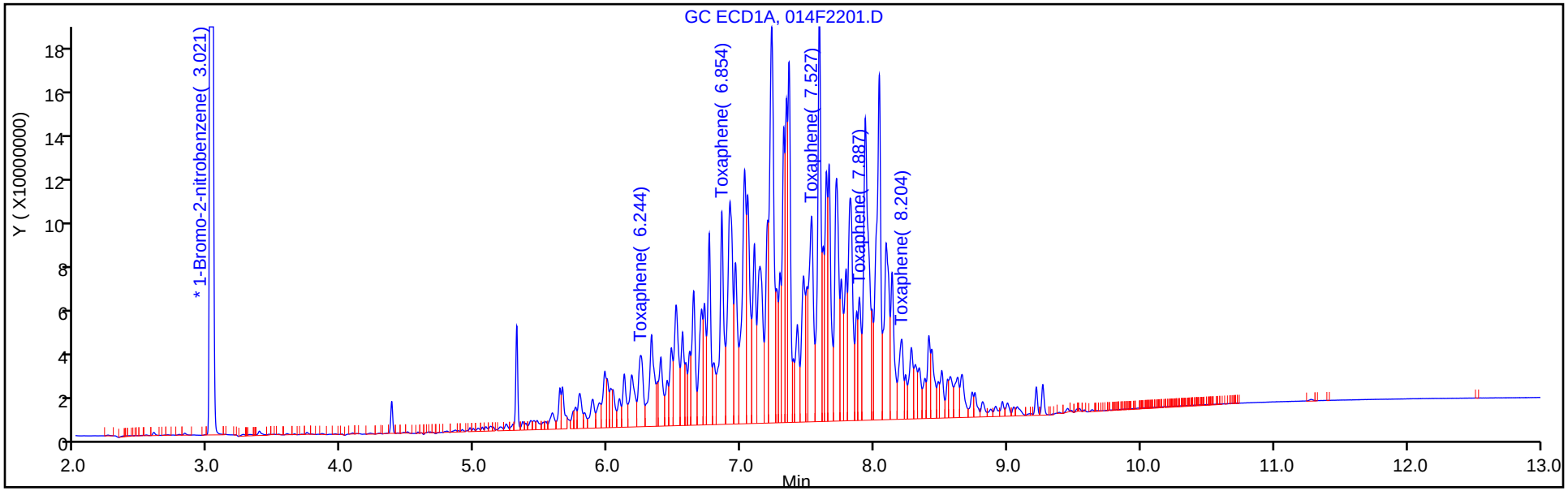
Report Date: 14-Oct-2018 22:11:23 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

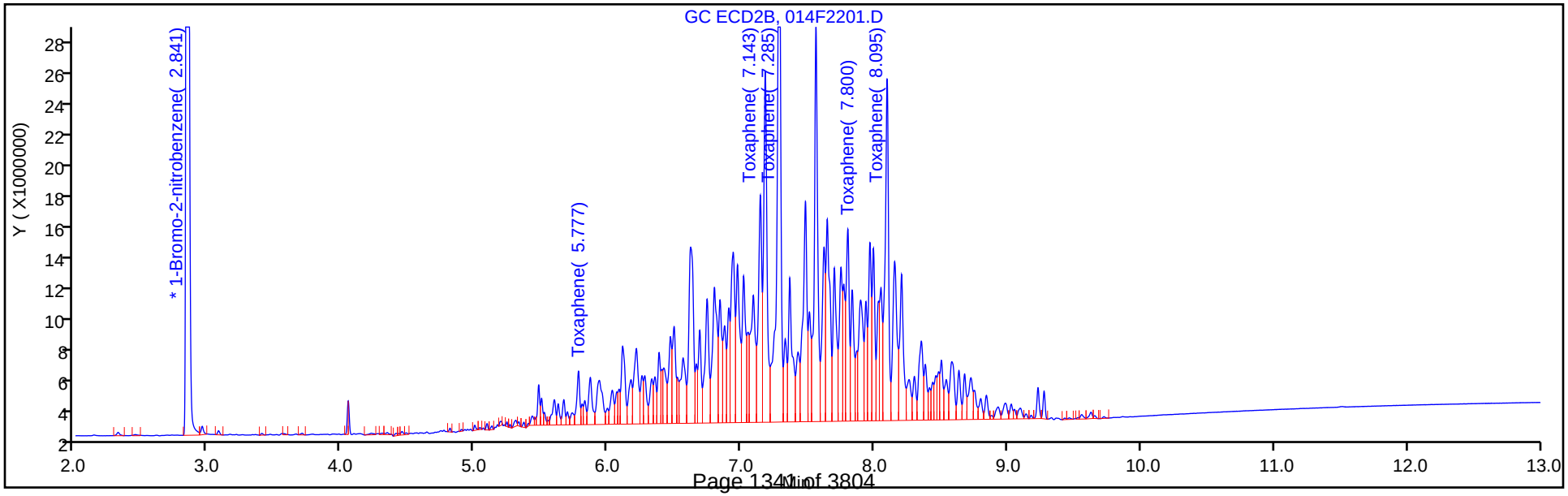
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\014F2201.D

Injection Date:	13-Oct-2018 17:03:01	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 TOX			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D
Lims ID: STD2 TOX
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 17:20:32 ALS Bottle#: 15 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:24 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:33:48

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.000	1773925252	150.0	150.0	
2	2.841	2.841	0.000	187588077	150.0	150.0	
28 Toxaphene							M
1	6.244	6.246	-0.002	36757841	500.0	481.1	M
1	6.854	6.854	0.000	89263703	500.0	467.4	M
1	7.528	7.528	0.000	96759589	500.0	471.3	M
1	7.887	7.886	0.001	36941603	500.0	458.5	M
1	8.204	8.204	0.000	33168067	500.0	441.0	M
		Average of Peak Amounts =				463.8	
2	5.778	5.778	0.000	3239492	500.0	523.2	M
2	7.144	7.145	-0.001	13088271	500.0	496.7	M
2	7.284	7.286	-0.002	34980187	500.0	489.4	M
2	7.799	7.800	-0.001	9872826	500.0	488.2	M
2	8.095	8.096	-0.001	19482419	500.0	488.8	M
		Average of Peak Amounts =				497.3	
						RPD = 6.96	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL2_00021	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

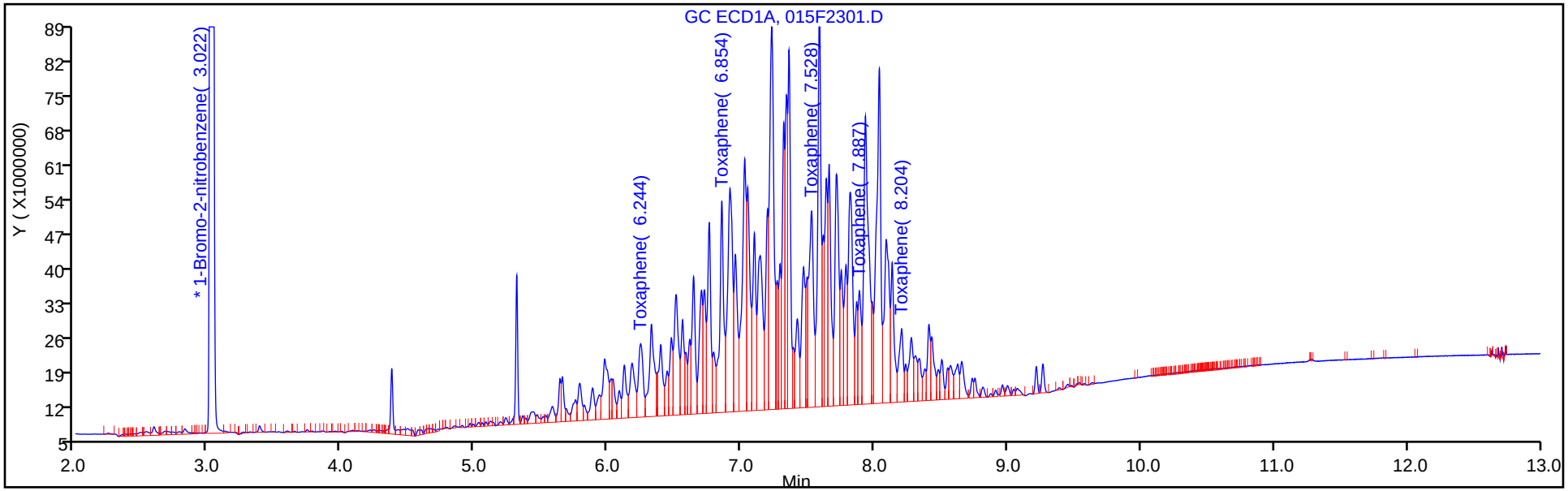
Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

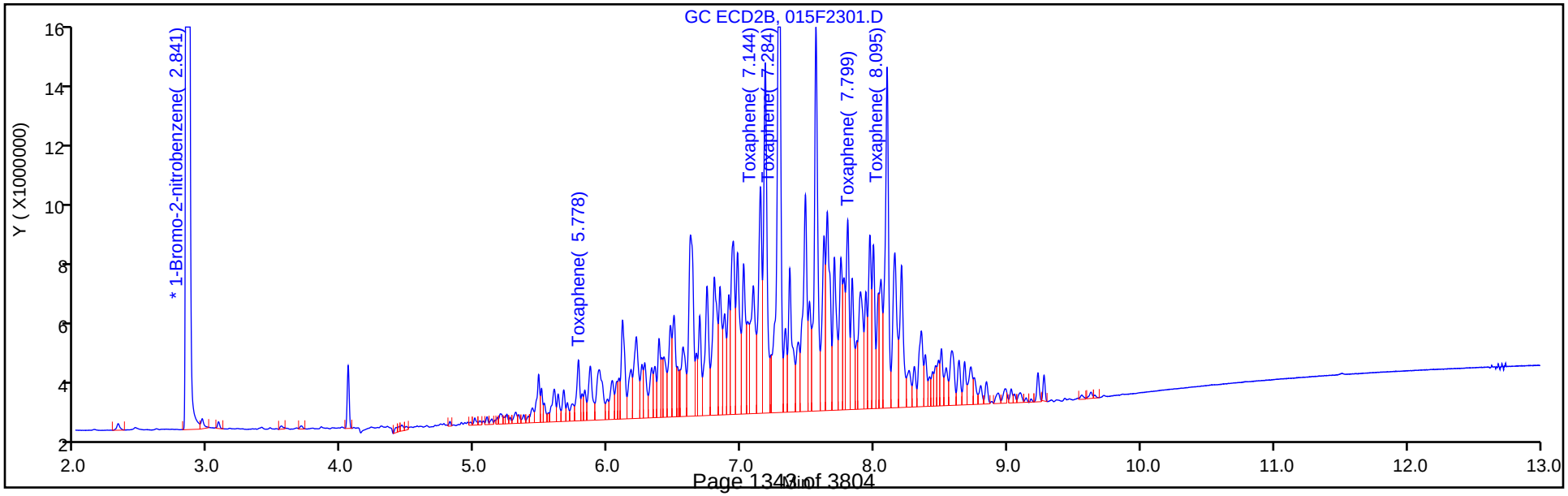
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date:	13-Oct-2018 17:20:32	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 TOX			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:26 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\015F2301.D

Injection Date: 13-Oct-2018 17:20:32 Instrument ID: SGC_P2

Lims ID: STD2 TOX

Client ID:

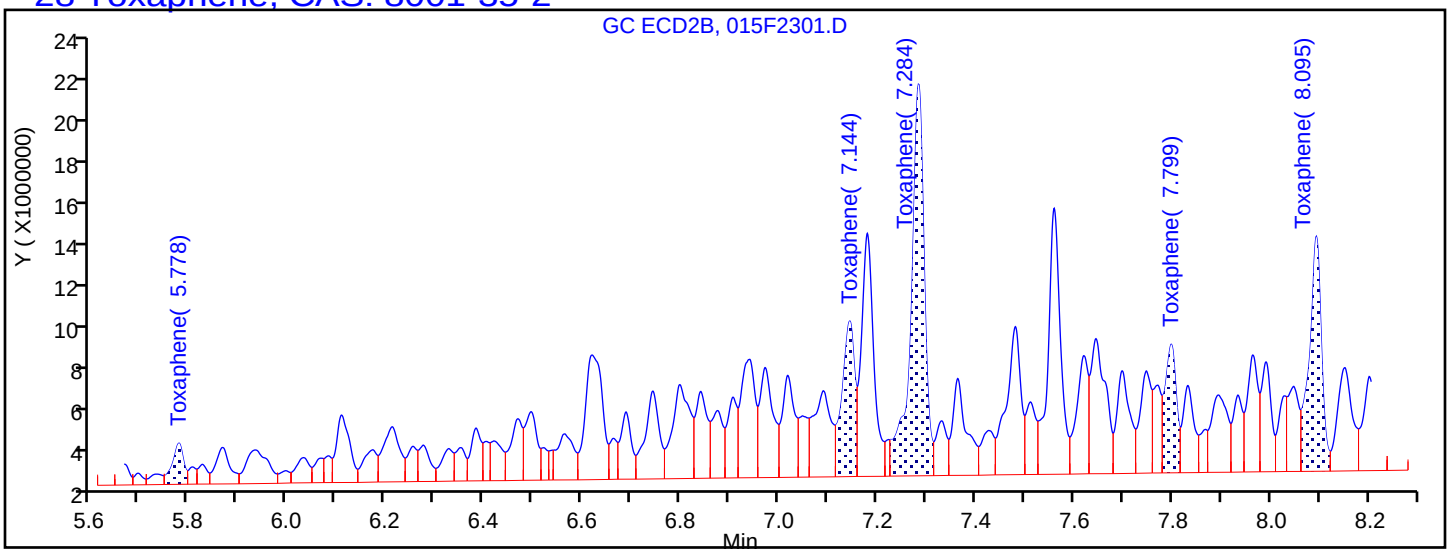
Operator ID: TEM ALS Bottle#: 15 Worklist Smp#: 20

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

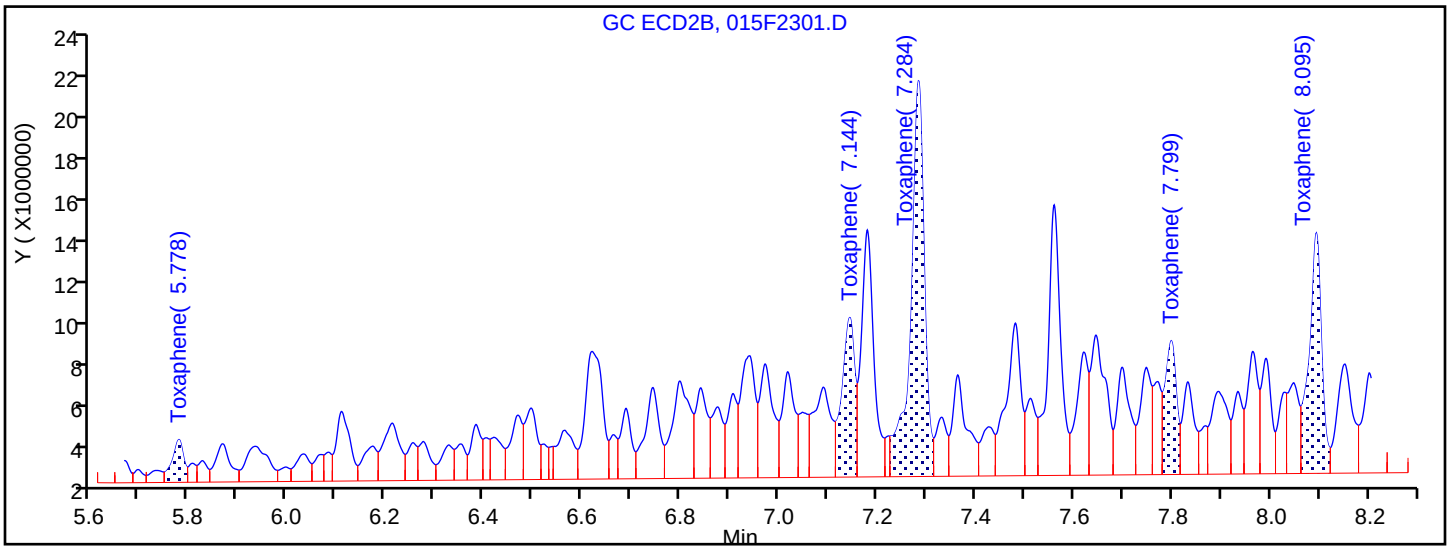
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.778	Response = 3020122
7.144	Response = 12594706
7.284	Response = 33926133
7.799	Response = 9338992
8.095	Response = 18544525



Manual Integration Results

5.778	Response = 3239492	M
7.144	Response = 13088271	M
7.284	Response = 34980187	M
7.799	Response = 9872826	M
8.095	Response = 19482419	M

Reviewer: mooret, 14-Oct-2018 21:33:47

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D
Lims ID: STD1 TOX
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 17:37:55 ALS Bottle#: 16 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:27 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:34:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.022	3.021	0.001	1720287810	150.0	150.0	
2	2.842	2.841	0.001	182087225	150.0	150.0	
28 Toxaphene							M
1	6.245	6.246	-0.001	13484316	200.0	203.4	M
1	6.854	6.854	0.000	32829722	200.0	205.8	M
1	7.528	7.528	0.000	32415828	200.0	205.6	M
1	7.887	7.886	0.001	12391302	200.0	207.2	M
1	8.204	8.204	0.000	10296721	200.0	210.3	M
		Average of Peak Amounts =				206.4	
2	5.778	5.778	0.000	1369118	200.0	198.1	M
2	7.144	7.145	-0.001	5249471	200.0	199.2	M
2	7.284	7.286	-0.002	13813356	200.0	200.0	M
2	7.800	7.800	0.000	3856571	200.0	201.6	M
2	8.095	8.096	-0.001	7701963	200.0	200.4	M
		Average of Peak Amounts =				199.8	
						RPD = 3.24	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081ToxL1_00020	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

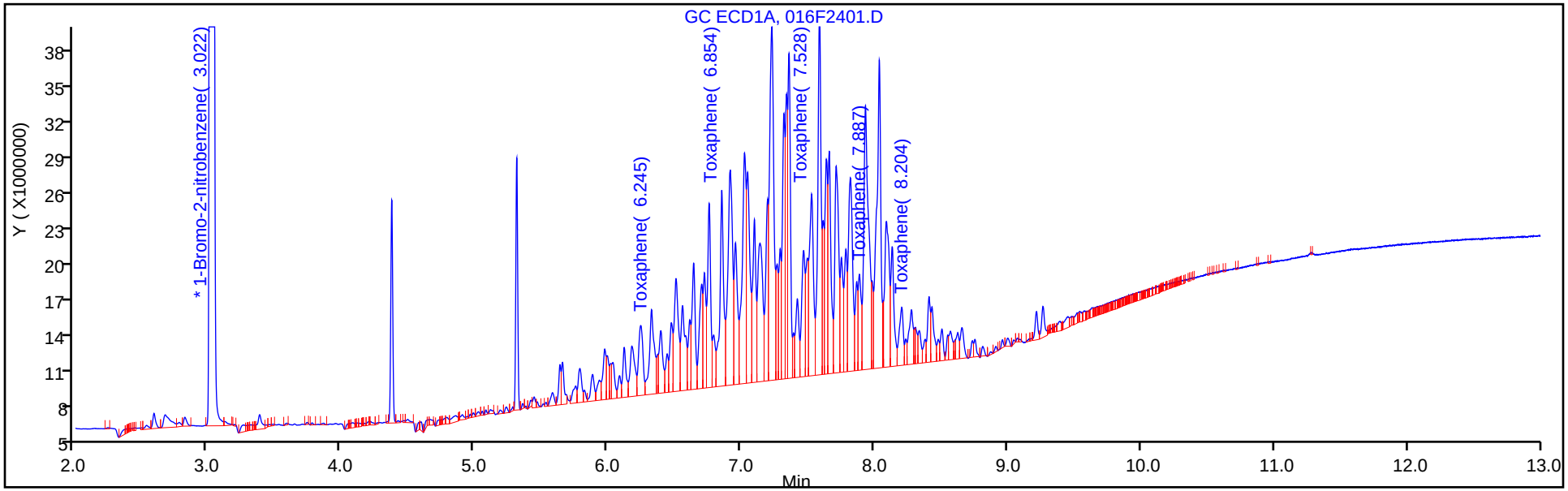
Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

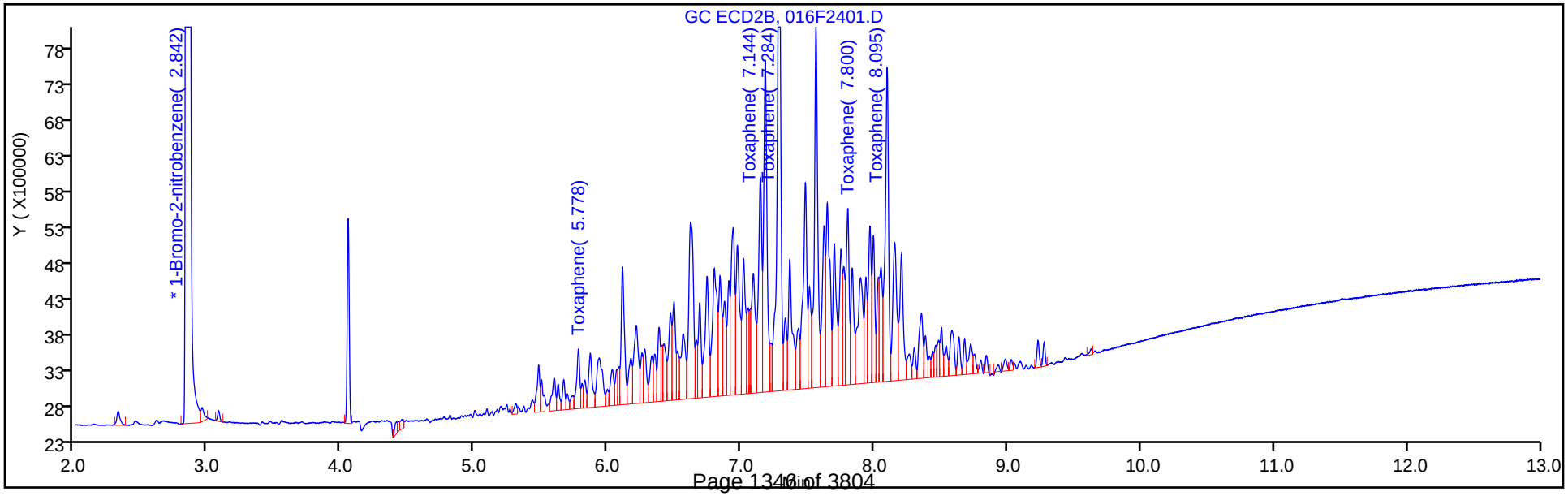
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date:	13-Oct-2018 17:37:55	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 TOX			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:11:29 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\016F2401.D

Injection Date: 13-Oct-2018 17:37:55 Instrument ID: SGC_P2

Lims ID: STD1 TOX

Client ID:

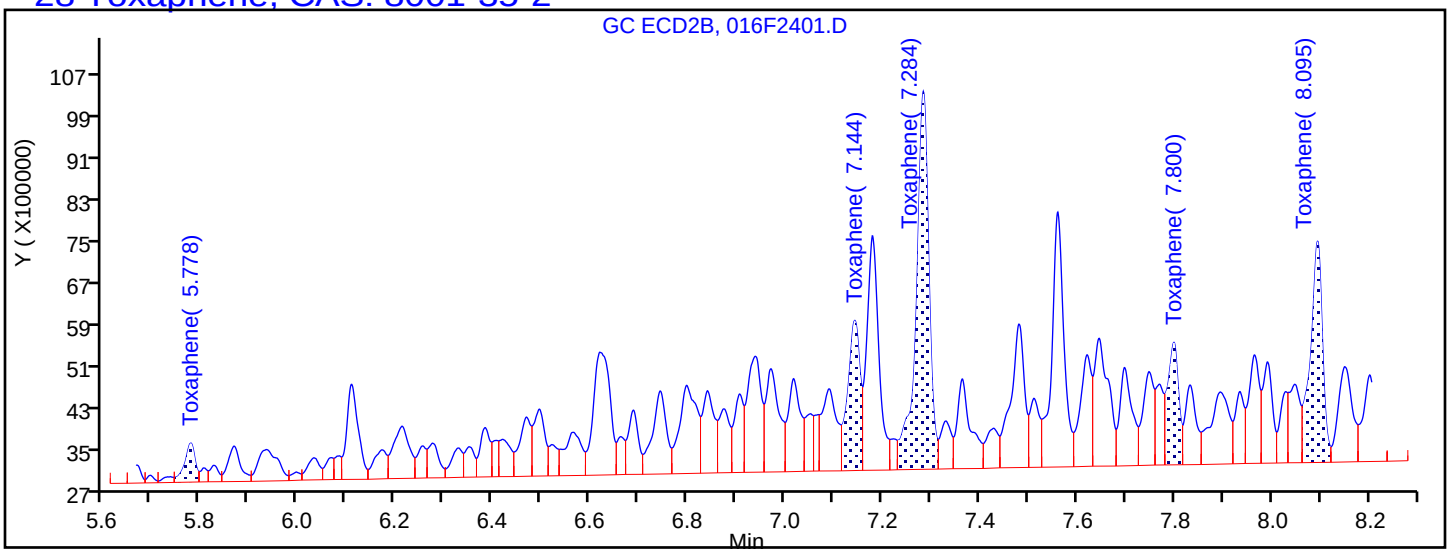
Operator ID: TEM ALS Bottle#: 16 Worklist Smp#: 21

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

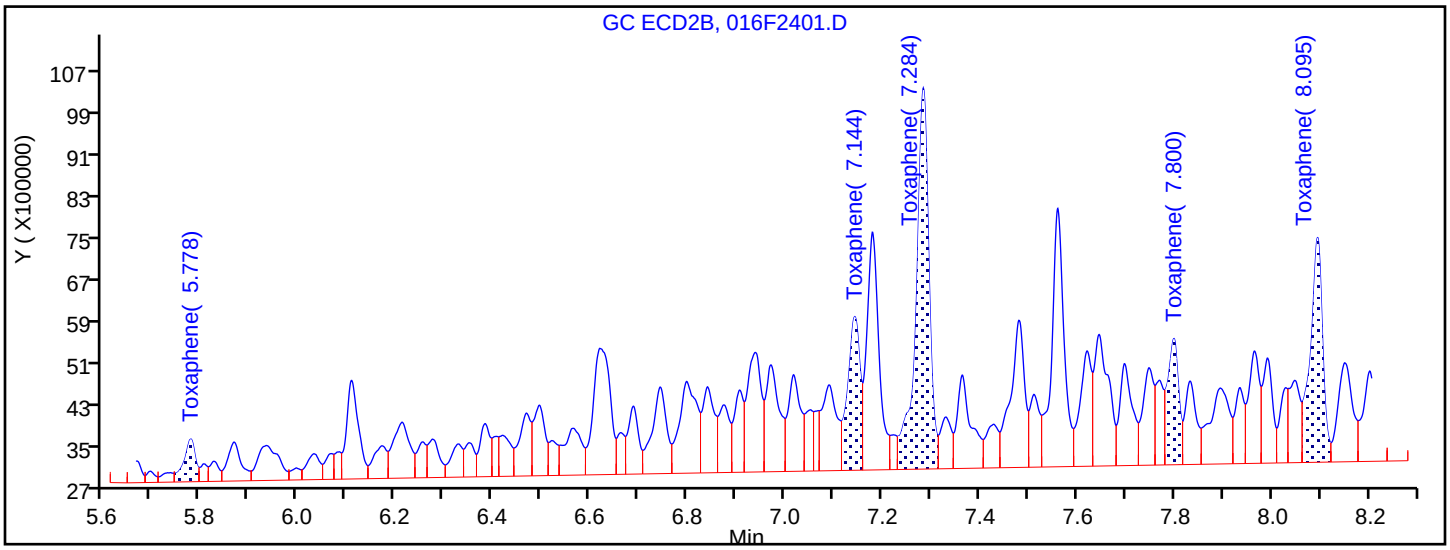
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.778	Response = 1148796
7.144	Response = 5058493
7.284	Response = 13437843
7.800	Response = 3687052
8.095	Response = 7436624



Manual Integration Results

5.778	Response = 1369118	M
7.144	Response = 5249471	M
7.284	Response = 13813356	M
7.800	Response = 3856571	M
8.095	Response = 7701963	M

Reviewer: mooret, 14-Oct-2018 21:34:13

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Hexachlorobenzene	1.0899 1.1788	1.0948	1.1161	1.1873	1.1486	Lin2	-0.340	1.1605							0.9990		0.9900
alpha-BHC	1.4325 1.7413	1.5151	1.5784	1.6732	1.7082	Lin2	-1.160	1.6919							0.9990		0.9900
gamma-BHC (Lindane)	1.2873 1.4841	1.3050	1.3541	1.4304	1.4566	Lin2	-0.721	1.4383							0.9980		0.9900
beta-BHC	0.6083 0.5624	0.5533	0.5269	0.5489	0.5547	Lin2	0.2347	0.5421							0.9990		0.9900
delta-BHC	1.2688 1.5059	1.3116	1.3789	1.4639	1.4777	Lin2	-0.911	1.4669							0.9990		0.9900
Heptachlor	1.1423 1.2700	1.1822	1.2288	1.2809	1.2874	Lin2	-0.584	1.2741							1.0000		0.9900
Aldrin	1.2062 1.3690	1.2570	1.3026	1.3742	1.3613	Lin2	-0.684	1.3611							0.9990		0.9900
Heptachlor epoxide	1.0838 1.1495	1.1012	1.1263	1.1655	1.1463	Lin2	-0.297	1.1502							1.0000		0.9900
gamma-Chlordane	1.1384 1.2781	1.1281	1.1791	1.2485	1.2502	Lin2	-0.520	1.2413							0.9980		0.9900
alpha-Chlordane	1.0735 1.2119	1.0963	1.1287	1.1934	1.1895	Lin2	-0.525	1.1868							0.9990		0.9900
4,4'-DDE	1.1109 1.2600	1.1411	1.1961	1.2683	1.2373	Lin2	-0.618	1.2469							0.9990		0.9900
Endosulfan I	1.0381 1.0827	1.0434	1.0691	1.1110	1.0759	Lin2	-0.222	1.0861							1.0000		0.9900
Dieldrin	1.1146 1.2115	1.1397	1.1784	1.2379	1.1993	Lin2	-0.433	1.2115							1.0000		0.9900
Endrin	0.9402 1.0666	0.9630	1.0117	1.0737	1.0470	Lin2	-0.524	1.0549							0.9990		0.9900
4,4'-DDD	0.8803 1.0077	0.8683	0.9102	0.9844	0.9556	Lin2	-0.439	0.9661							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Endosulfan II	0.9353 0.9815	0.9307	0.9610	1.0302	0.9720	Lin2	-0.252	0.9867							0.9990		0.9900
4,4'-DDT	0.7293 0.8991	0.7495	0.8019	0.8780	0.8772	Lin2	-0.663	0.8704							0.9970		0.9900
Endrin aldehyde	0.7328 0.7638	0.7096	0.7263	0.7800	0.7505	Lin2	-0.135	0.7536							0.9990		0.9900
Methoxychlor	0.3876 0.3901	0.3754	0.3827	0.4082	0.3892	Lin2	-0.035	0.3914							0.9990		0.9900
Endosulfan sulfate	0.8217 0.8872	0.8075	0.8371	0.9081	0.8647	Lin2	-0.276	0.8743							0.9980		0.9900
Endrin ketone	0.8782 0.9231	0.8495	0.8861	0.9671	0.9038	Lin2	-0.230	0.9179							0.9980		0.9900
Tetrachloro-m-xylene	1.0173 1.1251	1.0386	1.0634	1.1370	1.0977	Lin2	-0.428	1.1107							0.9990		0.9900
DCB Decachlorobiphenyl	0.6003 0.5770	0.5495	0.5594	0.5991	0.5570	Lin2	0.0911	0.5671							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobenzene	BNB	Lin2	47816993 1380707359	126156548	317851410	649000706	1019295562	4.00 100	10.0	25.0	50.0	75.0
alpha-BHC	BNB	Lin2	62852215 2039469973	174586944	449507972	914630685	1515867171	4.00 100	10.0	25.0	50.0	75.0
gamma-BHC (Lindane)	BNB	Lin2	56481667 1738294623	150377013	385635283	781888254	1292559350	4.00 100	10.0	25.0	50.0	75.0
beta-BHC	BNB	Lin2	26687989 658730126	63756954	150050051	300049327	492255043	4.00 100	10.0	25.0	50.0	75.0
delta-BHC	BNB	Lin2	55669358 1763800464	151129545	392697114	800211131	1311307456	4.00 100	10.0	25.0	50.0	75.0
Heptachlor	BNB	Lin2	50118465 1487484474	136220069	349955154	700142171	1142416982	4.00 100	10.0	25.0	50.0	75.0
Aldrin	BNB	Lin2	52919960 1603385174	144846582	370973392	751162048	1208042264	4.00 100	10.0	25.0	50.0	75.0
Heptachlor epoxide	BNB	Lin2	47553101 1346353314	126886425	320747071	637075296	1017236841	4.00 100	10.0	25.0	50.0	75.0
gamma-Chlordane	BNB	Lin2	49944652 1496975406	129991480	335790425	682439750	1109387779	4.00 100	10.0	25.0	50.0	75.0
alpha-Chlordane	BNB	Lin2	47100490 1419377556	126327949	321433079	652320568	1055599184	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDE	BNB	Lin2	48738148 1475769541	131488025	340651862	693292530	1097991084	4.00 100	10.0	25.0	50.0	75.0
Endosulfan I	BNB	Lin2	45543940 1268053177	120234528	304465713	607276774	954735604	4.00 100	10.0	25.0	50.0	75.0
Dieldrin	BNB	Lin2	48904591 1418985077	131325618	335595524	676681392	1064216521	4.00 100	10.0	25.0	50.0	75.0
Endrin	BNB	Lin2	41251930 1249259754	110965652	288123020	586918822	929144470	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDD	BNB	Lin2	38622027 1180309263	100049743	259223669	538092520	848012397	4.00 100	10.0	25.0	50.0	75.0
Endosulfan II	BNB	Lin2	41034933 1149629449	107239359	273685389	563151672	862538061	4.00 100	10.0	25.0	50.0	75.0

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33989

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
4,4'-DDT	BNB	Lin2	31997998 1053113637	86360678	228369137	479927441	778459968	4.00 100	10.0	25.0	50.0	75.0
Endrin aldehyde	BNB	Lin2	32150414 894620553	81761942	206854248	426357889	665966546	4.00 100	10.0	25.0	50.0	75.0
Methoxychlor	BNB	Lin2	17004835 456885819	43260093	108979408	223151920	345420332	4.00 100	10.0	25.0	50.0	75.0
Endosulfan sulfate	BNB	Lin2	36051087 1039104153	93045319	238398480	496366994	767321325	4.00 100	10.0	25.0	50.0	75.0
Endrin ketone	BNB	Lin2	38530653 1081196479	97881347	252349419	528619675	802034011	4.00 100	10.0	25.0	50.0	75.0
Tetrachloro-m-xylene	BNB	Lin2	44633037 1317820866	119672981	302832702	621494359	974117175	4.00 100	10.0	25.0	50.0	75.0
DCB Decachlorobiphenyl	BNB	Lin2	26336210 675825077	63321098	159322167	327463502	494311523	4.00 100	10.0	25.0	50.0	75.0

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D
Lims ID: STD6 AB
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 19:22:28 ALS Bottle#: 22 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:46 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:21:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						413.9	
2						393.8	
						RPD = 4.96	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.023	-0.002	1756870840	150.0	150.0	
2	2.840	2.842	-0.002	195021437	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.921	3.919	0.002	1317820866	100.0	101.7	
2	3.823	3.823	0.000	151651222	100.0	96.2	
						RPD = 5.52	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	1380707359	100.0	101.9	
2	4.302	4.302	0.000	160717643	100.0	96.5	
						RPD = 5.38	
8 alpha-BHC							
1	4.498	4.497	0.001	2039469973	100.0	103.6	
2	4.447	4.448	-0.001	213039488	100.0	98.9	
						RPD = 4.64	
9 gamma-BHC (Lindane)							
1	4.787	4.785	0.002	1738294623	100.0	103.7	
2	4.762	4.761	0.001	184996515	100.0	98.6	
						RPD = 4.99	
10 beta-BHC							
1	4.863	4.862	0.001	658730126	100.0	103.3	
2	4.837	4.837	0.000	77780555	100.0	97.6	
						RPD = 5.72	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.012	5.010	0.002	1763800464	100.0	103.3	
2	5.070	5.069	0.001	187730350	100.0	98.7	
						RPD = 4.51	
15 Heptachlor							
1	5.188	5.187	0.001	1487484474	100.0	100.1	
2	5.112	5.112	0.000	157743006	100.0	97.5	
						RPD = 2.69	
16 Aldrin							
1	5.458	5.457	0.001	1603385174	100.0	101.1	
2	5.384	5.383	0.001	171135300	100.0	98.1	
						RPD = 3.03	
18 Isodrin							
1	5.785	5.783	0.002	1276942983	100.0	101.0	
2	5.749	5.749	0.000	144685541	100.0	97.8	
						RPD = 3.17	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	1346353314	100.0	100.2	
2	5.932	5.931	0.001	153345134	100.0	96.9	
						RPD = 3.39	
22 trans-Chlordane							
1	6.204	6.204	0.000	1496975406	100.0	103.4	
2	6.131	6.130	0.001	163709394	100.0	98.3	
						RPD = 5.07	
23 cis-Chlordane							
1	6.346	6.344	0.002	1419377556	100.0	102.6	
2	6.287	6.286	0.001	154077138	100.0	97.9	
						RPD = 4.60	
24 4,4'-DDE							
1	6.422	6.421	0.001	1475769541	100.0	101.5	
2	6.470	6.469	0.001	160552956	100.0	97.9	
						RPD = 3.65	
25 Endosulfan I							
1	6.495	6.494	0.001	1268053177	100.0	99.9	
2	6.347	6.346	0.001	144373306	100.0	96.8	
						RPD = 3.18	
27 Dieldrin							
1	6.750	6.748	0.002	1418985077	100.0	100.4	
2	6.640	6.639	0.001	161178584	100.0	97.7	
						RPD = 2.73	
30 Endrin							
1	6.998	6.997	0.001	1249259754	100.0	101.6	
2	6.964	6.963	0.001	142775347	100.0	97.9	
						RPD = 3.71	
32 4,4'-DDD							
1	7.059	7.058	0.001	1180309263	100.0	104.8	
2	7.089	7.089	0.000	131149227	100.0	98.3	
						RPD = 6.34	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.235	7.234	0.001	1149629449	100.0	99.7	
2	7.191	7.190	0.001	134900820	100.0	95.9	
						RPD = 3.88	
35 4,4'-DDT							
1	7.353	7.352	0.001	1053113637	100.0	104.1	
2	7.420	7.419	0.001	115525218	100.0	99.4	
						RPD = 4.57	
36 Endrin aldehyde							
1	7.680	7.679	0.001	894620553	100.0	101.5	
2	7.551	7.550	0.001	109276534	100.0	96.9	
						RPD = 4.65	
37 Methoxychlor							
1	7.857	7.857	0.000	456885819	100.0	99.8	
2	8.151	8.150	0.001	54922574	100.0	96.4	
						RPD = 3.44	
38 Mirex							
1	8.017	8.016	0.001	761678556	100.0	103.8	
2	8.346	8.344	0.002	90852521	100.0	95.7	
						RPD = 8.10	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	1039104153	100.0	101.8	
2	7.842	7.841	0.001	124525276	100.0	96.7	
						RPD = 5.17	
40 Endrin ketone							
1	8.431	8.429	0.002	1081196479	100.0	100.8	
2	8.398	8.396	0.002	136381981	100.0	96.1	
						RPD = 4.74	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	675825077	100.0	101.6	
2	9.669	9.668	0.001	88747472	100.0	95.6	
						RPD = 6.08	
S 3 Endosulfan, Total							
1						301.4	
2						289.4	
						RPD = 4.08	

Reagents:

8081IcalL6_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

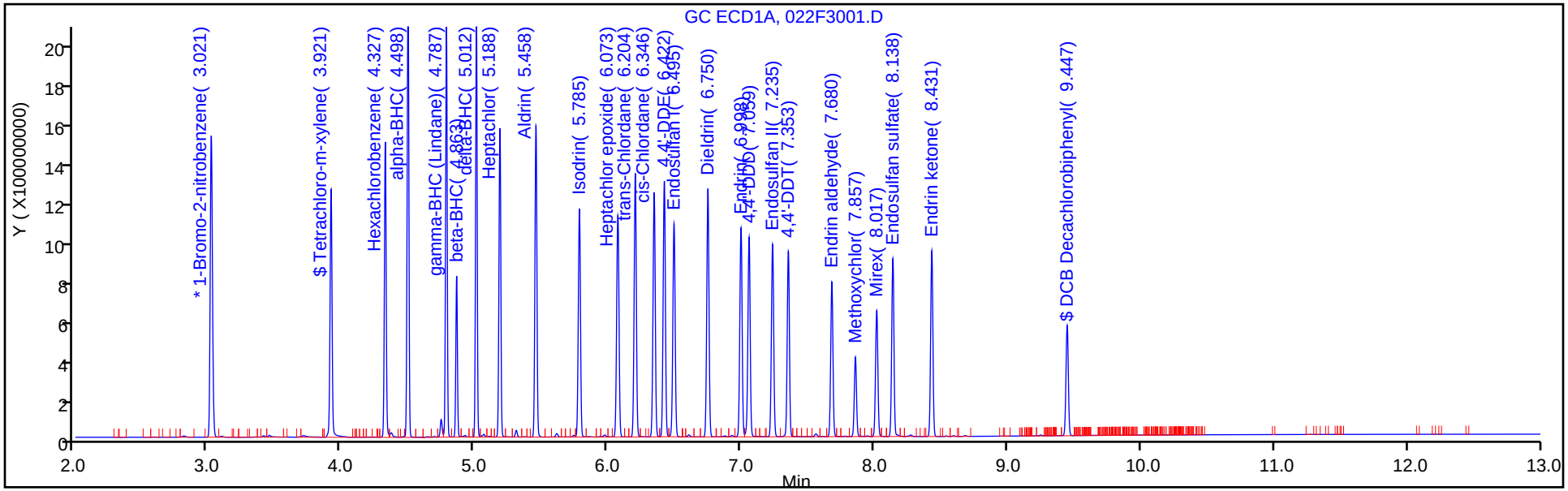
Report Date: 14-Oct-2018 22:11:48 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

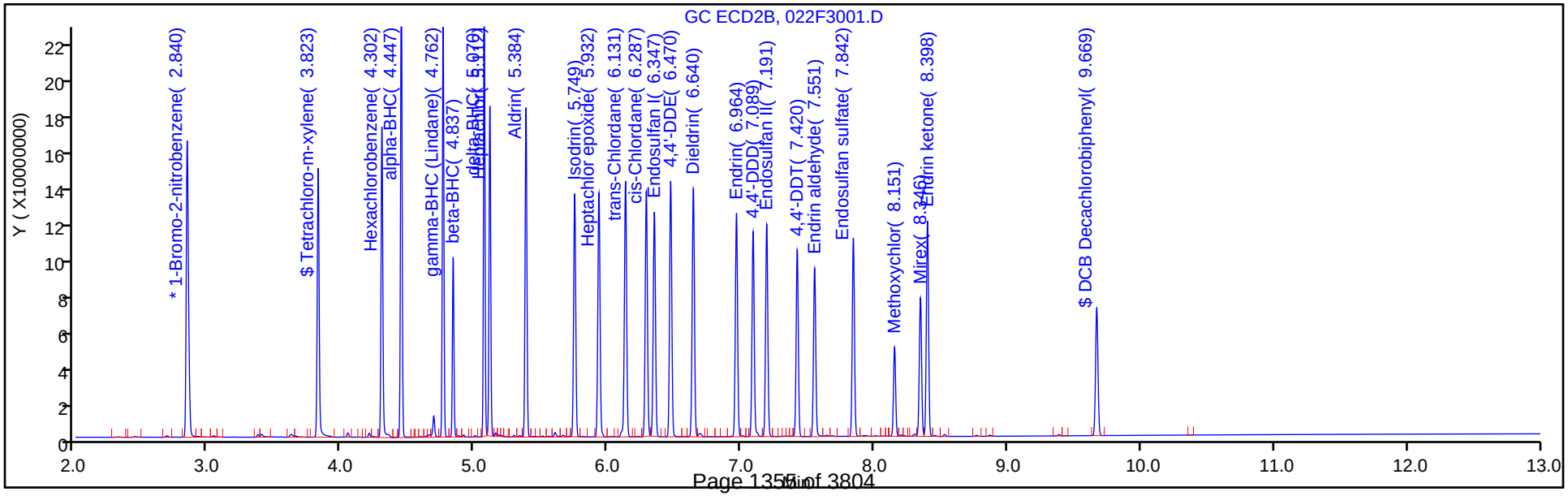
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D

Injection Date:	13-Oct-2018 19:22:28	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 AB			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D
Lims ID: STD5 AB
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 19:39:58 ALS Bottle#: 23 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:49 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						305.3	
2						297.4	
						RPD = 2.65	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.023	-0.002	1774800139	150.0	150.0	
2	2.840	2.842	-0.002	196975139	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.920	3.919	0.001	974117175	75.0	74.5	
2	3.823	3.823	0.000	115355955	75.0	72.3	
						RPD = 2.99	
5 Hexachlorobenzene							
1	4.328	4.326	0.002	1019295562	75.0	74.5	
2	4.302	4.302	0.000	120451736	75.0	71.5	
						RPD = 4.17	
8 alpha-BHC							
1	4.498	4.497	0.001	1515867171	75.0	76.4	
2	4.448	4.448	0.000	162579162	75.0	74.7	
						RPD = 2.33	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	1292559350	75.0	76.5	
2	4.761	4.761	0.000	141300627	75.0	74.5	
						RPD = 2.52	
10 beta-BHC							
1	4.862	4.862	0.000	492255043	75.0	76.3	
2	4.837	4.837	0.000	59596054	75.0	73.8	
						RPD = 3.31	
12 delta-BHC							
1	5.011	5.010	0.001	1311307456	75.0	76.2	
2	5.070	5.069	0.001	142822500	75.0	74.3	
						RPD = 2.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.188	5.187	0.001	1142416982	75.0	76.2	
2	5.113	5.112	0.001	122155556	75.0	74.7	
						RPD = 2.10	
16 Aldrin							
1	5.458	5.457	0.001	1208042264	75.0	75.5	
2	5.384	5.383	0.001	130679943	75.0	74.1	
						RPD = 1.93	
18 Isodrin							
1	5.785	5.783	0.002	961672330	75.0	75.3	
2	5.750	5.749	0.001	109763292	75.0	73.3	
						RPD = 2.72	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	1017236841	75.0	75.0	
2	5.932	5.931	0.001	117794987	75.0	73.5	
						RPD = 1.98	
22 trans-Chlordane							
1	6.205	6.204	0.001	1109387779	75.0	76.0	
2	6.131	6.130	0.001	123500639	75.0	73.3	
						RPD = 3.54	
23 cis-Chlordane							
1	6.346	6.344	0.002	1055599184	75.0	75.6	
2	6.288	6.286	0.002	116906799	75.0	73.4	
						RPD = 2.90	
24 4,4'-DDE							
1	6.422	6.421	0.001	1097991084	75.0	74.9	
2	6.470	6.469	0.001	121439906	75.0	73.3	
						RPD = 2.23	
25 Endosulfan I							
1	6.495	6.494	0.001	954735604	75.0	74.5	
2	6.348	6.346	0.002	110310449	75.0	73.0	
						RPD = 1.99	
27 Dieldrin							
1	6.750	6.748	0.002	1064216521	75.0	74.6	
2	6.640	6.639	0.001	122303746	75.0	73.3	
						RPD = 1.77	
30 Endrin							
1	6.998	6.997	0.001	929144470	75.0	74.9	
2	6.965	6.963	0.002	108615513	75.0	73.7	
						RPD = 1.66	
32 4,4'-DDD							
1	7.059	7.058	0.001	848012397	75.0	74.6	
2	7.090	7.089	0.001	98409444	75.0	73.0	
						RPD = 2.25	
34 Endosulfan II							
1	7.235	7.234	0.001	862538061	75.0	74.1	
2	7.191	7.190	0.001	103131602	75.0	72.4	
						RPD = 2.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.353	7.352	0.001	778459968	75.0	76.4	
2	7.420	7.419	0.001	88104638	75.0	75.1	
						RPD = 1.66	
36 Endrin aldehyde							
1	7.680	7.679	0.001	665966546	75.0	74.9	
2	7.551	7.550	0.001	82965198	75.0	72.7	
						RPD = 2.96	
37 Methoxychlor							
1	7.857	7.857	0.000	345420332	75.0	74.7	
2	8.151	8.150	0.001	42337805	75.0	73.5	
						RPD = 1.63	
38 Mirex							
1	8.016	8.016	0.000	537010702	75.0	72.4	
2	8.345	8.344	0.001	69265800	75.0	71.9	
						RPD = 0.66	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	767321325	75.0	74.5	
2	7.843	7.841	0.002	94443160	75.0	72.4	
						RPD = 2.83	
40 Endrin ketone							
1	8.430	8.429	0.001	802034011	75.0	74.1	
2	8.398	8.396	0.002	103818155	75.0	72.3	
						RPD = 2.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	494311523	75.0	73.5	
2	9.669	9.668	0.001	67193439	75.0	71.4	
						RPD = 2.91	
S 3 Endosulfan, Total							
1						223.1	
2						217.9	
						RPD = 2.38	

Reagents:

8081IcalL5_00026	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

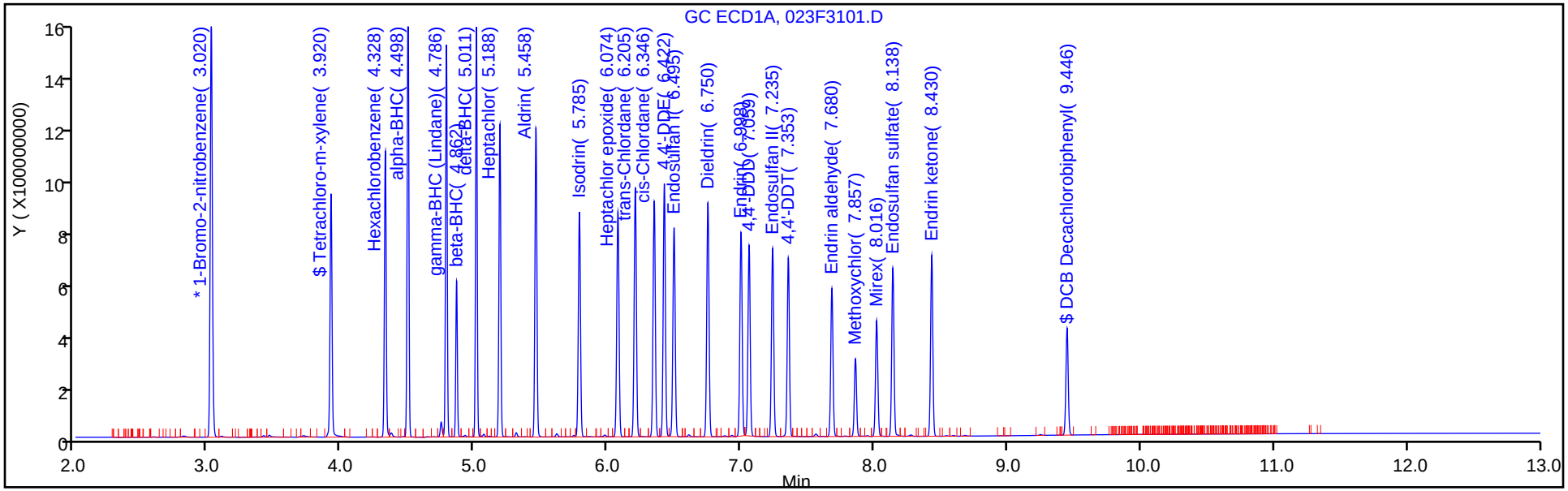
Report Date: 14-Oct-2018 22:11:51 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

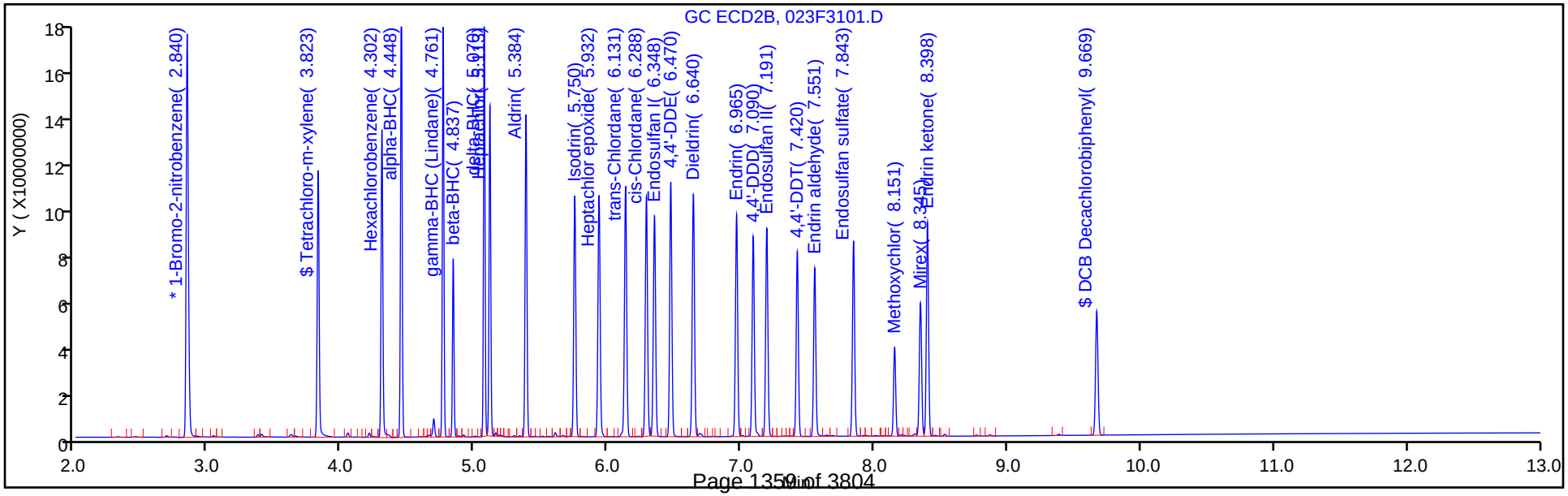
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D

Injection Date:	13-Oct-2018 19:39:58	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 AB			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D
Lims ID: STD4 AB
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 13-Oct-2018 19:57:23 ALS Bottle#: 24 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:53 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:15:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1639866372	150.0	150.0	
2	2.839	2.839	0.000	184249474	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	621494359	50.0	51.6	
2	3.823	3.823	0.000	77802319	50.0	52.0	
						RPD = 0.76	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	649000706	50.0	51.4	
2	4.302	4.302	0.000	82080999	50.0	51.9	
						RPD = 0.91	
8 alpha-BHC							
1	4.497	4.497	0.000	914630685	50.0	50.1	
2	4.448	4.448	0.000	102825287	50.0	50.4	
						RPD = 0.46	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	781888254	50.0	50.2	
2	4.761	4.761	0.000	89108339	50.0	50.2	
						RPD = 0.06	
10 beta-BHC							
1	4.862	4.862	0.000	300049327	50.0	50.2	
2	4.837	4.837	0.000	38193156	50.0	50.3	
						RPD = 0.27	
12 delta-BHC							
1	5.010	5.010	0.000	800211131	50.0	50.5	
2	5.069	5.069	0.000	90510020	50.0	50.3	
						RPD = 0.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.187	5.187	0.000	700142171	50.0	50.7	
2	5.112	5.112	0.000	76652553	50.0	50.0	
						RPD = 1.50	
16 Aldrin							
1	5.457	5.457	0.000	751162048	50.0	51.0	
2	5.383	5.383	0.000	83229214	50.0	50.3	
						RPD = 1.26	
18 Isodrin							
1	5.783	5.783	0.000	601057788	50.0	51.1	
2	5.749	5.749	0.000	70720524	50.0	50.3	
						RPD = 1.47	
21 Heptachlor epoxide							
1	6.072	6.072	0.000	637075296	50.0	50.9	
2	5.931	5.931	0.000	75919068	50.0	50.5	
						RPD = 0.86	
22 trans-Chlordane							
1	6.204	6.204	0.000	682439750	50.0	50.7	
2	6.130	6.130	0.000	79344564	50.0	50.2	
						RPD = 0.91	
23 cis-Chlordane							
1	6.344	6.344	0.000	652320568	50.0	50.7	
2	6.286	6.286	0.000	75318619	50.0	50.4	
						RPD = 0.57	
24 4,4'-DDE							
1	6.421	6.421	0.000	693292530	50.0	51.4	
2	6.469	6.469	0.000	79191054	50.0	51.0	
						RPD = 0.68	
25 Endosulfan I							
1	6.494	6.494	0.000	607276774	50.0	51.4	
2	6.346	6.346	0.000	71761841	50.0	50.6	
						RPD = 1.49	
27 Dieldrin							
1	6.748	6.748	0.000	676681392	50.0	51.4	
2	6.639	6.639	0.000	79630835	50.0	50.9	
						RPD = 1.01	
30 Endrin							
1	6.997	6.997	0.000	586918822	50.0	51.4	
2	6.963	6.963	0.000	70123187	50.0	50.8	
						RPD = 1.13	
32 4,4'-DDD							
1	7.058	7.058	0.000	538092520	50.0	51.4	
2	7.089	7.089	0.000	64688838	50.0	51.2	
						RPD = 0.39	
34 Endosulfan II							
1	7.234	7.234	0.000	563151672	50.0	52.5	
2	7.190	7.190	0.000	69296907	50.0	51.8	
						RPD = 1.25	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.352	7.352	0.000	479927441	50.0	51.2	
2	7.419	7.419	0.000	55899373	50.0	51.0	
						RPD = 0.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	426357889	50.0	51.9	
2	7.550	7.550	0.000	55206907	50.0	51.5	
						RPD = 0.80	
37 Methoxychlor							
1	7.857	7.857	0.000	223151920	50.0	52.2	
2	8.150	8.150	0.000	27972236	50.0	51.8	
						RPD = 0.89	
38 Mirex							
1	8.016	8.016	0.000	349932979	50.0	51.1	
2	8.344	8.344	0.000	46808816	50.0	51.7	
						RPD = 1.13	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	496366994	50.0	52.2	
2	7.841	7.841	0.000	63414174	50.0	51.8	
						RPD = 0.87	
40 Endrin ketone							
1	8.429	8.429	0.000	528619675	50.0	52.9	
2	8.396	8.396	0.000	70279476	50.0	52.2	
						RPD = 1.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	327463502	50.0	52.7	
2	9.668	9.668	0.000	46374378	50.0	52.4	
						RPD = 0.46	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

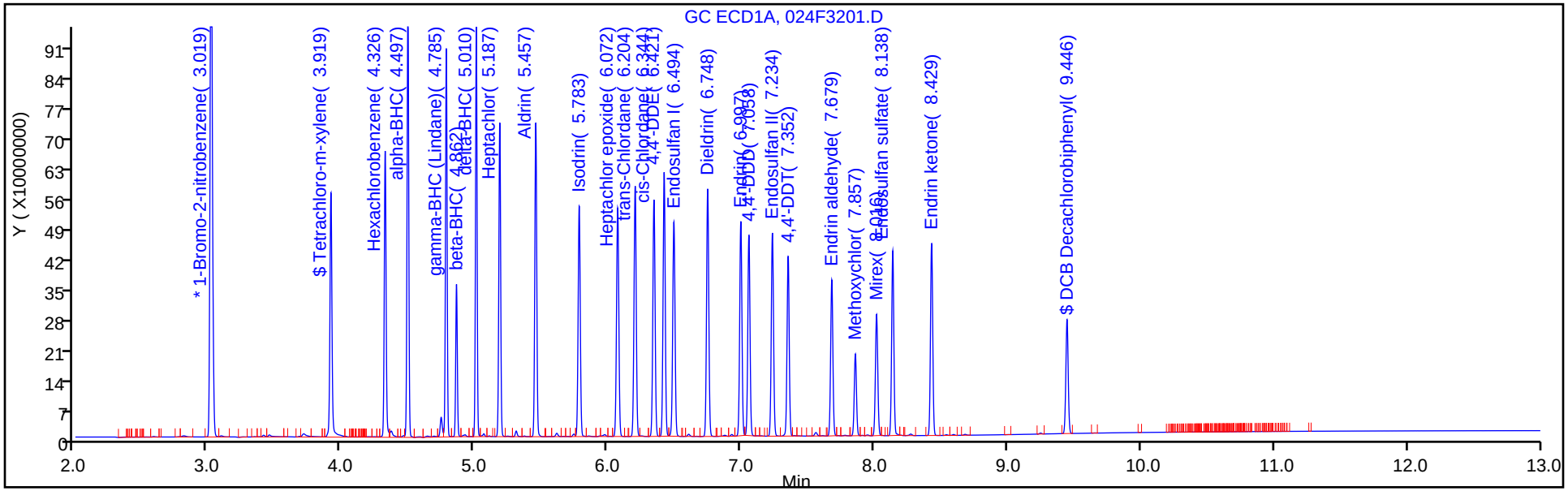
Report Date: 14-Oct-2018 22:11:55 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

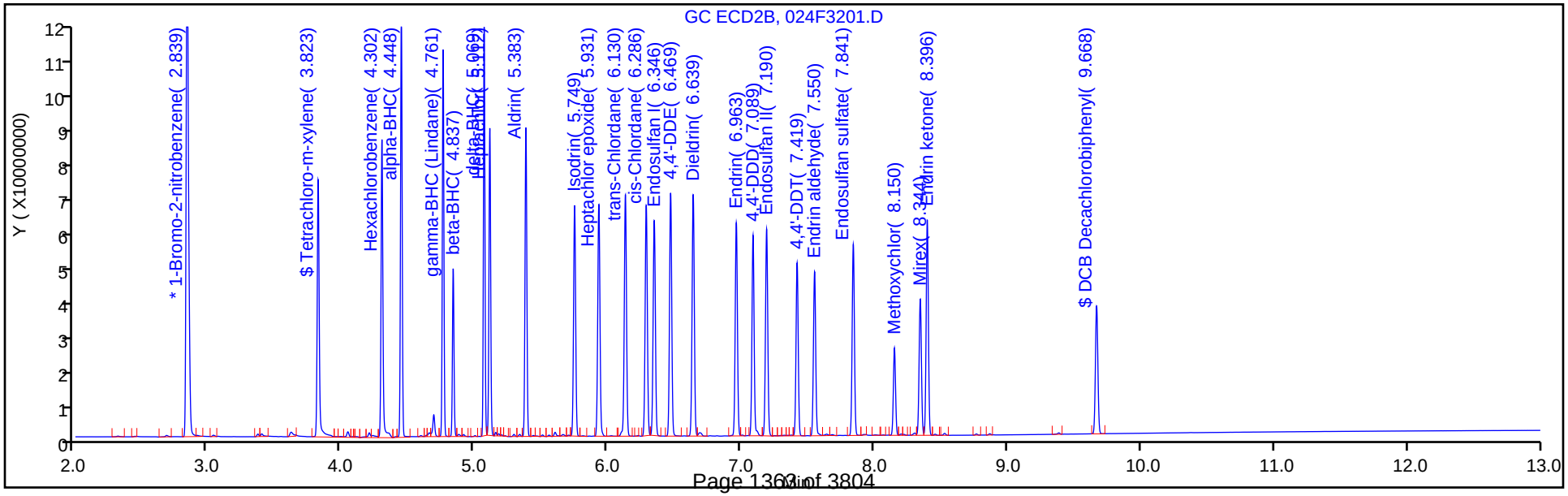
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D

Injection Date:	13-Oct-2018 19:57:23	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 AB			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D
Lims ID: STD3 AB
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 20:14:49 ALS Bottle#: 25 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:56 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						96.0	
2						100.5	
						RPD = 4.51	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1708743357	150.0	150.0	
2	2.839	2.839	0.000	189250238	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	302832702	25.0	24.3	
2	3.823	3.823	0.000	39633690	25.0	25.4	
						RPD = 4.54	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	317851410	25.0	24.3	
2	4.301	4.302	-0.001	42722842	25.0	26.0	
						RPD = 6.71	
8 alpha-BHC							
1	4.497	4.497	0.000	449507972	25.0	24.0	
2	4.447	4.448	-0.001	52885133	25.0	25.1	
						RPD = 4.26	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	385635283	25.0	24.0	
2	4.761	4.761	0.000	45850109	25.0	25.1	
						RPD = 4.13	
10 beta-BHC							
1	4.862	4.862	0.000	150050051	25.0	23.9	
2	4.836	4.837	-0.001	19996794	25.0	25.3	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	392697114	25.0	24.1	
2	5.069	5.069	0.000	46474767	25.0	25.1	
						RPD = 3.96	
15 Heptachlor							
1	5.187	5.187	0.000	349955154	25.0	24.6	
2	5.111	5.112	-0.001	40161455	25.0	25.3	
						RPD = 3.00	
16 Aldrin							
1	5.457	5.457	0.000	370973392	25.0	24.4	
2	5.383	5.383	0.000	42909032	25.0	25.1	
						RPD = 2.83	
18 Isodrin							
1	5.783	5.783	0.000	298789524	25.0	24.5	
2	5.748	5.749	-0.001	36890552	25.0	25.3	
						RPD = 3.01	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	320747071	25.0	24.7	
2	5.930	5.931	-0.001	39660540	25.0	25.4	
						RPD = 2.64	
22 trans-Chlordane							
1	6.203	6.204	-0.001	335790425	25.0	24.2	
2	6.129	6.130	-0.001	41653596	25.0	25.5	
						RPD = 5.41	
23 cis-Chlordane							
1	6.344	6.344	0.000	321433079	25.0	24.2	
2	6.285	6.286	-0.001	39100281	25.0	25.2	
						RPD = 4.13	
24 4,4'-DDE							
1	6.421	6.421	0.000	340651862	25.0	24.5	
2	6.469	6.469	0.000	40427222	25.0	25.2	
						RPD = 3.05	
25 Endosulfan I							
1	6.494	6.494	0.000	304465713	25.0	24.8	
2	6.346	6.346	0.000	37660075	25.0	25.5	
						RPD = 2.80	
27 Dieldrin							
1	6.748	6.748	0.000	335595524	25.0	24.7	
2	6.638	6.639	-0.001	40874216	25.0	25.3	
						RPD = 2.54	
30 Endrin							
1	6.997	6.997	0.000	288123020	25.0	24.5	
2	6.963	6.963	0.000	35861993	25.0	25.2	
						RPD = 2.96	
32 4,4'-DDD							
1	7.058	7.058	0.000	259223669	25.0	24.0	
2	7.088	7.089	-0.001	32918226	25.0	25.2	
						RPD = 4.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	273685389	25.0	24.6	
2	7.190	7.190	0.000	35501572	25.0	25.5	
						RPD = 3.40	
35 4,4'-DDT							
1	7.352	7.352	0.000	228369137	25.0	23.8	
2	7.419	7.419	0.000	27647840	25.0	24.6	
						RPD = 3.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	206854248	25.0	24.3	
2	7.550	7.550	0.000	28263198	25.0	25.3	
						RPD = 4.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	108979408	25.0	24.5	
2	8.150	8.150	0.000	14155118	25.0	25.3	
						RPD = 3.13	
38 Mirex							
1	8.015	8.016	-0.001	172426127	25.0	24.2	
2	8.344	8.344	0.000	24325156	25.0	25.6	
						RPD = 5.67	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	238398480	25.0	24.3	
2	7.841	7.841	0.000	32381376	25.0	25.4	
						RPD = 4.66	
40 Endrin ketone							
1	8.429	8.429	0.000	252349419	25.0	24.4	
2	8.396	8.396	0.000	35593065	25.0	25.4	
						RPD = 4.25	
$ 41 DCB Decachlorobiphenyl							
1	9.445	9.446	-0.001	159322167	25.0	24.5	
2	9.668	9.668	0.000	23709545	25.0	25.6	
						RPD = 4.30	
S 3 Endosulfan, Total							
1						73.7	
2						76.4	
						RPD = 3.61	

Reagents:

8081IcalL3_00028	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

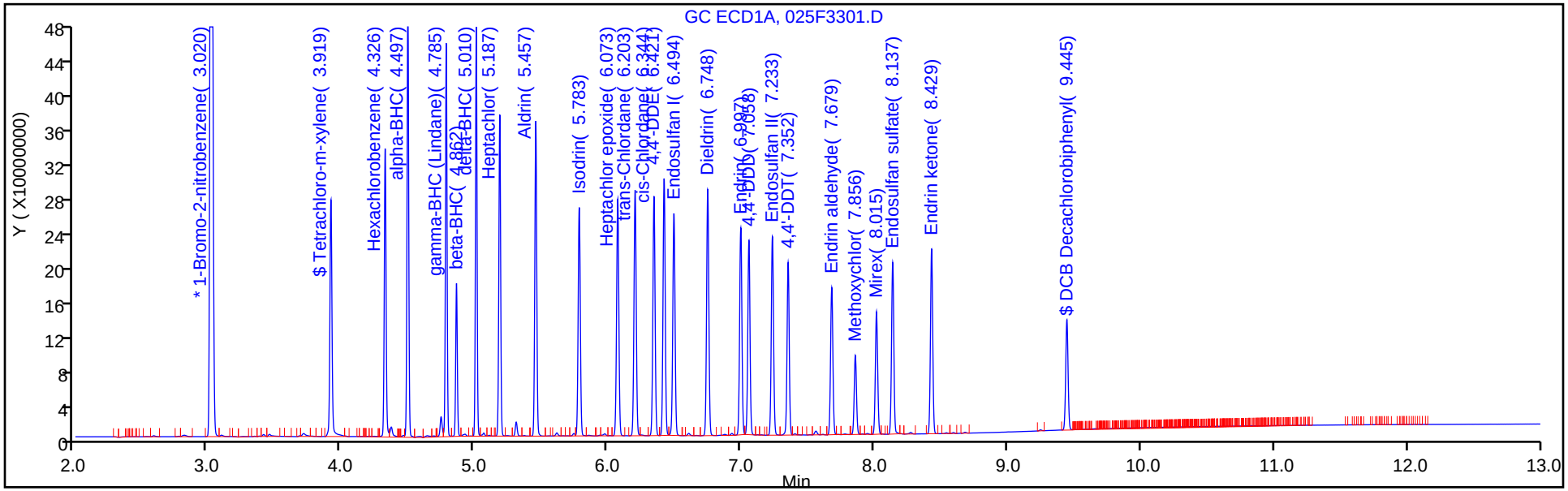
Report Date: 14-Oct-2018 22:11:58 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

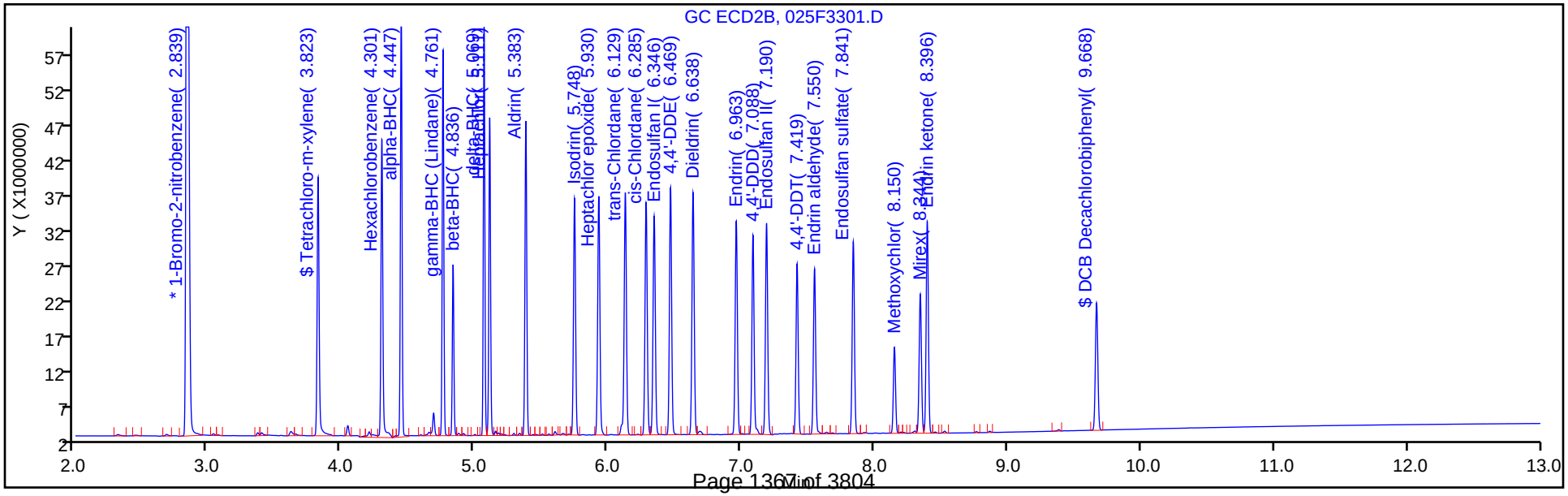
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D

Injection Date:	13-Oct-2018 20:14:49	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 AB			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D
Lims ID: STD2 AB
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 20:32:15 ALS Bottle#: 26 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:00 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						38.6	
2						40.9	
						RPD = 5.94	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1728425275	150.0	150.0	
2	2.839	2.839	0.000	187345459	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	119672981	10.0	9.74	
2	3.822	3.823	-0.001	16477394	10.0	10.3	
						RPD = 5.80	
5 Hexachlorobenzene							
1	4.325	4.326	-0.001	126156548	10.0	9.73	
2	4.301	4.302	-0.001	17019247	10.0	10.1	
						RPD = 4.06	
8 alpha-BHC							
1	4.496	4.497	-0.001	174586944	10.0	9.64	
2	4.446	4.448	-0.002	21525266	10.0	10.1	
						RPD = 4.69	
9 gamma-BHC (Lindane)							
1	4.784	4.785	-0.001	150377013	10.0	9.57	
2	4.760	4.761	-0.001	18724325	10.0	10.2	
						RPD = 6.55	
10 beta-BHC							
1	4.861	4.862	-0.001	63756954	10.0	9.77	
2	4.836	4.837	-0.001	8495816	10.0	10.4	
						RPD = 6.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	151129545	10.0	9.56	
2	5.068	5.069	-0.001	18818212	10.0	10.2	
						RPD = 6.40	
15 Heptachlor							
1	5.186	5.187	-0.001	136220069	10.0	9.74	
2	5.111	5.112	-0.001	16505122	10.0	10.3	
						RPD = 5.70	
16 Aldrin							
1	5.456	5.457	-0.001	144846582	10.0	9.74	
2	5.382	5.383	-0.001	17731926	10.0	10.3	
						RPD = 5.89	
18 Isodrin							
1	5.783	5.783	0.000	117749615	10.0	9.72	
2	5.748	5.749	-0.001	15625487	10.0	10.5	
						RPD = 7.33	
21 Heptachlor epoxide							M
1	6.071	6.072	-0.001	126886425	10.0	9.83	
2	5.929	5.931	-0.002	16641254	10.0	10.4	M
						RPD = 5.98	
22 trans-Chlordane							
1	6.202	6.204	-0.002	129991480	10.0	9.51	
2	6.129	6.130	-0.001	16929113	10.0	10.3	
						RPD = 7.70	
23 cis-Chlordane							
1	6.344	6.344	0.000	126327949	10.0	9.68	
2	6.286	6.286	0.000	16380093	10.0	10.4	
						RPD = 7.07	
24 4,4'-DDE							
1	6.420	6.421	-0.001	131488025	10.0	9.65	
2	6.468	6.469	-0.001	16485248	10.0	10.3	
						RPD = 6.16	
25 Endosulfan I							
1	6.493	6.494	-0.001	120234528	10.0	9.81	
2	6.346	6.346	0.000	15849043	10.0	10.5	
						RPD = 6.40	
27 Dieldrin							
1	6.747	6.748	-0.001	131325618	10.0	9.76	
2	6.638	6.639	-0.001	16696805	10.0	10.3	
						RPD = 5.11	
30 Endrin							
1	6.996	6.997	-0.001	110965652	10.0	9.63	
2	6.962	6.963	-0.001	14572762	10.0	10.2	
						RPD = 6.20	
32 4,4'-DDD							
1	7.057	7.058	-0.001	100049743	10.0	9.44	
2	7.088	7.089	-0.001	13387732	10.0	10.2	
						RPD = 7.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	107239359	10.0	9.69	
2	7.189	7.190	-0.001	14939909	10.0	10.4	
						RPD = 6.87	
35 4,4'-DDT							
1	7.352	7.352	0.000	86360678	10.0	9.37	
2	7.418	7.419	-0.001	11005760	10.0	9.98	
						RPD = 6.32	
36 Endrin aldehyde							
1	7.679	7.679	0.000	81761942	10.0	9.60	
2	7.550	7.550	0.000	11820141	10.0	10.3	
						RPD = 7.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	43260093	10.0	9.68	
2	8.149	8.150	-0.001	5763013	10.0	10.2	
						RPD = 5.03	
38 Mirex							
1	8.015	8.016	-0.001	69898898	10.0	9.68	
2	8.343	8.344	-0.001	10513875	10.0	10.5	
						RPD = 8.20	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	93045319	10.0	9.55	
2	7.840	7.841	-0.001	13487473	10.0	10.3	
						RPD = 7.54	
40 Endrin ketone							
1	8.428	8.429	-0.001	97881347	10.0	9.50	
2	8.396	8.396	0.000	14668648	10.0	10.3	
						RPD = 7.65	
$ 41 DCB Decachlorobiphenyl							
1	9.443	9.446	-0.003	63321098	10.0	9.53	
2	9.668	9.668	0.000	10078459	10.0	10.4	
						RPD = 8.76	
S 3 Endosulfan, Total							
1						29.1	
2						31.1	
						RPD = 6.93	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081IcalL2_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

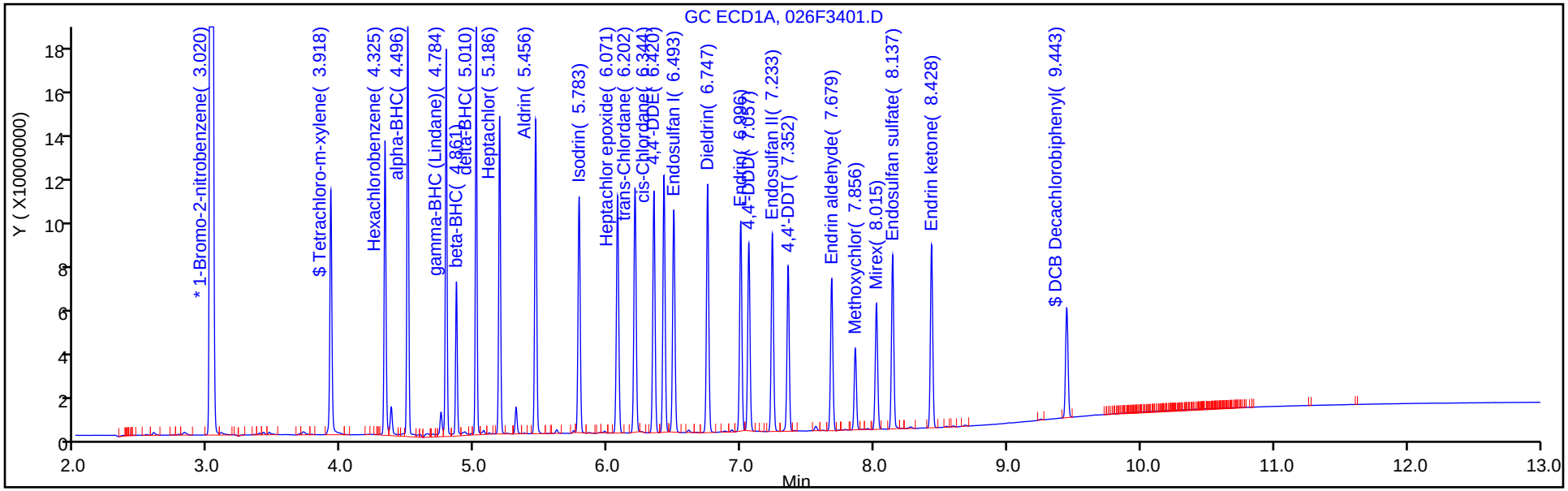
Report Date: 14-Oct-2018 22:12:01 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

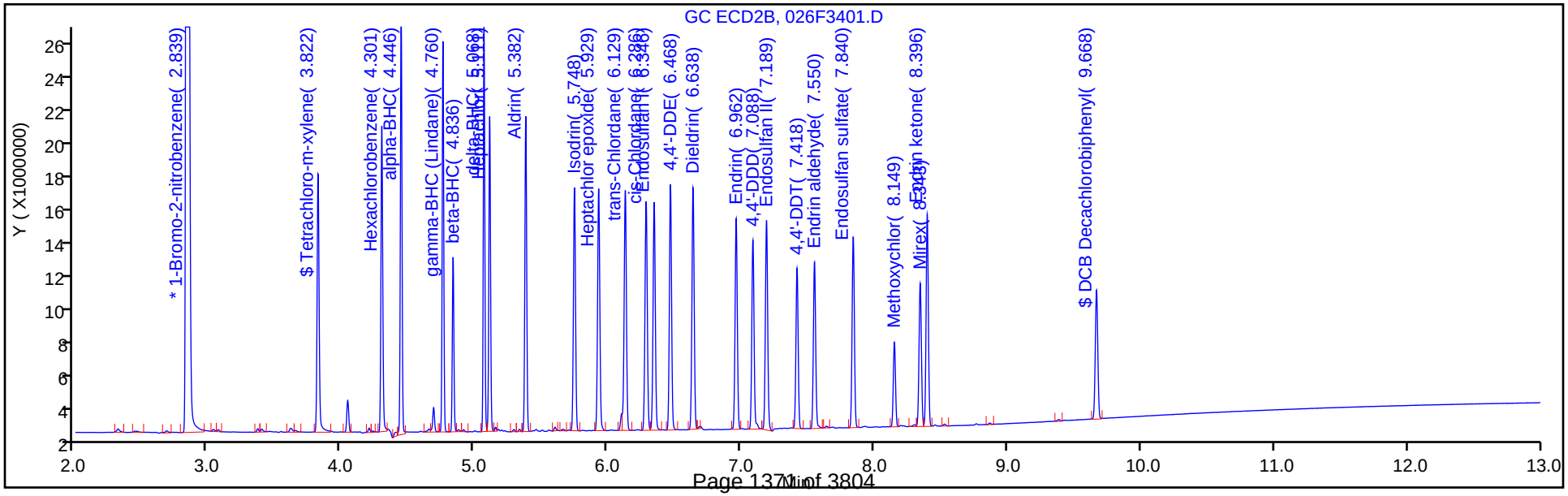
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D

Injection Date:	13-Oct-2018 20:32:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 AB			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D
Lims ID: STD1 AB
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 20:49:46 ALS Bottle#: 27 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						16.3	
2						15.9	
						RPD = 2.72	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.019	0.002	1645292180	150.0	150.0	
2	2.839	2.839	0.000	186440198	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	44633037	4.00	4.05	
2	3.823	3.823	0.000	6851543	4.00	3.94	
						RPD = 2.74	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	47816993	4.00	4.05	
2	4.302	4.302	0.000	7168590	4.00	3.96	
						RPD = 2.34	
8 alpha-BHC							
1	4.497	4.497	0.000	62852215	4.00	4.07	
2	4.447	4.448	-0.001	8858523	4.00	3.98	
						RPD = 2.23	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	56481667	4.00	4.08	
2	4.761	4.761	0.000	7435354	4.00	3.97	
						RPD = 2.89	
10 beta-BHC							
1	4.862	4.862	0.000	26687989	4.00	4.06	
2	4.837	4.837	0.000	3576692	4.00	3.94	
						RPD = 2.98	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	55669358	4.00	4.08	
2	5.069	5.069	0.000	7424235	4.00	3.97	
						RPD = 2.79	
15 Heptachlor							
1	5.187	5.187	0.000	50118465	4.00	4.04	
2	5.112	5.112	0.000	6621110	4.00	3.95	
						RPD = 2.42	
16 Aldrin							
1	5.457	5.457	0.000	52919960	4.00	4.05	
2	5.383	5.383	0.000	7030048	4.00	3.95	
						RPD = 2.49	
18 Isodrin							
1	5.784	5.783	0.001	44705372	4.00	4.05	
2	5.748	5.749	-0.001	6366004	4.00	3.93	
						RPD = 3.06	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	47553101	4.00	4.03	
2	5.930	5.931	-0.001	6762032	4.00	3.93	
						RPD = 2.56	
22 trans-Chlordane							
1	6.203	6.204	-0.001	49944652	4.00	4.09	
2	6.130	6.130	0.000	6819666	4.00	3.95	
						RPD = 3.42	
23 cis-Chlordane							
1	6.344	6.344	0.000	47100490	4.00	4.06	
2	6.286	6.286	0.000	6646251	4.00	3.94	
						RPD = 3.11	
24 4,4'-DDE							
1	6.421	6.421	0.000	48738148	4.00	4.06	
2	6.469	6.469	0.000	6542674	4.00	3.95	
						RPD = 2.61	
25 Endosulfan I							
1	6.494	6.494	0.000	45543940	4.00	4.03	
2	6.347	6.346	0.001	6507441	4.00	3.92	
						RPD = 2.71	
27 Dieldrin							
1	6.748	6.748	0.000	48904591	4.00	4.04	
2	6.638	6.639	-0.001	6664239	4.00	3.95	
						RPD = 2.17	
30 Endrin							
1	6.997	6.997	0.000	41251930	4.00	4.06	
2	6.963	6.963	0.000	5757882	4.00	3.96	
						RPD = 2.60	
32 4,4'-DDD							
1	7.058	7.058	0.000	38622027	4.00	4.10	
2	7.088	7.089	-0.001	5391187	4.00	3.96	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.234	7.234	0.000	41034933	4.00	4.05	
2	7.191	7.190	0.001	6270548	4.00	3.93	
						RPD = 2.93	
35 4,4'-DDT							
1	7.352	7.352	0.000	31997998	4.00	4.11	
2	7.419	7.419	0.000	4302693	4.00	4.01	
						RPD = 2.63	
36 Endrin aldehyde							
1	7.678	7.679	-0.001	32150414	4.00	4.07	
2	7.551	7.550	0.001	4932964	4.00	3.94	
						RPD = 3.18	
37 Methoxychlor							
1	7.857	7.857	0.000	17004835	4.00	4.05	
2	8.150	8.150	0.000	2361021	4.00	3.96	
						RPD = 2.20	
38 Mirex							
1	8.016	8.016	0.000	28621709	4.00	4.16	
2	8.344	8.344	0.000	4546008	4.00	3.91	
						RPD = 6.31	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	36051087	4.00	4.08	
2	7.841	7.841	0.000	5646467	4.00	3.94	
						RPD = 3.30	
40 Endrin ketone							
1	8.429	8.429	0.000	38530653	4.00	4.08	
2	8.397	8.396	0.001	6086476	4.00	3.95	
						RPD = 3.26	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	26336210	4.00	4.07	
2	9.668	9.668	0.000	4339575	4.00	3.92	
						RPD = 3.76	
S 3 Endosulfan, Total							
1						12.1	
2						11.8	
						RPD = 2.98	

Reagents:

8081IcalL1_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

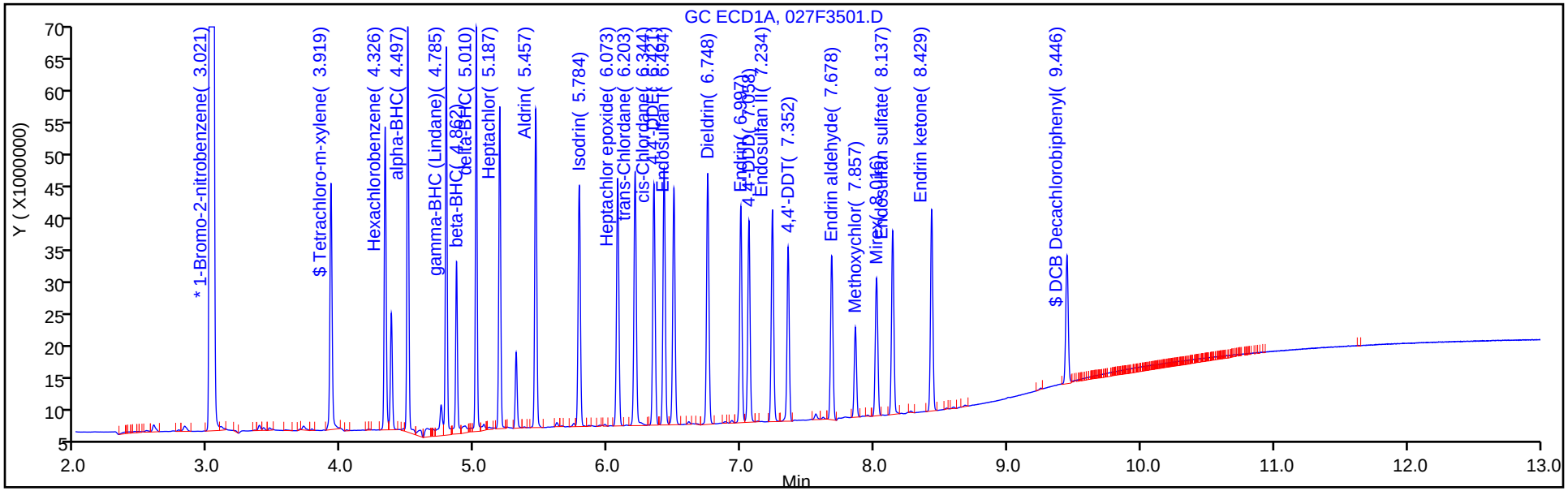
Report Date: 14-Oct-2018 22:12:06 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

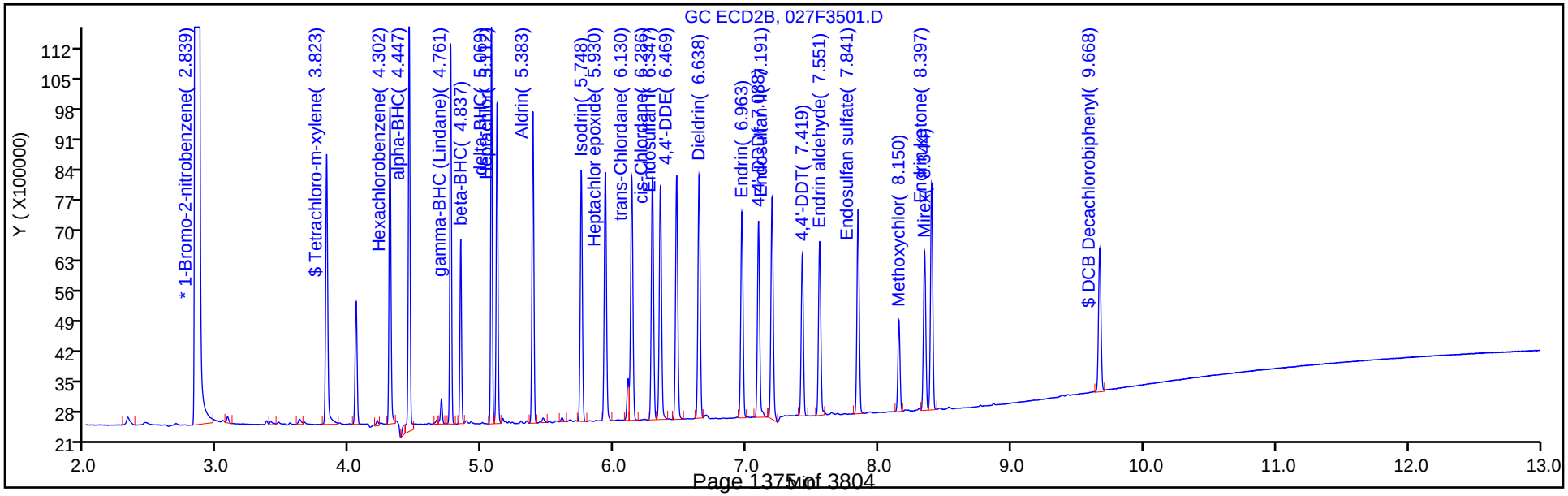
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Injection Date:	13-Oct-2018 20:49:46	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 AB			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Hexachlorobenzene	1.4419 1.2362	1.3627	1.3545	1.3365	1.2230	Lin2	0.7315	1.2729							0.9980		0.9900
alpha-BHC	1.7818 1.6386	1.7234	1.6767	1.6742	1.6508	Lin2	0.5521	1.6510							1.0000		0.9900
gamma-BHC (Lindane)	1.4955 1.4229	1.4992	1.4536	1.4509	1.4347	Lin2	0.2733	1.4397							1.0000		0.9900
beta-BHC	0.7194 0.5982	0.6802	0.6340	0.6219	0.6051	Lin2	0.4836	0.6082							0.9990		0.9900
delta-BHC	1.4933 1.4439	1.5067	1.4734	1.4737	1.4502	Lin2	0.1758	1.4608							1.0000		0.9900
Heptachlor	1.3317 1.2133	1.3215	1.2733	1.2481	1.2403	Lin2	0.4306	1.2403							0.9990		0.9900
Aldrin	1.4140 1.3163	1.4197	1.3604	1.3552	1.3269	Lin2	0.3719	1.3385							0.9990		0.9900
Heptachlor epoxide	1.3601 1.1794	1.3324	1.2574	1.2361	1.1960	Lin2	0.6880	1.2106							0.9990		0.9900
gamma-Chlordane	1.3717 1.2592	1.3554	1.3206	1.2919	1.2540	Lin2	0.4438	1.2767							0.9990		0.9900
alpha-Chlordane	1.3368 1.1851	1.3115	1.2396	1.2264	1.1870	Lin2	0.6085	1.2038							0.9990		0.9900
Endosulfan I	1.3089 1.1104	1.2690	1.1940	1.1684	1.1200	Lin2	0.7681	1.1397							0.9990		0.9900
4,4'-DDE	1.3160 1.2349	1.3199	1.2817	1.2894	1.2330	Lin2	0.2882	1.2583							0.9990		0.9900
Dieldrin	1.3404 1.2397	1.3368	1.2959	1.2966	1.2418	Lin2	0.3611	1.2658							0.9990		0.9900
Endrin	1.1581 1.0982	1.1668	1.1370	1.1418	1.1028	Lin2	0.2016	1.1195							0.9990		0.9900
4,4'-DDD	1.0844 1.0087	1.0719	1.0436	1.0533	0.9992	Lin2	0.2831	1.0231							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Endosulfan II	1.2612 1.0376	1.1962	1.1255	1.1283	1.0472	Lin2	0.8286	1.0728							0.9980		0.9900
4,4'-DDT	0.8654 0.8886	0.8812	0.8765	0.9102	0.8946	Lin2	-0.124	0.8951							1.0000		0.9900
Endrin aldehyde	0.9922 0.8405	0.9464	0.8961	0.8989	0.8424	Lin2	0.5740	0.8613							0.9990		0.9900
Endosulfan sulfate	1.1357 0.9578	1.0799	1.0266	1.0325	0.9589	Lin2	0.6631	0.9840							0.9990		0.9900
Methoxychlor	0.4749 0.4224	0.4614	0.4488	0.4555	0.4299	Lin2	0.1701	0.4365							0.9990		0.9900
Endrin ketone	1.2242 1.0490	1.1745	1.1284	1.1443	1.0541	Lin2	0.6163	1.0846							0.9980		0.9900
Tetrachloro-m-xylene	1.3781 1.1664	1.3193	1.2565	1.2668	1.1713	Lin2	0.7692	1.2042							0.9980		0.9900
DCB Decachlorobiphenyl	0.8728 0.6826	0.8069	0.7517	0.7551	0.6823	Lin2	0.7195	0.7066							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 280-433303/32	027F3501.D
Level 2	STD2 280-433303/31	026F3401.D
Level 3	STD3 280-433303/30	025F3301.D
Level 4	STD4 280-433303/29	024F3201.D
Level 5	STD5 280-433303/28	023F3101.D
Level 6	STD6 280-433303/27	022F3001.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobenzene	BNB	Lin2	7168590 160717643	17019247	42722842	82080999	120451736	4.00 100	10.0	25.0	50.0	75.0
alpha-BHC	BNB	Lin2	8858523 213039488	21525266	52885133	102825287	162579162	4.00 100	10.0	25.0	50.0	75.0
gamma-BHC (Lindane)	BNB	Lin2	7435354 184996515	18724325	45850109	89108339	141300627	4.00 100	10.0	25.0	50.0	75.0
beta-BHC	BNB	Lin2	3576692 77780555	8495816	19996794	38193156	59596054	4.00 100	10.0	25.0	50.0	75.0
delta-BHC	BNB	Lin2	7424235 187730350	18818212	46474767	90510020	142822500	4.00 100	10.0	25.0	50.0	75.0
Heptachlor	BNB	Lin2	6621110 157743006	16505122	40161455	76652553	122155556	4.00 100	10.0	25.0	50.0	75.0
Aldrin	BNB	Lin2	7030048 171135300	17731926	42909032	83229214	130679943	4.00 100	10.0	25.0	50.0	75.0
Heptachlor epoxide	BNB	Lin2	6762032 153345134	16641254	39660540	75919068	117794987	4.00 100	10.0	25.0	50.0	75.0
gamma-Chlordane	BNB	Lin2	6819666 163709394	16929113	41653596	79344564	123500639	4.00 100	10.0	25.0	50.0	75.0
alpha-Chlordane	BNB	Lin2	6646251 154077138	16380093	39100281	75318619	116906799	4.00 100	10.0	25.0	50.0	75.0
Endosulfan I	BNB	Lin2	6507441 144373306	15849043	37660075	71761841	110310449	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDE	BNB	Lin2	6542674 160552956	16485248	40427222	79191054	121439906	4.00 100	10.0	25.0	50.0	75.0
Dieldrin	BNB	Lin2	6664239 161178584	16696805	40874216	79630835	122303746	4.00 100	10.0	25.0	50.0	75.0
Endrin	BNB	Lin2	5757882 142775347	14572762	35861993	70123187	108615513	4.00 100	10.0	25.0	50.0	75.0
4,4'-DDD	BNB	Lin2	5391187 131149227	13387732	32918226	64688838	98409444	4.00 100	10.0	25.0	50.0	75.0
Endosulfan II	BNB	Lin2	6270548 134900820	14939909	35501572	69296907	103131602	4.00 100	10.0	25.0	50.0	75.0

FORM VI
PESTICIDES BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 433303

SDG No.:

Instrument ID: SGC_P2 GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/13/2018 19:22 Calibration End Date: 10/13/2018 20:49 Calibration ID: 33990

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
4,4'-DDT	BNB	Lin2	4302693 115525218	11005760	27647840	55899373	88104638	4.00 100	10.0	25.0	50.0	75.0
Endrin aldehyde	BNB	Lin2	4932964 109276534	11820141	28263198	55206907	82965198	4.00 100	10.0	25.0	50.0	75.0
Endosulfan sulfate	BNB	Lin2	5646467 124525276	13487473	32381376	63414174	94443160	4.00 100	10.0	25.0	50.0	75.0
Methoxychlor	BNB	Lin2	2361021 54922574	5763013	14155118	27972236	42337805	4.00 100	10.0	25.0	50.0	75.0
Endrin ketone	BNB	Lin2	6086476 136381981	14668648	35593065	70279476	103818155	4.00 100	10.0	25.0	50.0	75.0
Tetrachloro-m-xylene	BNB	Lin2	6851543 151651222	16477394	39633690	77802319	115355955	4.00 100	10.0	25.0	50.0	75.0
DCB Decachlorobiphenyl	BNB	Lin2	4339575 88747472	10078459	23709545	46374378	67193439	4.00 100	10.0	25.0	50.0	75.0

Curve Type Legend:
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D
Lims ID: STD6 AB
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 13-Oct-2018 19:22:28 ALS Bottle#: 22 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD6 AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:46 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:21:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						413.9	
2						393.8	
						RPD = 4.96	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.023	-0.002	1756870840	150.0	150.0	
2	2.840	2.842	-0.002	195021437	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.921	3.919	0.002	1317820866	100.0	101.7	
2	3.823	3.823	0.000	151651222	100.0	96.2	
						RPD = 5.52	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	1380707359	100.0	101.9	
2	4.302	4.302	0.000	160717643	100.0	96.5	
						RPD = 5.38	
8 alpha-BHC							
1	4.498	4.497	0.001	2039469973	100.0	103.6	
2	4.447	4.448	-0.001	213039488	100.0	98.9	
						RPD = 4.64	
9 gamma-BHC (Lindane)							
1	4.787	4.785	0.002	1738294623	100.0	103.7	
2	4.762	4.761	0.001	184996515	100.0	98.6	
						RPD = 4.99	
10 beta-BHC							
1	4.863	4.862	0.001	658730126	100.0	103.3	
2	4.837	4.837	0.000	77780555	100.0	97.6	
						RPD = 5.72	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.012	5.010	0.002	1763800464	100.0	103.3	
2	5.070	5.069	0.001	187730350	100.0	98.7	
						RPD = 4.51	
15 Heptachlor							
1	5.188	5.187	0.001	1487484474	100.0	100.1	
2	5.112	5.112	0.000	157743006	100.0	97.5	
						RPD = 2.69	
16 Aldrin							
1	5.458	5.457	0.001	1603385174	100.0	101.1	
2	5.384	5.383	0.001	171135300	100.0	98.1	
						RPD = 3.03	
18 Isodrin							
1	5.785	5.783	0.002	1276942983	100.0	101.0	
2	5.749	5.749	0.000	144685541	100.0	97.8	
						RPD = 3.17	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	1346353314	100.0	100.2	
2	5.932	5.931	0.001	153345134	100.0	96.9	
						RPD = 3.39	
22 trans-Chlordane							
1	6.204	6.204	0.000	1496975406	100.0	103.4	
2	6.131	6.130	0.001	163709394	100.0	98.3	
						RPD = 5.07	
23 cis-Chlordane							
1	6.346	6.344	0.002	1419377556	100.0	102.6	
2	6.287	6.286	0.001	154077138	100.0	97.9	
						RPD = 4.60	
24 4,4'-DDE							
1	6.422	6.421	0.001	1475769541	100.0	101.5	
2	6.470	6.469	0.001	160552956	100.0	97.9	
						RPD = 3.65	
25 Endosulfan I							
1	6.495	6.494	0.001	1268053177	100.0	99.9	
2	6.347	6.346	0.001	144373306	100.0	96.8	
						RPD = 3.18	
27 Dieldrin							
1	6.750	6.748	0.002	1418985077	100.0	100.4	
2	6.640	6.639	0.001	161178584	100.0	97.7	
						RPD = 2.73	
30 Endrin							
1	6.998	6.997	0.001	1249259754	100.0	101.6	
2	6.964	6.963	0.001	142775347	100.0	97.9	
						RPD = 3.71	
32 4,4'-DDD							
1	7.059	7.058	0.001	1180309263	100.0	104.8	
2	7.089	7.089	0.000	131149227	100.0	98.3	
						RPD = 6.34	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.235	7.234	0.001	1149629449	100.0	99.7	
2	7.191	7.190	0.001	134900820	100.0	95.9	
						RPD = 3.88	
35 4,4'-DDT							
1	7.353	7.352	0.001	1053113637	100.0	104.1	
2	7.420	7.419	0.001	115525218	100.0	99.4	
						RPD = 4.57	
36 Endrin aldehyde							
1	7.680	7.679	0.001	894620553	100.0	101.5	
2	7.551	7.550	0.001	109276534	100.0	96.9	
						RPD = 4.65	
37 Methoxychlor							
1	7.857	7.857	0.000	456885819	100.0	99.8	
2	8.151	8.150	0.001	54922574	100.0	96.4	
						RPD = 3.44	
38 Mirex							
1	8.017	8.016	0.001	761678556	100.0	103.8	
2	8.346	8.344	0.002	90852521	100.0	95.7	
						RPD = 8.10	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	1039104153	100.0	101.8	
2	7.842	7.841	0.001	124525276	100.0	96.7	
						RPD = 5.17	
40 Endrin ketone							
1	8.431	8.429	0.002	1081196479	100.0	100.8	
2	8.398	8.396	0.002	136381981	100.0	96.1	
						RPD = 4.74	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	675825077	100.0	101.6	
2	9.669	9.668	0.001	88747472	100.0	95.6	
						RPD = 6.08	
S 3 Endosulfan, Total							
1						301.4	
2						289.4	
						RPD = 4.08	

Reagents:

8081IcalL6_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

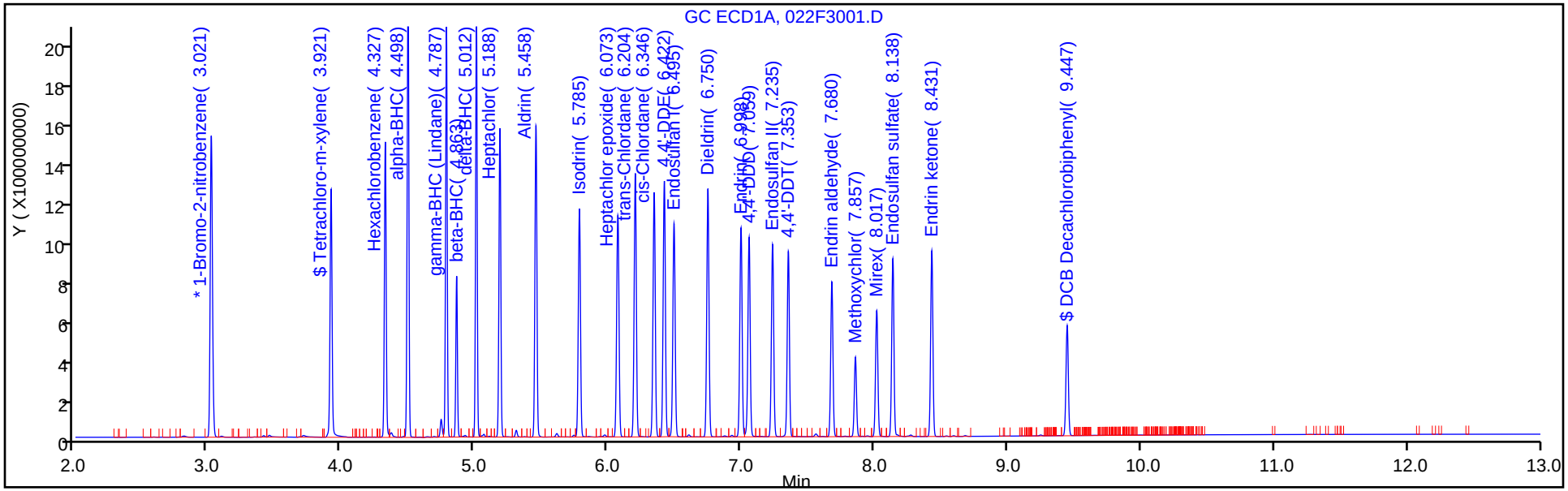
Report Date: 14-Oct-2018 22:11:48 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

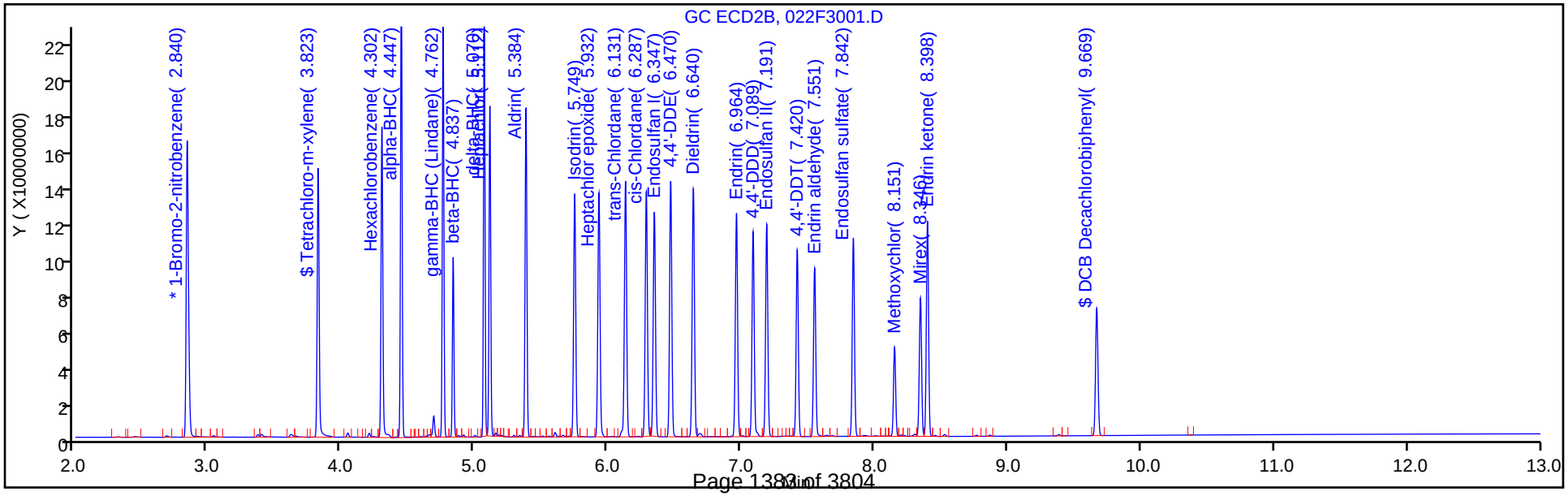
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\022F3001.D

Injection Date:	13-Oct-2018 19:22:28	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD6 AB			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D
Lims ID: STD5 AB
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 13-Oct-2018 19:39:58 ALS Bottle#: 23 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD5
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:49 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						305.3	
2						297.4	
						RPD = 2.65	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.023	-0.002	1774800139	150.0	150.0	
2	2.840	2.842	-0.002	196975139	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.920	3.919	0.001	974117175	75.0	74.5	
2	3.823	3.823	0.000	115355955	75.0	72.3	
						RPD = 2.99	
5 Hexachlorobenzene							
1	4.328	4.326	0.002	1019295562	75.0	74.5	
2	4.302	4.302	0.000	120451736	75.0	71.5	
						RPD = 4.17	
8 alpha-BHC							
1	4.498	4.497	0.001	1515867171	75.0	76.4	
2	4.448	4.448	0.000	162579162	75.0	74.7	
						RPD = 2.33	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	1292559350	75.0	76.5	
2	4.761	4.761	0.000	141300627	75.0	74.5	
						RPD = 2.52	
10 beta-BHC							
1	4.862	4.862	0.000	492255043	75.0	76.3	
2	4.837	4.837	0.000	59596054	75.0	73.8	
						RPD = 3.31	
12 delta-BHC							
1	5.011	5.010	0.001	1311307456	75.0	76.2	
2	5.070	5.069	0.001	142822500	75.0	74.3	
						RPD = 2.45	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.188	5.187	0.001	1142416982	75.0	76.2	
2	5.113	5.112	0.001	122155556	75.0	74.7	
						RPD = 2.10	
16 Aldrin							
1	5.458	5.457	0.001	1208042264	75.0	75.5	
2	5.384	5.383	0.001	130679943	75.0	74.1	
						RPD = 1.93	
18 Isodrin							
1	5.785	5.783	0.002	961672330	75.0	75.3	
2	5.750	5.749	0.001	109763292	75.0	73.3	
						RPD = 2.72	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	1017236841	75.0	75.0	
2	5.932	5.931	0.001	117794987	75.0	73.5	
						RPD = 1.98	
22 trans-Chlordane							
1	6.205	6.204	0.001	1109387779	75.0	76.0	
2	6.131	6.130	0.001	123500639	75.0	73.3	
						RPD = 3.54	
23 cis-Chlordane							
1	6.346	6.344	0.002	1055599184	75.0	75.6	
2	6.288	6.286	0.002	116906799	75.0	73.4	
						RPD = 2.90	
24 4,4'-DDE							
1	6.422	6.421	0.001	1097991084	75.0	74.9	
2	6.470	6.469	0.001	121439906	75.0	73.3	
						RPD = 2.23	
25 Endosulfan I							
1	6.495	6.494	0.001	954735604	75.0	74.5	
2	6.348	6.346	0.002	110310449	75.0	73.0	
						RPD = 1.99	
27 Dieldrin							
1	6.750	6.748	0.002	1064216521	75.0	74.6	
2	6.640	6.639	0.001	122303746	75.0	73.3	
						RPD = 1.77	
30 Endrin							
1	6.998	6.997	0.001	929144470	75.0	74.9	
2	6.965	6.963	0.002	108615513	75.0	73.7	
						RPD = 1.66	
32 4,4'-DDD							
1	7.059	7.058	0.001	848012397	75.0	74.6	
2	7.090	7.089	0.001	98409444	75.0	73.0	
						RPD = 2.25	
34 Endosulfan II							
1	7.235	7.234	0.001	862538061	75.0	74.1	
2	7.191	7.190	0.001	103131602	75.0	72.4	
						RPD = 2.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.353	7.352	0.001	778459968	75.0	76.4	
2	7.420	7.419	0.001	88104638	75.0	75.1	
						RPD = 1.66	
36 Endrin aldehyde							
1	7.680	7.679	0.001	665966546	75.0	74.9	
2	7.551	7.550	0.001	82965198	75.0	72.7	
						RPD = 2.96	
37 Methoxychlor							
1	7.857	7.857	0.000	345420332	75.0	74.7	
2	8.151	8.150	0.001	42337805	75.0	73.5	
						RPD = 1.63	
38 Mirex							
1	8.016	8.016	0.000	537010702	75.0	72.4	
2	8.345	8.344	0.001	69265800	75.0	71.9	
						RPD = 0.66	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	767321325	75.0	74.5	
2	7.843	7.841	0.002	94443160	75.0	72.4	
						RPD = 2.83	
40 Endrin ketone							
1	8.430	8.429	0.001	802034011	75.0	74.1	
2	8.398	8.396	0.002	103818155	75.0	72.3	
						RPD = 2.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	494311523	75.0	73.5	
2	9.669	9.668	0.001	67193439	75.0	71.4	
						RPD = 2.91	
S 3 Endosulfan, Total							
1						223.1	
2						217.9	
						RPD = 2.38	

Reagents:

8081IcalL5_00026	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

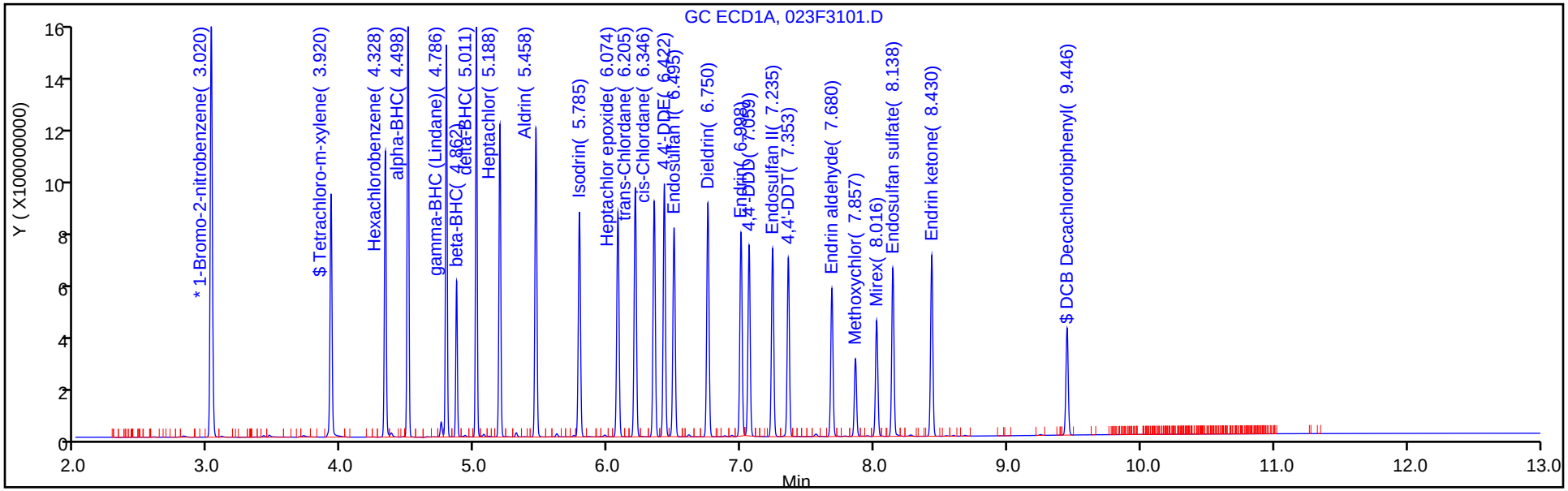
Report Date: 14-Oct-2018 22:11:52 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

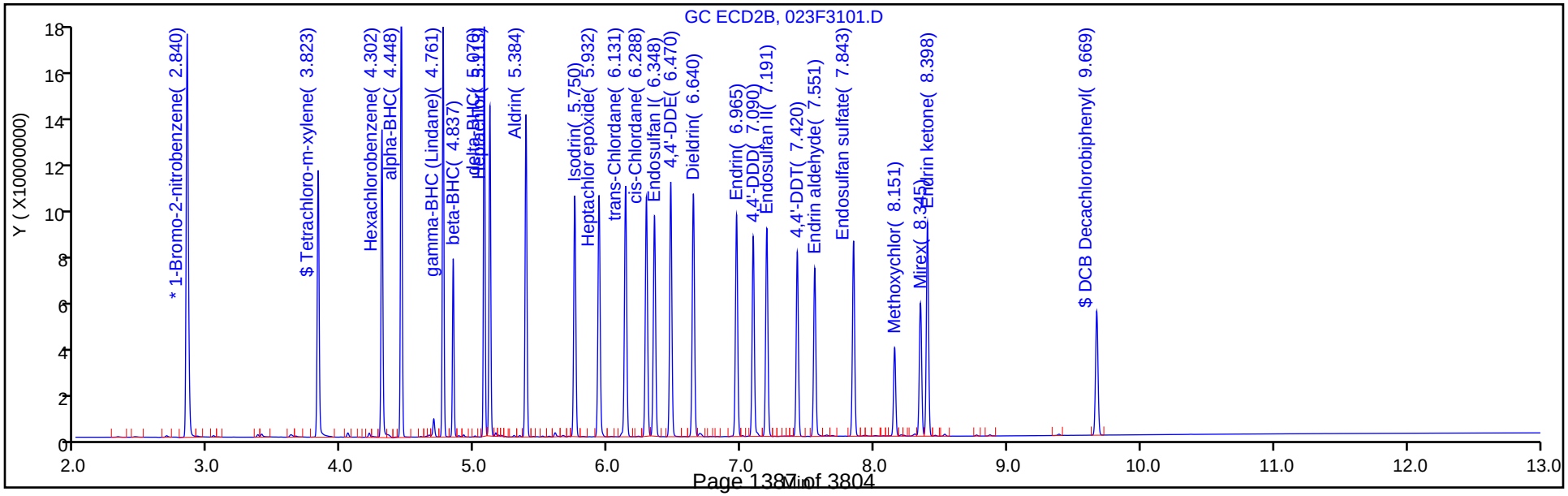
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\023F3101.D

Injection Date:	13-Oct-2018 19:39:58	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD5 AB			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D
Lims ID: STD4 AB
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 13-Oct-2018 19:57:23 ALS Bottle#: 24 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD4
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:53 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:15:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1639866372	150.0	150.0	
2	2.839	2.839	0.000	184249474	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	621494359	50.0	51.6	
2	3.823	3.823	0.000	77802319	50.0	52.0	
						RPD = 0.76	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	649000706	50.0	51.4	
2	4.302	4.302	0.000	82080999	50.0	51.9	
						RPD = 0.91	
8 alpha-BHC							
1	4.497	4.497	0.000	914630685	50.0	50.1	
2	4.448	4.448	0.000	102825287	50.0	50.4	
						RPD = 0.46	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	781888254	50.0	50.2	
2	4.761	4.761	0.000	89108339	50.0	50.2	
						RPD = 0.06	
10 beta-BHC							
1	4.862	4.862	0.000	300049327	50.0	50.2	
2	4.837	4.837	0.000	38193156	50.0	50.3	
						RPD = 0.27	
12 delta-BHC							
1	5.010	5.010	0.000	800211131	50.0	50.5	
2	5.069	5.069	0.000	90510020	50.0	50.3	
						RPD = 0.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.187	5.187	0.000	700142171	50.0	50.7	
2	5.112	5.112	0.000	76652553	50.0	50.0	
						RPD = 1.50	
16 Aldrin							
1	5.457	5.457	0.000	751162048	50.0	51.0	
2	5.383	5.383	0.000	83229214	50.0	50.3	
						RPD = 1.26	
18 Isodrin							
1	5.783	5.783	0.000	601057788	50.0	51.1	
2	5.749	5.749	0.000	70720524	50.0	50.3	
						RPD = 1.47	
21 Heptachlor epoxide							
1	6.072	6.072	0.000	637075296	50.0	50.9	
2	5.931	5.931	0.000	75919068	50.0	50.5	
						RPD = 0.86	
22 trans-Chlordane							
1	6.204	6.204	0.000	682439750	50.0	50.7	
2	6.130	6.130	0.000	79344564	50.0	50.2	
						RPD = 0.91	
23 cis-Chlordane							
1	6.344	6.344	0.000	652320568	50.0	50.7	
2	6.286	6.286	0.000	75318619	50.0	50.4	
						RPD = 0.57	
24 4,4'-DDE							
1	6.421	6.421	0.000	693292530	50.0	51.4	
2	6.469	6.469	0.000	79191054	50.0	51.0	
						RPD = 0.68	
25 Endosulfan I							
1	6.494	6.494	0.000	607276774	50.0	51.4	
2	6.346	6.346	0.000	71761841	50.0	50.6	
						RPD = 1.49	
27 Dieldrin							
1	6.748	6.748	0.000	676681392	50.0	51.4	
2	6.639	6.639	0.000	79630835	50.0	50.9	
						RPD = 1.01	
30 Endrin							
1	6.997	6.997	0.000	586918822	50.0	51.4	
2	6.963	6.963	0.000	70123187	50.0	50.8	
						RPD = 1.13	
32 4,4'-DDD							
1	7.058	7.058	0.000	538092520	50.0	51.4	
2	7.089	7.089	0.000	64688838	50.0	51.2	
						RPD = 0.39	
34 Endosulfan II							
1	7.234	7.234	0.000	563151672	50.0	52.5	
2	7.190	7.190	0.000	69296907	50.0	51.8	
						RPD = 1.25	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.352	7.352	0.000	479927441	50.0	51.2	
2	7.419	7.419	0.000	55899373	50.0	51.0	
						RPD = 0.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	426357889	50.0	51.9	
2	7.550	7.550	0.000	55206907	50.0	51.5	
						RPD = 0.80	
37 Methoxychlor							
1	7.857	7.857	0.000	223151920	50.0	52.2	
2	8.150	8.150	0.000	27972236	50.0	51.8	
						RPD = 0.89	
38 Mirex							
1	8.016	8.016	0.000	349932979	50.0	51.1	
2	8.344	8.344	0.000	46808816	50.0	51.7	
						RPD = 1.13	
39 Endosulfan sulfate							
1	8.138	8.138	0.000	496366994	50.0	52.2	
2	7.841	7.841	0.000	63414174	50.0	51.8	
						RPD = 0.87	
40 Endrin ketone							
1	8.429	8.429	0.000	528619675	50.0	52.9	
2	8.396	8.396	0.000	70279476	50.0	52.2	
						RPD = 1.42	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	327463502	50.0	52.7	
2	9.668	9.668	0.000	46374378	50.0	52.4	
						RPD = 0.46	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

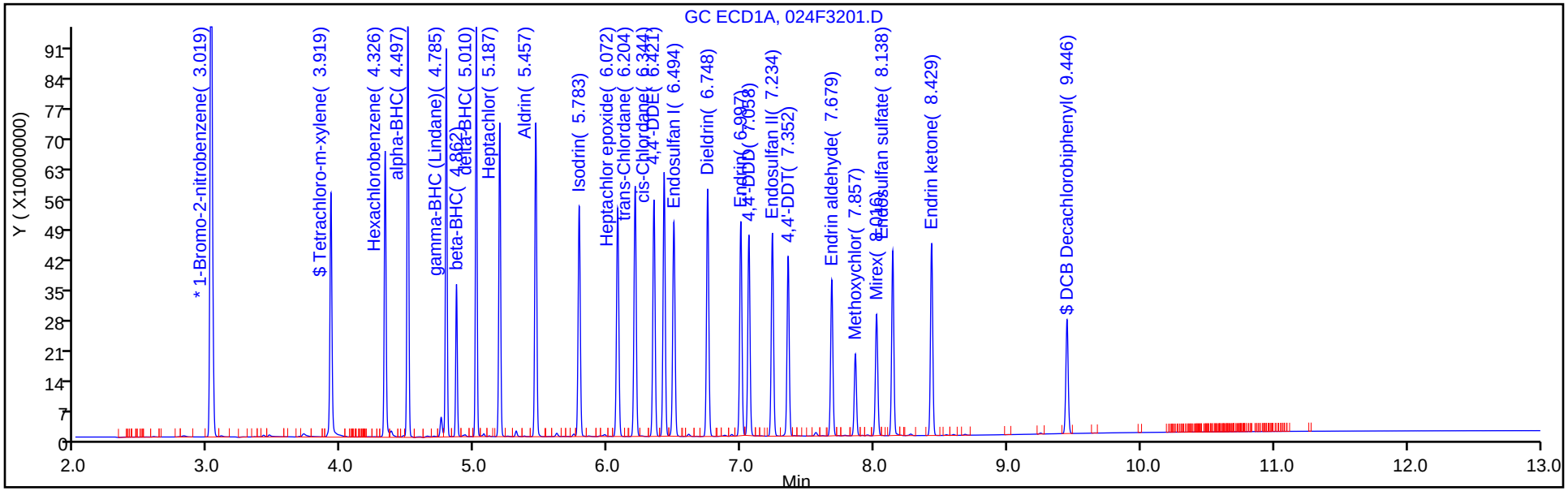
Report Date: 14-Oct-2018 22:11:55 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

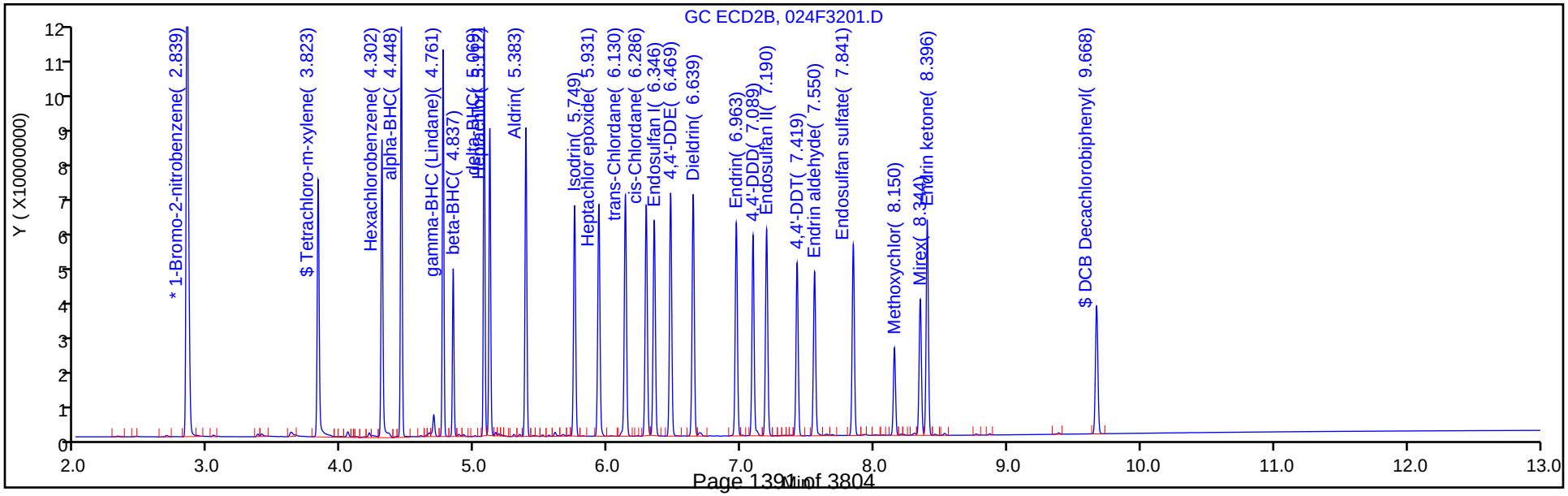
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\024F3201.D

Injection Date:	13-Oct-2018 19:57:23	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD4 AB			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D
Lims ID: STD3 AB
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 13-Oct-2018 20:14:49 ALS Bottle#: 25 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD3
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:11:56 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						96.0	
2						100.5	
						RPD = 4.51	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1708743357	150.0	150.0	
2	2.839	2.839	0.000	189250238	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	302832702	25.0	24.3	
2	3.823	3.823	0.000	39633690	25.0	25.4	
						RPD = 4.54	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	317851410	25.0	24.3	
2	4.301	4.302	-0.001	42722842	25.0	26.0	
						RPD = 6.71	
8 alpha-BHC							
1	4.497	4.497	0.000	449507972	25.0	24.0	
2	4.447	4.448	-0.001	52885133	25.0	25.1	
						RPD = 4.26	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	385635283	25.0	24.0	
2	4.761	4.761	0.000	45850109	25.0	25.1	
						RPD = 4.13	
10 beta-BHC							
1	4.862	4.862	0.000	150050051	25.0	23.9	
2	4.836	4.837	-0.001	19996794	25.0	25.3	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	392697114	25.0	24.1	
2	5.069	5.069	0.000	46474767	25.0	25.1	
						RPD = 3.96	
15 Heptachlor							
1	5.187	5.187	0.000	349955154	25.0	24.6	
2	5.111	5.112	-0.001	40161455	25.0	25.3	
						RPD = 3.00	
16 Aldrin							
1	5.457	5.457	0.000	370973392	25.0	24.4	
2	5.383	5.383	0.000	42909032	25.0	25.1	
						RPD = 2.83	
18 Isodrin							
1	5.783	5.783	0.000	298789524	25.0	24.5	
2	5.748	5.749	-0.001	36890552	25.0	25.3	
						RPD = 3.01	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	320747071	25.0	24.7	
2	5.930	5.931	-0.001	39660540	25.0	25.4	
						RPD = 2.64	
22 trans-Chlordane							
1	6.203	6.204	-0.001	335790425	25.0	24.2	
2	6.129	6.130	-0.001	41653596	25.0	25.5	
						RPD = 5.41	
23 cis-Chlordane							
1	6.344	6.344	0.000	321433079	25.0	24.2	
2	6.285	6.286	-0.001	39100281	25.0	25.2	
						RPD = 4.13	
24 4,4'-DDE							
1	6.421	6.421	0.000	340651862	25.0	24.5	
2	6.469	6.469	0.000	40427222	25.0	25.2	
						RPD = 3.05	
25 Endosulfan I							
1	6.494	6.494	0.000	304465713	25.0	24.8	
2	6.346	6.346	0.000	37660075	25.0	25.5	
						RPD = 2.80	
27 Dieldrin							
1	6.748	6.748	0.000	335595524	25.0	24.7	
2	6.638	6.639	-0.001	40874216	25.0	25.3	
						RPD = 2.54	
30 Endrin							
1	6.997	6.997	0.000	288123020	25.0	24.5	
2	6.963	6.963	0.000	35861993	25.0	25.2	
						RPD = 2.96	
32 4,4'-DDD							
1	7.058	7.058	0.000	259223669	25.0	24.0	
2	7.088	7.089	-0.001	32918226	25.0	25.2	
						RPD = 4.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	273685389	25.0	24.6	
2	7.190	7.190	0.000	35501572	25.0	25.5	
						RPD = 3.40	
35 4,4'-DDT							
1	7.352	7.352	0.000	228369137	25.0	23.8	
2	7.419	7.419	0.000	27647840	25.0	24.6	
						RPD = 3.42	
36 Endrin aldehyde							
1	7.679	7.679	0.000	206854248	25.0	24.3	
2	7.550	7.550	0.000	28263198	25.0	25.3	
						RPD = 4.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	108979408	25.0	24.5	
2	8.150	8.150	0.000	14155118	25.0	25.3	
						RPD = 3.13	
38 Mirex							
1	8.015	8.016	-0.001	172426127	25.0	24.2	
2	8.344	8.344	0.000	24325156	25.0	25.6	
						RPD = 5.67	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	238398480	25.0	24.3	
2	7.841	7.841	0.000	32381376	25.0	25.4	
						RPD = 4.66	
40 Endrin ketone							
1	8.429	8.429	0.000	252349419	25.0	24.4	
2	8.396	8.396	0.000	35593065	25.0	25.4	
						RPD = 4.25	
$ 41 DCB Decachlorobiphenyl							
1	9.445	9.446	-0.001	159322167	25.0	24.5	
2	9.668	9.668	0.000	23709545	25.0	25.6	
						RPD = 4.30	
S 3 Endosulfan, Total							
1						73.7	
2						76.4	
						RPD = 3.61	

Reagents:

8081IcalL3_00028	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

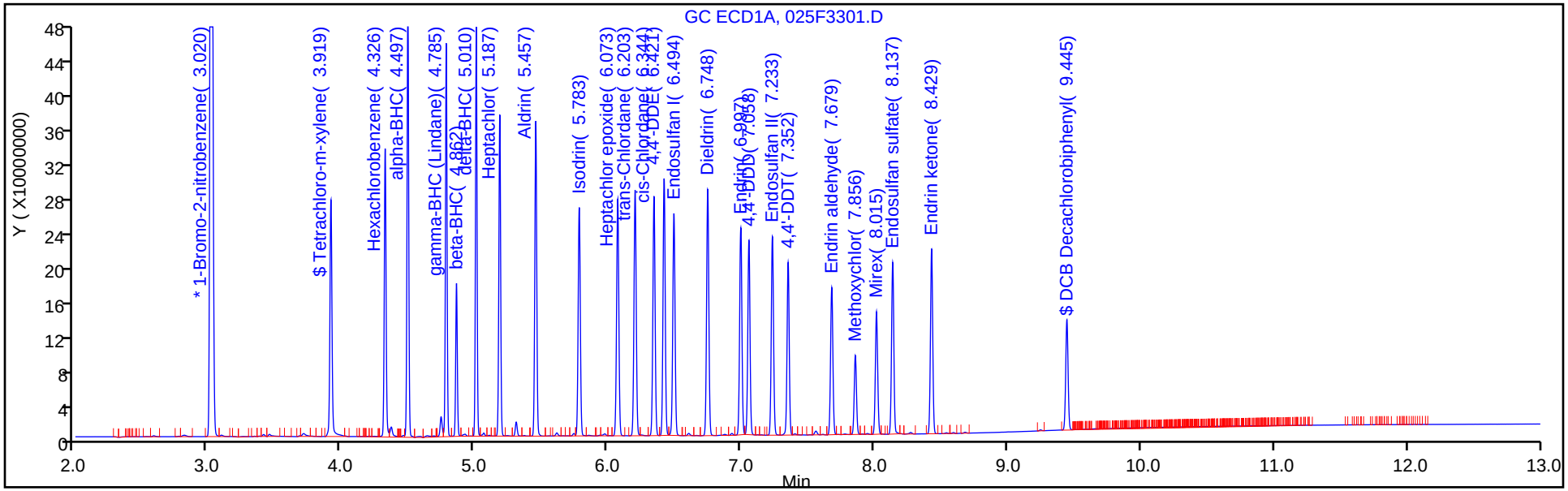
Report Date: 14-Oct-2018 22:11:59 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

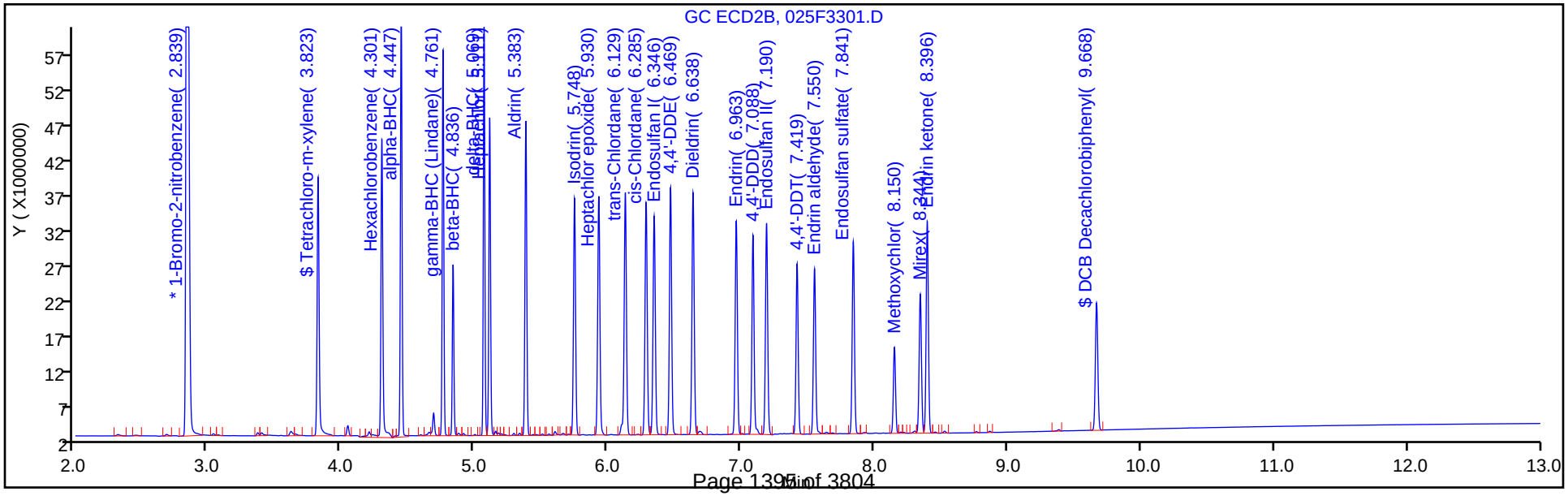
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\025F3301.D

Injection Date:	13-Oct-2018 20:14:49	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD3 AB			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D
Lims ID: STD2 AB
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 13-Oct-2018 20:32:15 ALS Bottle#: 26 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD2
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:00 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:17:42

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						38.6	
2						40.9	
						RPD = 5.94	
* 2 1-Bromo-2-nitrobenzene							
1	3.020	3.019	0.001	1728425275	150.0	150.0	
2	2.839	2.839	0.000	187345459	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	119672981	10.0	9.74	
2	3.822	3.823	-0.001	16477394	10.0	10.3	
						RPD = 5.80	
5 Hexachlorobenzene							
1	4.325	4.326	-0.001	126156548	10.0	9.73	
2	4.301	4.302	-0.001	17019247	10.0	10.1	
						RPD = 4.06	
8 alpha-BHC							
1	4.496	4.497	-0.001	174586944	10.0	9.64	
2	4.446	4.448	-0.002	21525266	10.0	10.1	
						RPD = 4.69	
9 gamma-BHC (Lindane)							
1	4.784	4.785	-0.001	150377013	10.0	9.57	
2	4.760	4.761	-0.001	18724325	10.0	10.2	
						RPD = 6.55	
10 beta-BHC							
1	4.861	4.862	-0.001	63756954	10.0	9.77	
2	4.836	4.837	-0.001	8495816	10.0	10.4	
						RPD = 6.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	151129545	10.0	9.56	
2	5.068	5.069	-0.001	18818212	10.0	10.2	
						RPD = 6.40	
15 Heptachlor							
1	5.186	5.187	-0.001	136220069	10.0	9.74	
2	5.111	5.112	-0.001	16505122	10.0	10.3	
						RPD = 5.70	
16 Aldrin							
1	5.456	5.457	-0.001	144846582	10.0	9.74	
2	5.382	5.383	-0.001	17731926	10.0	10.3	
						RPD = 5.89	
18 Isodrin							
1	5.783	5.783	0.000	117749615	10.0	9.72	
2	5.748	5.749	-0.001	15625487	10.0	10.5	
						RPD = 7.33	
21 Heptachlor epoxide							M
1	6.071	6.072	-0.001	126886425	10.0	9.83	
2	5.929	5.931	-0.002	16641254	10.0	10.4	M
						RPD = 5.98	
22 trans-Chlordane							
1	6.202	6.204	-0.002	129991480	10.0	9.51	
2	6.129	6.130	-0.001	16929113	10.0	10.3	
						RPD = 7.70	
23 cis-Chlordane							
1	6.344	6.344	0.000	126327949	10.0	9.68	
2	6.286	6.286	0.000	16380093	10.0	10.4	
						RPD = 7.07	
24 4,4'-DDE							
1	6.420	6.421	-0.001	131488025	10.0	9.65	
2	6.468	6.469	-0.001	16485248	10.0	10.3	
						RPD = 6.16	
25 Endosulfan I							
1	6.493	6.494	-0.001	120234528	10.0	9.81	
2	6.346	6.346	0.000	15849043	10.0	10.5	
						RPD = 6.40	
27 Dieldrin							
1	6.747	6.748	-0.001	131325618	10.0	9.76	
2	6.638	6.639	-0.001	16696805	10.0	10.3	
						RPD = 5.11	
30 Endrin							
1	6.996	6.997	-0.001	110965652	10.0	9.63	
2	6.962	6.963	-0.001	14572762	10.0	10.2	
						RPD = 6.20	
32 4,4'-DDD							
1	7.057	7.058	-0.001	100049743	10.0	9.44	
2	7.088	7.089	-0.001	13387732	10.0	10.2	
						RPD = 7.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.233	7.234	-0.001	107239359	10.0	9.69	
2	7.189	7.190	-0.001	14939909	10.0	10.4	
						RPD = 6.87	
35 4,4'-DDT							
1	7.352	7.352	0.000	86360678	10.0	9.37	
2	7.418	7.419	-0.001	11005760	10.0	9.98	
						RPD = 6.32	
36 Endrin aldehyde							
1	7.679	7.679	0.000	81761942	10.0	9.60	
2	7.550	7.550	0.000	11820141	10.0	10.3	
						RPD = 7.30	
37 Methoxychlor							
1	7.856	7.857	-0.001	43260093	10.0	9.68	
2	8.149	8.150	-0.001	5763013	10.0	10.2	
						RPD = 5.03	
38 Mirex							
1	8.015	8.016	-0.001	69898898	10.0	9.68	
2	8.343	8.344	-0.001	10513875	10.0	10.5	
						RPD = 8.20	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	93045319	10.0	9.55	
2	7.840	7.841	-0.001	13487473	10.0	10.3	
						RPD = 7.54	
40 Endrin ketone							
1	8.428	8.429	-0.001	97881347	10.0	9.50	
2	8.396	8.396	0.000	14668648	10.0	10.3	
						RPD = 7.65	
$ 41 DCB Decachlorobiphenyl							
1	9.443	9.446	-0.003	63321098	10.0	9.53	
2	9.668	9.668	0.000	10078459	10.0	10.4	
						RPD = 8.76	
S 3 Endosulfan, Total							
1						29.1	
2						31.1	
						RPD = 6.93	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081IcalL2_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

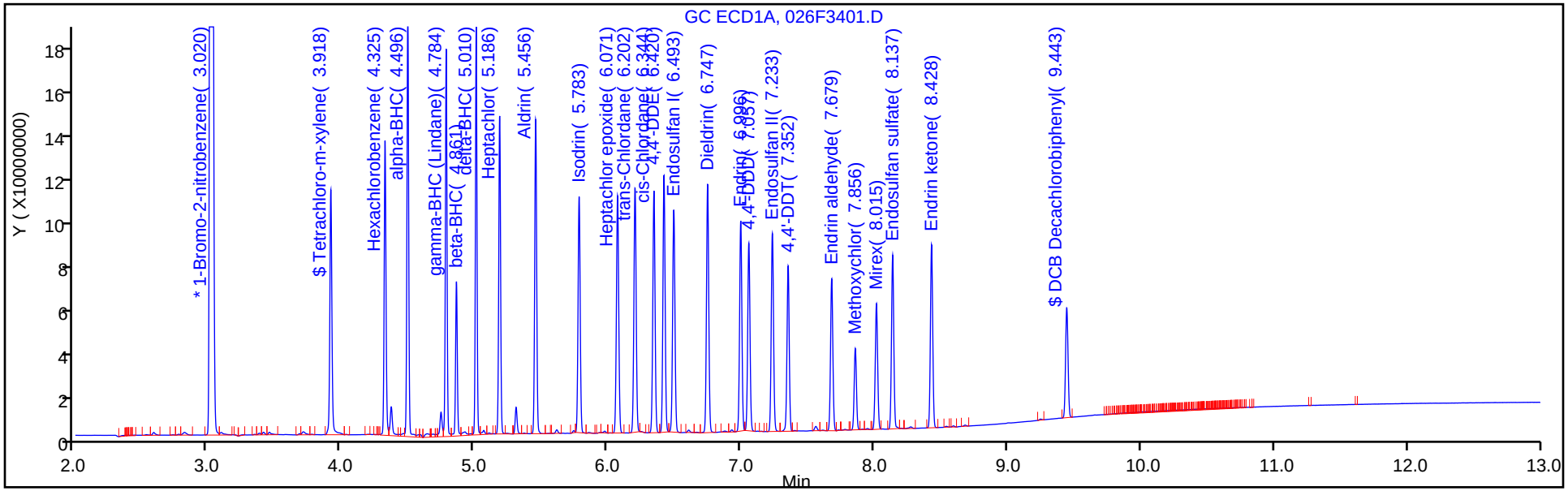
Report Date: 14-Oct-2018 22:12:02 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

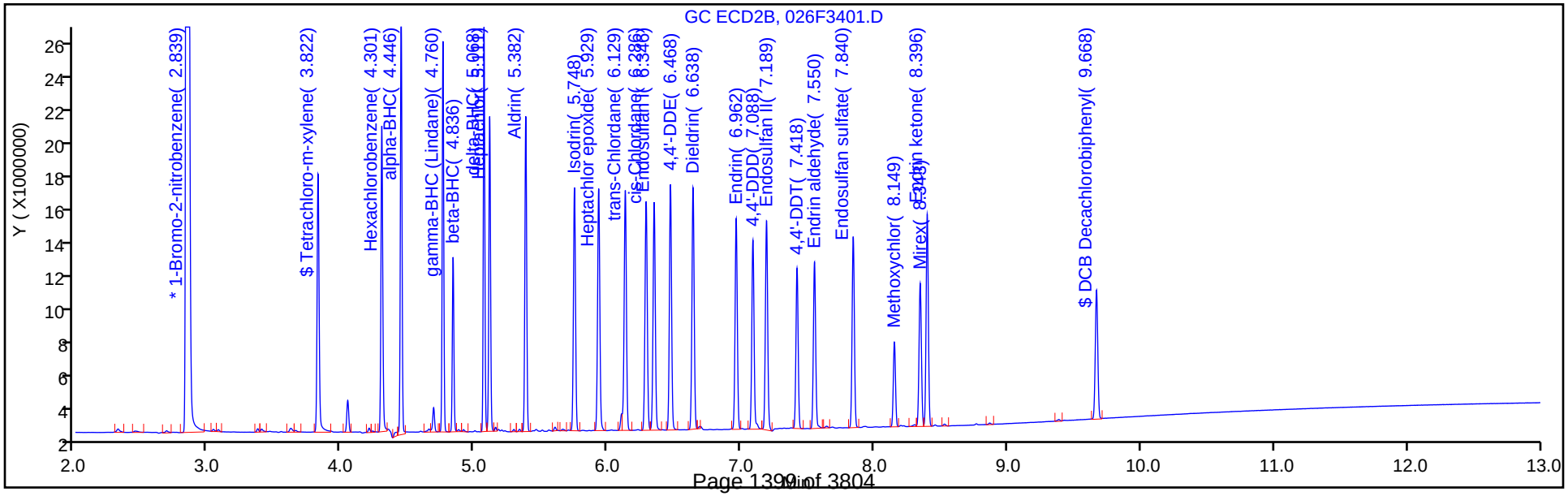
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D

Injection Date:	13-Oct-2018 20:32:15	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD2 AB			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Manual Integration/User Assign Peak Report

TestAmerica Denver

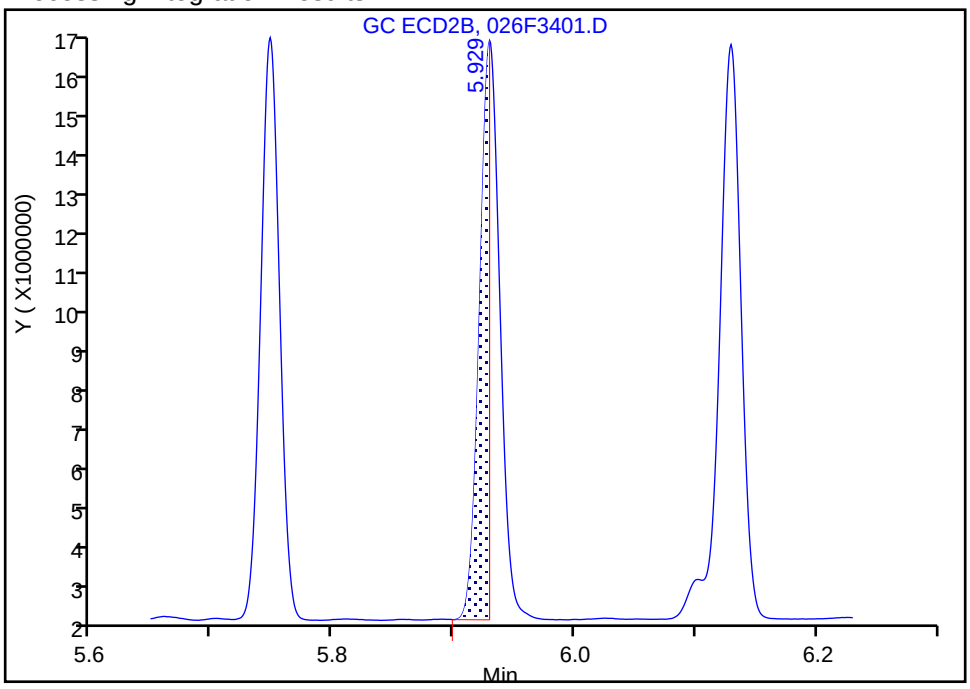
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\026F3401.D
Injection Date: 13-Oct-2018 20:32:15 Instrument ID: SGC_P2
Lims ID: STD2 AB
Client ID:
Operator ID: TEM ALS Bottle#: 26 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: P2 8081 IS Limit Group: GCSV - 8081A - IS
Column: CLP2 (0.32 mm) Detector GC ECD2B

21 Heptachlor epoxide, CAS: 1024-57-3

Signal: 2

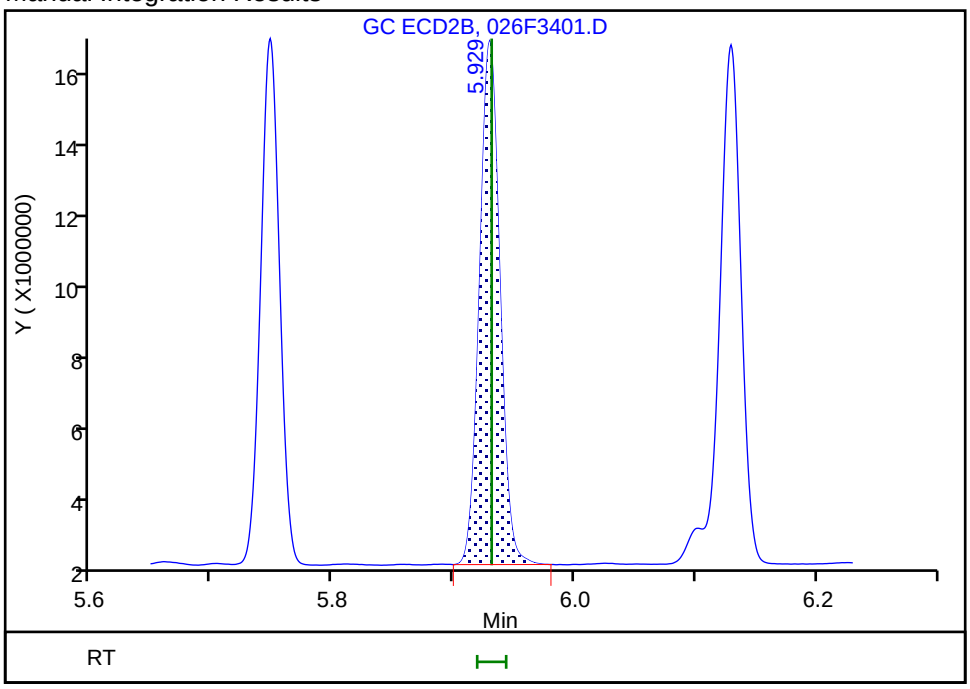
Processing Integration Results

RT: 5.93
Area: 8040349
Amount: 6.830396
Amount Units: ng/mL



Manual Integration Results

RT: 5.93
Area: 16641254
Amount: 10.438106
Amount Units: ng/mL



Reviewer: mooret, 14-Oct-2018 09:17:36
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D
Lims ID: STD1 AB
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 13-Oct-2018 20:49:46 ALS Bottle#: 27 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STD1
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						16.3	
2						15.9	
						RPD = 2.72	
* 2 1-Bromo-2-nitrobenzene							
1	3.021	3.019	0.002	1645292180	150.0	150.0	
2	2.839	2.839	0.000	186440198	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.919	3.919	0.000	44633037	4.00	4.05	
2	3.823	3.823	0.000	6851543	4.00	3.94	
						RPD = 2.74	
5 Hexachlorobenzene							
1	4.326	4.326	0.000	47816993	4.00	4.05	
2	4.302	4.302	0.000	7168590	4.00	3.96	
						RPD = 2.34	
8 alpha-BHC							
1	4.497	4.497	0.000	62852215	4.00	4.07	
2	4.447	4.448	-0.001	8858523	4.00	3.98	
						RPD = 2.23	
9 gamma-BHC (Lindane)							
1	4.785	4.785	0.000	56481667	4.00	4.08	
2	4.761	4.761	0.000	7435354	4.00	3.97	
						RPD = 2.89	
10 beta-BHC							
1	4.862	4.862	0.000	26687989	4.00	4.06	
2	4.837	4.837	0.000	3576692	4.00	3.94	
						RPD = 2.98	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.010	5.010	0.000	55669358	4.00	4.08	
2	5.069	5.069	0.000	7424235	4.00	3.97	
						RPD = 2.79	
15 Heptachlor							
1	5.187	5.187	0.000	50118465	4.00	4.04	
2	5.112	5.112	0.000	6621110	4.00	3.95	
						RPD = 2.42	
16 Aldrin							
1	5.457	5.457	0.000	52919960	4.00	4.05	
2	5.383	5.383	0.000	7030048	4.00	3.95	
						RPD = 2.49	
18 Isodrin							
1	5.784	5.783	0.001	44705372	4.00	4.05	
2	5.748	5.749	-0.001	6366004	4.00	3.93	
						RPD = 3.06	
21 Heptachlor epoxide							
1	6.073	6.072	0.001	47553101	4.00	4.03	
2	5.930	5.931	-0.001	6762032	4.00	3.93	
						RPD = 2.56	
22 trans-Chlordane							
1	6.203	6.204	-0.001	49944652	4.00	4.09	
2	6.130	6.130	0.000	6819666	4.00	3.95	
						RPD = 3.42	
23 cis-Chlordane							
1	6.344	6.344	0.000	47100490	4.00	4.06	
2	6.286	6.286	0.000	6646251	4.00	3.94	
						RPD = 3.11	
24 4,4'-DDE							
1	6.421	6.421	0.000	48738148	4.00	4.06	
2	6.469	6.469	0.000	6542674	4.00	3.95	
						RPD = 2.61	
25 Endosulfan I							
1	6.494	6.494	0.000	45543940	4.00	4.03	
2	6.347	6.346	0.001	6507441	4.00	3.92	
						RPD = 2.71	
27 Dieldrin							
1	6.748	6.748	0.000	48904591	4.00	4.04	
2	6.638	6.639	-0.001	6664239	4.00	3.95	
						RPD = 2.17	
30 Endrin							
1	6.997	6.997	0.000	41251930	4.00	4.06	
2	6.963	6.963	0.000	5757882	4.00	3.96	
						RPD = 2.60	
32 4,4'-DDD							
1	7.058	7.058	0.000	38622027	4.00	4.10	
2	7.088	7.089	-0.001	5391187	4.00	3.96	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.234	7.234	0.000	41034933	4.00	4.05	
2	7.191	7.190	0.001	6270548	4.00	3.93	
						RPD = 2.93	
35 4,4'-DDT							
1	7.352	7.352	0.000	31997998	4.00	4.11	
2	7.419	7.419	0.000	4302693	4.00	4.01	
						RPD = 2.63	
36 Endrin aldehyde							
1	7.678	7.679	-0.001	32150414	4.00	4.07	
2	7.551	7.550	0.001	4932964	4.00	3.94	
						RPD = 3.18	
37 Methoxychlor							
1	7.857	7.857	0.000	17004835	4.00	4.05	
2	8.150	8.150	0.000	2361021	4.00	3.96	
						RPD = 2.20	
38 Mirex							
1	8.016	8.016	0.000	28621709	4.00	4.16	
2	8.344	8.344	0.000	4546008	4.00	3.91	
						RPD = 6.31	
39 Endosulfan sulfate							
1	8.137	8.138	-0.001	36051087	4.00	4.08	
2	7.841	7.841	0.000	5646467	4.00	3.94	
						RPD = 3.30	
40 Endrin ketone							
1	8.429	8.429	0.000	38530653	4.00	4.08	
2	8.397	8.396	0.001	6086476	4.00	3.95	
						RPD = 3.26	
$ 41 DCB Decachlorobiphenyl							
1	9.446	9.446	0.000	26336210	4.00	4.07	
2	9.668	9.668	0.000	4339575	4.00	3.92	
						RPD = 3.76	
S 3 Endosulfan, Total							
1						12.1	
2						11.8	
						RPD = 2.98	

Reagents:

8081IcalL1_00025	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

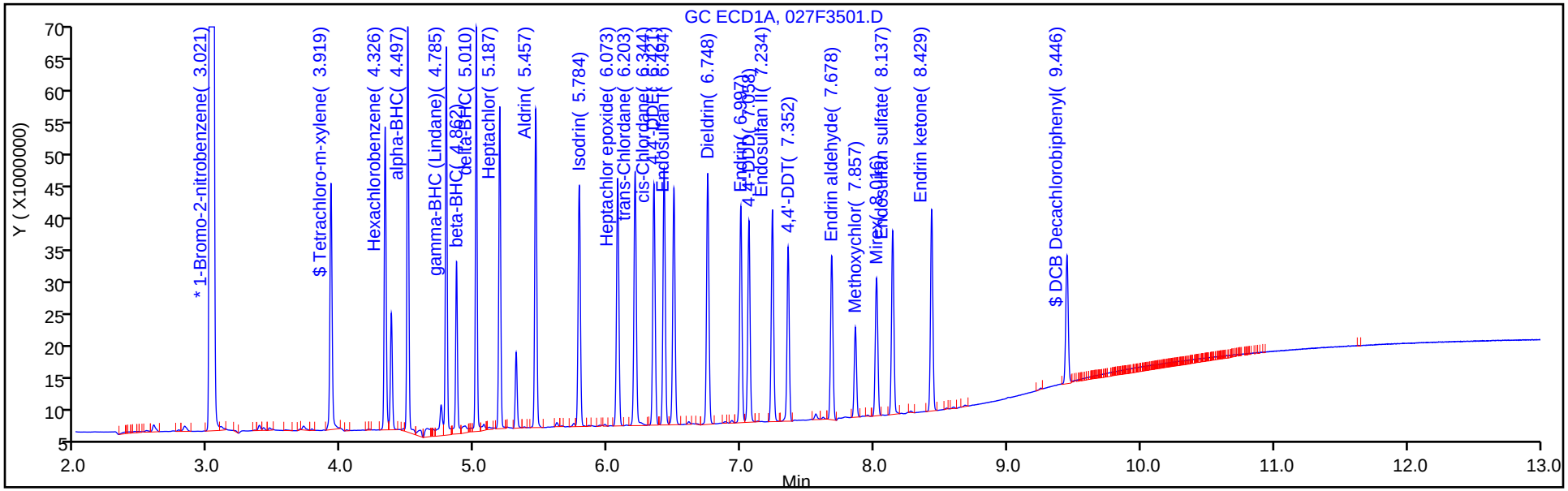
Report Date: 14-Oct-2018 22:12:07 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

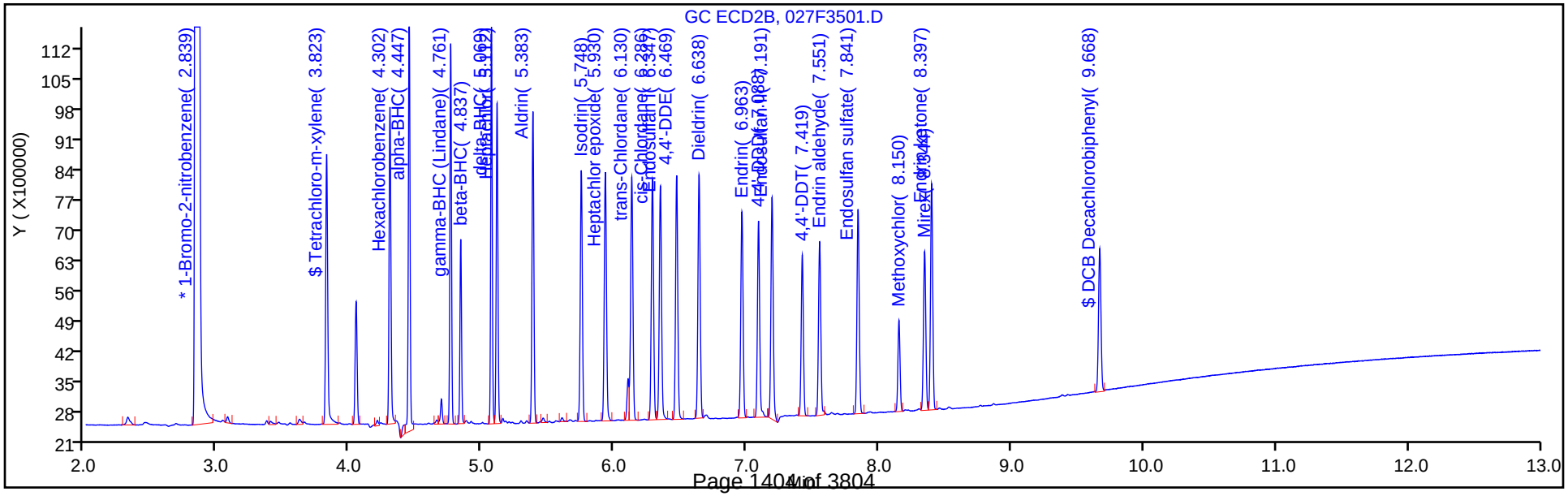
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Injection Date:	13-Oct-2018 20:49:46	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	STD1 AB			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES PERFORMANCE EVALUATION MIXTURE (PEM)

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: PEM 280-438595/7 Calibration Date: 11/23/2018 18:09

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230007.D Conc. Units: ug/L

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
Endrin	6.97	547165871	2.71	15	
Endrin aldehyde	7.65	6905312			
Endrin ketone	8.40	8328748			

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
4,4'-DDT	7.33	438737440	1.32	15	
4,4'-DDD	7.03	4709831			
4,4'-DDE	6.40	1139233			

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230007.D
Lims ID: PEM
Client ID:
Sample Type: PEM
Inject. Date: 23-Nov-2018 18:09:02 ALS Bottle#: 2 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: PEM
Misc. Info.: 280-0076490-007
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:33:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.006	3.005	0.001	1772713645	150.0	150.0	
2	2.809	2.807	0.001	228154774	150.0	150.0	
24 4,4'-DDE							
1	6.399	6.395	0.004	1139233		0.5727	
2	6.421	6.418	0.003	160872		-0.1449	
						RPD = 335.54	
30 Endrin							
1	6.972	6.970	0.002	547165871	40.0	44.4	
2	6.908	6.905	0.003	71904333	40.0	42.0	
						RPD = 5.42	
32 4,4'-DDD							
1	7.034	7.031	0.003	4709831		0.8672	
2	7.033	7.033	0.000	1895950		0.9416	
						RPD = 8.23	
35 4,4'-DDT							
1	7.327	7.325	0.002	438737440	40.0	43.4	
2	7.366	7.364	0.002	59719478	40.0	44.0	
						RPD = 1.35	
36 Endrin aldehyde							
1	7.654	7.650	0.004	6905312		0.9547	
2	7.494	7.490	0.004	993772		0.0921	
						RPD = 164.81	
40 Endrin ketone							
1	8.403	8.400	0.003	8328748		1.02	
2	8.338	8.335	0.003	1438615		0.3038	
						RPD = 108.07	

Reagents:

8081_EvalBPEM_00013	Amount Added: 1.00	Units: ml	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

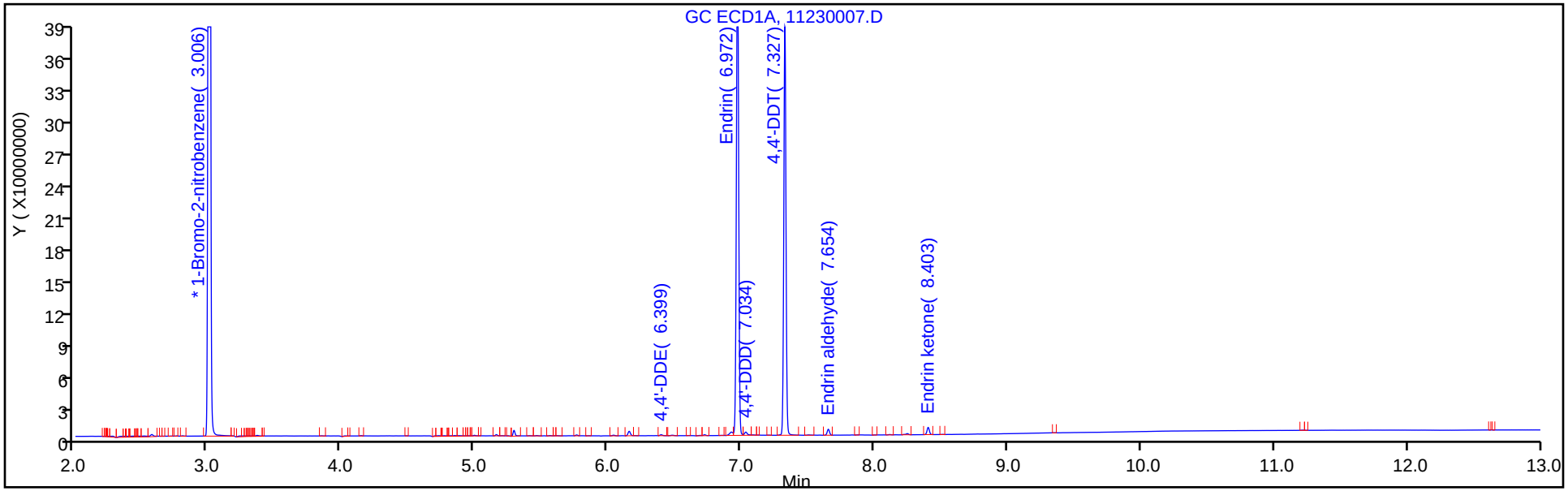
Report Date: 25-Nov-2018 19:33:06 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

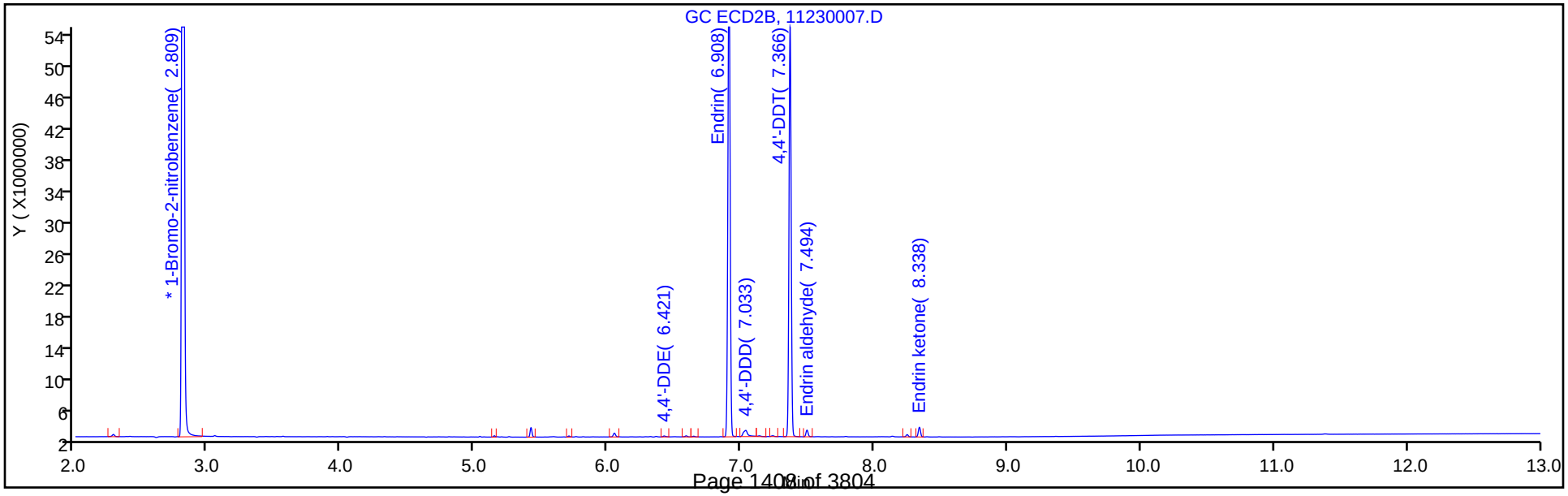
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230007.D

Injection Date:	23-Nov-2018 18:09:02	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	PEM			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES PERFORMANCE EVALUATION MIXTURE (PEM)

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: PEM 280-438595/7 Calibration Date: 11/23/2018 18:09

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230007.D Conc. Units: ug/L

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
Endrin	6.91	71904333	3.27	15	
Endrin aldehyde	7.49	993772			
Endrin ketone	8.34	1438615			

ANALYTE	RT	RESPONSE	BREAKDOWN (%)	LIMIT	#
4,4'-DDT	7.37	59719478	3.33	15	
4,4'-DDD	7.03	1895950			
4,4'-DDE	6.42	160872			

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230007.D
Lims ID: PEM
Client ID:
Sample Type: PEM
Inject. Date: 23-Nov-2018 18:09:02 ALS Bottle#: 2 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: PEM
Misc. Info.: 280-0076490-007
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:33:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.006	3.005	0.001	1772713645	150.0	150.0	
2	2.809	2.807	0.001	228154774	150.0	150.0	
24 4,4'-DDE							
1	6.399	6.395	0.004	1139233		0.5727	
2	6.421	6.418	0.003	160872		-0.1449	
						RPD = 335.54	
30 Endrin							
1	6.972	6.970	0.002	547165871	40.0	44.4	
2	6.908	6.905	0.003	71904333	40.0	42.0	
						RPD = 5.42	
32 4,4'-DDD							
1	7.034	7.031	0.003	4709831		0.8672	
2	7.033	7.033	0.000	1895950		0.9416	
						RPD = 8.23	
35 4,4'-DDT							
1	7.327	7.325	0.002	438737440	40.0	43.4	
2	7.366	7.364	0.002	59719478	40.0	44.0	
						RPD = 1.35	
36 Endrin aldehyde							
1	7.654	7.650	0.004	6905312		0.9547	
2	7.494	7.490	0.004	993772		0.0921	
						RPD = 164.81	
40 Endrin ketone							
1	8.403	8.400	0.003	8328748		1.02	
2	8.338	8.335	0.003	1438615		0.3038	
						RPD = 108.07	

Reagents:

8081_EvalBPEM_00013	Amount Added:	1.00	Units: ml	
8081_IS_00008	Amount Added:	75.00	Units: uL	Run Reagent

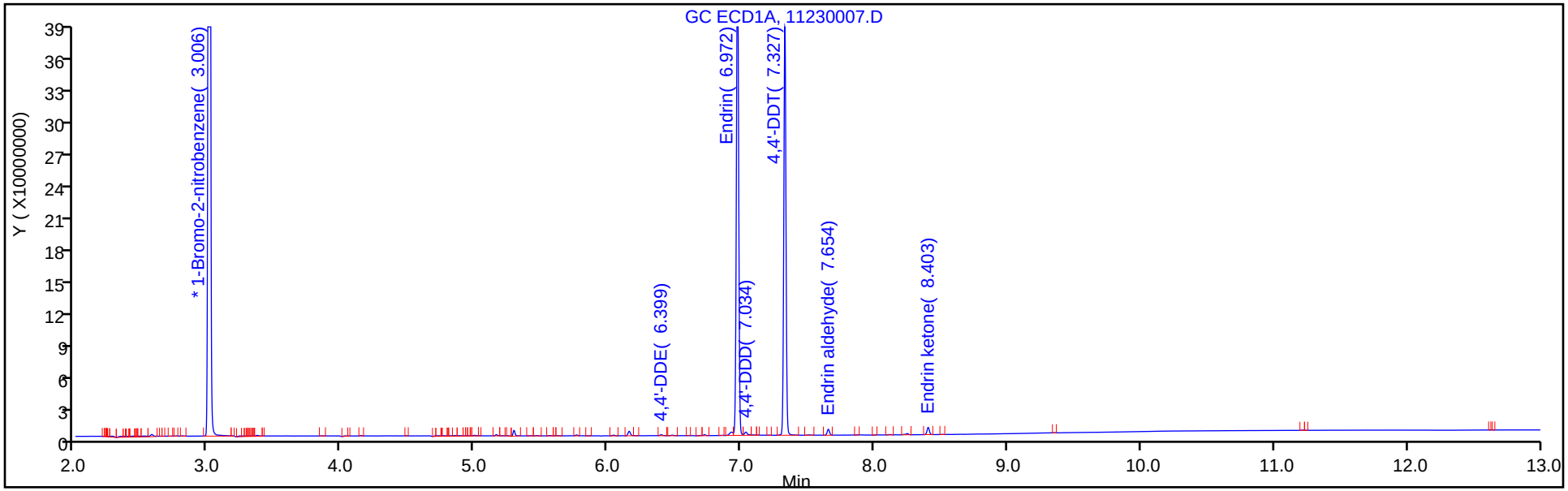
Report Date: 25-Nov-2018 19:33:06 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

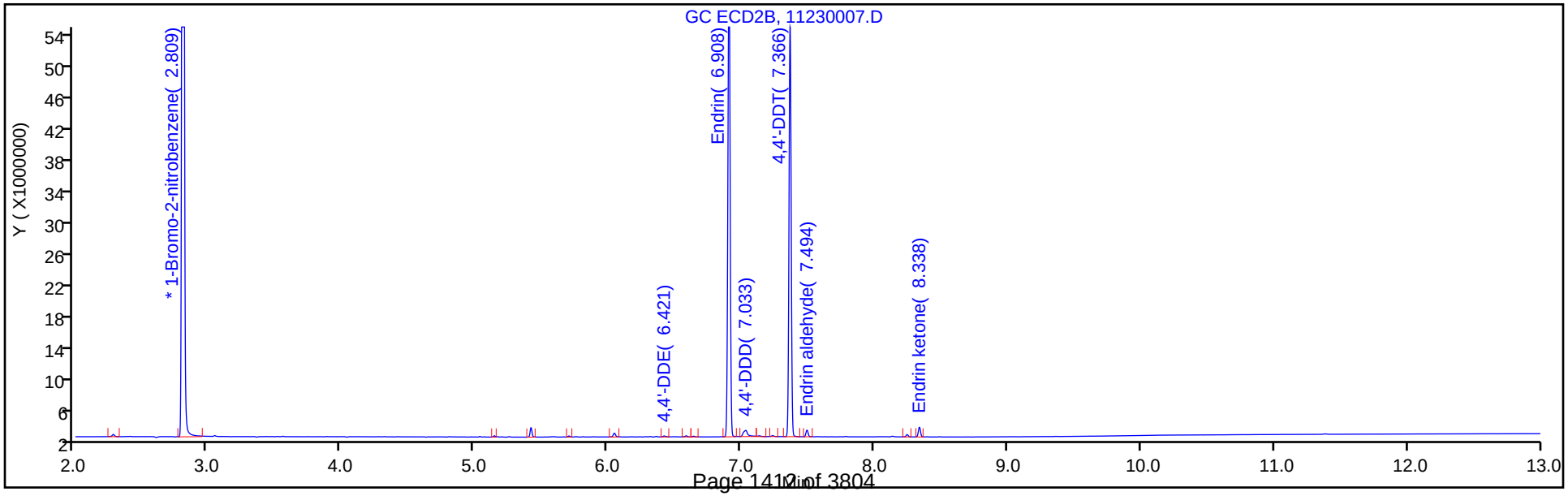
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230007.D

Injection Date:	23-Nov-2018 18:09:02	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	PEM			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0030		464	1000	-53.6*	20.0
Toxaphene Peak 2	Lin2		0.0110		660	1000	-34.0*	20.0
Toxaphene Peak 3	Lin2		0.0151		815	1000	-18.5	20.0
Toxaphene Peak 4	Lin2		0.0082		1080	1000	8.3	20.0
Toxaphene Peak 5	Lin2		0.0114		1480	1000	48.4*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	6.23	6.23	6.26
Toxaphene Peak 2	6.85	6.84	6.87
Toxaphene Peak 3	7.52	7.52	7.54
Toxaphene Peak 4	7.89	7.87	7.90
Toxaphene Peak 5	8.20	8.19	8.22

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D
Lims ID: ICV TOX
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:24:35 ALS Bottle#: 29 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:40:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.018	3.019	-0.001	1963980017	150.0	150.0	
2	2.838	2.839	-0.002	209759075	150.0	150.0	
28 Toxaphene							Ma
1	6.230	6.246	-0.016	39169071	1000.0	464.3	M
1	6.848	6.854	-0.006	144072882	1000.0	660.3	M
1	7.516	7.528	-0.012	197948260	1000.0	815.4	M
1	7.886	7.886	0.000	107438429	1000.0	1083.4	M
1	8.203	8.204	-0.001	149524851	1000.0	1483.7	M
		Average of Peak Amounts =				901.4	
2	5.774	5.778	-0.004	6074445	1000.0	913.0	M
2	7.136	7.145	-0.009	18826032	1000.0	641.9	M
2	7.278	7.286	-0.008	62348552	1000.0	779.1	M
2	7.783	7.800	-0.017	34844907	1000.0	1522.8	M
2	8.088	8.096	-0.008	50429097	1000.0	1128.6	M
		Average of Peak Amounts =				997.1	
					RPD =	10.08	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8081ToxICVL3_00013 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

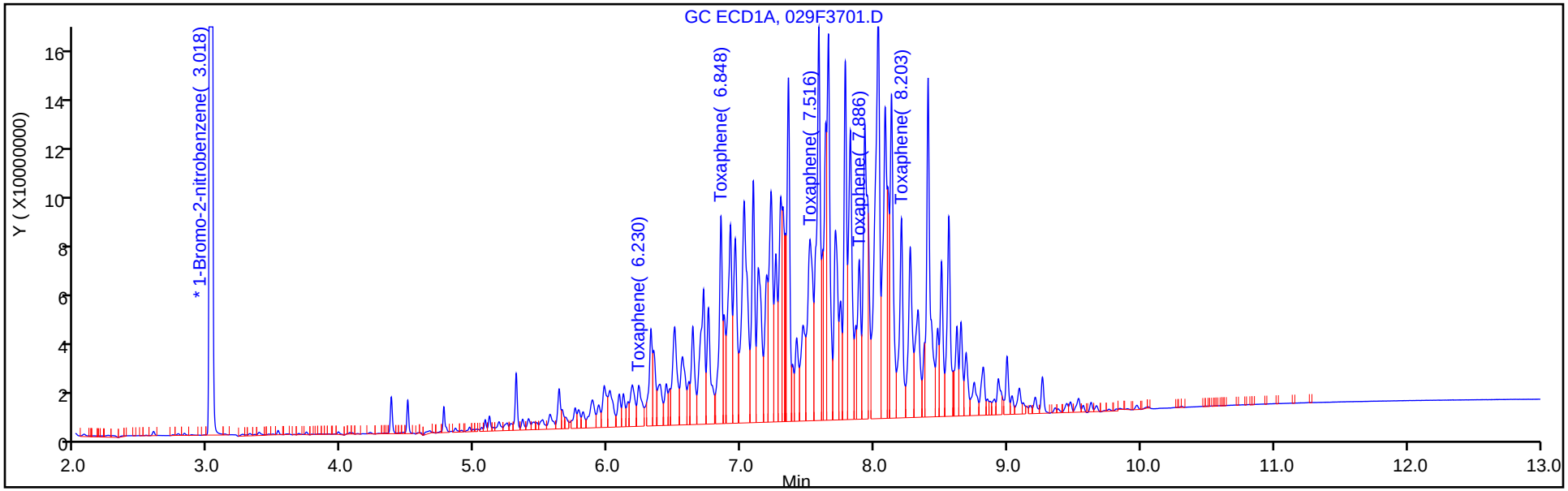
Report Date: 14-Oct-2018 22:12:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

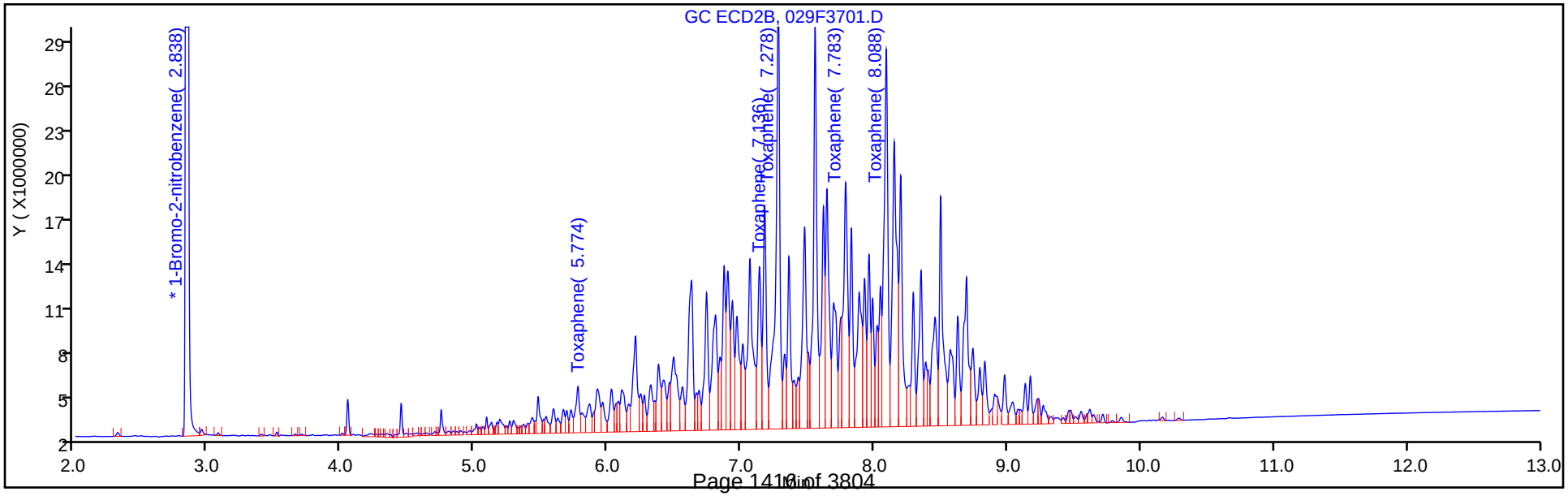
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date:	13-Oct-2018 21:24:35	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV TOX			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:12:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date: 13-Oct-2018 21:24:35 Instrument ID: SGC_P2

Lims ID: ICV TOX

Client ID:

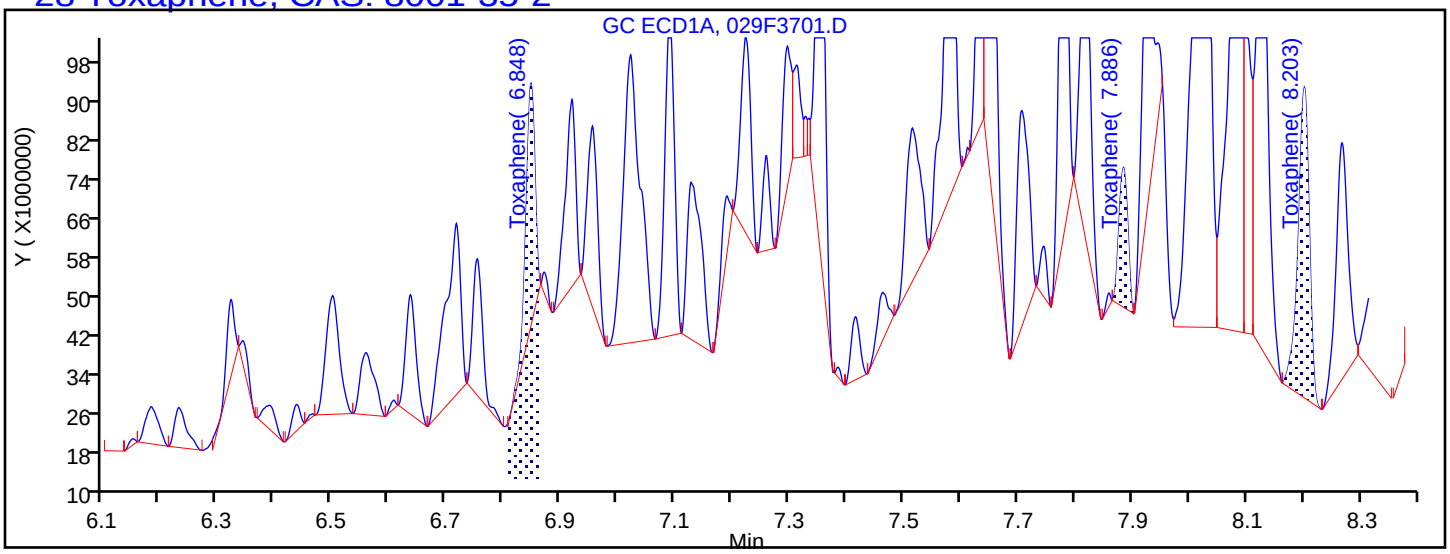
Operator ID: TEM ALS Bottle#: 29 Worklist Smp#: 34

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

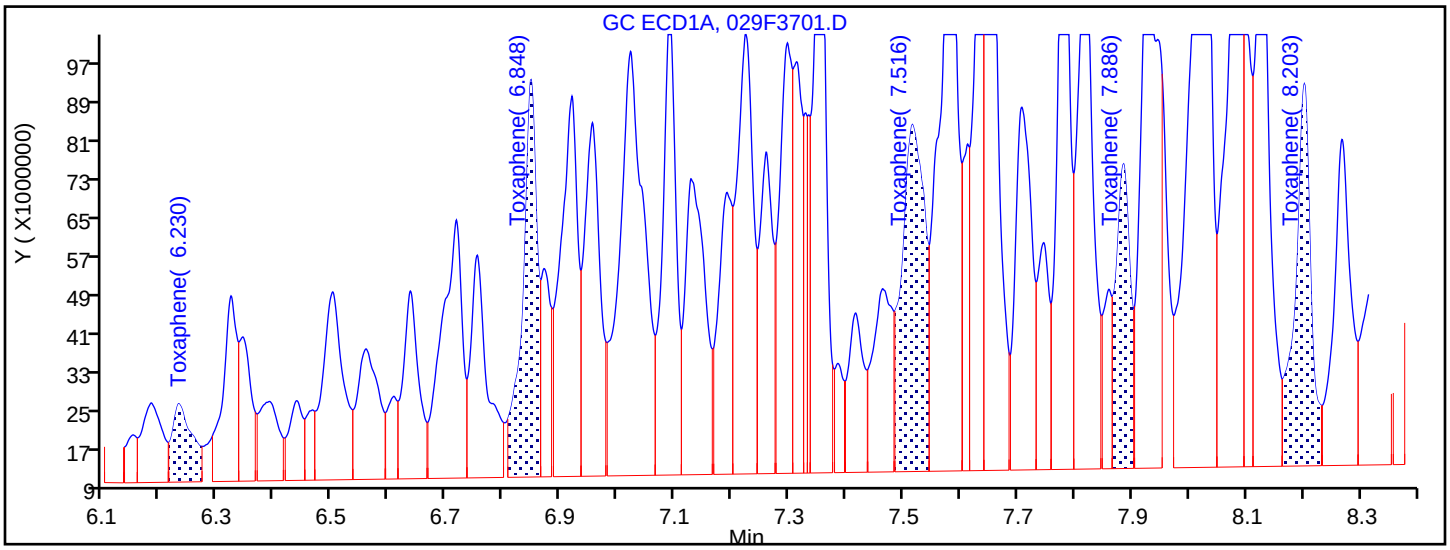
Column: CLP1 (0.32 mm) Detector GC ECD1A

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.246	Response = 0
6.848	Response = 54735220
7.528	Response = 0
7.886	Response = 30855926
8.203	Response = 87461515



Manual Integration Results

6.230	Response = 39169071	M
6.848	Response = 144072882	M
7.516	Response = 197948260	M
7.886	Response = 107438429	M
8.203	Response = 149524851	M

Reviewer: mooret, 14-Oct-2018 21:40:44

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0043		913	1000	-8.7	20.0
Toxaphene Peak 2	Lin2		0.0135		642	1000	-35.8*	20.0
Toxaphene Peak 3	Lin2		0.0446		779	1000	-22.1*	20.0
Toxaphene Peak 4	Lin2		0.0249		1520	1000	52.3*	20.0
Toxaphene Peak 5	Lin2		0.0361		1130	1000	12.9	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-433303/34 Calibration Date: 10/13/2018 21:24

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 029F3701.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	5.77	5.77	5.79
Toxaphene Peak 2	7.14	7.13	7.16
Toxaphene Peak 3	7.28	7.27	7.30
Toxaphene Peak 4	7.78	7.79	7.81
Toxaphene Peak 5	8.09	8.08	8.11

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D
Lims ID: ICV TOX
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:24:35 ALS Bottle#: 29 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV TOX
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 21:40:57

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.018	3.019	-0.001	1963980017	150.0	150.0	
2	2.838	2.839	-0.002	209759075	150.0	150.0	
28 Toxaphene							Ma
1	6.230	6.246	-0.016	39169071	1000.0	464.3	M
1	6.848	6.854	-0.006	144072882	1000.0	660.3	M
1	7.516	7.528	-0.012	197948260	1000.0	815.4	M
1	7.886	7.886	0.000	107438429	1000.0	1083.4	M
1	8.203	8.204	-0.001	149524851	1000.0	1483.7	M
		Average of Peak Amounts =				901.4	
2	5.774	5.778	-0.004	6074445	1000.0	913.0	M
2	7.136	7.145	-0.009	18826032	1000.0	641.9	M
2	7.278	7.286	-0.008	62348552	1000.0	779.1	M
2	7.783	7.800	-0.017	34844907	1000.0	1522.8	M
2	8.088	8.096	-0.008	50429097	1000.0	1128.6	M
		Average of Peak Amounts =				997.1	
					RPD =	10.08	

QC Flag Legend

Review Flags
M - Manually Integrated
a - User Assigned ID

Reagents:

8081ToxICVL3_00013 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

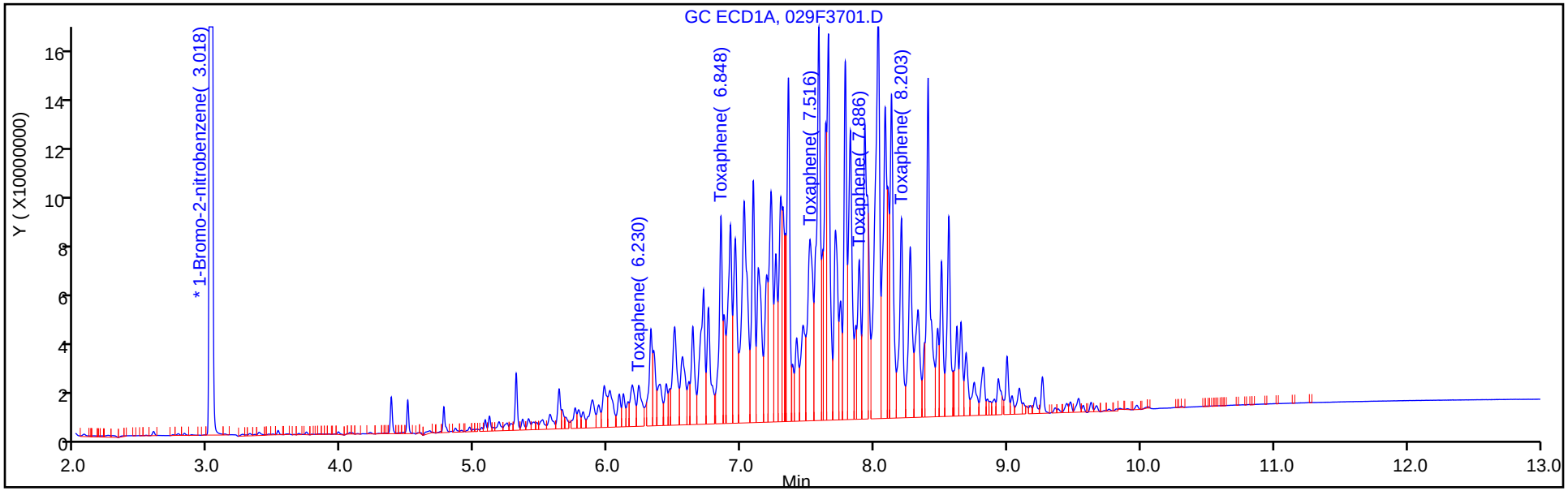
Report Date: 14-Oct-2018 22:12:10 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

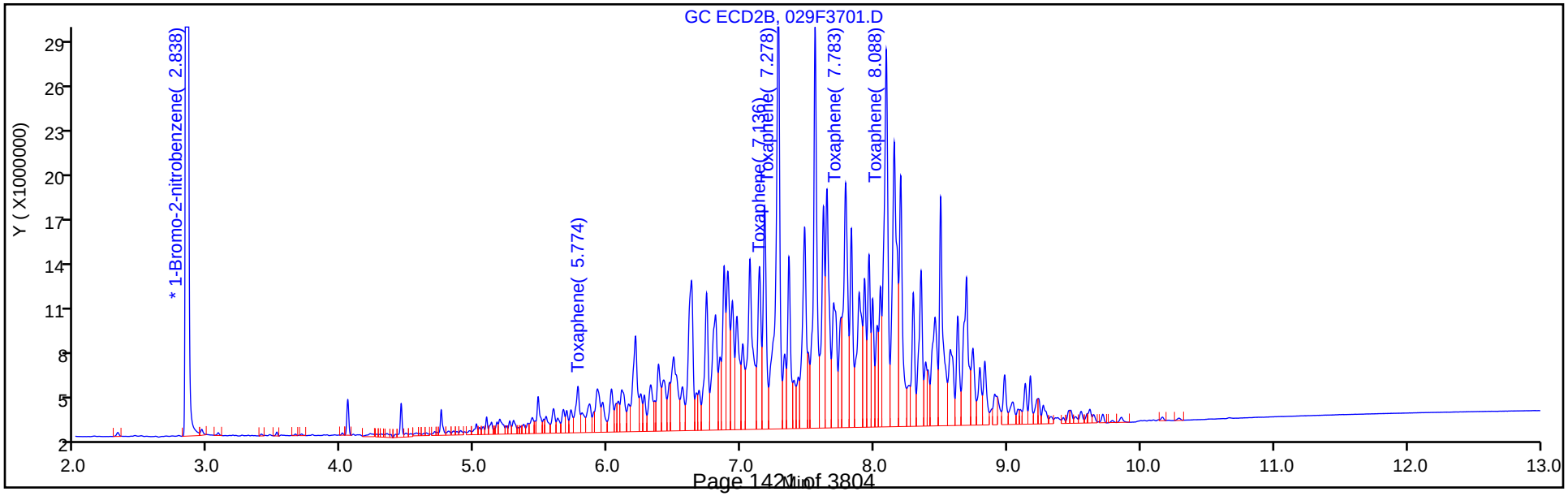
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date:	13-Oct-2018 21:24:35	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV TOX			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Report Date: 14-Oct-2018 22:12:11 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\029F3701.D

Injection Date: 13-Oct-2018 21:24:35 Instrument ID: SGC_P2

Lims ID: ICV TOX

Client ID:

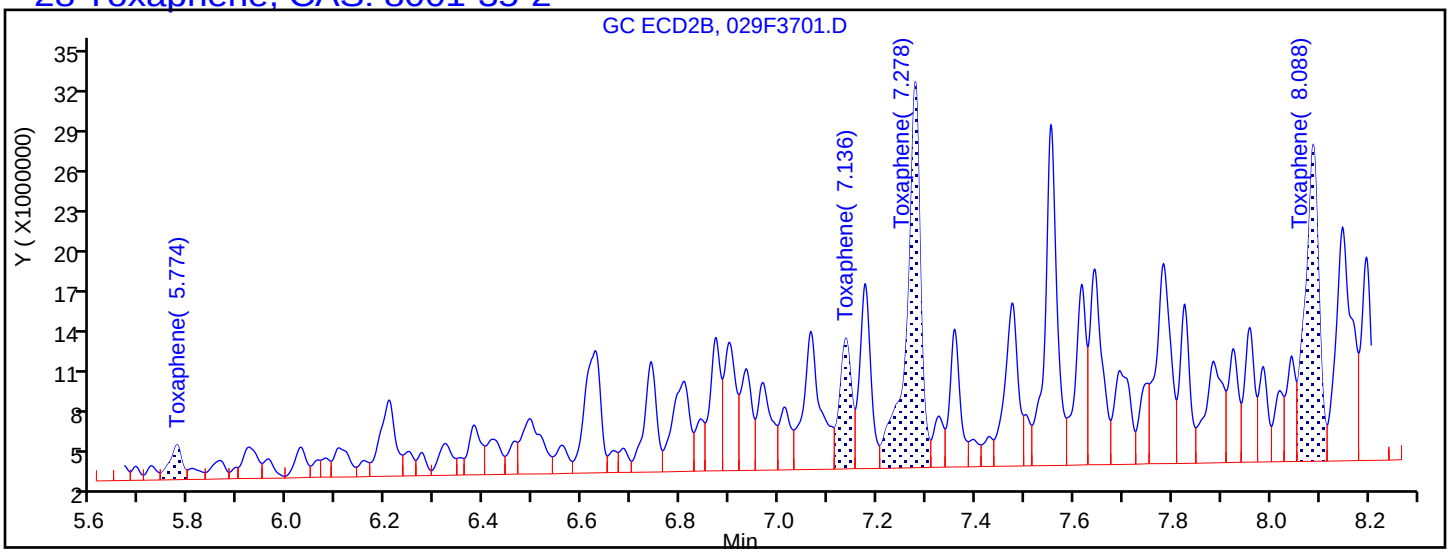
Operator ID: TEM ALS Bottle#: 29 Worklist Smp#: 34

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: P2 8081 IS Limit Group: GCSV - 8081A - IS

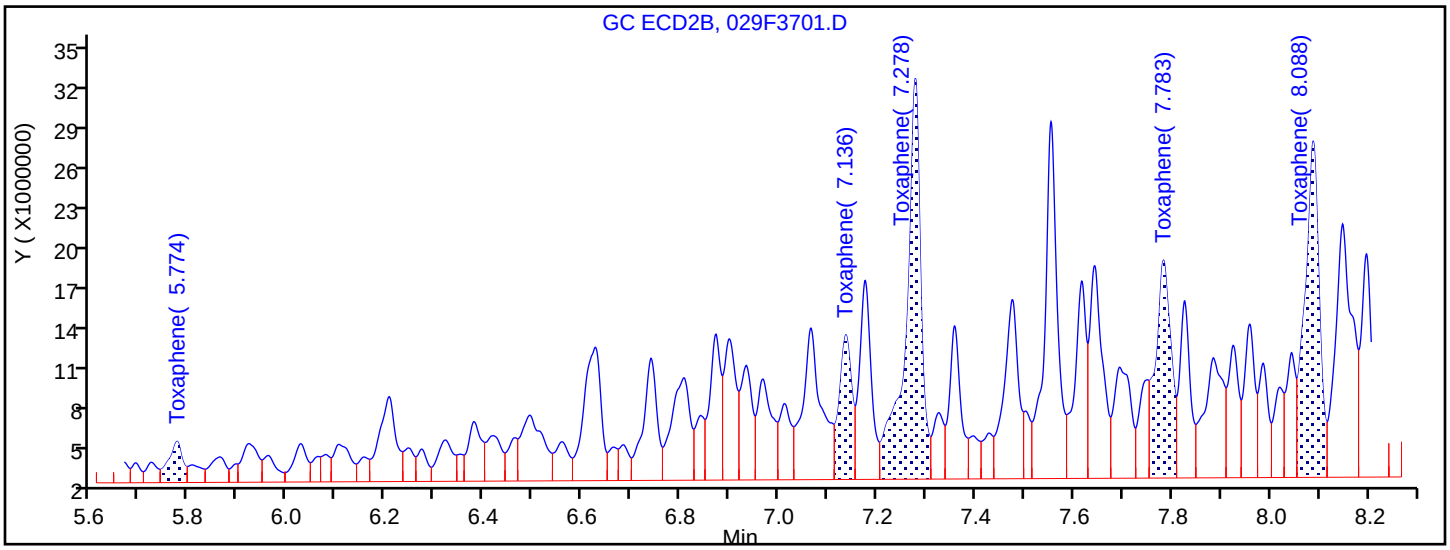
Column: CLP2 (0.32 mm) Detector GC ECD2B

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.774	Response = 4545269
7.136	Response = 16204546
7.278	Response = 55594865
7.800	Response = 0
8.088	Response = 45157495



Manual Integration Results

5.774	Response = 6074445	M
7.136	Response = 18826032	M
7.278	Response = 62348552	M
7.783	Response = 34844907	M
8.088	Response = 50429097	M

Reviewer: mooret, 14-Oct-2018 21:40:53

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.128		24.6	25.0	-1.6	20.0
alpha-BHC	Lin2		1.602		24.4	25.0	-2.6	20.0
gamma-BHC (Lindane)	Lin2		1.376		24.4	25.0	-2.4	20.0
beta-BHC	Lin2		0.5291		24.0	25.0	-4.1	20.0
delta-BHC	Lin2		1.370		24.0	25.0	-4.1	20.0
Heptachlor	Lin2		1.251		25.0	25.0	0.0	20.0
Aldrin	Lin2		1.323		24.8	25.0	-0.8	20.0
Heptachlor epoxide	Lin2		1.117		24.5	25.0	-1.8	20.0
gamma-Chlordane	Lin2		1.168		24.0	25.0	-4.2	20.0
alpha-Chlordane	Lin2		1.114		23.9	25.0	-4.4	20.0
4,4'-DDE	Lin2		1.153		23.6	25.0	-5.6	20.0
Endosulfan I	Lin2		1.049		24.3	25.0	-2.6	20.0
Dieldrin	Lin2		1.192		25.0	25.0	-0.2	20.0
Endrin	Lin2		0.9895		23.9	25.0	-4.2	20.0
4,4'-DDD	Lin2		0.8973		23.7	25.0	-5.3	20.0
Endosulfan II	Lin2		0.9210		23.6	25.0	-5.6	20.0
4,4'-DDT	Lin2		0.7862		23.3	25.0	-6.6	20.0
Endrin aldehyde	Lin2		0.7035		23.5	25.0	-5.9	20.0
Methoxychlor	Lin2		0.3555		22.8	25.0	-8.8	20.0
Endosulfan sulfate	Lin2		0.8083		23.4	25.0	-6.3	20.0
Endrin ketone	Lin2		0.8377		23.1	25.0	-7.7	20.0
Tetrachloro-m-xylene	Lin2		1.029		23.5	25.0	-5.9	20.0
DCB Decachlorobiphenyl	Lin2		0.5203		22.8	25.0	-8.9	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.33	4.31	4.34
alpha-BHC	4.50	4.49	4.51
gamma-BHC (Lindane)	4.79	4.77	4.80
beta-BHC	4.86	4.85	4.87
delta-BHC	5.01	5.00	5.02
Heptachlor	5.19	5.18	5.20
Aldrin	5.46	5.45	5.47
Heptachlor epoxide	6.07	6.06	6.08
gamma-Chlordane	6.20	6.19	6.22
alpha-Chlordane	6.35	6.33	6.36
4,4'-DDE	6.42	6.41	6.43
Endosulfan I	6.50	6.48	6.51
Dieldrin	6.75	6.74	6.76
Endrin	7.00	6.99	7.01
4,4'-DDD	7.06	7.05	7.07
Endosulfan II	7.24	7.22	7.25
4,4'-DDT	7.35	7.34	7.36
Endrin aldehyde	7.68	7.67	7.69
Methoxychlor	7.86	7.85	7.87
Endosulfan sulfate	8.14	8.13	8.15
Endrin ketone	8.43	8.42	8.44
Tetrachloro-m-xylene	3.92	3.91	3.93
DCB Decachlorobiphenyl	9.45	9.43	9.46

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D
Lims ID: ICV AB
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:59:26 ALS Bottle#: 31 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1					100.0	96.7	
2					100.0	103.8	
						RPD = 7.09	
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1833818877	150.0	150.0	
2	2.837	2.839	-0.002	196779319	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	314378706	25.0	23.5	
2	3.822	3.823	-0.001	40975324	25.0	25.3	
						RPD = 7.22	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	344758382	25.0	24.6	
2	4.302	4.302	0.000	43428441	25.0	25.4	
						RPD = 3.35	
8 alpha-BHC							
1	4.497	4.497	0.000	489570974	25.0	24.4	
2	4.447	4.448	-0.001	57087109	25.0	26.0	
						RPD = 6.62	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	420459219	25.0	24.4	
2	4.762	4.761	0.001	50008117	25.0	26.3	
						RPD = 7.40	
10 beta-BHC							
1	4.862	4.862	0.000	161705438	25.0	24.0	
2	4.837	4.837	0.000	21403256	25.0	26.0	
						RPD = 8.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.011	5.010	0.001	418721510	25.0	24.0	
2	5.070	5.069	0.001	49051008	25.0	25.5	
						RPD = 6.09	
15 Heptachlor							
1	5.187	5.187	0.000	382406575	25.0	25.0	
2	5.112	5.112	0.000	43506261	25.0	26.4	
						RPD = 5.38	
16 Aldrin							
1	5.458	5.457	0.001	404243124	25.0	24.8	
2	5.384	5.383	0.001	46807354	25.0	26.4	
						RPD = 6.18	
18 Isodrin							
1	5.785	5.783	0.002	312070496	25.0	23.9	
2	5.750	5.749	0.001	38025211	25.0	25.0	
						RPD = 4.80	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	341495179	25.0	24.5	
2	5.932	5.931	0.001	42252977	25.0	26.0	
						RPD = 5.91	
22 trans-Chlordane							
1	6.204	6.204	0.000	357105555	25.0	24.0	
2	6.132	6.130	0.002	43276821	25.0	25.5	
						RPD = 6.23	
23 cis-Chlordane							
1	6.347	6.344	0.003	340403751	25.0	23.9	
2	6.287	6.286	0.001	41538812	25.0	25.8	
						RPD = 7.62	
24 4,4'-DDE							
1	6.422	6.421	0.001	352295573	25.0	23.6	
2	6.471	6.469	0.002	42170047	25.0	25.3	
						RPD = 6.99	
25 Endosulfan I							
1	6.496	6.494	0.002	320496682	25.0	24.3	
2	6.348	6.346	0.002	39747580	25.0	25.9	
						RPD = 6.24	
27 Dieldrin							
1	6.750	6.748	0.002	364318480	25.0	25.0	
2	6.641	6.639	0.002	44056375	25.0	26.2	
						RPD = 5.04	
30 Endrin							
1	6.998	6.997	0.001	302410533	25.0	23.9	
2	6.964	6.963	0.001	37475292	25.0	25.3	
						RPD = 5.64	
32 4,4'-DDD							
1	7.058	7.058	0.000	274241112	25.0	23.7	
2	7.089	7.089	0.000	33960824	25.0	25.0	
						RPD = 5.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.236	7.234	0.002	281476331	25.0	23.6	
2	7.192	7.190	0.002	36361969	25.0	25.1	
						RPD = 6.06	
35 4,4'-DDT							
1	7.353	7.352	0.001	240280393	25.0	23.3	
2	7.421	7.419	0.002	30504127	25.0	26.1	
						RPD = 11.22	
36 Endrin aldehyde							
1	7.681	7.679	0.002	215019147	25.0	23.5	
2	7.552	7.550	0.002	29378162	25.0	25.3	
						RPD = 7.44	
37 Methoxychlor							
1	7.857	7.857	0.000	108660913	25.0	22.8	
2	8.152	8.150	0.002	14100142	25.0	24.2	
						RPD = 6.10	
38 Mirex							
1	8.017	8.016	0.001	154479193	25.0	20.2	
2	8.346	8.344	0.002	24486294	25.0	24.7	
						RPD = 20.27	
39 Endosulfan sulfate							
1	8.139	8.138	0.001	247058157	25.0	23.4	
2	7.843	7.841	0.002	33389158	25.0	25.2	
						RPD = 7.25	
40 Endrin ketone							
1	8.432	8.429	0.003	256015167	25.0	23.1	
2	8.398	8.396	0.002	36099125	25.0	24.8	
						RPD = 7.26	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	159008498	25.0	22.8	
2	9.669	9.668	0.001	23458218	25.0	24.3	
						RPD = 6.44	
S 3 Endosulfan, Total							
1					75.0	71.4	
2					75.0	76.2	
						RPD = 6.51	

Reagents:

8081ABICVL3_00035	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

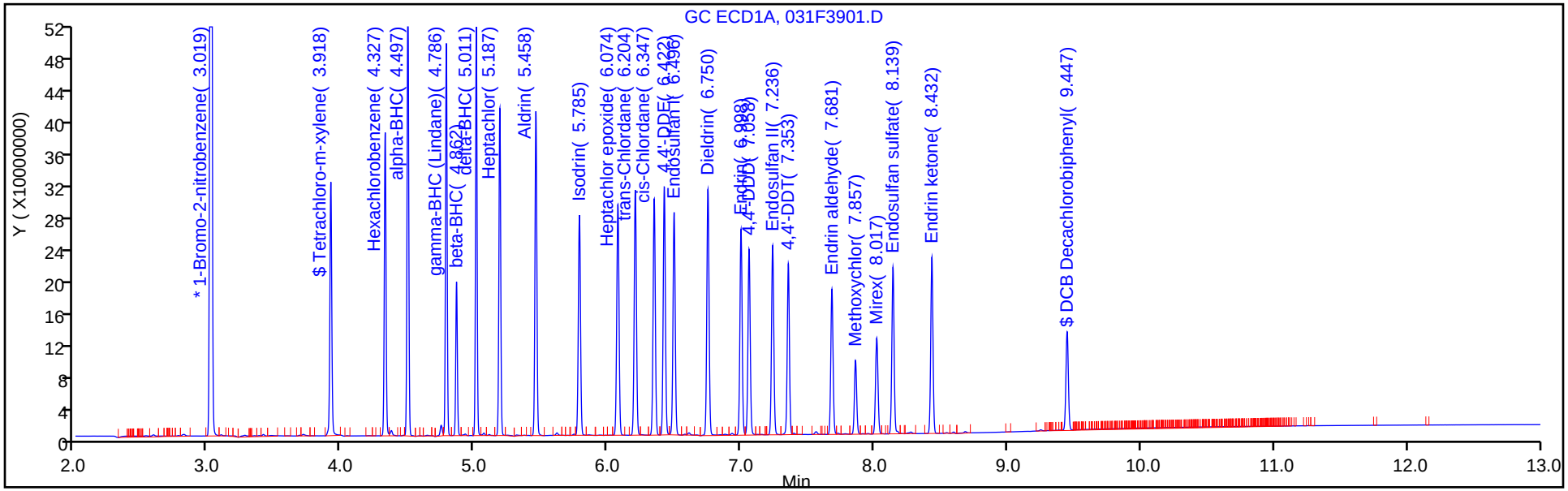
Report Date: 14-Oct-2018 22:12:18 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

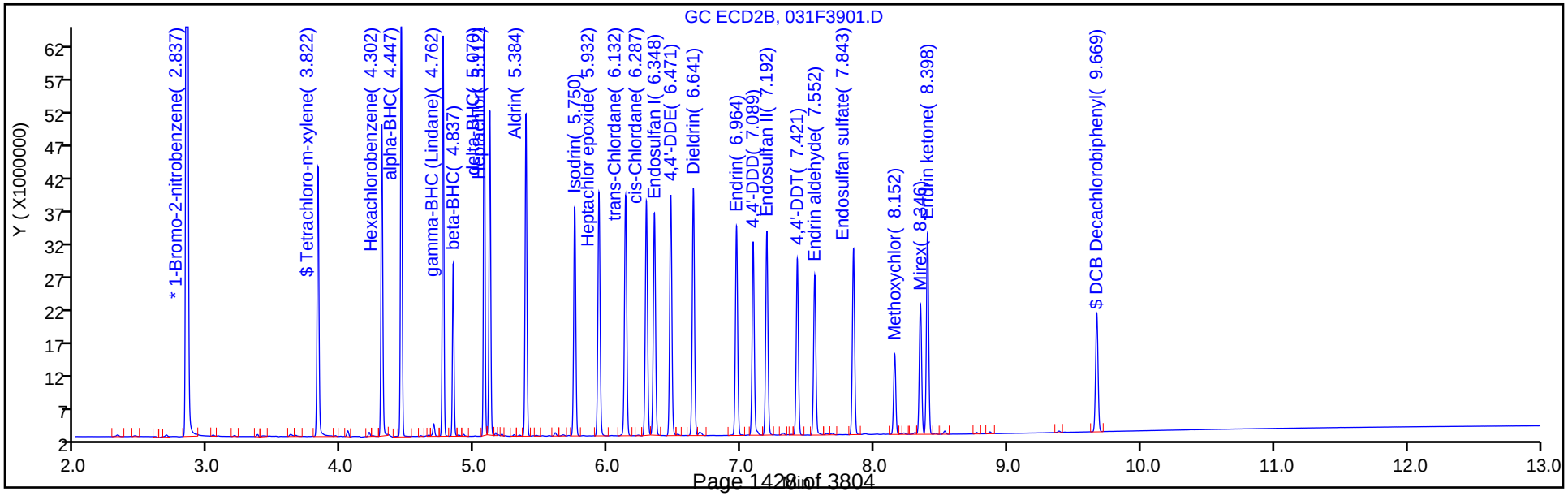
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D

Injection Date:	13-Oct-2018 21:59:26	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV AB			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.324		25.4	25.0	1.7	20.0
alpha-BHC	Lin2		1.741		26.0	25.0	4.1	20.0
gamma-BHC (Lindane)	Lin2		1.525		26.3	25.0	5.1	20.0
beta-BHC	Lin2		0.6526		26.0	25.0	4.1	20.0
delta-BHC	Lin2		1.496		25.5	25.0	1.9	20.0
Heptachlor	Lin2		1.327		26.4	25.0	5.6	20.0
Aldrin	Lin2		1.427		26.4	25.0	5.5	20.0
Heptachlor epoxide	Lin2		1.288		26.0	25.0	4.2	20.0
gamma-Chlordane	Lin2		1.320		25.5	25.0	2.0	20.0
alpha-Chlordane	Lin2		1.267		25.8	25.0	3.2	20.0
Endosulfan I	Lin2		1.212		25.9	25.0	3.6	20.0
4,4'-DDE	Lin2		1.286		25.3	25.0	1.3	20.0
Dieldrin	Lin2		1.343		26.2	25.0	5.0	20.0
Endrin	Lin2		1.143		25.3	25.0	1.3	20.0
4,4'-DDD	Lin2		1.036		25.0	25.0	0.1	20.0
Endosulfan II	Lin2		1.109		25.1	25.0	0.3	20.0
4,4'-DDT	Lin2		0.9301		26.1	25.0	4.5	20.0
Endrin aldehyde	Lin2		0.8958		25.3	25.0	1.3	20.0
Endosulfan sulfate	Lin2		1.018		25.2	25.0	0.8	20.0
Methoxychlor	Lin2		0.4299		24.2	25.0	-3.1	20.0
Endrin ketone	Lin2		1.101		24.8	25.0	-0.8	20.0
Tetrachloro-m-xylene	Lin2		1.249		25.3	25.0	1.2	20.0
DCB Decachlorobiphenyl	Lin2		0.7153		24.3	25.0	-2.8	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-433303/36 Calibration Date: 10/13/2018 21:59

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 031F3901.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.30	4.29	4.31
alpha-BHC	4.45	4.44	4.46
gamma-BHC (Lindane)	4.76	4.75	4.77
beta-BHC	4.84	4.83	4.85
delta-BHC	5.07	5.06	5.08
Heptachlor	5.11	5.10	5.12
Aldrin	5.38	5.37	5.40
Heptachlor epoxide	5.93	5.92	5.94
gamma-Chlordane	6.13	6.12	6.14
alpha-Chlordane	6.29	6.27	6.30
Endosulfan I	6.35	6.33	6.36
4,4'-DDE	6.47	6.46	6.48
Dieldrin	6.64	6.63	6.65
Endrin	6.96	6.95	6.98
4,4'-DDD	7.09	7.08	7.10
Endosulfan II	7.19	7.18	7.20
4,4'-DDT	7.42	7.41	7.43
Endrin aldehyde	7.55	7.54	7.56
Endosulfan sulfate	7.84	7.83	7.85
Methoxychlor	8.15	8.14	8.16
Endrin ketone	8.40	8.38	8.41
Tetrachloro-m-xylene	3.82	3.81	3.84
DCB Decachlorobiphenyl	9.67	9.66	9.68

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D
Lims ID: ICV AB
Client ID:
Sample Type: ICV
Inject. Date: 13-Oct-2018 21:59:26 ALS Bottle#: 31 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV AB
Operator ID: TEM Instrument ID: SGC_P2
Sublist:

Method: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 14-Oct-2018 22:12:04 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0315

First Level Reviewer: mooret Date: 14-Oct-2018 09:19:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1					100.0	96.7	
2					100.0	103.8	
						RPD = 7.09	
* 2 1-Bromo-2-nitrobenzene							
1	3.019	3.019	0.000	1833818877	150.0	150.0	
2	2.837	2.839	-0.002	196779319	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.918	3.919	-0.001	314378706	25.0	23.5	
2	3.822	3.823	-0.001	40975324	25.0	25.3	
						RPD = 7.22	
5 Hexachlorobenzene							
1	4.327	4.326	0.001	344758382	25.0	24.6	
2	4.302	4.302	0.000	43428441	25.0	25.4	
						RPD = 3.35	
8 alpha-BHC							
1	4.497	4.497	0.000	489570974	25.0	24.4	
2	4.447	4.448	-0.001	57087109	25.0	26.0	
						RPD = 6.62	
9 gamma-BHC (Lindane)							
1	4.786	4.785	0.001	420459219	25.0	24.4	
2	4.762	4.761	0.001	50008117	25.0	26.3	
						RPD = 7.40	
10 beta-BHC							
1	4.862	4.862	0.000	161705438	25.0	24.0	
2	4.837	4.837	0.000	21403256	25.0	26.0	
						RPD = 8.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	5.011	5.010	0.001	418721510	25.0	24.0	
2	5.070	5.069	0.001	49051008	25.0	25.5	
						RPD = 6.09	
15 Heptachlor							
1	5.187	5.187	0.000	382406575	25.0	25.0	
2	5.112	5.112	0.000	43506261	25.0	26.4	
						RPD = 5.38	
16 Aldrin							
1	5.458	5.457	0.001	404243124	25.0	24.8	
2	5.384	5.383	0.001	46807354	25.0	26.4	
						RPD = 6.18	
18 Isodrin							
1	5.785	5.783	0.002	312070496	25.0	23.9	
2	5.750	5.749	0.001	38025211	25.0	25.0	
						RPD = 4.80	
21 Heptachlor epoxide							
1	6.074	6.072	0.002	341495179	25.0	24.5	
2	5.932	5.931	0.001	42252977	25.0	26.0	
						RPD = 5.91	
22 trans-Chlordane							
1	6.204	6.204	0.000	357105555	25.0	24.0	
2	6.132	6.130	0.002	43276821	25.0	25.5	
						RPD = 6.23	
23 cis-Chlordane							
1	6.347	6.344	0.003	340403751	25.0	23.9	
2	6.287	6.286	0.001	41538812	25.0	25.8	
						RPD = 7.62	
24 4,4'-DDE							
1	6.422	6.421	0.001	352295573	25.0	23.6	
2	6.471	6.469	0.002	42170047	25.0	25.3	
						RPD = 6.99	
25 Endosulfan I							
1	6.496	6.494	0.002	320496682	25.0	24.3	
2	6.348	6.346	0.002	39747580	25.0	25.9	
						RPD = 6.24	
27 Dieldrin							
1	6.750	6.748	0.002	364318480	25.0	25.0	
2	6.641	6.639	0.002	44056375	25.0	26.2	
						RPD = 5.04	
30 Endrin							
1	6.998	6.997	0.001	302410533	25.0	23.9	
2	6.964	6.963	0.001	37475292	25.0	25.3	
						RPD = 5.64	
32 4,4'-DDD							
1	7.058	7.058	0.000	274241112	25.0	23.7	
2	7.089	7.089	0.000	33960824	25.0	25.0	
						RPD = 5.56	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.236	7.234	0.002	281476331	25.0	23.6	
2	7.192	7.190	0.002	36361969	25.0	25.1	
						RPD = 6.06	
35 4,4'-DDT							
1	7.353	7.352	0.001	240280393	25.0	23.3	
2	7.421	7.419	0.002	30504127	25.0	26.1	
						RPD = 11.22	
36 Endrin aldehyde							
1	7.681	7.679	0.002	215019147	25.0	23.5	
2	7.552	7.550	0.002	29378162	25.0	25.3	
						RPD = 7.44	
37 Methoxychlor							
1	7.857	7.857	0.000	108660913	25.0	22.8	
2	8.152	8.150	0.002	14100142	25.0	24.2	
						RPD = 6.10	
38 Mirex							
1	8.017	8.016	0.001	154479193	25.0	20.2	
2	8.346	8.344	0.002	24486294	25.0	24.7	
						RPD = 20.27	
39 Endosulfan sulfate							
1	8.139	8.138	0.001	247058157	25.0	23.4	
2	7.843	7.841	0.002	33389158	25.0	25.2	
						RPD = 7.25	
40 Endrin ketone							
1	8.432	8.429	0.003	256015167	25.0	23.1	
2	8.398	8.396	0.002	36099125	25.0	24.8	
						RPD = 7.26	
$ 41 DCB Decachlorobiphenyl							
1	9.447	9.446	0.001	159008498	25.0	22.8	
2	9.669	9.668	0.001	23458218	25.0	24.3	
						RPD = 6.44	
S 3 Endosulfan, Total							
1					75.0	71.4	
2					75.0	76.2	
						RPD = 6.51	

Reagents:

8081ABICVL3_00035	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

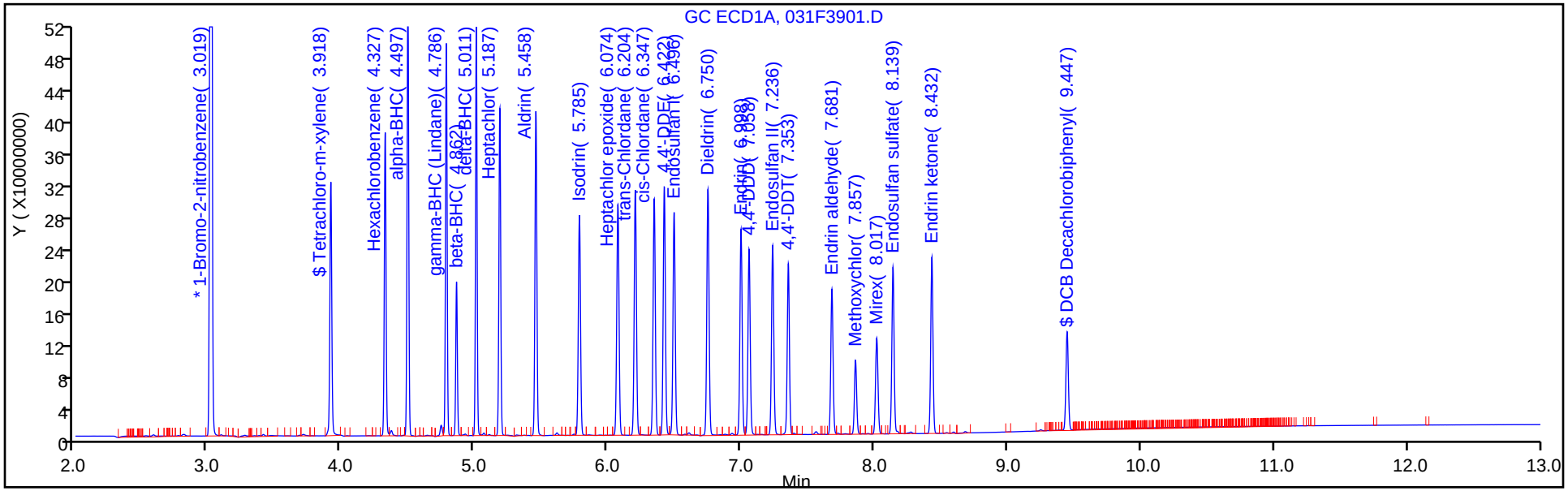
Report Date: 14-Oct-2018 22:12:19 Chrom Revision: 2.3 19-Jul-2018 15:14:50

TestAmerica Denver

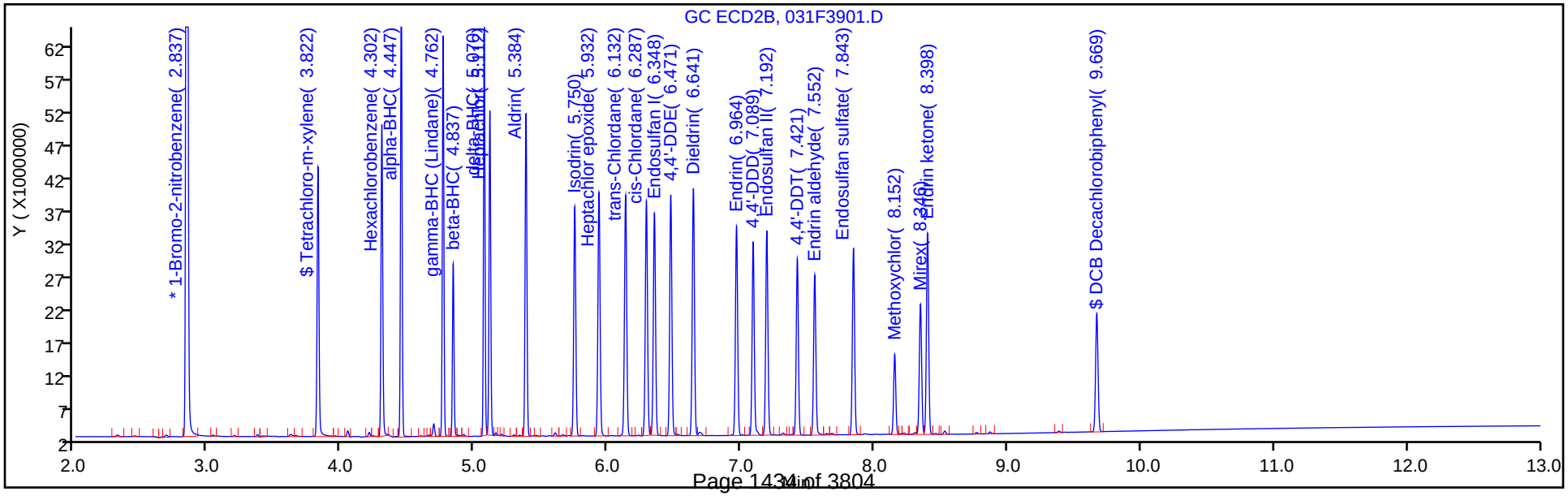
Data File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\031F3901.D

Injection Date:	13-Oct-2018 21:59:26	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	ICV AB			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVIS 280-438595/13 Calibration Date: 11/23/2018 19:54

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230013.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.187		51.4	50.0	2.9	20.0
alpha-BHC	Lin2		1.699		50.9	50.0	1.8	20.0
gamma-BHC (Lindane)	Lin2		1.487		52.2	50.0	4.4	20.0
beta-BHC	Lin2		0.5699		52.1	50.0	4.3	20.0
delta-BHC	Lin2		1.517		52.3	50.0	4.7	20.0
Heptachlor	Lin2		1.368		54.2	50.0	8.3	20.0
Aldrin	Lin2		1.442		53.5	50.0	6.9	20.0
Heptachlor epoxide	Lin2		1.227		53.6	50.0	7.2	20.0
gamma-Chlordane	Lin2		1.318		53.5	50.0	7.0	20.0
alpha-Chlordane	Lin2		1.258		53.4	50.0	6.9	20.0
4,4'-DDE	Lin2		1.268		51.3	50.0	2.7	20.0
Endosulfan I	Lin2		1.181		54.6	50.0	9.2	20.0
Dieldrin	Lin2		1.323		55.0	50.0	9.9	20.0
Endrin	Lin2		1.217		58.2	50.0	16.3	20.0
4,4'-DDD	Lin2		1.027		53.6	50.0	7.2	20.0
Endosulfan II	Lin2		1.121		57.1	50.0	14.1	20.0
4,4'-DDT	Lin2		0.9567		55.7	50.0	11.4	20.0
Endrin aldehyde	Lin2		0.8959		59.6	50.0	19.2	20.0
Methoxychlor	Lin2		0.4730		60.5	50.0	21.0*	20.0
Endosulfan sulfate	Lin2		1.081		62.1	50.0	24.3*	20.0
Endrin ketone	Lin2		1.131		61.8	50.0	23.7*	20.0
Tetrachloro-m-xylene	Lin2		1.090		49.5	50.0	-1.1	20.0
DCB Decachlorobiphenyl	Lin2		0.7245		63.7	50.0	27.4*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVIS 280-438595/13 Calibration Date: 11/23/2018 19:54

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230013.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.31	4.30	4.32
alpha-BHC	4.48	4.47	4.49
gamma-BHC (Lindane)	4.77	4.76	4.78
beta-BHC	4.85	4.83	4.86
delta-BHC	5.00	4.98	5.01
Heptachlor	5.17	5.16	5.18
Aldrin	5.44	5.43	5.45
Heptachlor epoxide	6.05	6.04	6.06
gamma-Chlordane	6.18	6.17	6.19
alpha-Chlordane	6.32	6.31	6.33
4,4'-DDE	6.40	6.38	6.41
Endosulfan I	6.47	6.46	6.48
Dieldrin	6.72	6.71	6.73
Endrin	6.97	6.96	6.98
4,4'-DDD	7.03	7.02	7.04
Endosulfan II	7.21	7.19	7.22
4,4'-DDT	7.33	7.31	7.34
Endrin aldehyde	7.65	7.64	7.66
Methoxychlor	7.83	7.82	7.84
Endosulfan sulfate	8.11	8.10	8.12
Endrin ketone	8.40	8.39	8.41
Tetrachloro-m-xylene	3.90	3.89	3.91
DCB Decachlorobiphenyl	9.42	9.40	9.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230013.D
Lims ID: CCVIS AB
Client ID:
Sample Type: CCVIS
Inject. Date: 23-Nov-2018 19:54:18 ALS Bottle#: 7 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0076490-013
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:58 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 12:46:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.005	0.000	1583147211	150.0	150.0	
2	2.807	2.807	0.000	215658534	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.902	3.902	0.000	575434866	50.0	49.5	
2	3.790	3.790	0.000	86002984	50.0	49.0	
						RPD = 0.88	
5 Hexachlorobenzene							
1	4.310	4.310	0.000	626530762	50.0	51.4	
2	4.268	4.268	0.000	91590755	50.0	49.5	
						RPD = 3.91	
8 alpha-BHC							
1	4.480	4.480	0.000	896552580	50.0	50.9	
2	4.413	4.413	0.000	120635655	50.0	50.5	
						RPD = 0.80	
9 gamma-BHC (Lindane)							
1	4.769	4.769	0.000	784881281	50.0	52.2	
2	4.726	4.726	0.000	105397145	50.0	50.7	
						RPD = 2.87	
10 beta-BHC							
1	4.846	4.846	0.000	300759782	50.0	52.1	
2	4.803	4.803	0.000	44092171	50.0	49.6	
						RPD = 4.92	
12 delta-BHC							
1	4.995	4.995	0.000	800500242	50.0	52.3	
2	5.035	5.035	0.000	105426464	50.0	50.1	
						RPD = 4.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.169	5.169	0.000	722136182	50.0	54.2	
2	5.077	5.077	0.000	94962742	50.0	52.9	
						RPD = 2.34	
16 Aldrin							
1	5.438	5.438	0.000	760900907	50.0	53.5	
2	5.345	5.345	0.000	99607652	50.0	51.5	
						RPD = 3.79	
18 Isodrin							
1	5.762	5.762	0.000	619706543	50.0	54.5	
2	5.703	5.703	0.000	80990212	50.0	49.2	
						RPD = 10.21	
21 Heptachlor epoxide							
1	6.048	6.048	0.000	647696016	50.0	53.6	
2	5.881	5.881	0.000	89934091	50.0	51.1	
						RPD = 4.79	
22 trans-Chlordane							
1	6.179	6.179	0.000	695610821	50.0	53.5	
2	6.080	6.080	0.000	92795552	50.0	50.2	
						RPD = 6.38	
23 cis-Chlordane							
1	6.320	6.320	0.000	663713108	50.0	53.4	
2	6.235	6.235	0.000	89423064	50.0	51.2	
						RPD = 4.33	
24 4,4'-DDE							
1	6.395	6.395	0.000	669039293	50.0	51.3	
2	6.418	6.418	0.000	91321249	50.0	50.2	
						RPD = 2.14	
25 Endosulfan I							
1	6.468	6.468	0.000	623431287	50.0	54.6	
2	6.294	6.294	0.000	85377812	50.0	51.4	
						RPD = 5.96	
27 Dieldrin							
1	6.722	6.722	0.000	698237947	50.0	55.0	
2	6.584	6.584	0.000	94628313	50.0	51.7	
						RPD = 6.10	
30 Endrin							
1	6.970	6.970	0.000	642137103	50.0	58.2	
2	6.905	6.905	0.000	88483519	50.0	54.8	
						RPD = 5.98	
32 4,4'-DDD							
1	7.031	7.031	0.000	541939392	50.0	53.6	
2	7.033	7.033	0.000	75156379	50.0	50.8	
						RPD = 5.33	
34 Endosulfan II							
1	7.206	7.206	0.000	591598236	50.0	57.1	
2	7.131	7.131	0.000	81627401	50.0	52.1	
						RPD = 9.00	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.325	7.325	0.000	504850457	50.0	55.7	
2	7.364	7.364	0.000	72218023	50.0	56.3	
						RPD = 0.96	
36 Endrin aldehyde							
1	7.650	7.650	0.000	472758600	50.0	59.6	
2	7.490	7.490	0.000	65861180	50.0	52.5	
						RPD = 12.66	
37 Methoxychlor							
1	7.830	7.830	0.000	249621080	50.0	60.5	
2	8.094	8.094	0.000	35715364	50.0	56.5	
						RPD = 6.83	
38 Mirex							
1	7.988	7.988	0.000	400691078	50.0	60.6	
2	8.285	8.285	0.000	56317344	50.0	53.1	
						RPD = 13.10	
39 Endosulfan sulfate							
1	8.109	8.109	0.000	570539465	50.0	62.1	
2	7.782	7.782	0.000	76380936	50.0	53.3	
						RPD = 15.29	
40 Endrin ketone							
1	8.400	8.400	0.000	596694188	50.0	61.8	
2	8.335	8.335	0.000	83778786	50.0	53.2	
						RPD = 15.10	
$ 41 DCB Decachlorobiphenyl							
1	9.415	9.415	0.000	382343897	50.0	63.7	
2	9.605	9.605	0.000	53487809	50.0	51.6	
						RPD = 20.95	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

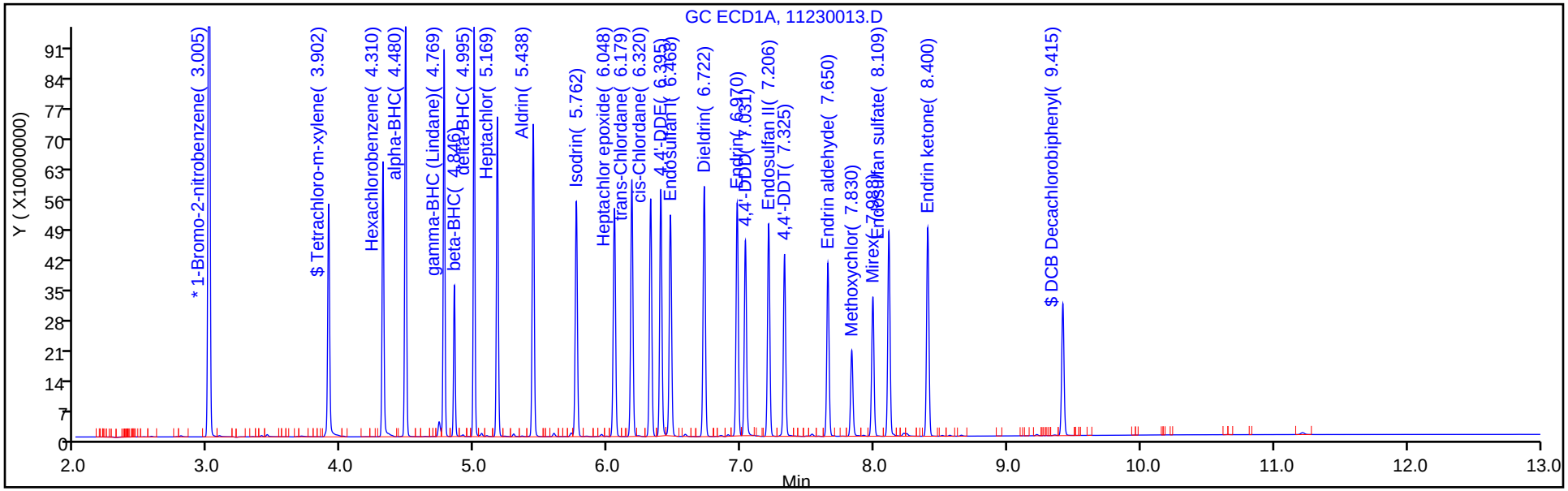
Report Date: 25-Nov-2018 19:32:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

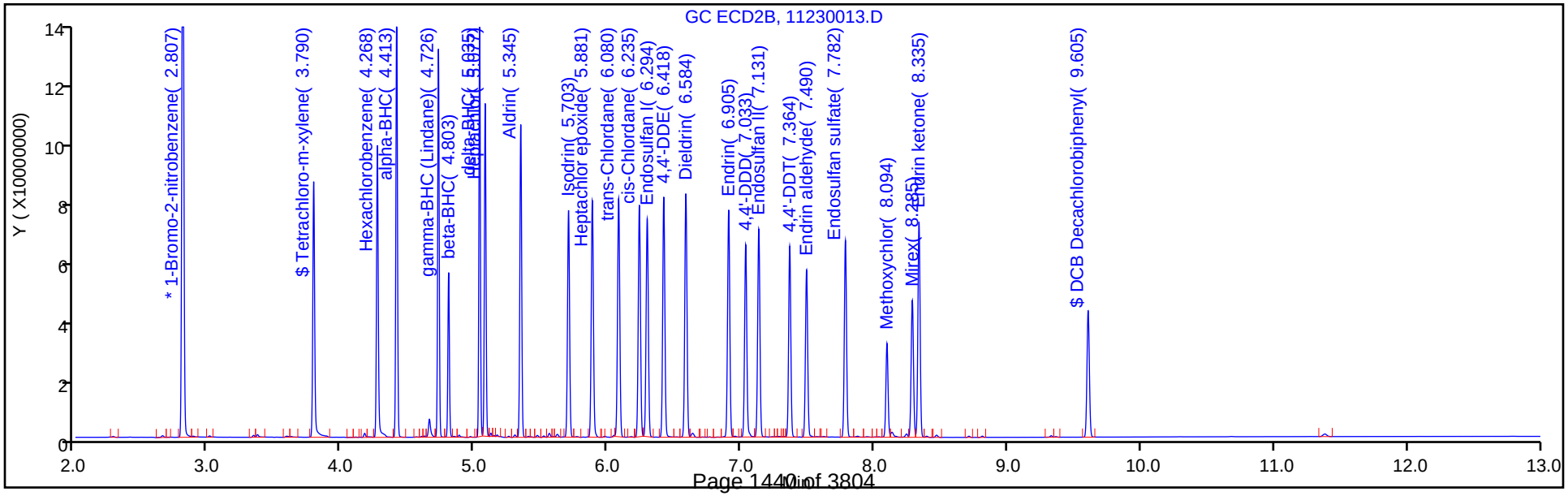
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230013.D

Injection Date:	23-Nov-2018 19:54:18	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCVIS AB			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVIS 280-438595/13 Calibration Date: 11/23/2018 19:54

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230013.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.274		49.5	50.0	-1.1	20.0
alpha-BHC	Lin2		1.678		50.5	50.0	1.0	20.0
gamma-BHC (Lindane)	Lin2		1.466		50.7	50.0	1.5	20.0
beta-BHC	Lin2		0.6134		49.6	50.0	-0.7	20.0
delta-BHC	Lin2		1.467		50.1	50.0	0.2	20.0
Heptachlor	Lin2		1.321		52.9	50.0	5.8	20.0
Aldrin	Lin2		1.386		51.5	50.0	3.0	20.0
Heptachlor epoxide	Lin2		1.251		51.1	50.0	2.2	20.0
gamma-Chlordane	Lin2		1.291		50.2	50.0	0.4	20.0
alpha-Chlordane	Lin2		1.244		51.2	50.0	2.3	20.0
Endosulfan I	Lin2		1.188		51.4	50.0	2.9	20.0
4,4'-DDE	Lin2		1.270		50.2	50.0	0.5	20.0
Dieldrin	Lin2		1.316		51.7	50.0	3.4	20.0
Endrin	Lin2		1.231		54.8	50.0	9.6	20.0
4,4'-DDD	Lin2		1.045		50.8	50.0	1.6	20.0
Endosulfan II	Lin2		1.136		52.1	50.0	4.3	20.0
4,4'-DDT	Lin2		1.005		56.3	50.0	12.5	20.0
Endrin aldehyde	Lin2		0.9162		52.5	50.0	5.0	20.0
Endosulfan sulfate	Lin2		1.063		53.3	50.0	6.6	20.0
Methoxychlor	Lin2		0.4968		56.5	50.0	13.0	20.0
Endrin ketone	Lin2		1.165		53.2	50.0	6.3	20.0
Tetrachloro-m-xylene	Lin2		1.196		49.0	50.0	-1.9	20.0
DCB Decachlorobiphenyl	Lin2		0.7441		51.6	50.0	3.3	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVIS 280-438595/13 Calibration Date: 11/23/2018 19:54

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230013.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.27	4.26	4.28
alpha-BHC	4.41	4.40	4.43
gamma-BHC (Lindane)	4.73	4.71	4.74
beta-BHC	4.80	4.79	4.82
delta-BHC	5.04	5.02	5.05
Heptachlor	5.08	5.07	5.09
Aldrin	5.35	5.33	5.36
Heptachlor epoxide	5.88	5.87	5.89
gamma-Chlordane	6.08	6.07	6.09
alpha-Chlordane	6.24	6.22	6.25
Endosulfan I	6.29	6.28	6.31
4,4'-DDE	6.42	6.41	6.43
Dieldrin	6.58	6.57	6.60
Endrin	6.91	6.89	6.92
4,4'-DDD	7.03	7.02	7.05
Endosulfan II	7.13	7.12	7.14
4,4'-DDT	7.36	7.35	7.38
Endrin aldehyde	7.49	7.48	7.50
Endosulfan sulfate	7.78	7.77	7.79
Methoxychlor	8.09	8.08	8.11
Endrin ketone	8.34	8.32	8.35
Tetrachloro-m-xylene	3.79	3.78	3.80
DCB Decachlorobiphenyl	9.61	9.59	9.62

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230013.D
Lims ID: CCVIS AB
Client ID:
Sample Type: CCVIS
Inject. Date: 23-Nov-2018 19:54:18 ALS Bottle#: 7 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS AB
Misc. Info.: 280-0076490-013
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:58 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 12:46:13

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.005	0.000	1583147211	150.0	150.0	
2	2.807	2.807	0.000	215658534	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.902	3.902	0.000	575434866	50.0	49.5	
2	3.790	3.790	0.000	86002984	50.0	49.0	
						RPD = 0.88	
5 Hexachlorobenzene							
1	4.310	4.310	0.000	626530762	50.0	51.4	
2	4.268	4.268	0.000	91590755	50.0	49.5	
						RPD = 3.91	
8 alpha-BHC							
1	4.480	4.480	0.000	896552580	50.0	50.9	
2	4.413	4.413	0.000	120635655	50.0	50.5	
						RPD = 0.80	
9 gamma-BHC (Lindane)							
1	4.769	4.769	0.000	784881281	50.0	52.2	
2	4.726	4.726	0.000	105397145	50.0	50.7	
						RPD = 2.87	
10 beta-BHC							
1	4.846	4.846	0.000	300759782	50.0	52.1	
2	4.803	4.803	0.000	44092171	50.0	49.6	
						RPD = 4.92	
12 delta-BHC							
1	4.995	4.995	0.000	800500242	50.0	52.3	
2	5.035	5.035	0.000	105426464	50.0	50.1	
						RPD = 4.39	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.169	5.169	0.000	722136182	50.0	54.2	
2	5.077	5.077	0.000	94962742	50.0	52.9	
						RPD = 2.34	
16 Aldrin							
1	5.438	5.438	0.000	760900907	50.0	53.5	
2	5.345	5.345	0.000	99607652	50.0	51.5	
						RPD = 3.79	
18 Isodrin							
1	5.762	5.762	0.000	619706543	50.0	54.5	
2	5.703	5.703	0.000	80990212	50.0	49.2	
						RPD = 10.21	
21 Heptachlor epoxide							
1	6.048	6.048	0.000	647696016	50.0	53.6	
2	5.881	5.881	0.000	89934091	50.0	51.1	
						RPD = 4.79	
22 trans-Chlordane							
1	6.179	6.179	0.000	695610821	50.0	53.5	
2	6.080	6.080	0.000	92795552	50.0	50.2	
						RPD = 6.38	
23 cis-Chlordane							
1	6.320	6.320	0.000	663713108	50.0	53.4	
2	6.235	6.235	0.000	89423064	50.0	51.2	
						RPD = 4.33	
24 4,4'-DDE							
1	6.395	6.395	0.000	669039293	50.0	51.3	
2	6.418	6.418	0.000	91321249	50.0	50.2	
						RPD = 2.14	
25 Endosulfan I							
1	6.468	6.468	0.000	623431287	50.0	54.6	
2	6.294	6.294	0.000	85377812	50.0	51.4	
						RPD = 5.96	
27 Dieldrin							
1	6.722	6.722	0.000	698237947	50.0	55.0	
2	6.584	6.584	0.000	94628313	50.0	51.7	
						RPD = 6.10	
30 Endrin							
1	6.970	6.970	0.000	642137103	50.0	58.2	
2	6.905	6.905	0.000	88483519	50.0	54.8	
						RPD = 5.98	
32 4,4'-DDD							
1	7.031	7.031	0.000	541939392	50.0	53.6	
2	7.033	7.033	0.000	75156379	50.0	50.8	
						RPD = 5.33	
34 Endosulfan II							
1	7.206	7.206	0.000	591598236	50.0	57.1	
2	7.131	7.131	0.000	81627401	50.0	52.1	
						RPD = 9.00	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
35 4,4'-DDT							
1	7.325	7.325	0.000	504850457	50.0	55.7	
2	7.364	7.364	0.000	72218023	50.0	56.3	
						RPD = 0.96	
36 Endrin aldehyde							
1	7.650	7.650	0.000	472758600	50.0	59.6	
2	7.490	7.490	0.000	65861180	50.0	52.5	
						RPD = 12.66	
37 Methoxychlor							
1	7.830	7.830	0.000	249621080	50.0	60.5	
2	8.094	8.094	0.000	35715364	50.0	56.5	
						RPD = 6.83	
38 Mirex							
1	7.988	7.988	0.000	400691078	50.0	60.6	
2	8.285	8.285	0.000	56317344	50.0	53.1	
						RPD = 13.10	
39 Endosulfan sulfate							
1	8.109	8.109	0.000	570539465	50.0	62.1	
2	7.782	7.782	0.000	76380936	50.0	53.3	
						RPD = 15.29	
40 Endrin ketone							
1	8.400	8.400	0.000	596694188	50.0	61.8	
2	8.335	8.335	0.000	83778786	50.0	53.2	
						RPD = 15.10	
$ 41 DCB Decachlorobiphenyl							
1	9.415	9.415	0.000	382343897	50.0	63.7	
2	9.605	9.605	0.000	53487809	50.0	51.6	
						RPD = 20.95	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

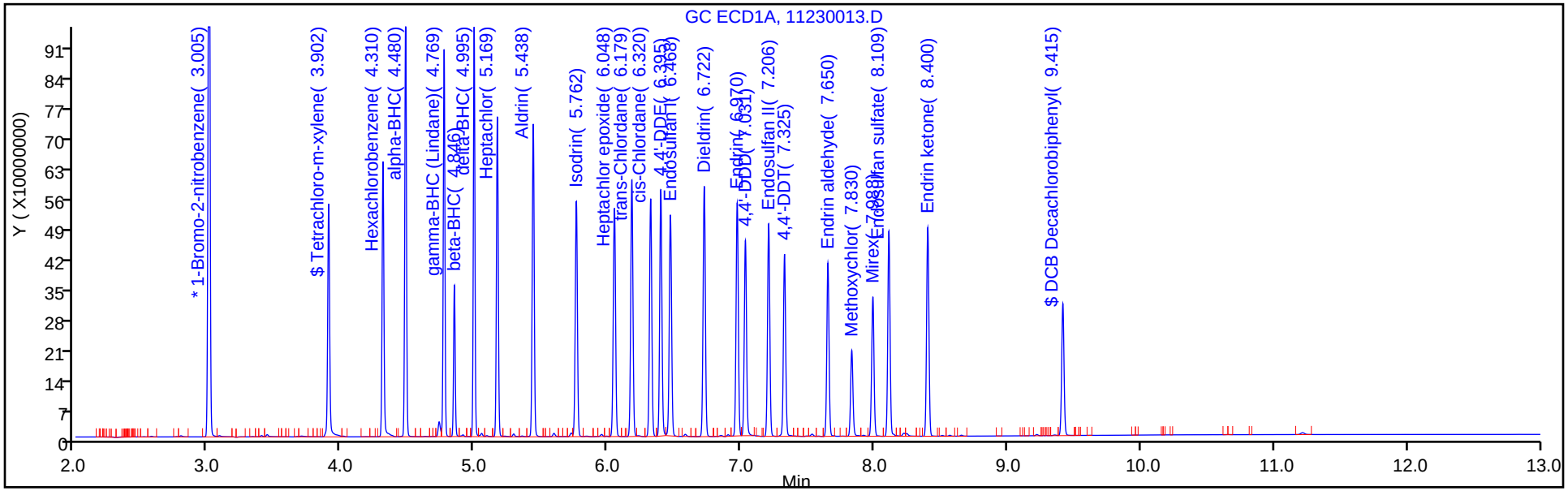
Report Date: 25-Nov-2018 19:32:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

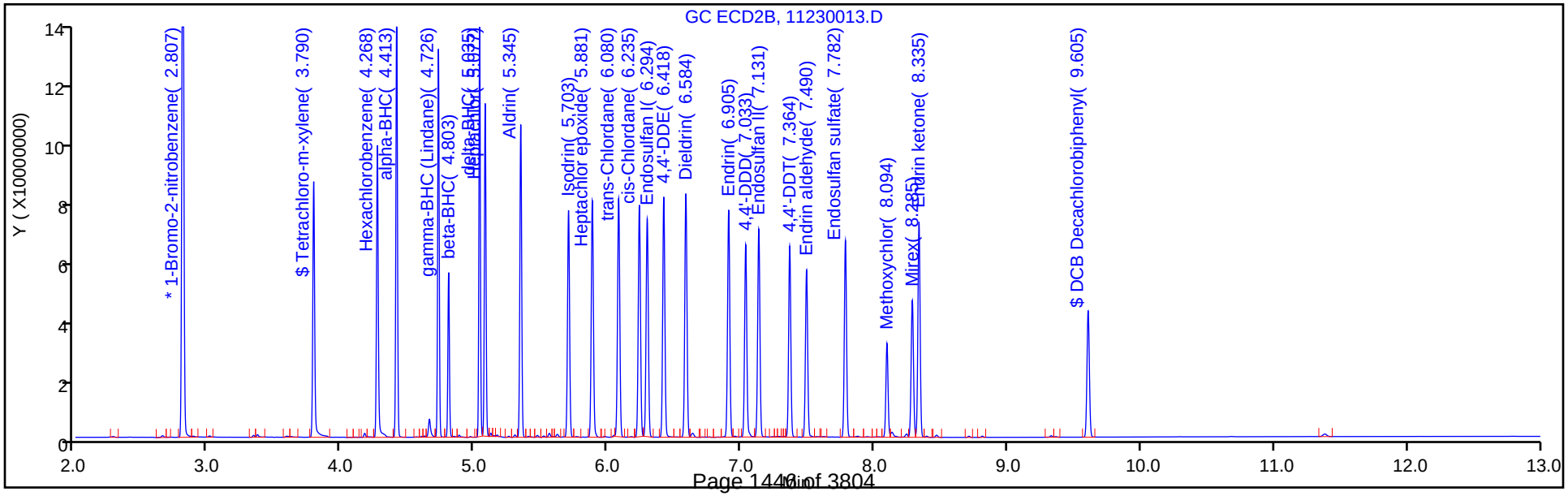
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230013.D

Injection Date:	23-Nov-2018 19:54:18	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCVIS AB			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/24 Calibration Date: 11/23/2018 23:07

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11230024.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0078		2280	2000	14.0	20.0
Toxaphene Peak 2	Lin2		0.0198		2260	2000	13.1	20.0
Toxaphene Peak 3	Lin2		0.0235		2400	2000	20.0	20.0
Toxaphene Peak 4	Lin2		0.0098		2470	2000	23.7*	20.0
Toxaphene Peak 5	Lin2		0.0102		2580	2000	29.0*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/24 Calibration Date: 11/23/2018 23:07

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11230024.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	6.22	6.20	6.23
Toxaphene Peak 2	6.82	6.81	6.83
Toxaphene Peak 3	7.49	7.48	7.51
Toxaphene Peak 4	7.85	7.84	7.87
Toxaphene Peak 5	8.17	8.16	8.18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230024.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 23-Nov-2018 23:07:39 ALS Bottle#: 18 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076490-024
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:41 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 19:19:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.007	3.005	0.002	1566520737	150.0	150.0	
2	2.808	2.807	0.001	218889998	150.0	150.0	
28 Toxaphene							M
1	6.215	6.215	0.000	163239318	2000.0	2280.8	M
1	6.818	6.821	-0.003	414409545	2000.0	2261.5	M
1	7.493	7.494	-0.001	491376525	2000.0	2399.6	M
1	7.851	7.853	-0.002	203862758	2000.0	2474.7	M
1	8.168	8.171	-0.003	213798545	2000.0	2579.1	M
		Average of Peak Amounts =				2399.1	
2	5.726	5.728	-0.002	14295531	2000.0	2125.1	
2	7.079	7.082	-0.003	64364170	2000.0	2126.4	
2	7.219	7.221	-0.002	179002087	2000.0	2140.8	
2	7.733	7.736	-0.003	51331206	2000.0	2146.2	
2	8.028	8.031	-0.003	99053134	2000.0	2122.5	
		Average of Peak Amounts =				2132.2	
					RPD = 11.78		

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

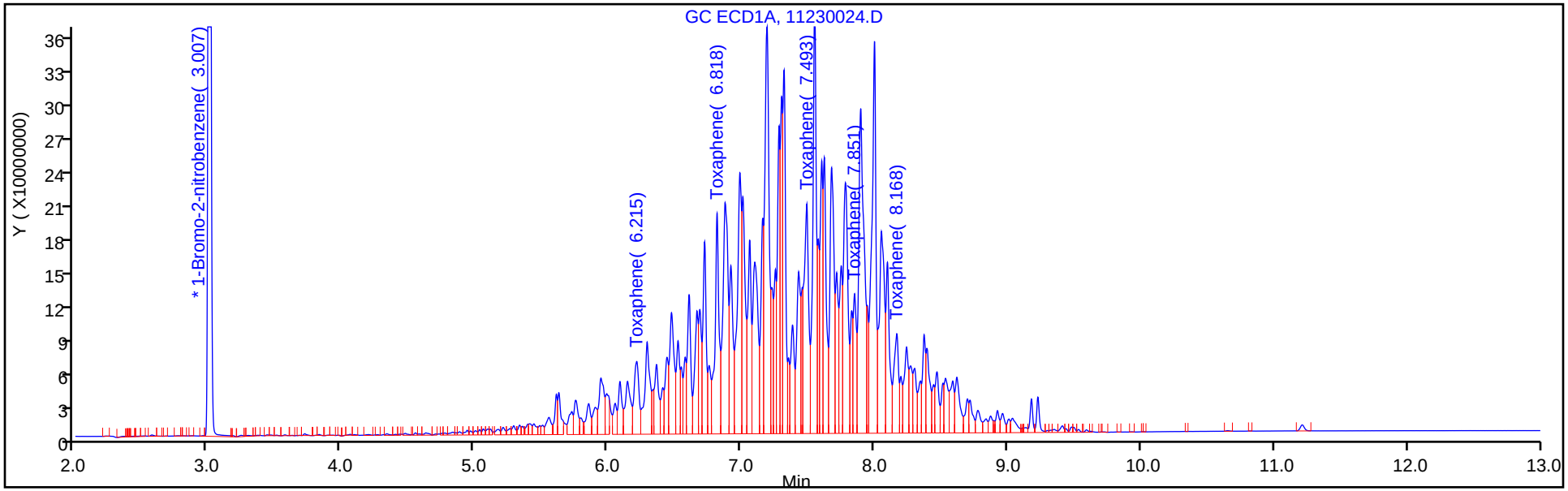
Report Date: 25-Nov-2018 19:32:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

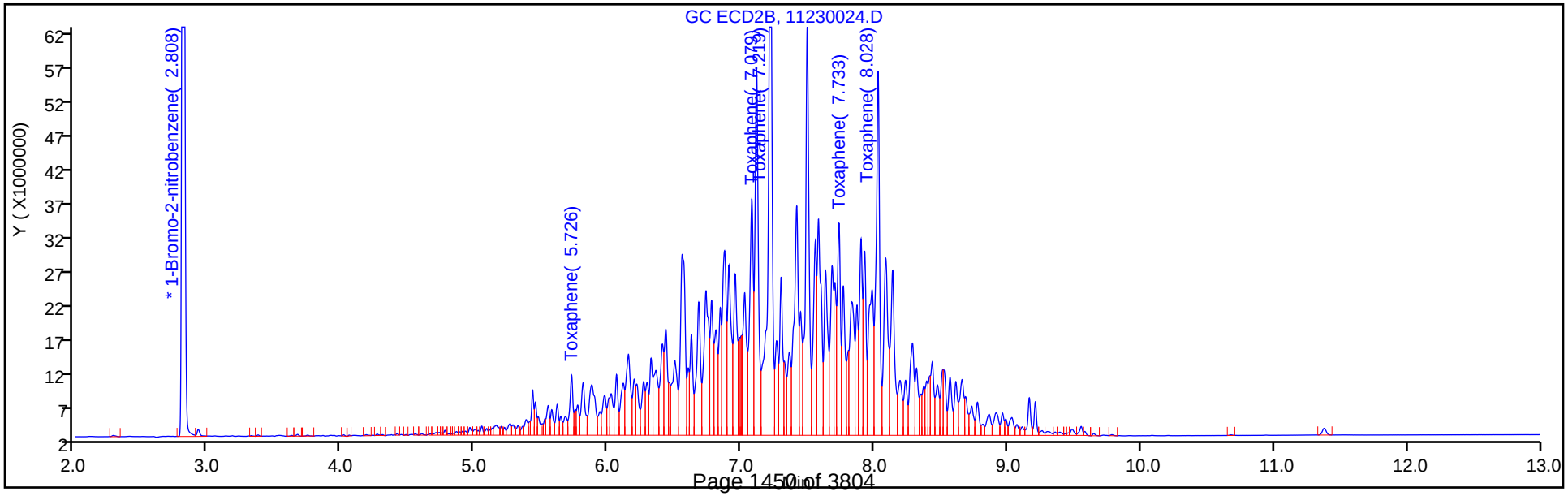
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230024.D

Injection Date:	23-Nov-2018 23:07:39	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



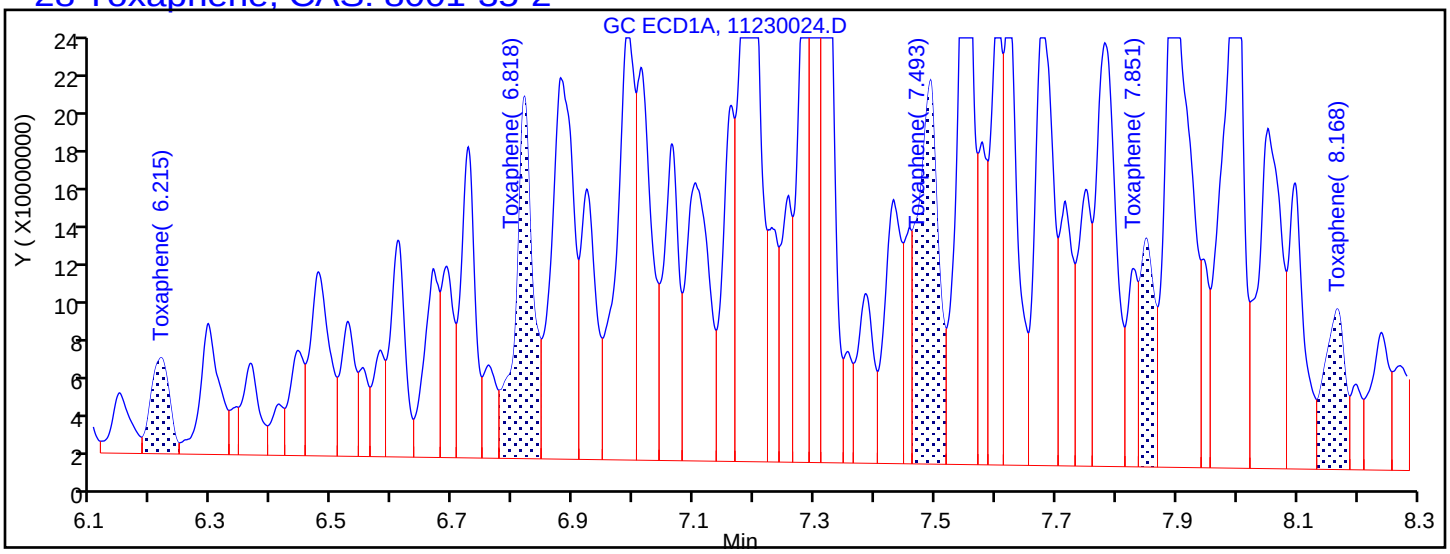
Report Date: 25-Nov-2018 19:32:42 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230024.D

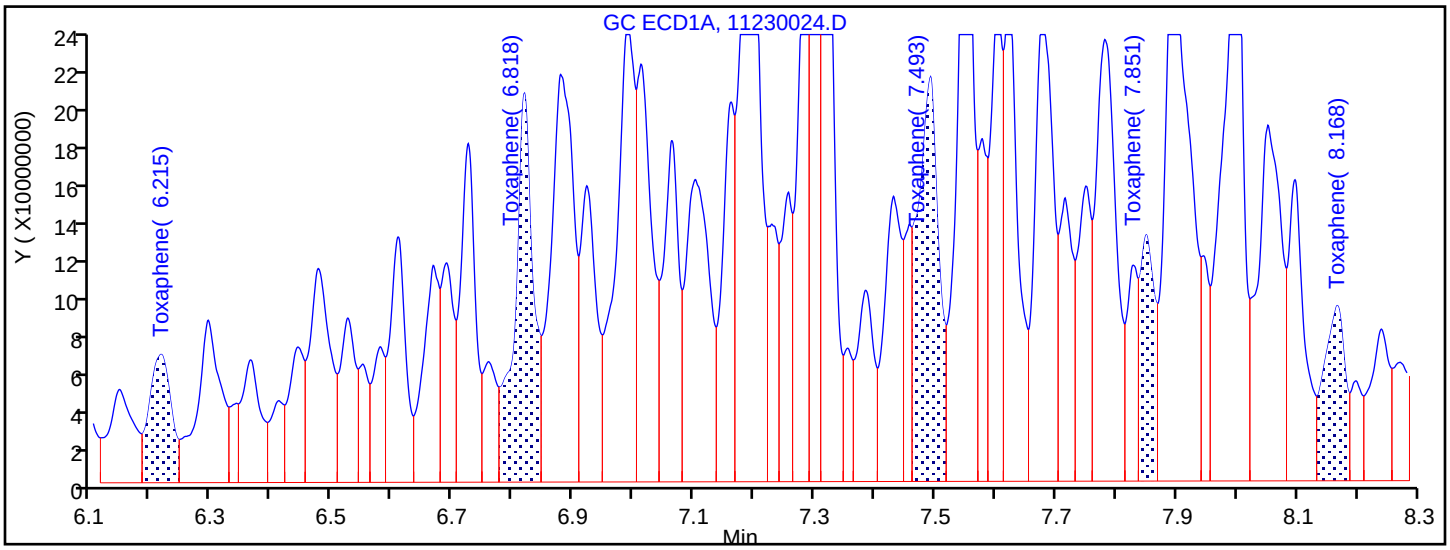
Injection Date:	23-Nov-2018 23:07:39	Instrument ID:	SGC_P2		
Lims ID:	CCV TOX				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	18	Worklist Smp#:	24
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP1 (0.32 mm)	Detector	GC ECD1A		

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

6.215	Response = 103518663
6.818	Response = 357974605
7.493	Response = 456155213
7.851	Response = 187308543
8.168	Response = 189644883



Manual Integration Results

6.215	Response = 163239318	M
6.818	Response = 414409545	M
7.493	Response = 491376525	M
7.851	Response = 203862758	M
8.168	Response = 213798545	M

Reviewer: mooret, 25-Nov-2018 19:19:33

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/24 Calibration Date: 11/23/2018 23:07

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11230024.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0049		2130	2000	6.3	20.0
Toxaphene Peak 2	Lin2		0.0221		2130	2000	6.3	20.0
Toxaphene Peak 3	Lin2		0.0613		2140	2000	7.0	20.0
Toxaphene Peak 4	Lin2		0.0176		2150	2000	7.3	20.0
Toxaphene Peak 5	Lin2		0.0339		2120	2000	6.1	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/24 Calibration Date: 11/23/2018 23:07

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11230024.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	5.73	5.72	5.74
Toxaphene Peak 2	7.08	7.07	7.09
Toxaphene Peak 3	7.22	7.21	7.23
Toxaphene Peak 4	7.73	7.72	7.75
Toxaphene Peak 5	8.03	8.02	8.04

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230024.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 23-Nov-2018 23:07:39 ALS Bottle#: 18 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076490-024
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:41 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 19:19:43

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.007	3.005	0.002	1566520737	150.0	150.0	
2	2.808	2.807	0.001	218889998	150.0	150.0	
28 Toxaphene							M
1	6.215	6.215	0.000	163239318	2000.0	2280.8	M
1	6.818	6.821	-0.003	414409545	2000.0	2261.5	M
1	7.493	7.494	-0.001	491376525	2000.0	2399.6	M
1	7.851	7.853	-0.002	203862758	2000.0	2474.7	M
1	8.168	8.171	-0.003	213798545	2000.0	2579.1	M
		Average of Peak Amounts =				2399.1	
2	5.726	5.728	-0.002	14295531	2000.0	2125.1	
2	7.079	7.082	-0.003	64364170	2000.0	2126.4	
2	7.219	7.221	-0.002	179002087	2000.0	2140.8	
2	7.733	7.736	-0.003	51331206	2000.0	2146.2	
2	8.028	8.031	-0.003	99053134	2000.0	2122.5	
		Average of Peak Amounts =				2132.2	
					RPD = 11.78		

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

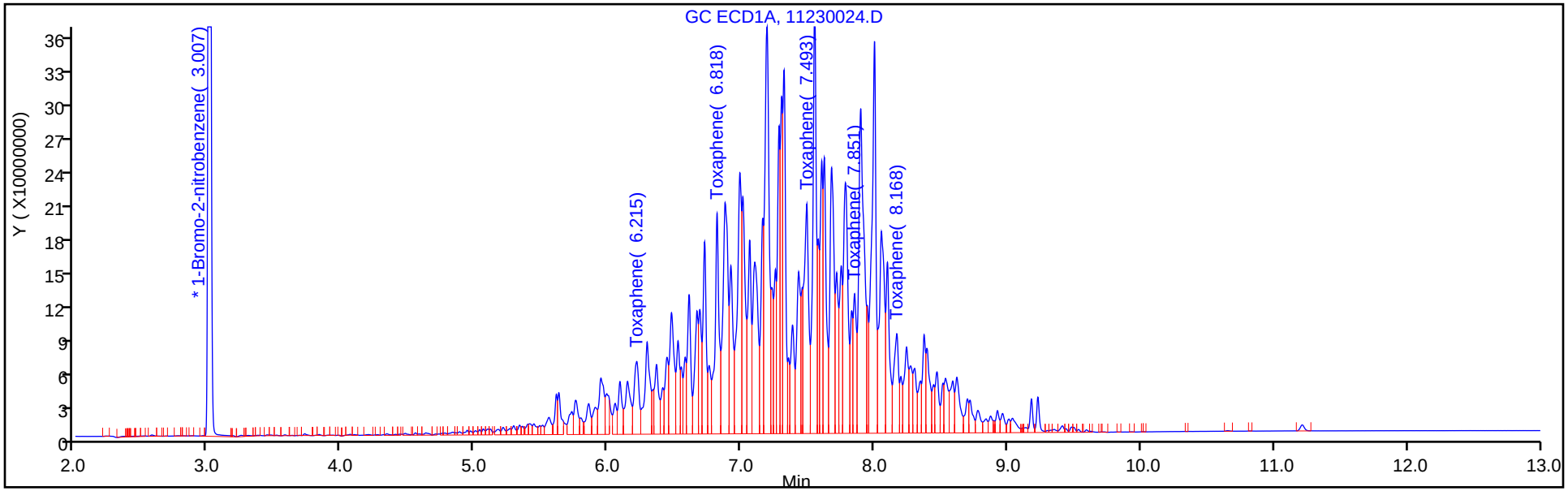
Report Date: 25-Nov-2018 19:32:42 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

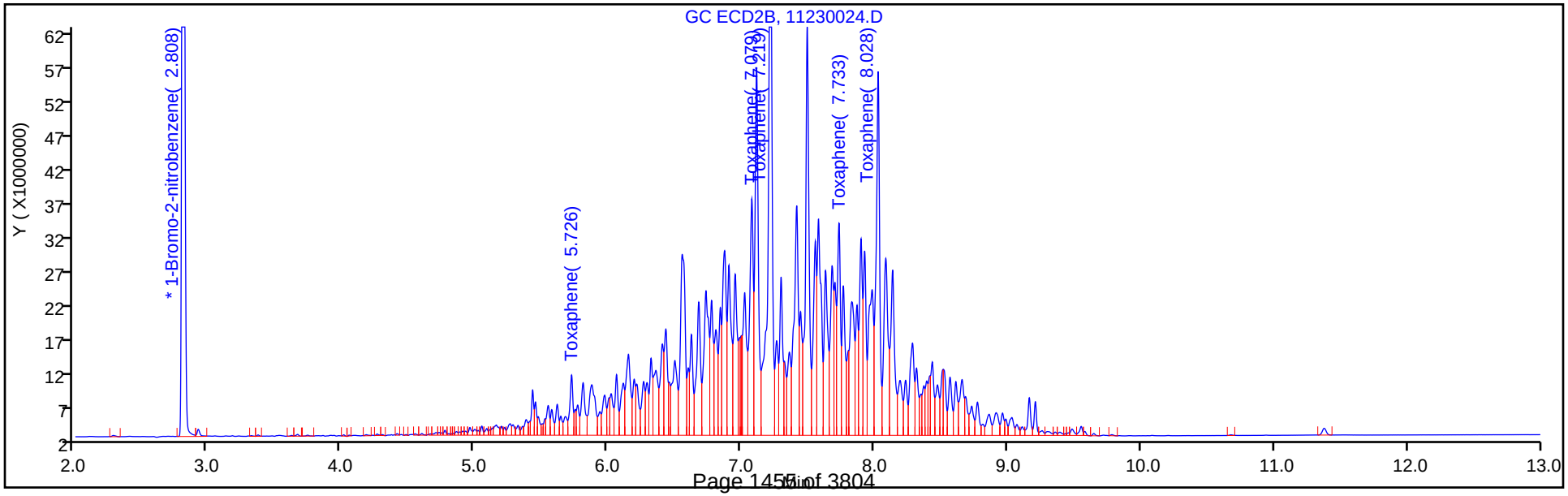
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230024.D

Injection Date:	23-Nov-2018 23:07:39	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/26 Calibration Date: 11/23/2018 23:42

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230026.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.193		51.7	50.0	3.4	20.0
alpha-BHC	Lin2		1.764		52.8	50.0	5.6	20.0
gamma-BHC (Lindane)	Lin2		1.555		54.6	50.0	9.1	20.0
beta-BHC	Lin2		0.5987		54.8	50.0	9.6	20.0
delta-BHC	Lin2		1.588		54.7	50.0	9.5	20.0
Heptachlor	Lin2		1.434		56.7	50.0	13.5	20.0
Aldrin	Lin2		1.463		54.3	50.0	8.5	20.0
Heptachlor epoxide	Lin2		1.262		55.1	50.0	10.2	20.0
gamma-Chlordane	Lin2		1.348		54.7	50.0	9.4	20.0
alpha-Chlordane	Lin2		1.284		54.5	50.0	9.1	20.0
4,4'-DDE	Lin2		1.283		51.9	50.0	3.9	20.0
Endosulfan I	Lin2		1.192		55.1	50.0	10.2	20.0
Dieldrin	Lin2		1.329		55.2	50.0	10.4	20.0
Endrin	Lin2		1.222		58.4	50.0	16.8	20.0
4,4'-DDD	Lin2		1.045		54.5	50.0	9.0	20.0
Endosulfan II	Lin2		1.112		56.6	50.0	13.2	20.0
4,4'-DDT	Lin2		0.9540		55.6	50.0	11.1	20.0
Endrin aldehyde	Lin2		0.8918		59.4	50.0	18.7	20.0
Methoxychlor	Lin2		0.4551		58.2	50.0	16.4	20.0
Endosulfan sulfate	Lin2		1.059		60.9	50.0	21.8*	20.0
Endrin ketone	Lin2		1.097		60.0	50.0	20.0	20.0
Tetrachloro-m-xylene	Lin2		1.094		49.6	50.0	-0.7	20.0
DCB Decachlorobiphenyl	Lin2		0.6836		60.1	50.0	20.2*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/26 Calibration Date: 11/23/2018 23:42

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230026.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.31	4.30	4.32
alpha-BHC	4.48	4.47	4.49
gamma-BHC (Lindane)	4.77	4.76	4.78
beta-BHC	4.85	4.83	4.86
delta-BHC	4.99	4.98	5.01
Heptachlor	5.17	5.16	5.18
Aldrin	5.44	5.43	5.45
Heptachlor epoxide	6.05	6.04	6.06
gamma-Chlordane	6.18	6.17	6.19
alpha-Chlordane	6.32	6.31	6.33
4,4'-DDE	6.39	6.38	6.41
Endosulfan I	6.47	6.46	6.48
Dieldrin	6.72	6.71	6.73
Endrin	6.97	6.96	6.98
4,4'-DDD	7.03	7.02	7.04
Endosulfan II	7.20	7.19	7.22
4,4'-DDT	7.32	7.31	7.34
Endrin aldehyde	7.65	7.64	7.66
Methoxychlor	7.83	7.82	7.84
Endosulfan sulfate	8.11	8.10	8.12
Endrin ketone	8.40	8.39	8.41
Tetrachloro-m-xylene	3.90	3.89	3.91
DCB Decachlorobiphenyl	9.41	9.40	9.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230026.D
Lims ID: CCV AB
Client ID:
Sample Type: CCV
Inject. Date: 23-Nov-2018 23:42:50 ALS Bottle#: 20 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV AB
Misc. Info.: 280-0076490-026
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:35 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 12:46:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						216.9	
2						208.8	
						RPD = 3.80	
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.005	0.000	1634780219	150.0	150.0	
2	2.807	2.807	-0.001	227836204	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.903	3.902	0.001	596215034	50.0	49.6	
2	3.788	3.790	-0.002	89558735	50.0	48.3	
						RPD = 2.68	
5 Hexachlorobenzene							
1	4.309	4.310	-0.001	650295290	50.0	51.7	
2	4.266	4.268	-0.002	96021138	50.0	49.1	
						RPD = 5.20	
8 alpha-BHC							
1	4.480	4.480	0.000	961306041	50.0	52.8	
2	4.411	4.413	-0.002	131681008	50.0	52.2	
						RPD = 1.23	
9 gamma-BHC (Lindane)							
1	4.768	4.769	-0.001	847617182	50.0	54.6	
2	4.725	4.726	-0.001	115717101	50.0	52.7	
						RPD = 3.44	
10 beta-BHC							
1	4.845	4.846	-0.001	326227612	50.0	54.8	
2	4.802	4.803	-0.001	48317637	50.0	51.5	
						RPD = 6.16	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	4.993	4.995	-0.002	865338035	50.0	54.7	
2	5.034	5.035	-0.001	116574126	50.0	52.4	
						RPD = 4.35	
15 Heptachlor							
1	5.168	5.169	-0.001	781497589	50.0	56.7	
2	5.076	5.077	-0.001	105369986	50.0	55.6	
						RPD = 2.05	
16 Aldrin							
1	5.437	5.438	-0.001	797376221	50.0	54.3	
2	5.343	5.345	-0.002	107653139	50.0	52.7	
						RPD = 2.96	
18 Isodrin							
1	5.760	5.762	-0.002	650238796	50.0	55.4	
2	5.701	5.703	-0.002	88237017	50.0	50.8	
						RPD = 8.69	
21 Heptachlor epoxide							
1	6.045	6.048	-0.003	687602528	50.0	55.1	
2	5.879	5.881	-0.002	97723191	50.0	52.6	
						RPD = 4.70	
22 trans-Chlordane							
1	6.177	6.179	-0.002	734481709	50.0	54.7	
2	6.078	6.080	-0.002	100538832	50.0	51.5	
						RPD = 6.05	
23 cis-Chlordane							
1	6.318	6.320	-0.002	699829304	50.0	54.5	
2	6.233	6.235	-0.002	96451981	50.0	52.2	
						RPD = 4.31	
24 4,4'-DDE							
1	6.394	6.395	-0.001	698910565	50.0	51.9	
2	6.416	6.418	-0.002	98082323	50.0	51.1	
						RPD = 1.63	
25 Endosulfan I							
1	6.466	6.468	-0.002	649578362	50.0	55.1	
2	6.292	6.294	-0.002	91792647	50.0	52.4	
						RPD = 5.08	
27 Dieldrin							
1	6.720	6.722	-0.002	724256473	50.0	55.2	
2	6.582	6.584	-0.002	101307580	50.0	52.4	
						RPD = 5.21	
30 Endrin							
1	6.968	6.970	-0.002	665695473	50.0	58.4	
2	6.903	6.905	-0.002	94544368	50.0	55.4	
						RPD = 5.24	
32 4,4'-DDD							
1	7.029	7.031	-0.002	569185650	50.0	54.5	
2	7.031	7.033	-0.002	80399656	50.0	51.5	
						RPD = 5.75	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.204	7.206	-0.002	605849419	50.0	56.6	
2	7.129	7.131	-0.002	86095892	50.0	52.1	
						RPD = 8.35	
35 4,4'-DDT							
1	7.323	7.325	-0.002	519870595	50.0	55.6	
2	7.363	7.364	-0.001	75841940	50.0	55.9	
						RPD = 0.64	
36 Endrin aldehyde							
1	7.648	7.650	-0.002	485974302	50.0	59.4	
2	7.488	7.490	-0.002	69386605	50.0	52.4	
						RPD = 12.49	
37 Methoxychlor							
1	7.828	7.830	-0.002	247969978	50.0	58.2	
2	8.093	8.094	-0.001	36078150	50.0	54.0	
						RPD = 7.48	
38 Mirex							
1	7.987	7.988	-0.001	393069904	50.0	57.6	
2	8.282	8.285	-0.003	57747391	50.0	51.5	
						RPD = 11.03	
39 Endosulfan sulfate							
1	8.107	8.109	-0.002	577222287	50.0	60.9	
2	7.780	7.782	-0.002	79814914	50.0	52.7	
						RPD = 14.37	
40 Endrin ketone							
1	8.398	8.400	-0.002	597710935	50.0	60.0	
2	8.333	8.335	-0.002	86471088	50.0	51.9	
						RPD = 14.43	
$ 41 DCB Decachlorobiphenyl							
1	9.413	9.415	-0.002	372491555	50.0	60.1	
2	9.603	9.605	-0.002	53947783	50.0	49.2	
						RPD = 19.86	
S 3 Endosulfan, Total							
1						172.6	
2						157.1	
						RPD = 9.36	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

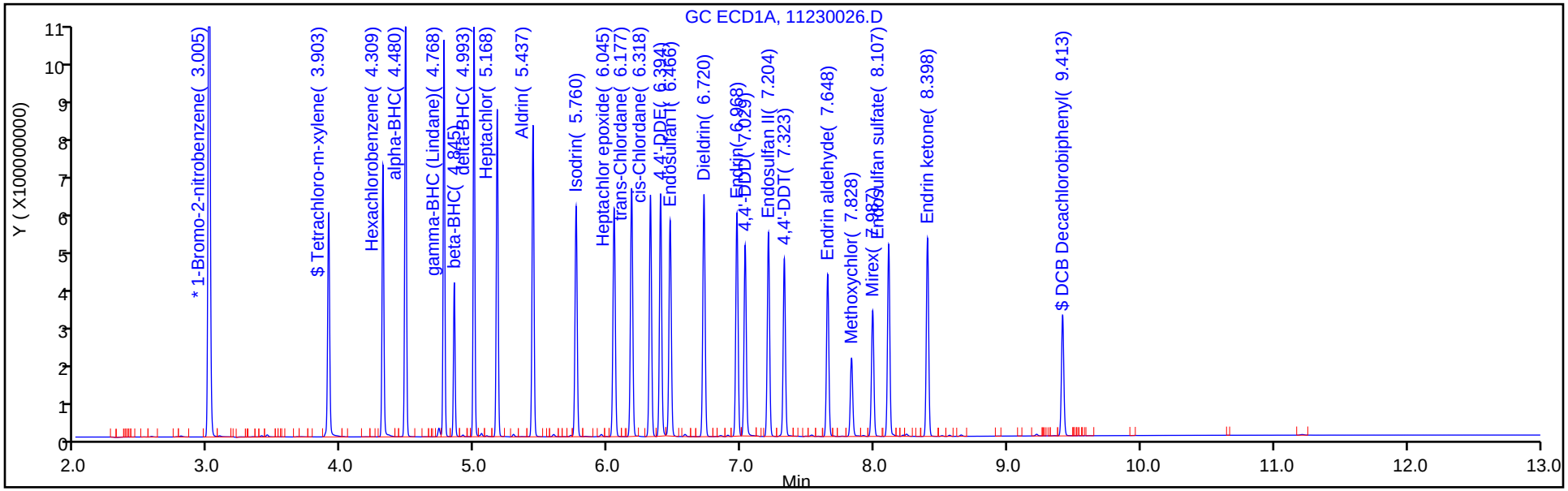
Report Date: 25-Nov-2018 19:32:36 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

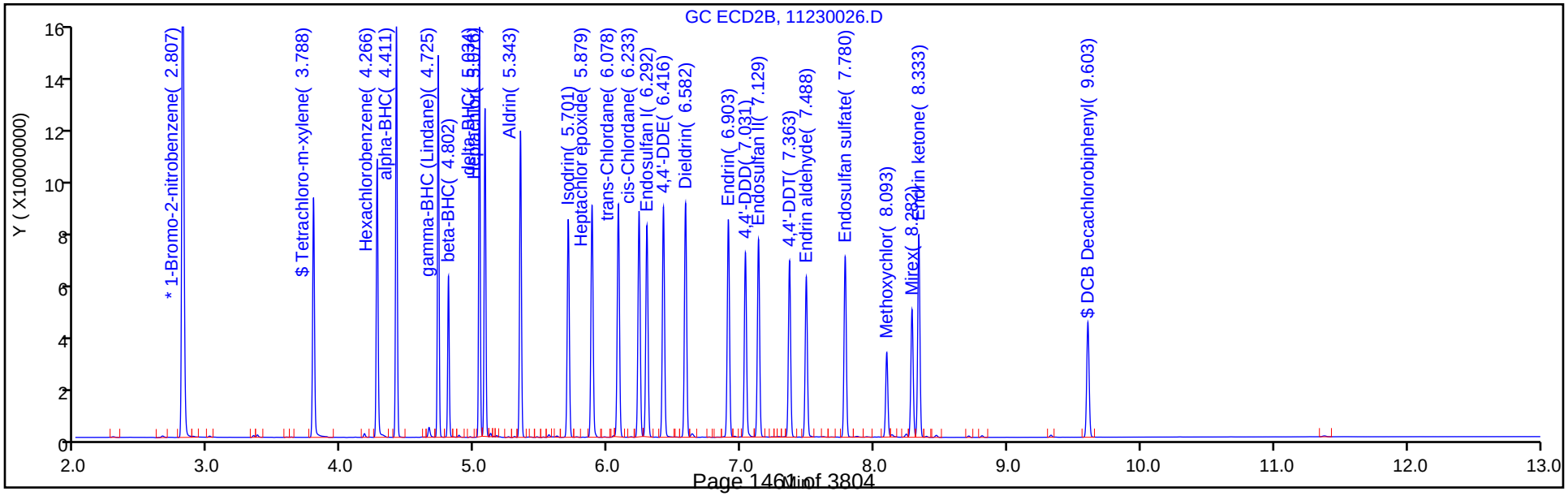
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230026.D

Injection Date:	23-Nov-2018 23:42:50	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV AB			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/26 Calibration Date: 11/23/2018 23:42

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230026.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.264		49.1	50.0	-1.8	20.0
alpha-BHC	Lin2		1.734		52.2	50.0	4.3	20.0
gamma-BHC (Lindane)	Lin2		1.524		52.7	50.0	5.5	20.0
beta-BHC	Lin2		0.6362		51.5	50.0	3.0	20.0
delta-BHC	Lin2		1.535		52.4	50.0	4.8	20.0
Heptachlor	Lin2		1.387		55.6	50.0	11.2	20.0
Aldrin	Lin2		1.418		52.7	50.0	5.3	20.0
Heptachlor epoxide	Lin2		1.287		52.6	50.0	5.2	20.0
gamma-Chlordane	Lin2		1.324		51.5	50.0	3.0	20.0
alpha-Chlordane	Lin2		1.270		52.2	50.0	4.5	20.0
Endosulfan I	Lin2		1.209		52.4	50.0	4.7	20.0
4,4'-DDE	Lin2		1.291		51.1	50.0	2.2	20.0
Dieldrin	Lin2		1.334		52.4	50.0	4.8	20.0
Endrin	Lin2		1.245		55.4	50.0	10.8	20.0
4,4'-DDD	Lin2		1.059		51.5	50.0	2.9	20.0
Endosulfan II	Lin2		1.134		52.1	50.0	4.1	20.0
4,4'-DDT	Lin2		0.999		55.9	50.0	11.8	20.0
Endrin aldehyde	Lin2		0.9136		52.4	50.0	4.7	20.0
Endosulfan sulfate	Lin2		1.051		52.7	50.0	5.5	20.0
Methoxychlor	Lin2		0.4751		54.0	50.0	8.0	20.0
Endrin ketone	Lin2		1.139		51.9	50.0	3.8	20.0
Tetrachloro-m-xylene	Lin2		1.179		48.3	50.0	-3.3	20.0
DCB Decachlorobiphenyl	Lin2		0.7104		49.2	50.0	-1.5	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/26 Calibration Date: 11/23/2018 23:42

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230026.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.27	4.26	4.28
alpha-BHC	4.41	4.40	4.43
gamma-BHC (Lindane)	4.73	4.71	4.74
beta-BHC	4.80	4.79	4.82
delta-BHC	5.03	5.02	5.05
Heptachlor	5.08	5.07	5.09
Aldrin	5.34	5.33	5.36
Heptachlor epoxide	5.88	5.87	5.89
gamma-Chlordane	6.08	6.07	6.09
alpha-Chlordane	6.23	6.22	6.25
Endosulfan I	6.29	6.28	6.31
4,4'-DDE	6.42	6.41	6.43
Dieldrin	6.58	6.57	6.60
Endrin	6.90	6.89	6.92
4,4'-DDD	7.03	7.02	7.05
Endosulfan II	7.13	7.12	7.14
4,4'-DDT	7.36	7.35	7.38
Endrin aldehyde	7.49	7.48	7.50
Endosulfan sulfate	7.78	7.77	7.79
Methoxychlor	8.09	8.08	8.11
Endrin ketone	8.33	8.32	8.35
Tetrachloro-m-xylene	3.79	3.78	3.80
DCB Decachlorobiphenyl	9.60	9.59	9.62

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230026.D
Lims ID: CCV AB
Client ID:
Sample Type: CCV
Inject. Date: 23-Nov-2018 23:42:50 ALS Bottle#: 20 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV AB
Misc. Info.: 280-0076490-026
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:35 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 12:46:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						216.9	
2						208.8	
						RPD = 3.80	
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.005	0.000	1634780219	150.0	150.0	
2	2.807	2.807	-0.001	227836204	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.903	3.902	0.001	596215034	50.0	49.6	
2	3.788	3.790	-0.002	89558735	50.0	48.3	
						RPD = 2.68	
5 Hexachlorobenzene							
1	4.309	4.310	-0.001	650295290	50.0	51.7	
2	4.266	4.268	-0.002	96021138	50.0	49.1	
						RPD = 5.20	
8 alpha-BHC							
1	4.480	4.480	0.000	961306041	50.0	52.8	
2	4.411	4.413	-0.002	131681008	50.0	52.2	
						RPD = 1.23	
9 gamma-BHC (Lindane)							
1	4.768	4.769	-0.001	847617182	50.0	54.6	
2	4.725	4.726	-0.001	115717101	50.0	52.7	
						RPD = 3.44	
10 beta-BHC							
1	4.845	4.846	-0.001	326227612	50.0	54.8	
2	4.802	4.803	-0.001	48317637	50.0	51.5	
						RPD = 6.16	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	4.993	4.995	-0.002	865338035	50.0	54.7	
2	5.034	5.035	-0.001	116574126	50.0	52.4	
						RPD = 4.35	
15 Heptachlor							
1	5.168	5.169	-0.001	781497589	50.0	56.7	
2	5.076	5.077	-0.001	105369986	50.0	55.6	
						RPD = 2.05	
16 Aldrin							
1	5.437	5.438	-0.001	797376221	50.0	54.3	
2	5.343	5.345	-0.002	107653139	50.0	52.7	
						RPD = 2.96	
18 Isodrin							
1	5.760	5.762	-0.002	650238796	50.0	55.4	
2	5.701	5.703	-0.002	88237017	50.0	50.8	
						RPD = 8.69	
21 Heptachlor epoxide							
1	6.045	6.048	-0.003	687602528	50.0	55.1	
2	5.879	5.881	-0.002	97723191	50.0	52.6	
						RPD = 4.70	
22 trans-Chlordane							
1	6.177	6.179	-0.002	734481709	50.0	54.7	
2	6.078	6.080	-0.002	100538832	50.0	51.5	
						RPD = 6.05	
23 cis-Chlordane							
1	6.318	6.320	-0.002	699829304	50.0	54.5	
2	6.233	6.235	-0.002	96451981	50.0	52.2	
						RPD = 4.31	
24 4,4'-DDE							
1	6.394	6.395	-0.001	698910565	50.0	51.9	
2	6.416	6.418	-0.002	98082323	50.0	51.1	
						RPD = 1.63	
25 Endosulfan I							
1	6.466	6.468	-0.002	649578362	50.0	55.1	
2	6.292	6.294	-0.002	91792647	50.0	52.4	
						RPD = 5.08	
27 Dieldrin							
1	6.720	6.722	-0.002	724256473	50.0	55.2	
2	6.582	6.584	-0.002	101307580	50.0	52.4	
						RPD = 5.21	
30 Endrin							
1	6.968	6.970	-0.002	665695473	50.0	58.4	
2	6.903	6.905	-0.002	94544368	50.0	55.4	
						RPD = 5.24	
32 4,4'-DDD							
1	7.029	7.031	-0.002	569185650	50.0	54.5	
2	7.031	7.033	-0.002	80399656	50.0	51.5	
						RPD = 5.75	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.204	7.206	-0.002	605849419	50.0	56.6	
2	7.129	7.131	-0.002	86095892	50.0	52.1	
						RPD = 8.35	
35 4,4'-DDT							
1	7.323	7.325	-0.002	519870595	50.0	55.6	
2	7.363	7.364	-0.001	75841940	50.0	55.9	
						RPD = 0.64	
36 Endrin aldehyde							
1	7.648	7.650	-0.002	485974302	50.0	59.4	
2	7.488	7.490	-0.002	69386605	50.0	52.4	
						RPD = 12.49	
37 Methoxychlor							
1	7.828	7.830	-0.002	247969978	50.0	58.2	
2	8.093	8.094	-0.001	36078150	50.0	54.0	
						RPD = 7.48	
38 Mirex							
1	7.987	7.988	-0.001	393069904	50.0	57.6	
2	8.282	8.285	-0.003	57747391	50.0	51.5	
						RPD = 11.03	
39 Endosulfan sulfate							
1	8.107	8.109	-0.002	577222287	50.0	60.9	
2	7.780	7.782	-0.002	79814914	50.0	52.7	
						RPD = 14.37	
40 Endrin ketone							
1	8.398	8.400	-0.002	597710935	50.0	60.0	
2	8.333	8.335	-0.002	86471088	50.0	51.9	
						RPD = 14.43	
$ 41 DCB Decachlorobiphenyl							
1	9.413	9.415	-0.002	372491555	50.0	60.1	
2	9.603	9.605	-0.002	53947783	50.0	49.2	
						RPD = 19.86	
S 3 Endosulfan, Total							
1						172.6	
2						157.1	
						RPD = 9.36	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

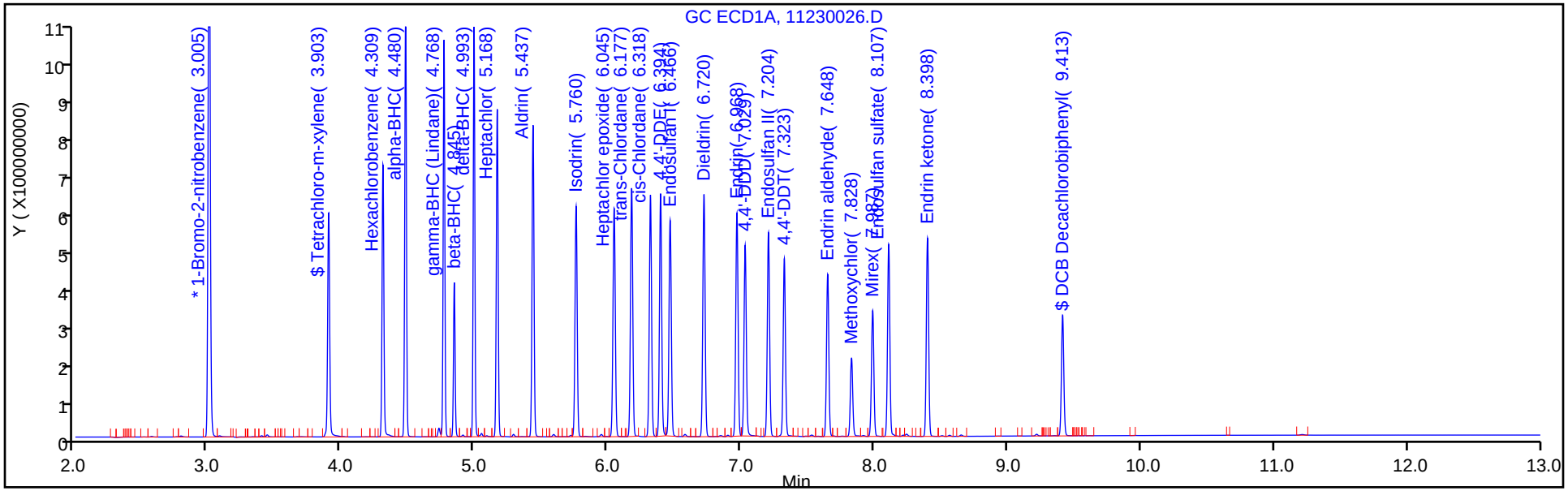
Report Date: 25-Nov-2018 19:32:36 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

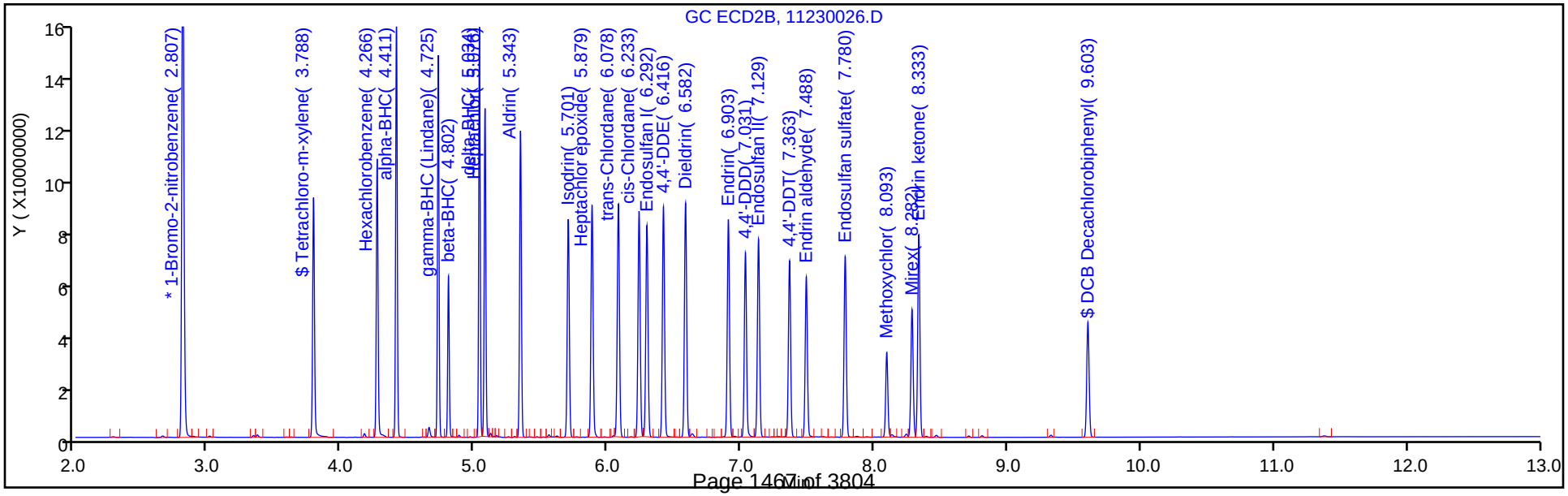
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230026.D

Injection Date:	23-Nov-2018 23:42:50	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV AB			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/41 Calibration Date: 11/24/2018 04:06

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11230041.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0081		2370	2000	18.4	20.0
Toxaphene Peak 2	Lin2		0.0203		2320	2000	15.8	20.0
Toxaphene Peak 3	Lin2		0.0250		2540	2000	27.2*	20.0
Toxaphene Peak 4	Lin2		0.0102		2570	2000	28.7*	20.0
Toxaphene Peak 5	Lin2		0.0103		2590	2000	29.3*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/41 Calibration Date: 11/24/2018 04:06

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11230041.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	6.22	6.20	6.23
Toxaphene Peak 2	6.82	6.81	6.83
Toxaphene Peak 3	7.49	7.48	7.51
Toxaphene Peak 4	7.85	7.84	7.87
Toxaphene Peak 5	8.17	8.16	8.18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230041.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 24-Nov-2018 04:06:04 ALS Bottle#: 35 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076490-041
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:01 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 19:30:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.005	0.000	1608163082	150.0	150.0	
2	2.807	2.807	0.000	219764267	150.0	150.0	
28 Toxaphene							M
1	6.216	6.215	0.001	174148989	2000.0	2368.9	
1	6.819	6.821	-0.002	436007160	2000.0	2316.6	
1	7.493	7.494	-0.001	535673418	2000.0	2544.1	
1	7.851	7.853	-0.002	218015445	2000.0	2574.9	
1	8.169	8.171	-0.002	220023566	2000.0	2585.2	
		Average of Peak Amounts =				2477.9	
2	5.727	5.728	-0.001	15154637	2000.0	2246.8	M
2	7.081	7.082	-0.001	67003897	2000.0	2205.2	M
2	7.220	7.221	-0.001	181553768	2000.0	2162.7	M
2	7.735	7.736	-0.001	51875317	2000.0	2160.2	M
2	8.029	8.031	-0.002	98952566	2000.0	2111.9	M
		Average of Peak Amounts =				2177.3	
						RPD = 12.91	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

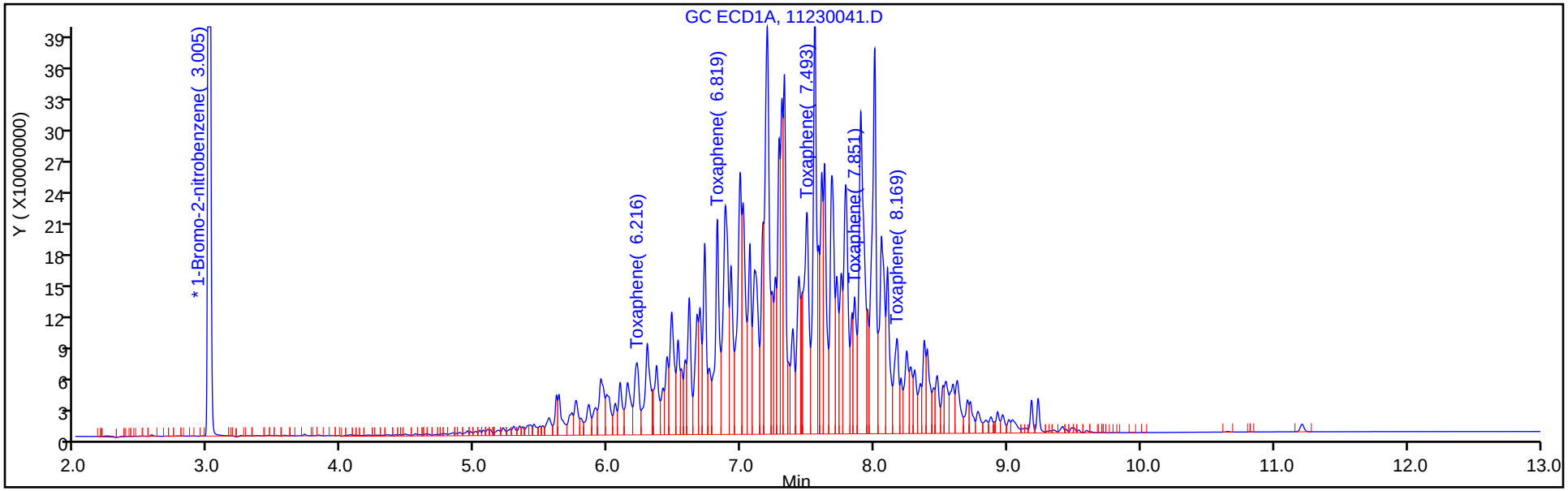
Report Date: 25-Nov-2018 19:32:02 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

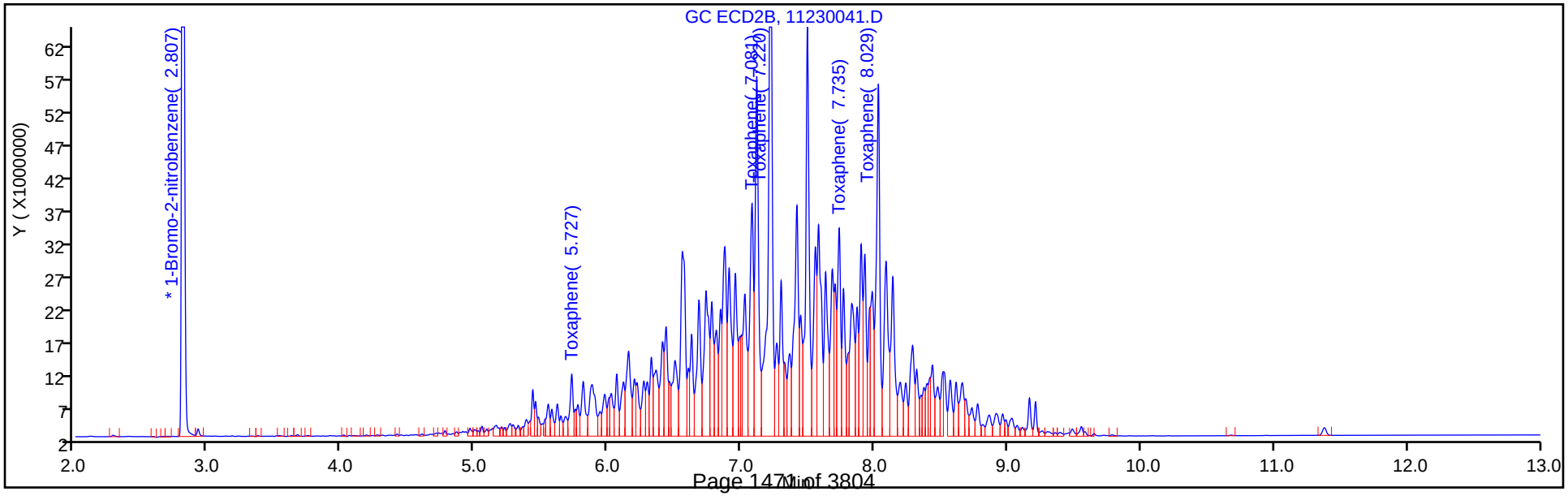
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230041.D

Injection Date:	24-Nov-2018 04:06:04	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	41
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/41 Calibration Date: 11/24/2018 04:06

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11230041.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toxaphene Peak 1	Lin2		0.0052		2250	2000	12.3	20.0
Toxaphene Peak 2	Lin2		0.0229		2210	2000	10.3	20.0
Toxaphene Peak 3	Lin2		0.0620		2160	2000	8.1	20.0
Toxaphene Peak 4	Lin2		0.0177		2160	2000	8.0	20.0
Toxaphene Peak 5	Lin2		0.0338		2110	2000	5.6	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/41 Calibration Date: 11/24/2018 04:06

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 16:10

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 17:37

Lab File ID: 11230041.D

Analyte	RT	RT WINDOW	
		FROM	TO
Toxaphene Peak 1	5.73	5.72	5.74
Toxaphene Peak 2	7.08	7.07	7.09
Toxaphene Peak 3	7.22	7.21	7.23
Toxaphene Peak 4	7.74	7.72	7.75
Toxaphene Peak 5	8.03	8.02	8.04

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230041.D
Lims ID: CCV TOX
Client ID:
Sample Type: CCV
Inject. Date: 24-Nov-2018 04:06:04 ALS Bottle#: 35 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV TOX
Misc. Info.: 280-0076490-041
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:01 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 19:30:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.005	0.000	1608163082	150.0	150.0	
2	2.807	2.807	0.000	219764267	150.0	150.0	
28 Toxaphene							M
1	6.216	6.215	0.001	174148989	2000.0	2368.9	
1	6.819	6.821	-0.002	436007160	2000.0	2316.6	
1	7.493	7.494	-0.001	535673418	2000.0	2544.1	
1	7.851	7.853	-0.002	218015445	2000.0	2574.9	
1	8.169	8.171	-0.002	220023566	2000.0	2585.2	
		Average of Peak Amounts =				2477.9	
2	5.727	5.728	-0.001	15154637	2000.0	2246.8	M
2	7.081	7.082	-0.001	67003897	2000.0	2205.2	M
2	7.220	7.221	-0.001	181553768	2000.0	2162.7	M
2	7.735	7.736	-0.001	51875317	2000.0	2160.2	M
2	8.029	8.031	-0.002	98952566	2000.0	2111.9	M
		Average of Peak Amounts =				2177.3	
						RPD = 12.91	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8081TOXCCVL4_00015 Amount Added: 1.00 Units: mL
8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

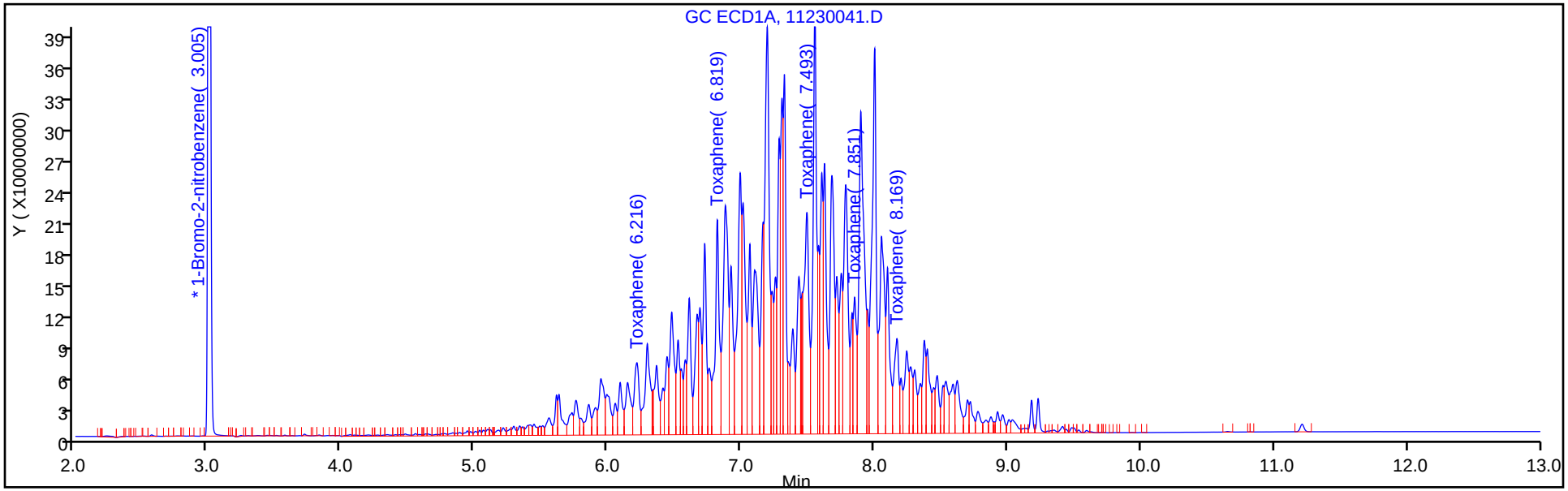
Report Date: 25-Nov-2018 19:32:06 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

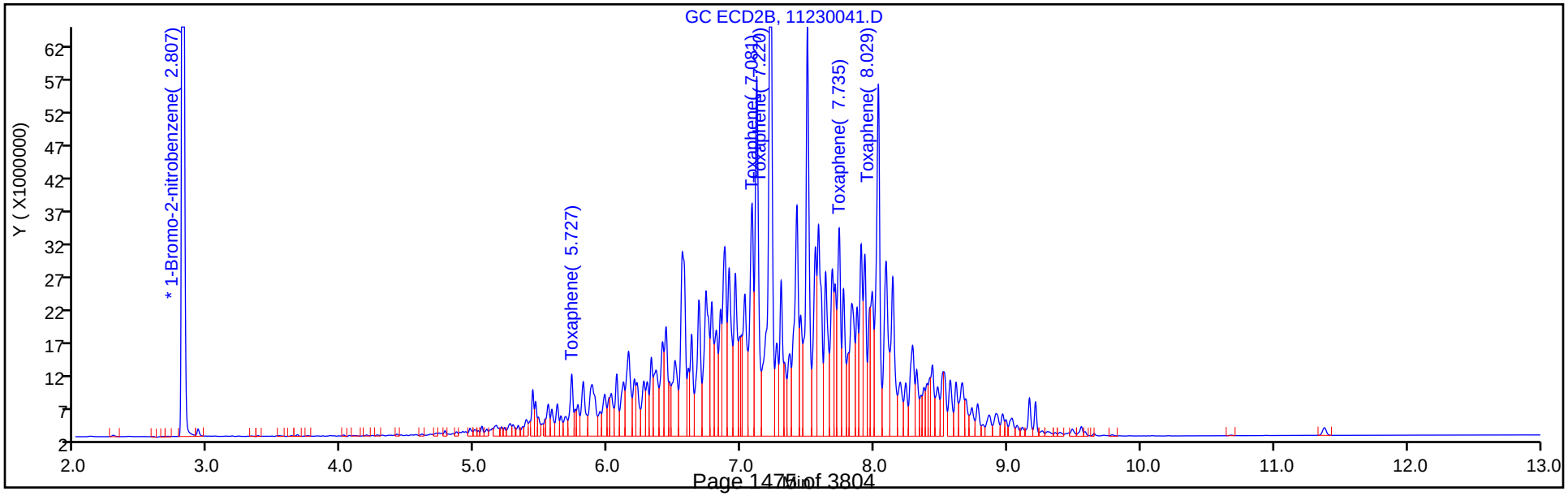
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230041.D

Injection Date:	24-Nov-2018 04:06:04	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV TOX			Worklist Smp#:	41
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



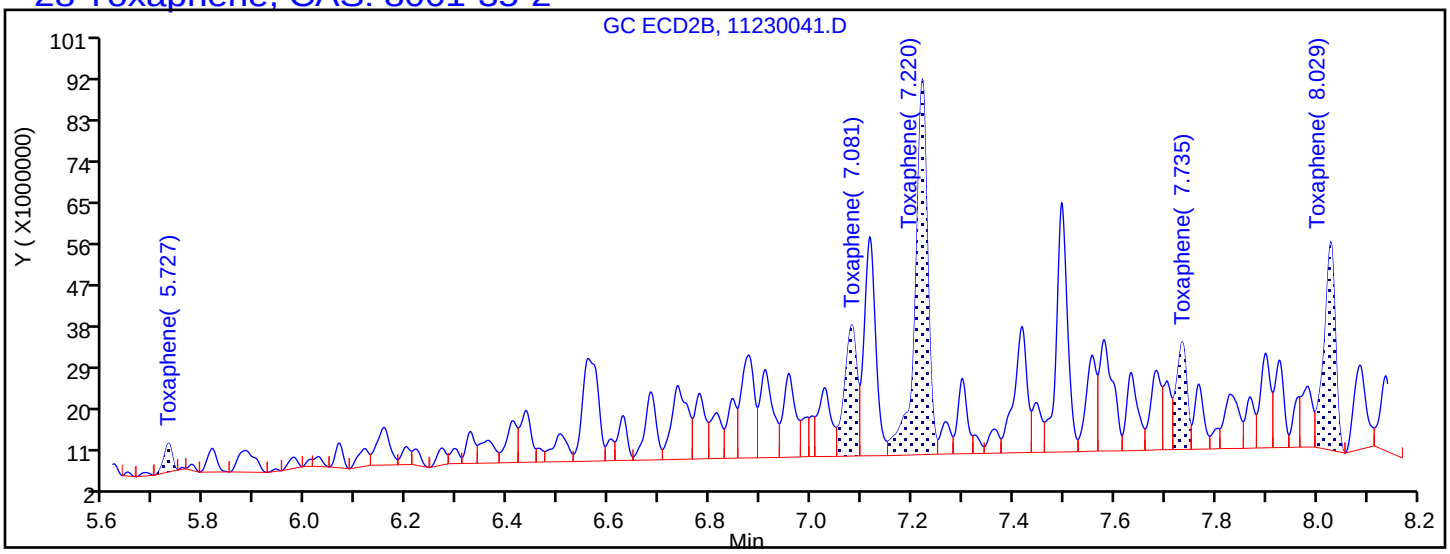
Report Date: 25-Nov-2018 19:32:07 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230041.D

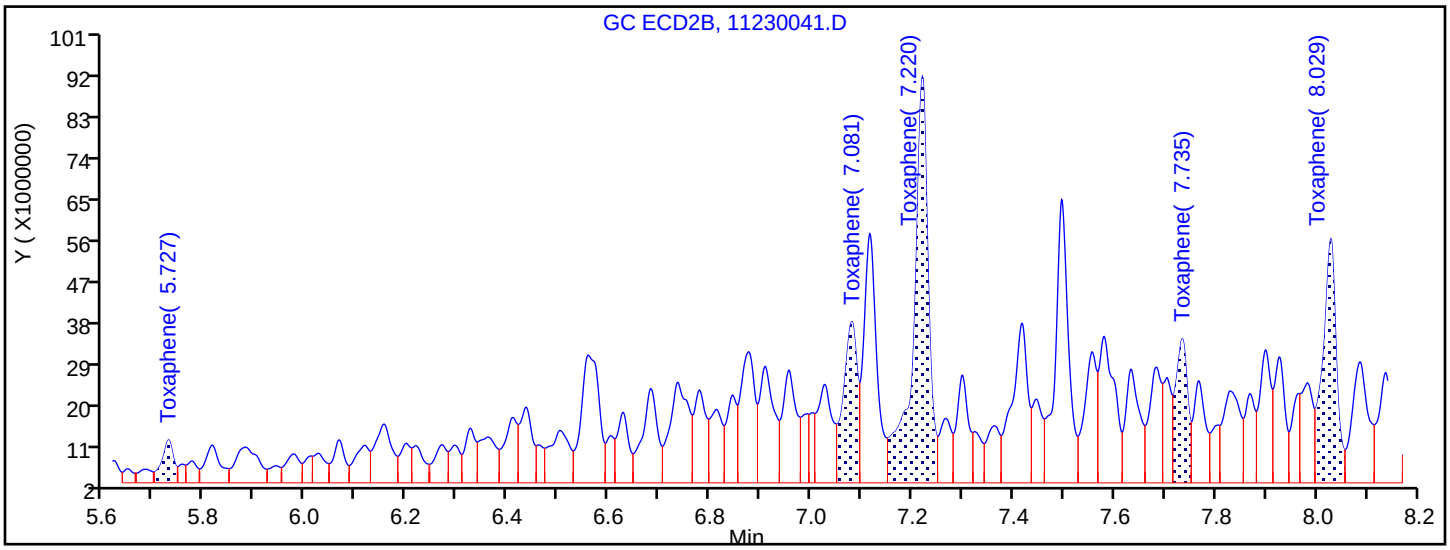
Injection Date:	24-Nov-2018 04:06:04	Instrument ID:	SGC_P2		
Lims ID:	CCV TOX				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	35	Worklist Smp#:	41
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP2 (0.32 mm)	Detector	GC ECD2B		

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.727	Response = 7109117
7.081	Response = 49110318
7.220	Response = 141269302
7.735	Response = 34364859
8.029	Response = 71151703



Manual Integration Results

5.727	Response = 15154637	M
7.081	Response = 67003897	M
7.220	Response = 181553768	M
7.735	Response = 51875317	M
8.029	Response = 98952566	M

Reviewer: mooret, 25-Nov-2018 19:30:12

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/43 Calibration Date: 11/24/2018 04:41

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230043.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.204		52.2	50.0	4.4	20.0
alpha-BHC	Lin2		1.735		52.0	50.0	3.9	20.0
gamma-BHC (Lindane)	Lin2		1.521		53.4	50.0	6.8	20.0
beta-BHC	Lin2		0.5844		53.5	50.0	6.9	20.0
delta-BHC	Lin2		1.567		54.0	50.0	8.1	20.0
Heptachlor	Lin2		1.405		55.6	50.0	11.2	20.0
Aldrin	Lin2		1.513		56.1	50.0	12.2	20.0
Heptachlor epoxide	Lin2		1.305		57.0	50.0	14.0	20.0
gamma-Chlordane	Lin2		1.407		57.1	50.0	14.2	20.0
alpha-Chlordane	Lin2		1.343		57.0	50.0	14.1	20.0
4,4'-DDE	Lin2		1.356		54.9	50.0	9.8	20.0
Endosulfan I	Lin2		1.253		57.9	50.0	15.8	20.0
Dieldrin	Lin2		1.401		58.2	50.0	16.4	20.0
Endrin	Lin2		1.281		61.2	50.0	22.4*	20.0
4,4'-DDD	Lin2		1.110		57.9	50.0	15.8	20.0
Endosulfan II	Lin2		1.174		59.7	50.0	19.5	20.0
4,4'-DDT	Lin2		1.021		59.4	50.0	18.8	20.0
Endrin aldehyde	Lin2		0.9333		62.1	50.0	24.2*	20.0
Methoxychlor	Lin2		0.4854		62.1	50.0	24.2*	20.0
Endosulfan sulfate	Lin2		1.126		64.7	50.0	29.5*	20.0
Endrin ketone	Lin2		1.173		64.1	50.0	28.3*	20.0
Tetrachloro-m-xylene	Lin2		1.097		49.8	50.0	-0.4	20.0
DCB Decachlorobiphenyl	Lin2		0.7417		65.2	50.0	30.5*	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/43 Calibration Date: 11/24/2018 04:41

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230043.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.31	4.30	4.32
alpha-BHC	4.48	4.47	4.49
gamma-BHC (Lindane)	4.77	4.76	4.78
beta-BHC	4.85	4.83	4.86
delta-BHC	4.99	4.98	5.01
Heptachlor	5.17	5.16	5.18
Aldrin	5.44	5.43	5.45
Heptachlor epoxide	6.05	6.04	6.06
gamma-Chlordane	6.18	6.17	6.19
alpha-Chlordane	6.32	6.31	6.33
4,4'-DDE	6.40	6.38	6.41
Endosulfan I	6.47	6.46	6.48
Dieldrin	6.72	6.71	6.73
Endrin	6.97	6.96	6.98
4,4'-DDD	7.03	7.02	7.04
Endosulfan II	7.21	7.19	7.22
4,4'-DDT	7.32	7.31	7.34
Endrin aldehyde	7.65	7.64	7.66
Methoxychlor	7.83	7.82	7.84
Endosulfan sulfate	8.11	8.10	8.12
Endrin ketone	8.40	8.39	8.41
Tetrachloro-m-xylene	3.90	3.89	3.91
DCB Decachlorobiphenyl	9.41	9.40	9.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230043.D
Lims ID: CCV AB
Client ID:
Sample Type: CCV
Inject. Date: 24-Nov-2018 04:41:17 ALS Bottle#: 37 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV AB
Misc. Info.: 280-0076490-043
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:31:42 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 12:48:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						212.9	
2						204.2	
						RPD = 4.13	
* 2 1-Bromo-2-nitrobenzene							
1	3.006	3.005	0.001	1593983218	150.0	150.0	
2	2.808	2.807	0.001	221485487	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.902	3.902	0.000	583024262	50.0	49.8	
2	3.789	3.790	-0.001	88374973	50.0	49.1	
						RPD = 1.45	
5 Hexachlorobenzene							
1	4.310	4.310	0.000	639899107	50.0	52.2	
2	4.267	4.268	-0.001	94667276	50.0	49.8	
						RPD = 4.69	
8 alpha-BHC							
1	4.480	4.480	0.000	922031447	50.0	52.0	
2	4.412	4.413	-0.001	125765246	50.0	51.3	
						RPD = 1.39	
9 gamma-BHC (Lindane)							
1	4.768	4.769	-0.001	808411141	50.0	53.4	
2	4.726	4.726	0.000	109419894	50.0	51.3	
						RPD = 4.03	
10 beta-BHC							
1	4.846	4.846	0.000	310482556	50.0	53.5	
2	4.802	4.803	-0.001	45940188	50.0	50.4	
						RPD = 5.97	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	4.994	4.995	-0.001	832654563	50.0	54.0	
2	5.035	5.035	0.000	111018859	50.0	51.3	
						RPD = 5.10	
15 Heptachlor							
1	5.168	5.169	-0.001	746356343	50.0	55.6	
2	5.077	5.077	0.000	98949482	50.0	53.7	
						RPD = 3.48	
16 Aldrin							
1	5.437	5.438	-0.001	803992345	50.0	56.1	
2	5.343	5.345	-0.002	105990729	50.0	53.3	
						RPD = 5.01	
18 Isodrin							
1	5.761	5.762	-0.001	661655750	50.0	57.8	
2	5.702	5.703	-0.001	88202454	50.0	52.2	
						RPD = 10.11	
21 Heptachlor epoxide							
1	6.047	6.048	-0.001	693362640	50.0	57.0	
2	5.881	5.881	0.000	96112665	50.0	53.2	
						RPD = 6.87	
22 trans-Chlordane							
1	6.178	6.179	-0.001	747649027	50.0	57.1	
2	6.078	6.080	-0.002	100065238	50.0	52.7	
						RPD = 7.95	
23 cis-Chlordane							
1	6.319	6.320	-0.001	713693546	50.0	57.0	
2	6.234	6.235	-0.001	95397397	50.0	53.2	
						RPD = 7.02	
24 4,4'-DDE							
1	6.395	6.395	0.000	720702668	50.0	54.9	
2	6.417	6.418	-0.001	97056601	50.0	52.0	
						RPD = 5.39	
25 Endosulfan I							
1	6.467	6.468	-0.001	665698913	50.0	57.9	
2	6.293	6.294	-0.001	90932448	50.0	53.4	
						RPD = 8.13	
27 Dieldrin							
1	6.721	6.722	-0.001	744637876	50.0	58.2	
2	6.582	6.584	-0.002	100683713	50.0	53.6	
						RPD = 8.26	
30 Endrin							
1	6.968	6.970	-0.002	680682331	50.0	61.2	
2	6.905	6.905	0.000	93677959	50.0	56.5	
						RPD = 8.04	
32 4,4'-DDD							
1	7.030	7.031	-0.001	589900405	50.0	57.9	
2	7.032	7.033	-0.001	81026065	50.0	53.4	
						RPD = 8.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.205	7.206	-0.001	623546265	50.0	59.7	
2	7.131	7.131	0.000	86253599	50.0	53.7	
						RPD = 10.67	
35 4,4'-DDT							
1	7.324	7.325	-0.001	542452782	50.0	59.4	
2	7.363	7.364	-0.001	75117761	50.0	57.0	
						RPD = 4.18	
36 Endrin aldehyde							
1	7.650	7.650	0.000	495897049	50.0	62.1	
2	7.489	7.490	-0.001	69108910	50.0	53.7	
						RPD = 14.56	
37 Methoxychlor							
1	7.828	7.830	-0.002	257900388	50.0	62.1	
2	8.093	8.094	-0.001	37045971	50.0	57.1	
						RPD = 8.41	
38 Mirex							
1	7.987	7.988	-0.001	412467394	50.0	61.9	
2	8.283	8.285	-0.002	58268287	50.0	53.5	
						RPD = 14.55	
39 Endosulfan sulfate							
1	8.108	8.109	-0.001	598504751	50.0	64.7	
2	7.781	7.782	-0.001	80197290	50.0	54.5	
						RPD = 17.13	
40 Endrin ketone							
1	8.400	8.400	0.000	623273312	50.0	64.1	
2	8.334	8.335	-0.001	87158165	50.0	53.9	
						RPD = 17.45	
$ 41 DCB Decachlorobiphenyl							
1	9.413	9.415	-0.002	394087473	50.0	65.2	
2	9.604	9.605	-0.001	55484082	50.0	52.2	
						RPD = 22.26	
S 3 Endosulfan, Total							
1						182.3	
2						161.6	
						RPD = 12.09	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

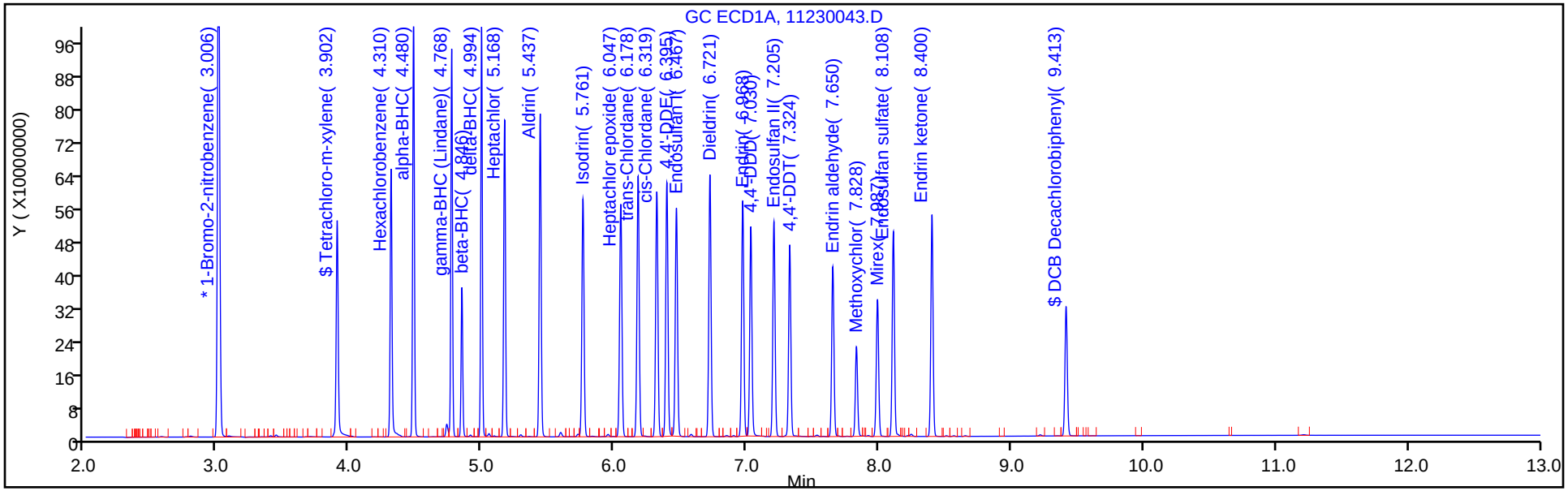
Report Date: 25-Nov-2018 19:31:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

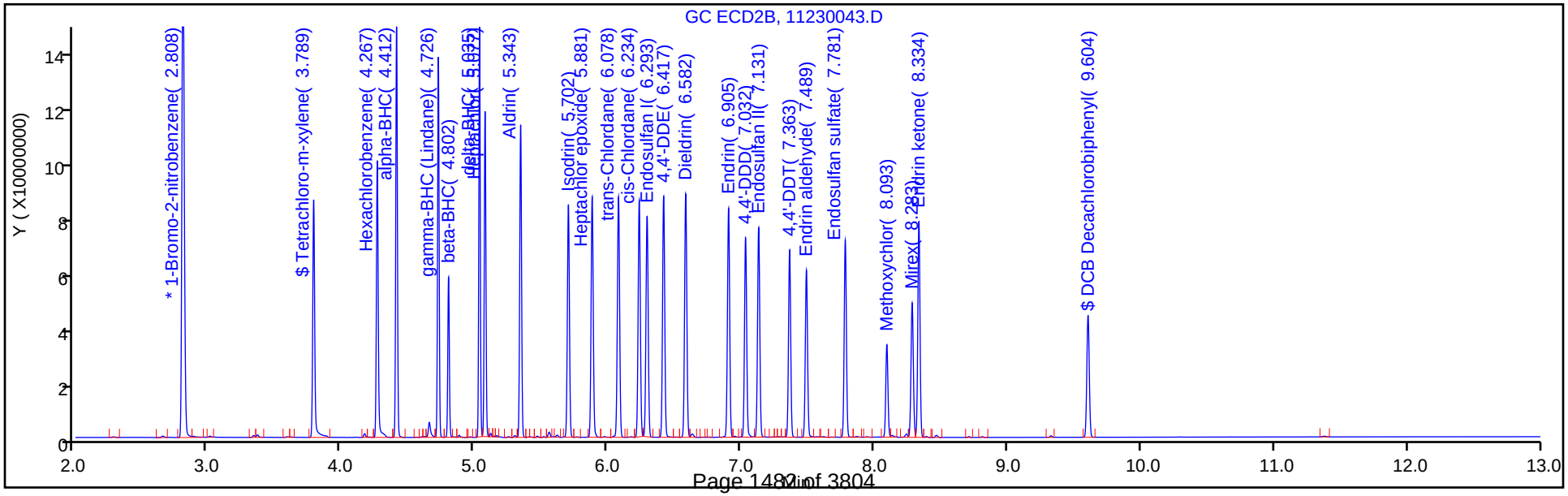
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230043.D

Injection Date:	24-Nov-2018 04:41:17	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV AB			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM VII
PESTICIDES CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/43 Calibration Date: 11/24/2018 04:41

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230043.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Hexachlorobenzene	Lin2		1.282		49.8	50.0	-0.4	20.0
alpha-BHC	Lin2		1.703		51.3	50.0	2.5	20.0
gamma-BHC (Lindane)	Lin2		1.482		51.3	50.0	2.6	20.0
beta-BHC	Lin2		0.6223		50.4	50.0	0.7	20.0
delta-BHC	Lin2		1.504		51.3	50.0	2.7	20.0
Heptachlor	Lin2		1.340		53.7	50.0	7.4	20.0
Aldrin	Lin2		1.436		53.3	50.0	6.7	20.0
Heptachlor epoxide	Lin2		1.302		53.2	50.0	6.4	20.0
gamma-Chlordane	Lin2		1.355		52.7	50.0	5.5	20.0
alpha-Chlordane	Lin2		1.292		53.2	50.0	6.3	20.0
Endosulfan I	Lin2		1.232		53.4	50.0	6.7	20.0
4,4'-DDE	Lin2		1.315		52.0	50.0	4.0	20.0
Dieldrin	Lin2		1.364		53.6	50.0	7.2	20.0
Endrin	Lin2		1.269		56.5	50.0	13.0	20.0
4,4'-DDD	Lin2		1.097		53.4	50.0	6.7	20.0
Endosulfan II	Lin2		1.168		53.7	50.0	7.4	20.0
4,4'-DDT	Lin2		1.017		57.0	50.0	14.0	20.0
Endrin aldehyde	Lin2		0.9361		53.7	50.0	7.4	20.0
Endosulfan sulfate	Lin2		1.086		54.5	50.0	9.0	20.0
Methoxychlor	Lin2		0.5018		57.1	50.0	14.2	20.0
Endrin ketone	Lin2		1.181		53.9	50.0	7.7	20.0
Tetrachloro-m-xylene	Lin2		1.197		49.1	50.0	-1.9	20.0
DCB Decachlorobiphenyl	Lin2		0.7515		52.2	50.0	4.3	20.0

FORM VII
PESTICIDES CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438595/43 Calibration Date: 11/24/2018 04:41

Instrument ID: SGC_P2 Calib Start Date: 10/13/2018 19:22

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 10/13/2018 20:49

Lab File ID: 11230043.D

Analyte	RT	RT WINDOW	
		FROM	TO
Hexachlorobenzene	4.27	4.26	4.28
alpha-BHC	4.41	4.40	4.43
gamma-BHC (Lindane)	4.73	4.71	4.74
beta-BHC	4.80	4.79	4.82
delta-BHC	5.04	5.02	5.05
Heptachlor	5.08	5.07	5.09
Aldrin	5.34	5.33	5.36
Heptachlor epoxide	5.88	5.87	5.89
gamma-Chlordane	6.08	6.07	6.09
alpha-Chlordane	6.23	6.22	6.25
Endosulfan I	6.29	6.28	6.31
4,4'-DDE	6.42	6.41	6.43
Dieldrin	6.58	6.57	6.60
Endrin	6.91	6.89	6.92
4,4'-DDD	7.03	7.02	7.05
Endosulfan II	7.13	7.12	7.14
4,4'-DDT	7.36	7.35	7.38
Endrin aldehyde	7.49	7.48	7.50
Endosulfan sulfate	7.78	7.77	7.79
Methoxychlor	8.09	8.08	8.11
Endrin ketone	8.33	8.32	8.35
Tetrachloro-m-xylene	3.79	3.78	3.80
DCB Decachlorobiphenyl	9.60	9.59	9.62

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230043.D
Lims ID: CCV AB
Client ID:
Sample Type: CCV
Inject. Date: 24-Nov-2018 04:41:17 ALS Bottle#: 37 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV AB
Misc. Info.: 280-0076490-043
Operator ID: TEM Instrument ID: SGC_P2
Sublist: chrom-P2 8081 IS*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:31:42 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 12:48:24

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						212.9	
2						204.2	
						RPD = 4.13	
* 2 1-Bromo-2-nitrobenzene							
1	3.006	3.005	0.001	1593983218	150.0	150.0	
2	2.808	2.807	0.001	221485487	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.902	3.902	0.000	583024262	50.0	49.8	
2	3.789	3.790	-0.001	88374973	50.0	49.1	
						RPD = 1.45	
5 Hexachlorobenzene							
1	4.310	4.310	0.000	639899107	50.0	52.2	
2	4.267	4.268	-0.001	94667276	50.0	49.8	
						RPD = 4.69	
8 alpha-BHC							
1	4.480	4.480	0.000	922031447	50.0	52.0	
2	4.412	4.413	-0.001	125765246	50.0	51.3	
						RPD = 1.39	
9 gamma-BHC (Lindane)							
1	4.768	4.769	-0.001	808411141	50.0	53.4	
2	4.726	4.726	0.000	109419894	50.0	51.3	
						RPD = 4.03	
10 beta-BHC							
1	4.846	4.846	0.000	310482556	50.0	53.5	
2	4.802	4.803	-0.001	45940188	50.0	50.4	
						RPD = 5.97	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
12 delta-BHC							
1	4.994	4.995	-0.001	832654563	50.0	54.0	
2	5.035	5.035	0.000	111018859	50.0	51.3	
						RPD = 5.10	
15 Heptachlor							
1	5.168	5.169	-0.001	746356343	50.0	55.6	
2	5.077	5.077	0.000	98949482	50.0	53.7	
						RPD = 3.48	
16 Aldrin							
1	5.437	5.438	-0.001	803992345	50.0	56.1	
2	5.343	5.345	-0.002	105990729	50.0	53.3	
						RPD = 5.01	
18 Isodrin							
1	5.761	5.762	-0.001	661655750	50.0	57.8	
2	5.702	5.703	-0.001	88202454	50.0	52.2	
						RPD = 10.11	
21 Heptachlor epoxide							
1	6.047	6.048	-0.001	693362640	50.0	57.0	
2	5.881	5.881	0.000	96112665	50.0	53.2	
						RPD = 6.87	
22 trans-Chlordane							
1	6.178	6.179	-0.001	747649027	50.0	57.1	
2	6.078	6.080	-0.002	100065238	50.0	52.7	
						RPD = 7.95	
23 cis-Chlordane							
1	6.319	6.320	-0.001	713693546	50.0	57.0	
2	6.234	6.235	-0.001	95397397	50.0	53.2	
						RPD = 7.02	
24 4,4'-DDE							
1	6.395	6.395	0.000	720702668	50.0	54.9	
2	6.417	6.418	-0.001	97056601	50.0	52.0	
						RPD = 5.39	
25 Endosulfan I							
1	6.467	6.468	-0.001	665698913	50.0	57.9	
2	6.293	6.294	-0.001	90932448	50.0	53.4	
						RPD = 8.13	
27 Dieldrin							
1	6.721	6.722	-0.001	744637876	50.0	58.2	
2	6.582	6.584	-0.002	100683713	50.0	53.6	
						RPD = 8.26	
30 Endrin							
1	6.968	6.970	-0.002	680682331	50.0	61.2	
2	6.905	6.905	0.000	93677959	50.0	56.5	
						RPD = 8.04	
32 4,4'-DDD							
1	7.030	7.031	-0.001	589900405	50.0	57.9	
2	7.032	7.033	-0.001	81026065	50.0	53.4	
						RPD = 8.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
34 Endosulfan II							
1	7.205	7.206	-0.001	623546265	50.0	59.7	
2	7.131	7.131	0.000	86253599	50.0	53.7	
						RPD = 10.67	
35 4,4'-DDT							
1	7.324	7.325	-0.001	542452782	50.0	59.4	
2	7.363	7.364	-0.001	75117761	50.0	57.0	
						RPD = 4.18	
36 Endrin aldehyde							
1	7.650	7.650	0.000	495897049	50.0	62.1	
2	7.489	7.490	-0.001	69108910	50.0	53.7	
						RPD = 14.56	
37 Methoxychlor							
1	7.828	7.830	-0.002	257900388	50.0	62.1	
2	8.093	8.094	-0.001	37045971	50.0	57.1	
						RPD = 8.41	
38 Mirex							
1	7.987	7.988	-0.001	412467394	50.0	61.9	
2	8.283	8.285	-0.002	58268287	50.0	53.5	
						RPD = 14.55	
39 Endosulfan sulfate							
1	8.108	8.109	-0.001	598504751	50.0	64.7	
2	7.781	7.782	-0.001	80197290	50.0	54.5	
						RPD = 17.13	
40 Endrin ketone							
1	8.400	8.400	0.000	623273312	50.0	64.1	
2	8.334	8.335	-0.001	87158165	50.0	53.9	
						RPD = 17.45	
$ 41 DCB Decachlorobiphenyl							
1	9.413	9.415	-0.002	394087473	50.0	65.2	
2	9.604	9.605	-0.001	55484082	50.0	52.2	
						RPD = 22.26	
S 3 Endosulfan, Total							
1						182.3	
2						161.6	
						RPD = 12.09	

Reagents:

8081IcalL4_00031	Amount Added: 1.00	Units: mL	
8081_IS_00008	Amount Added: 75.00	Units: uL	Run Reagent

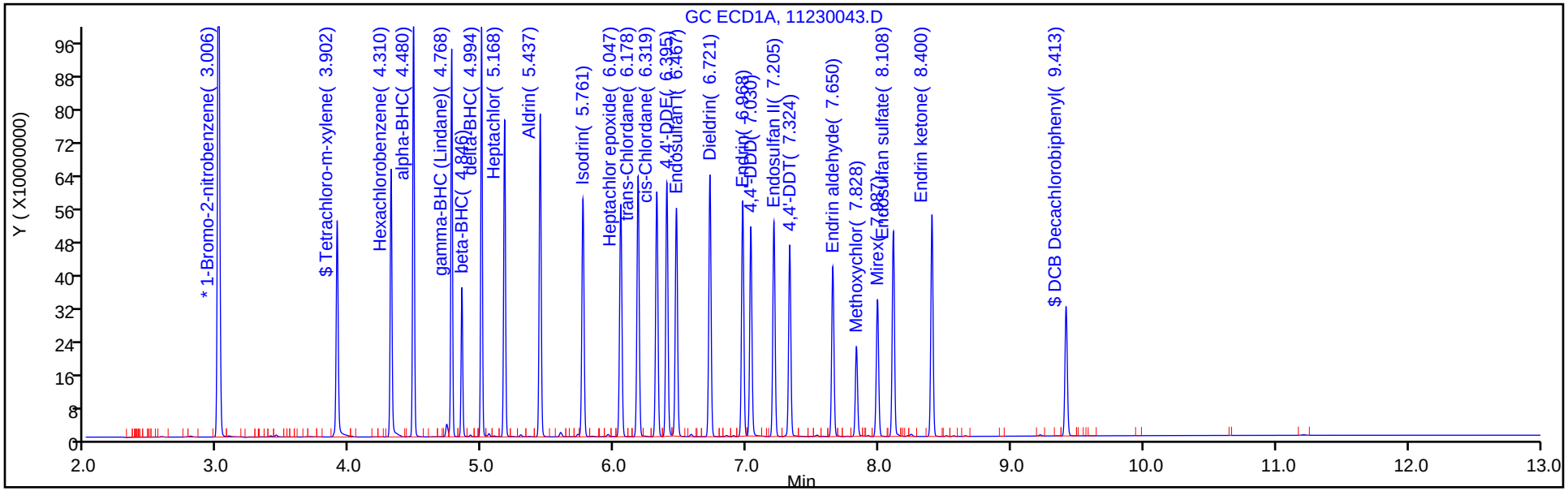
Report Date: 25-Nov-2018 19:31:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

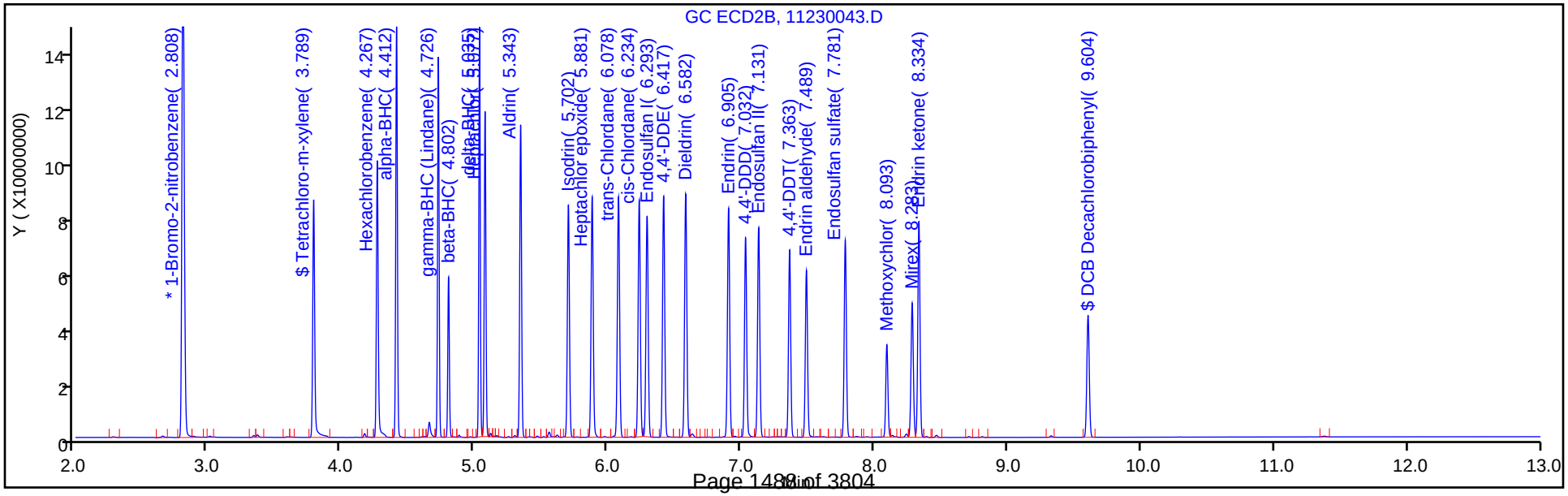
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230043.D

Injection Date:	24-Nov-2018 04:41:17	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	CCV AB			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436649/1-A

Matrix: Water | Lab File ID: 11230027.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/07/2018 10:54

Sample wt/vol: 1000(mL) | Date Analyzed: 11/24/2018 00:00

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438595 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
72-54-8	4,4'-DDD	0.020	U	0.050	0.020	0.0077
72-55-9	4,4'-DDE	0.020	U	0.050	0.020	0.0075
50-29-3	4,4'-DDT	0.050	U	0.050	0.050	0.015
309-00-2	Aldrin	0.020	U	0.050	0.020	0.0059
319-84-6	alpha-BHC	0.020	U	0.050	0.020	0.0053
5103-71-9	alpha-Chlordane	0.020	U	0.050	0.020	0.0053
319-85-7	beta-BHC	0.020	U	0.050	0.020	0.0087
319-86-8	delta-BHC	0.020	U	0.050	0.020	0.0058
60-57-1	Dieldrin	0.020	U	0.050	0.020	0.0063
959-98-8	Endosulfan I	0.020	U	0.050	0.020	0.0058
33213-65-9	Endosulfan II	0.020	U	0.050	0.020	0.0070
1031-07-8	Endosulfan sulfate	0.020	U	0.050	0.020	0.0057
72-20-8	Endrin	0.020	U	0.050	0.020	0.0079
7421-93-4	Endrin aldehyde	0.020	U	0.050	0.020	0.0088
53494-70-5	Endrin ketone	0.020	U	0.050	0.020	0.0070
58-89-9	gamma-BHC (Lindane)	0.020	U	0.050	0.020	0.0069
5103-74-2	gamma-Chlordane	0.020	U	0.050	0.020	0.0091
76-44-8	Heptachlor	0.020	U	0.050	0.020	0.0077
1024-57-3	Heptachlor epoxide	0.020	U	0.050	0.020	0.0075
72-43-5	Methoxychlor	0.050	U	0.050	0.050	0.013
8001-35-2	Toxaphene	0.80	U M	2.0	0.80	0.37

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	84		34-122
877-09-8	Tetrachloro-m-xylene	84		44-124

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230027.D
Lims ID: MB 280-436649/1-A
Client ID:
Sample Type: MB
Inject. Date: 24-Nov-2018 00:00:23 ALS Bottle#: 21 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-436649/1-
Misc. Info.: 280-0076490-027
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:09 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 19:22:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
S 1 Hexachlorocyclohexane, technical							
1						1.42	
2						0.1634	
						RPD = 158.84	
* 2 1-Bromo-2-nitrobenzene							
1	3.006	3.005	0.001	1658419346	150.0	150.0	
2	2.807	2.807	0.000	227541077	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.903	3.902	0.001	159179319	20.0	13.3	
2	3.789	3.790	-0.001	31765532	20.0	16.8	
						RPD = 22.62	
5 Hexachlorobenzene							
1	4.311	4.310	0.001	7524785		0.8796	
2	4.268	4.268	0.000	1218310		0.0563	
						RPD = 175.96	
6 Diallate							
1		4.336				ND	
2		4.221					
7 Propachlor							
1		4.477				ND	
2		4.099					
8 alpha-BHC							
1		4.480				ND	
2		4.413					
9 gamma-BHC (Lindane)							
1	4.771	4.769	0.002	2458955		0.6558	
2	4.726	4.726	0.000	545459		0.0599	
						RPD = 166.50	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
10 beta-BHC							
1		4.846				ND	
2		4.803					
11 2,4,5-Trichlorophenol							
1		4.861				ND	
2		4.772					
12 delta-BHC							
1	4.990	4.995	-0.005	2395759		0.7686	
2	5.034	5.035	-0.001	495988		0.1034	
						RPD = 152.55	
14 Chlordane (technical)							
1		5.101				ND	
1		5.568					
1		6.179					
1		6.317					
1		7.132					
2		4.963					
2		5.483					
2		6.079					
2		6.235					
2		7.179					
13 Technical Chlordane							
1		5.101				ND	
1		5.568					
1		6.179					
1		6.317					
1		7.132					
2		4.963					
2		5.483					
2		6.079					
2		6.235					
2		7.179					
15 Heptachlor							
1	5.159	5.169	-0.010	3552937		0.7107	
2	5.086	5.077	0.009	293600		-0.1912	
						RPD = 347.17	
16 Aldrin							
1		5.438				ND	
2		5.345					
17 Chlorpyrifos							
1	5.666	5.669	-0.003	551671		-0.8621	
2	5.566	5.565	0.001	566796		-1.71	
						RPD = -65.89	
LOD = 0.002000							
18 Isodrin							
1		5.762				ND	
2		5.703					
19 Dicofol							
1		5.801				ND	
2		5.663					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
20 2,4'-DDE							
1		6.031				ND	
2		6.086					
21 Heptachlor epoxide							
1		6.048				ND	
2		5.881					
22 trans-Chlordane							
1		6.179				ND	
2		6.080					
28 Toxaphene							U
1		6.215				ND	
1		6.821					
1		7.494					
1		7.853					
1		8.171					
2		5.728					
2		7.082					
2		7.221					
2		7.736					
2		8.031					
23 cis-Chlordane							
1		6.320				ND	
2		6.235					
24 4,4'-DDE							
1		6.395				ND	
2		6.418					
25 Endosulfan I							
1		6.468				ND	
2		6.294					
26 2,4'-DDD							
1	6.573	6.581	-0.008	17165218		2.52	
2	6.641	6.631	0.010	228697		-0.0632	
						RPD = 210.29	
27 Dieldrin							
1	6.716	6.722	-0.006	658153		0.4061	
2	6.580	6.584	-0.004	111048		-0.2274	
						RPD = 709.01	
29 2,4'-DDT							
1		6.848				ND	
2		6.953					
30 Endrin							
1		6.970				ND	
2		6.905					
31 Kepone							
1	7.003	7.012	-0.009	4584137		26.2	
2	7.011	7.022	-0.011	524408		24.5	
						RPD = 6.58	
32 4,4'-DDD							
1		7.031				ND	
2		7.033					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
33 Chlorobenzilate							
1		7.045				ND	
2		6.900					
34 Endosulfan II							
1		7.206				ND	
2		7.131					
35 4,4'-DDT							
1	7.321	7.325	-0.004	771224		0.8417	
2	7.365	7.364	0.001	198649		0.2854	
						RPD = 98.72	
36 Endrin aldehyde							
1		7.650				ND	
2		7.490					
37 Methoxychlor							
1		7.830				ND	
2		8.094					
38 Mirex							
1		7.988				ND	
2		8.285					
39 Endosulfan sulfate							
1		8.109				ND	
2		7.782					
40 Endrin ketone							
1		8.400				ND	
2		8.335					
$ 41 DCB Decachlorobiphenyl							
1	9.414	9.415	-0.001	127268993	20.0	20.1	
2	9.604	9.605	-0.001	19183914	20.0	16.9	
						RPD = 17.60	
42 Tris(2,3-dibromopropyl)phosphate							
1	11.208	11.209	-0.001	3864724		242.4	
2	11.379	11.380	-0.001	304471		243.9	
						RPD = 0.59	
S 3 Endosulfan, Total							
1		0.000				ND	
2		0.000					

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

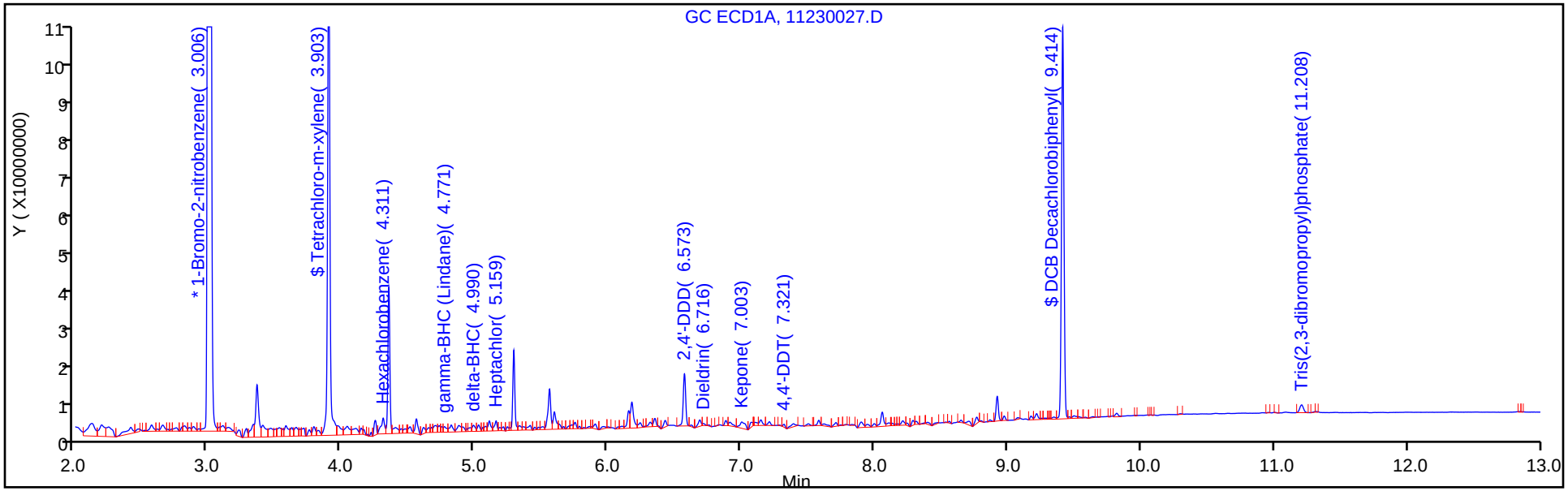
Report Date: 25-Nov-2018 19:32:33 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

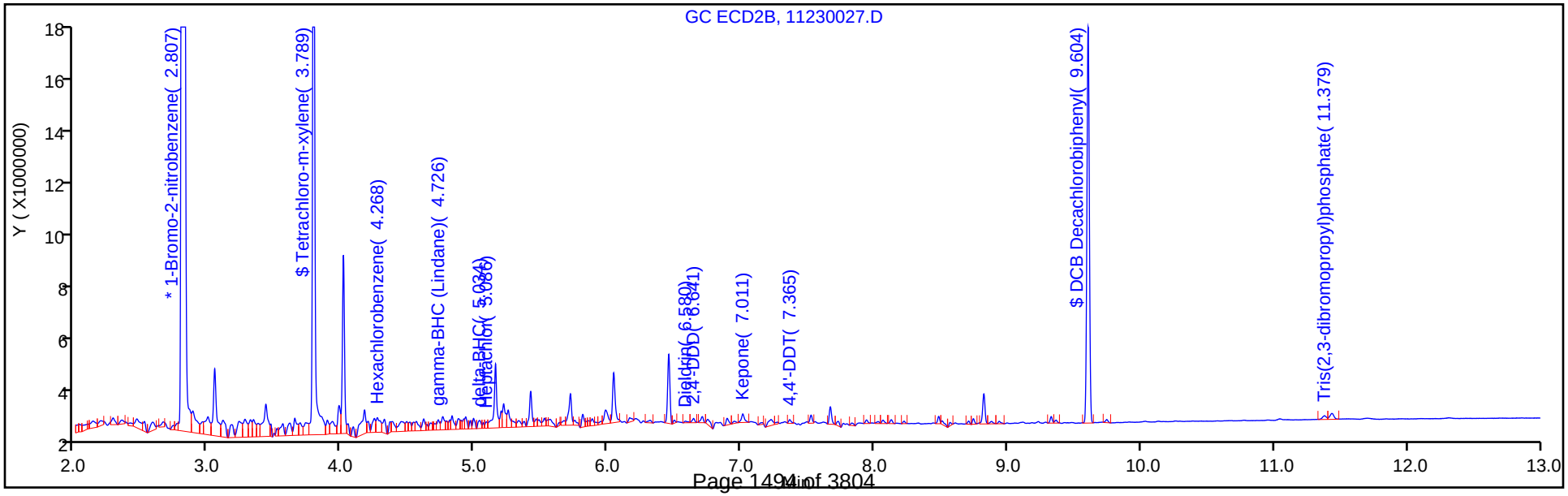
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230027.D

Injection Date:	24-Nov-2018 00:00:23	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	MB 280-436649/1-A			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230027.D				
Lims ID:	MB 280-436649/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	24-Nov-2018 00:00:23	ALS Bottle#:	21	Worklist Smp#:	27
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-436649/1-				
Misc. Info.:	280-0076490-027				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 19:32:09	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				
First Level Reviewer: mooret		Date:	25-Nov-2018 19:22:38		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	13.3	66.74
$ 41 DCB Decachlorobiphenyl	20.0	20.1	100.68

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	16.8	83.76
$ 41 DCB Decachlorobiphenyl	20.0	16.9	84.40

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436649/2-A

Matrix: Water | Lab File ID: 11230028.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/07/2018 10:54

Sample wt/vol: 1000(mL) | Date Analyzed: 11/24/2018 00:17

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438595 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
72-54-8	4,4'-DDD	0.456		0.050	0.020	0.0077
72-55-9	4,4'-DDE	0.435		0.050	0.020	0.0075
50-29-3	4,4'-DDT	0.498		0.050	0.050	0.015
309-00-2	Aldrin	0.439		0.050	0.020	0.0059
319-84-6	alpha-BHC	0.374		0.050	0.020	0.0053
5103-71-9	alpha-Chlordane	0.448		0.050	0.020	0.0053
319-85-7	beta-BHC	0.420		0.050	0.020	0.0087
319-86-8	delta-BHC	0.431		0.050	0.020	0.0058
60-57-1	Dieldrin	0.473		0.050	0.020	0.0063
959-98-8	Endosulfan I	0.436		0.050	0.020	0.0058
33213-65-9	Endosulfan II	0.417		0.050	0.020	0.0070
1031-07-8	Endosulfan sulfate	0.470		0.050	0.020	0.0057
72-20-8	Endrin	0.498		0.050	0.020	0.0079
7421-93-4	Endrin aldehyde	0.387		0.050	0.020	0.0088
53494-70-5	Endrin ketone	0.459		0.050	0.020	0.0070
58-89-9	gamma-BHC (Lindane)	0.430		0.050	0.020	0.0069
5103-74-2	gamma-Chlordane	0.447		0.050	0.020	0.0091
76-44-8	Heptachlor	0.429		0.050	0.020	0.0077
1024-57-3	Heptachlor epoxide	0.459		0.050	0.020	0.0075
72-43-5	Methoxychlor	0.529		0.050	0.050	0.013

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	90		34-122
877-09-8	Tetrachloro-m-xylene	84		44-124

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230028.D
Lims ID: LCS 280-436649/2-A
Client ID:
Sample Type: LCS
Inject. Date: 24-Nov-2018 00:17:53 ALS Bottle#: 22 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436649/2
Misc. Info.: 280-0076490-028
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:09 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 19:22:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.006	3.005	0.001	1592027959	150.0	150.0	
2	2.808	2.807	0.001	225008878	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.903	3.902	0.001	160728023	20.0	14.0	
2	3.790	3.790	0.000	31616647	20.0	16.9	
						RPD = 18.43	
5 Hexachlorobenzene							
1	4.310	4.310	0.000	289295370	50.0	23.8	
2	4.267	4.268	-0.001	47101641	50.0	24.1	
						RPD = 1.30	
8 alpha-BHC							
1	4.480	4.480	0.000	723490368	50.0	41.0	
2	4.412	4.413	-0.001	93546861	50.0	37.4	
						RPD = 9.03	
9 gamma-BHC (Lindane)							
1	4.768	4.769	-0.001	645032472	50.0	42.8	
2	4.726	4.726	0.000	93305200	50.0	43.0	
						RPD = 0.60	
10 beta-BHC							
1	4.845	4.846	-0.001	228446195	50.0	39.3	
2	4.803	4.803	0.000	39064674	50.0	42.0	
						RPD = 6.77	
12 delta-BHC							
1	4.993	4.995	-0.002	677920848	50.0	44.2	
2	5.034	5.035	-0.001	94675781	50.0	43.1	
						RPD = 2.47	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
15 Heptachlor							
1	5.168	5.169	-0.001	552648580	50.0	41.3	
2	5.077	5.077	0.000	80393002	50.0	42.9	
						RPD = 3.65	
16 Aldrin							
1	5.438	5.438	0.000	579070131	50.0	40.6	
2	5.343	5.345	-0.002	88743430	50.0	43.9	
						RPD = 7.89	
21 Heptachlor epoxide							
1	6.047	6.048	-0.001	526120100	50.0	43.4	
2	5.880	5.881	-0.001	84377160	50.0	45.9	
						RPD = 5.70	
22 trans-Chlordane							
1	6.177	6.179	-0.002	591292151	50.0	45.3	
2	6.078	6.080	-0.002	86304196	50.0	44.7	
						RPD = 1.30	
23 cis-Chlordane							
1	6.319	6.320	-0.001	591351388	50.0	47.4	
2	6.233	6.235	-0.002	81741621	50.0	44.8	
						RPD = 5.70	
24 4,4'-DDE							
1	6.394	6.395	-0.001	467012170	50.0	35.8	
2	6.416	6.418	-0.002	82492290	50.0	43.5	
						RPD = 19.40	
25 Endosulfan I							
1	6.467	6.468	-0.001	527024002	50.0	45.9	
2	6.292	6.294	-0.002	75640800	50.0	43.6	
						RPD = 5.26	
27 Dieldrin							
1	6.720	6.722	-0.002	645692968	50.0	50.6	
2	6.582	6.584	-0.002	90313882	50.0	47.3	
						RPD = 6.73	
30 Endrin							
1	6.968	6.970	-0.002	554617246	50.0	50.0	
2	6.903	6.905	-0.002	83983077	50.0	49.8	
						RPD = 0.41	
32 4,4'-DDD							
1	7.028	7.031	-0.003	481880299	50.0	47.4	
2	7.031	7.033	-0.002	70432388	50.0	45.6	
						RPD = 3.93	
34 Endosulfan II							
1	7.203	7.206	-0.003	499074131	50.0	47.9	
2	7.129	7.131	-0.002	68338730	50.0	41.7	
						RPD = 13.89	
35 4,4'-DDT							
1	7.323	7.325	-0.002	428813308	50.0	47.2	
2	7.363	7.364	-0.001	66625785	50.0	49.8	
						RPD = 5.32	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
36 Endrin aldehyde							
1	7.648	7.650	-0.002	320799647	50.0	40.3	
2	7.489	7.490	-0.001	50875957	50.0	38.7	
						RPD = 3.99	
37 Methoxychlor							
1	7.828	7.830	-0.002	237796556	50.0	57.3	
2	8.093	8.094	-0.001	34897163	50.0	52.9	
						RPD = 8.04	
39 Endosulfan sulfate							
1	8.108	8.109	-0.001	576169303	50.0	62.4	
2	7.781	7.782	-0.001	70304388	50.0	47.0	
						RPD = 28.26	
40 Endrin ketone							
1	8.398	8.400	-0.002	538732751	50.0	55.6	
2	8.333	8.335	-0.002	75549867	50.0	45.9	
						RPD = 19.09	
$ 41 DCB Decachlorobiphenyl							
1	9.413	9.415	-0.002	133949450	20.0	22.1	
2	9.603	9.605	-0.002	20186788	20.0	18.0	
						RPD = 20.27	

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

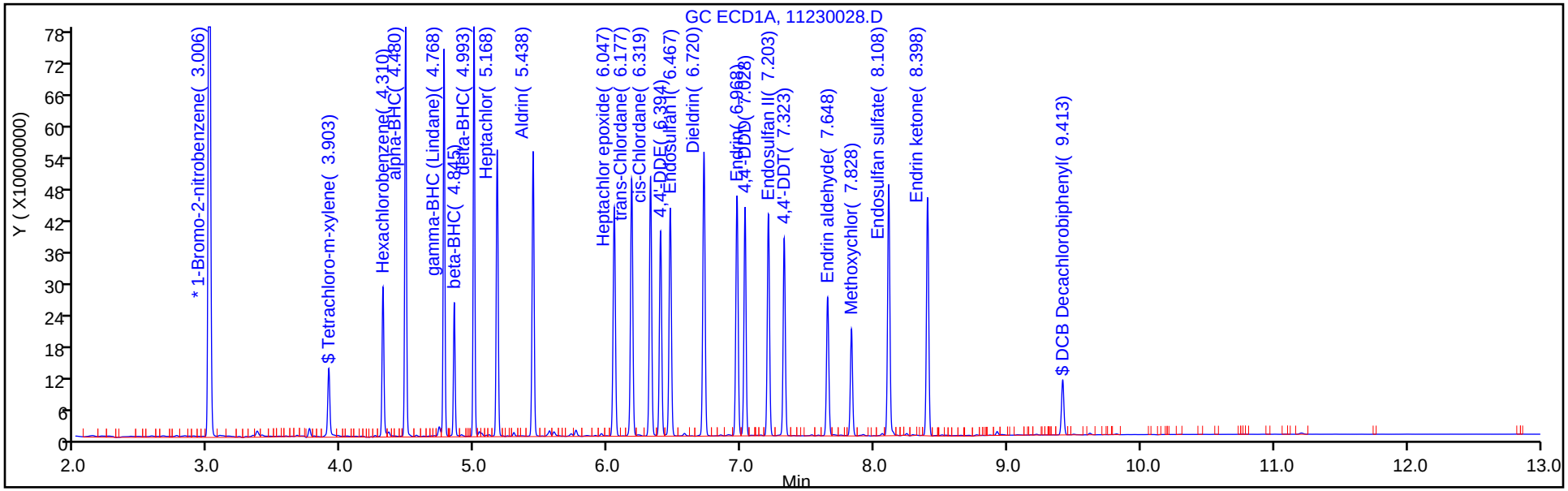
Report Date: 25-Nov-2018 19:32:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

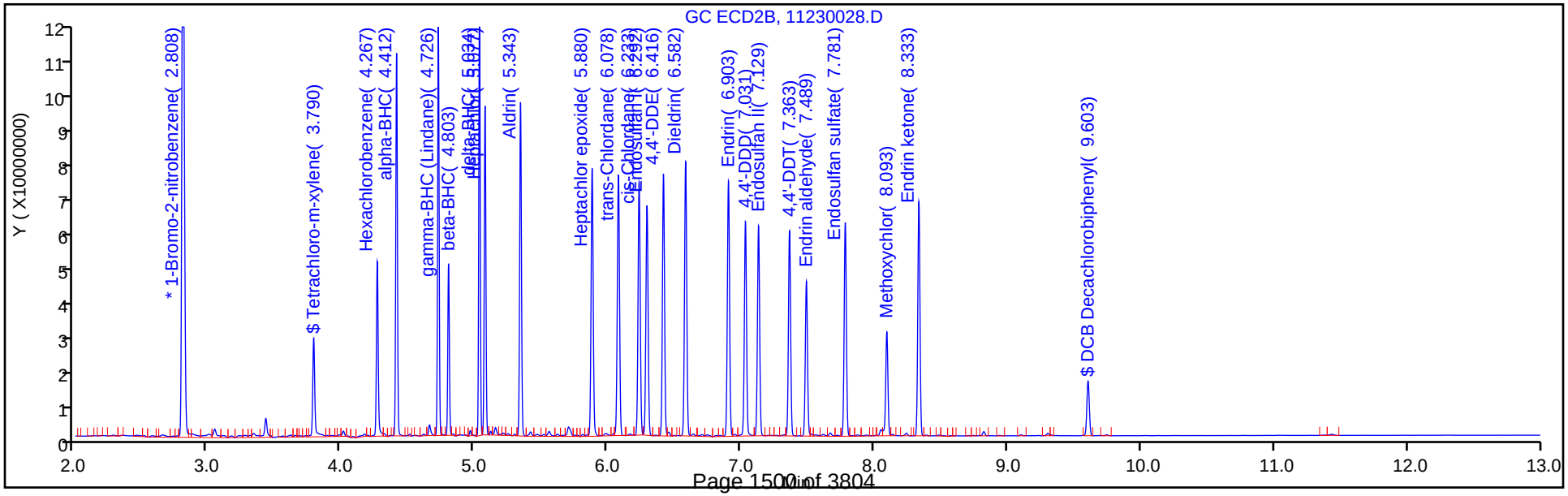
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230028.D

Injection Date:	24-Nov-2018 00:17:53	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	LCS 280-436649/2-A			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230028.D				
Lims ID:	LCS 280-436649/2-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	24-Nov-2018 00:17:53	ALS Bottle#:	22	Worklist Smp#:	28
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-436649/2				
Misc. Info.:	280-0076490-028				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 19:32:09	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				
First Level Reviewer: mooret		Date:	25-Nov-2018 19:22:46		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	14.0	70.10
$ 41 DCB Decachlorobiphenyl	20.0	22.1	110.46

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	16.9	84.32
$ 41 DCB Decachlorobiphenyl	20.0	18.0	90.13

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436649/6-A

Matrix: Water | Lab File ID: 11230039.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/07/2018 10:54

Sample wt/vol: 1000(mL) | Date Analyzed: 11/24/2018 03:30

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438595 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
8001-35-2	Toxaphene	3.01	Q	2.0	0.80	0.37

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	97		34-122
877-09-8	Tetrachloro-m-xylene	77		44-124

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230039.D
Lims ID: LCS 280-436649/6-A
Client ID:
Sample Type: LCS
Inject. Date: 24-Nov-2018 03:30:59 ALS Bottle#: 33 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436649/6
Misc. Info.: 280-0076490-039
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:09 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

First Level Reviewer: mooret Date: 25-Nov-2018 19:29:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.005	0.001	1747731087	150.0	150.0	
2	2.807	2.807	0.000	228557801	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.903	3.902	0.001	168871753	20.0	13.4	
2	3.789	3.790	-0.001	29569724	20.0	15.5	
						RPD = 14.14	
28 Toxaphene							M
1	0.000	6.215	-6.215	0	200.0	0	
1	6.820	6.821	-0.001	25671356	200.0	168.9	M
1	7.490	7.494	-0.004	39455439	200.0	233.4	M
1	7.856	7.853	0.003	17652637	200.0	260.6	M
1	8.177	8.171	0.006	23256150	200.0	343.2	M
		Average of Peak Amounts =				251.5	
2	5.717	5.728	-0.011	3678687	200.0	484.1	M
2	7.079	7.082	-0.003	6872590	200.0	208.2	M
2	7.219	7.221	-0.002	17220140	200.0	198.7	M
2	7.725	7.736	-0.011	8749444	200.0	357.4	M
2	8.030	8.031	-0.001	12345453	200.0	255.3	M
		Average of Peak Amounts =				300.7	
						RPD = 17.82	
$ 41 DCB Decachlorobiphenyl							
1	9.414	9.415	-0.001	148038768	20.0	22.2	
2	9.604	9.605	-0.001	21933173	20.0	19.4	
						RPD = 13.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

8081_IS_00008	Amount Added:	75.00	Units: uL	Run Reagent

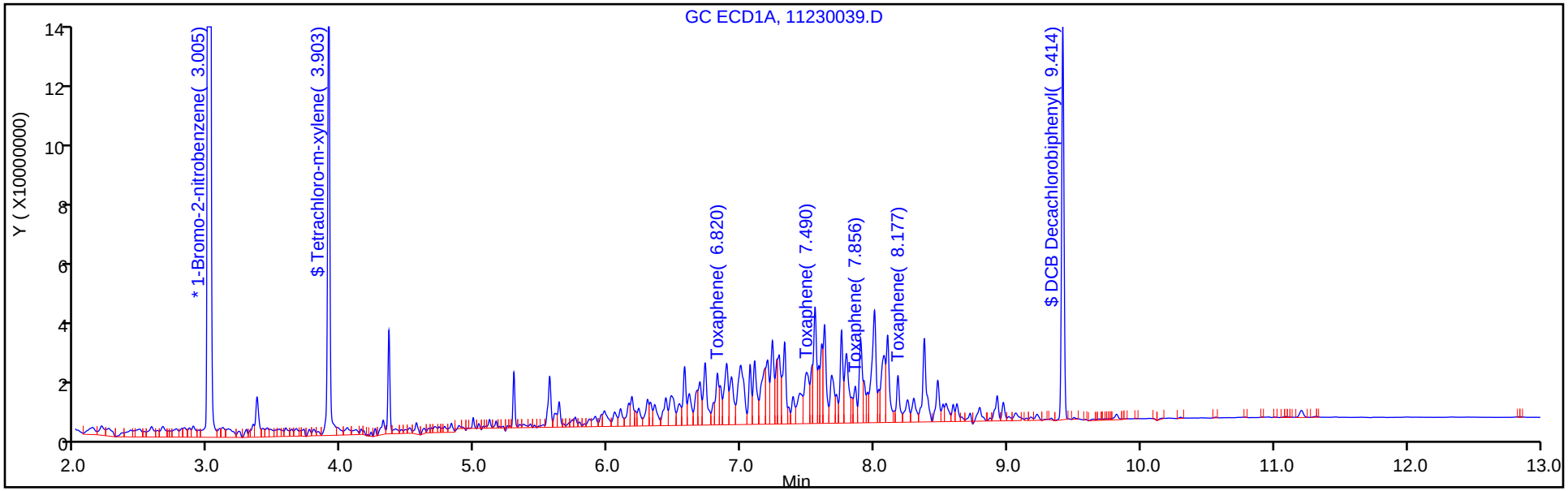
Report Date: 25-Nov-2018 19:32:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

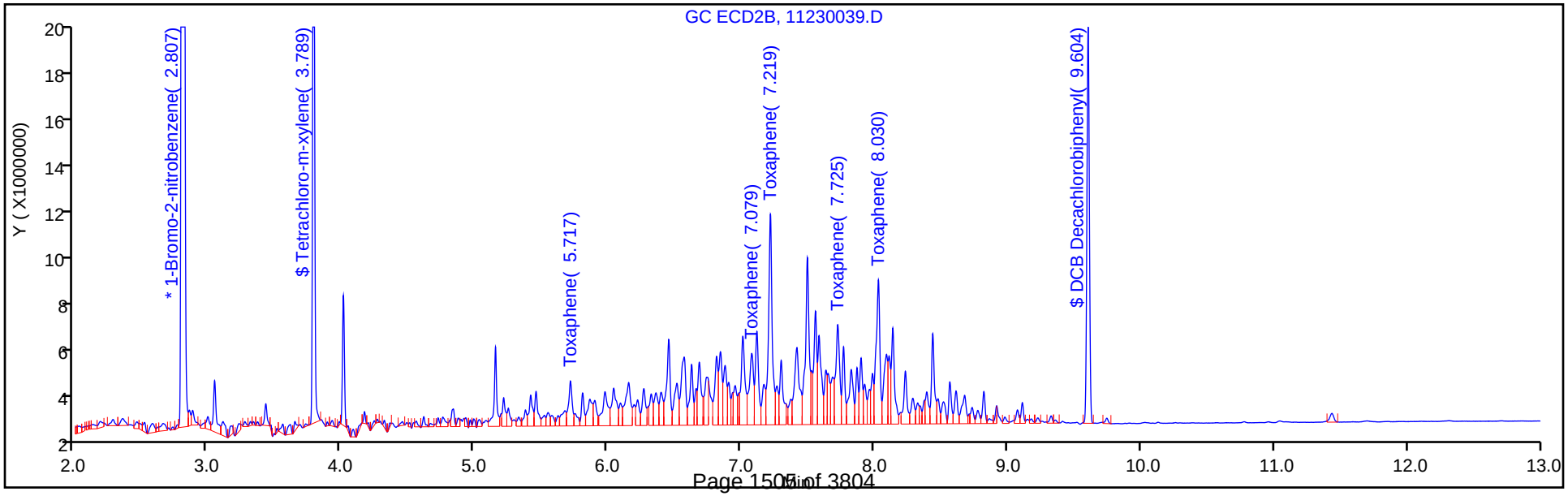
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230039.D

Injection Date:	24-Nov-2018 03:30:59	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	LCS 280-436649/6-A			Worklist Smp#:	39
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230039.D				
Lims ID:	LCS 280-436649/6-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	24-Nov-2018 03:30:59	ALS Bottle#:	33	Worklist Smp#:	39
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-436649/6				
Misc. Info.:	280-0076490-039				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 19:32:09	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				
First Level Reviewer: mooret		Date:	25-Nov-2018 19:29:46		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	13.4	67.17
$ 41 DCB Decachlorobiphenyl	20.0	22.2	111.21

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	15.5	77.38
$ 41 DCB Decachlorobiphenyl	20.0	19.4	96.77

Report Date: 25-Nov-2018 19:32:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

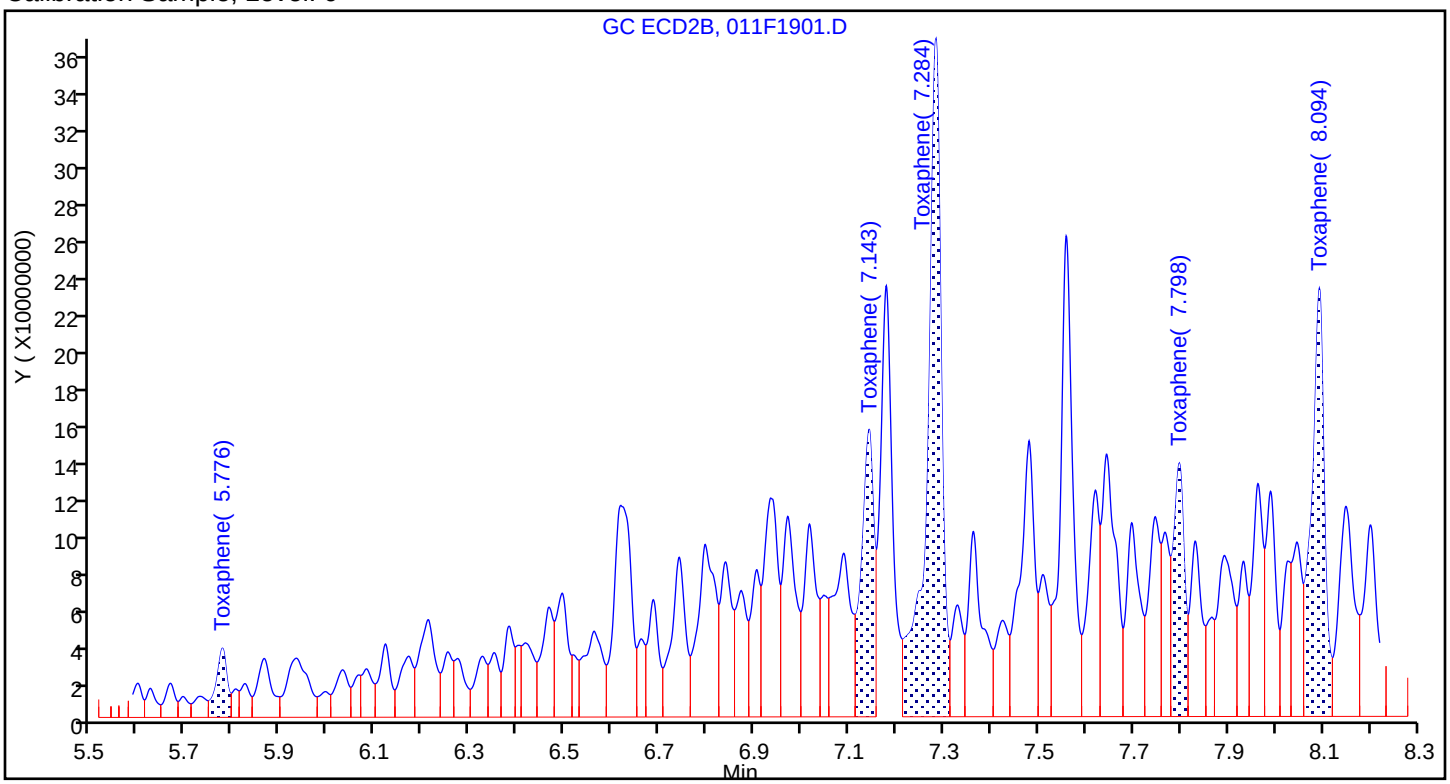
TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230039.D

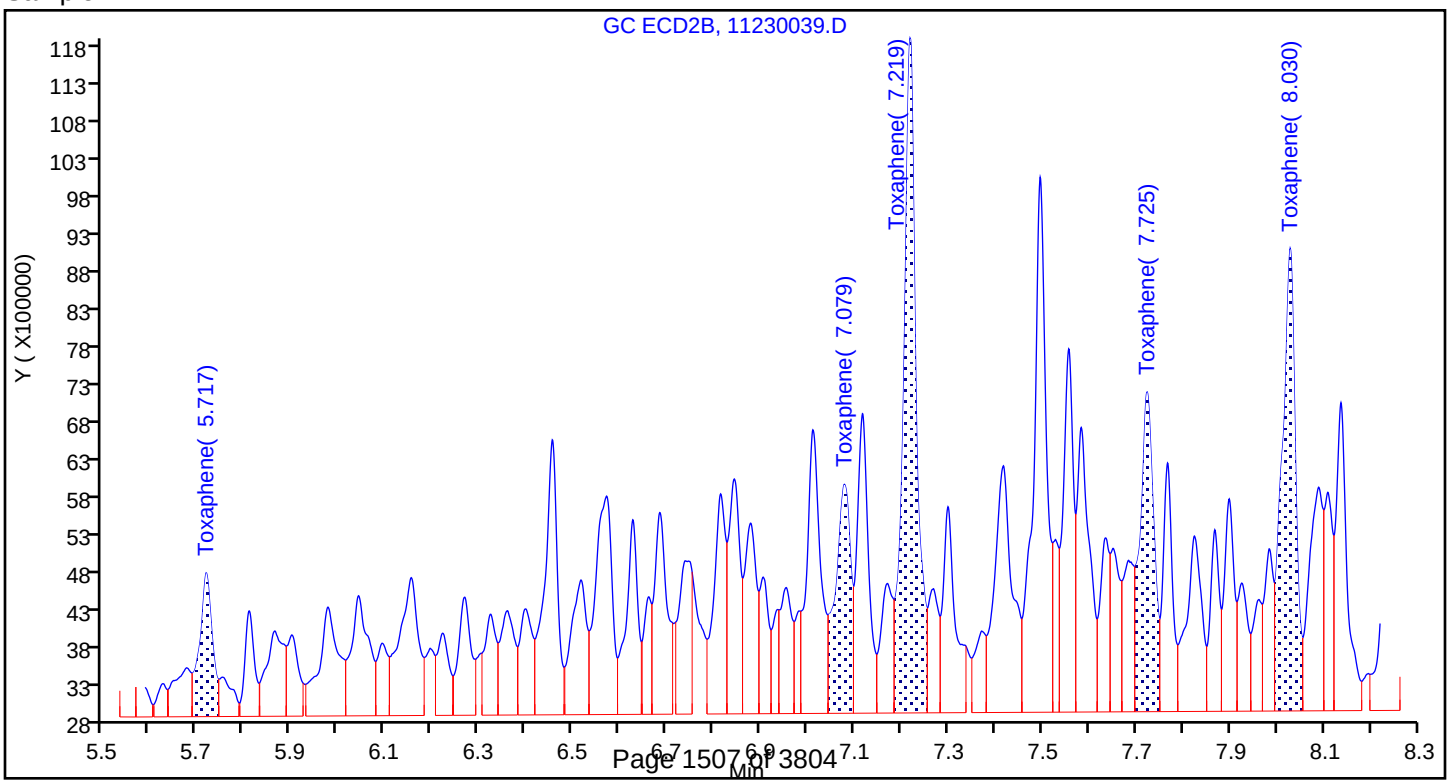
Injection Date:	24-Nov-2018 03:30:59	Instrument ID:	SGC_P2		
Lims ID:	LCS 280-436649/6-A				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	33	Worklist Smp#:	39
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP2 (0.32 mm)	Detector	GC ECD2B		

28 Toxaphene, CAS: 8001-35-2

Calibration Sample, Level: 6



Sample



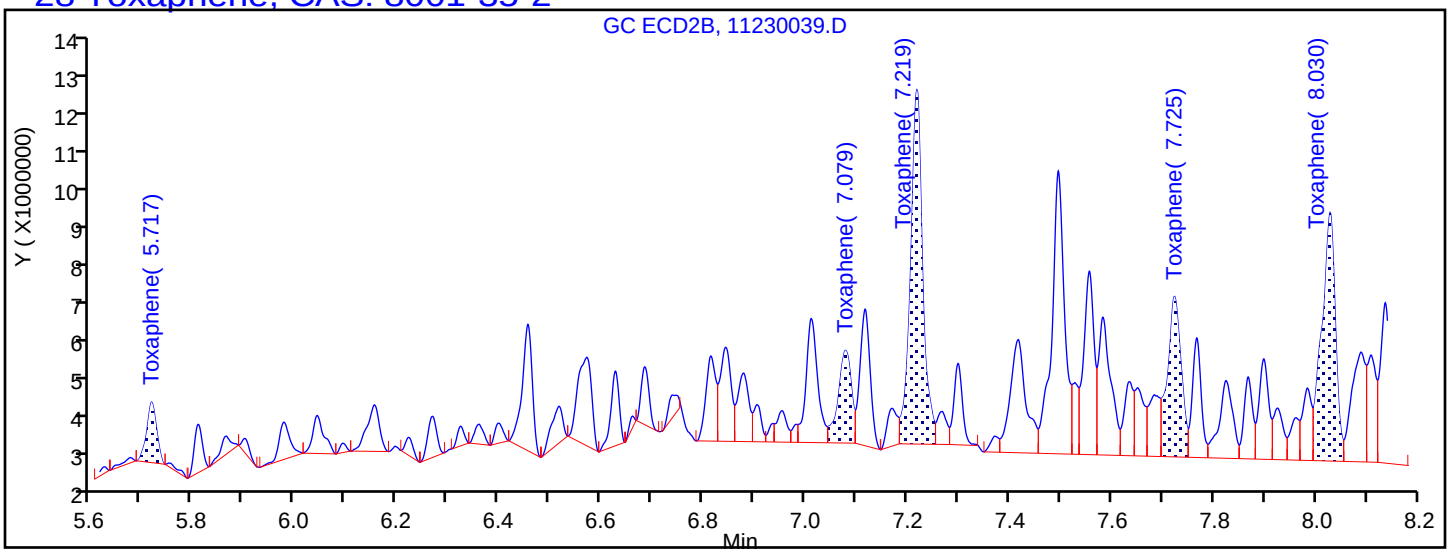
Report Date: 25-Nov-2018 19:32:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230039.D

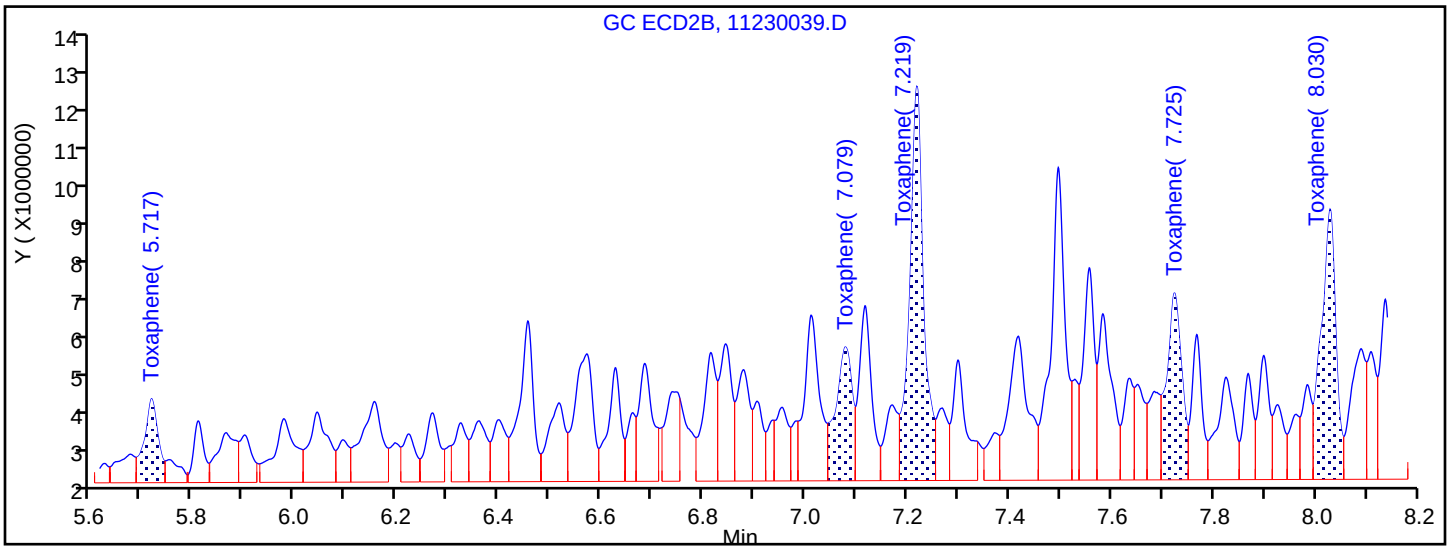
Injection Date:	24-Nov-2018 03:30:59	Instrument ID:	SGC_P2		
Lims ID:	LCS 280-436649/6-A				
Client ID:					
Operator ID:	TEM	ALS Bottle#:	33	Worklist Smp#:	39
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		
Column:	CLP2 (0.32 mm)	Detector	GC ECD2B		

28 Toxaphene, CAS: 8001-35-2



Processing Integration Results

5.717	Response = 1848455
7.079	Response = 3819615
7.219	Response = 13354342
7.725	Response = 6828442
8.030	Response = 10555270



Manual Integration Results

5.717	Response = 3678687	M
7.079	Response = 6872590	M
7.219	Response = 17220140	M
7.725	Response = 8749444	M
8.030	Response = 12345453	M

Reviewer: mooret, 25-Nov-2018 19:29:35

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM I
PESTICIDES ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-436649/3-A

Matrix: Water | Lab File ID: 11230029.D

Analysis Method: 8081B | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/07/2018 10:54

Sample wt/vol: 1000(mL) | Date Analyzed: 11/24/2018 00:35

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438595 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
72-54-8	4,4'-DDD	0.425		0.050	0.020	0.0077
72-55-9	4,4'-DDE	0.408		0.050	0.020	0.0075
50-29-3	4,4'-DDT	0.462		0.050	0.050	0.015
309-00-2	Aldrin	0.418		0.050	0.020	0.0059
319-84-6	alpha-BHC	0.359		0.050	0.020	0.0053
5103-71-9	alpha-Chlordane	0.422		0.050	0.020	0.0053
319-85-7	beta-BHC	0.408		0.050	0.020	0.0087
319-86-8	delta-BHC	0.418		0.050	0.020	0.0058
60-57-1	Dieldrin	0.445		0.050	0.020	0.0063
959-98-8	Endosulfan I	0.409		0.050	0.020	0.0058
33213-65-9	Endosulfan II	0.392		0.050	0.020	0.0070
1031-07-8	Endosulfan sulfate	0.438		0.050	0.020	0.0057
72-20-8	Endrin	0.469		0.050	0.020	0.0079
7421-93-4	Endrin aldehyde	0.365		0.050	0.020	0.0088
53494-70-5	Endrin ketone	0.425		0.050	0.020	0.0070
58-89-9	gamma-BHC (Lindane)	0.416		0.050	0.020	0.0069
5103-74-2	gamma-Chlordane	0.423		0.050	0.020	0.0091
76-44-8	Heptachlor	0.422		0.050	0.020	0.0077
1024-57-3	Heptachlor epoxide	0.434		0.050	0.020	0.0075
72-43-5	Methoxychlor	0.483		0.050	0.050	0.013

CAS NO.	SURROGATE	%REC	Q	LIMITS
2051-24-3	DCB Decachlorobiphenyl	86		34-122
877-09-8	Tetrachloro-m-xylene	78		44-124

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230029.D
Lims ID: LCSD 280-436649/3-A
Client ID:
Sample Type: LCSD
Inject. Date: 24-Nov-2018 00:35:25 ALS Bottle#: 23 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-436649/
Misc. Info.: 280-0076490-029
Operator ID: TEM Instrument ID: SGC_P2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m
Limit Group: GCSV - 8081A - IS
Last Update: 25-Nov-2018 19:32:09 Calib Date: 13-Oct-2018 20:49:46
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D

Column 1 : CLP1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0312

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
* 2 1-Bromo-2-nitrobenzene							
1	3.005	3.005	0.000	1624552569	150.0	150.0	
2	2.807	2.807	0.000	227168054	150.0	150.0	
$ 4 Tetrachloro-m-xylene							
1	3.903	3.902	0.001	153047159	20.0	13.1	
2	3.789	3.790	-0.001	29690973	20.0	15.6	
						RPD = 17.63	
5 Hexachlorobenzene							
1	4.310	4.310	0.000	284233416	50.0	22.9	
2	4.267	4.268	-0.001	45788172	50.0	23.2	
						RPD = 1.17	
8 alpha-BHC							
1	4.480	4.480	0.000	700893027	50.0	38.9	
2	4.411	4.413	-0.002	90613792	50.0	35.9	
						RPD = 8.10	
9 gamma-BHC (Lindane)							
1	4.769	4.769	0.000	627778124	50.0	40.8	
2	4.726	4.726	0.000	91147738	50.0	41.6	
						RPD = 1.97	
10 beta-BHC							
1	4.845	4.846	-0.001	221439527	50.0	37.3	
2	4.802	4.803	-0.001	38346048	50.0	40.8	
						RPD = 9.10	
12 delta-BHC							
1	4.994	4.995	-0.001	659357199	50.0	42.1	
2	5.035	5.035	0.000	92653069	50.0	41.8	
						RPD = 0.87	
15 Heptachlor							
1	5.167	5.169	-0.002	542464349	50.0	39.8	
2	5.076	5.077	-0.001	79945697	50.0	42.2	
						RPD = 5.96	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
16 Aldrin							
1	5.437	5.438	-0.001	554236487	50.0	38.1	
2	5.343	5.345	-0.002	85248053	50.0	41.8	
						RPD = 9.20	
21 Heptachlor epoxide							
1	6.046	6.048	-0.002	497859620	50.0	40.2	
2	5.881	5.881	0.000	80542883	50.0	43.4	
						RPD = 7.51	
22 trans-Chlordane							
1	6.176	6.179	-0.003	553771568	50.0	41.6	
2	6.078	6.080	-0.002	82366541	50.0	42.3	
						RPD = 1.52	
23 cis-Chlordane							
1	6.319	6.320	-0.001	551987825	50.0	43.4	
2	6.233	6.235	-0.002	77894033	50.0	42.2	
						RPD = 2.72	
24 4,4'-DDE							
1	6.395	6.395	0.000	450167957	50.0	33.8	
2	6.416	6.418	-0.002	78145224	50.0	40.8	
						RPD = 18.62	
25 Endosulfan I							
1	6.467	6.468	-0.001	488651571	50.0	41.7	
2	6.292	6.294	-0.002	71728745	50.0	40.9	
						RPD = 2.09	
27 Dieldrin							
1	6.721	6.722	-0.001	601274478	50.0	46.2	
2	6.582	6.584	-0.002	85852455	50.0	44.5	
						RPD = 3.71	
30 Endrin							
1	6.969	6.970	-0.001	521743460	50.0	46.2	
2	6.904	6.905	-0.001	79833215	50.0	46.9	
						RPD = 1.59	
32 4,4'-DDD							
1	7.029	7.031	-0.002	447386285	50.0	43.2	
2	7.032	7.033	-0.001	66314851	50.0	42.5	
						RPD = 1.60	
34 Endosulfan II							
1	7.205	7.206	-0.001	462968022	50.0	43.6	
2	7.130	7.131	-0.001	64872979	50.0	39.2	
						RPD = 10.70	
35 4,4'-DDT							
1	7.323	7.325	-0.002	394969046	50.0	42.7	
2	7.362	7.364	-0.002	62498958	50.0	46.2	
						RPD = 8.06	
36 Endrin aldehyde							
1	7.649	7.650	-0.001	305217795	50.0	37.6	
2	7.490	7.490	0.000	48456121	50.0	36.5	
						RPD = 2.95	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/mL	OnCol Amt ng/mL	Flags
37 Methoxychlor							
1	7.826	7.830	-0.004	217284797	50.0	51.3	
2	8.092	8.094	-0.002	32191862	50.0	48.3	
						RPD = 6.11	
39 Endosulfan sulfate							
1	8.107	8.109	-0.002	522278262	50.0	55.5	
2	7.781	7.782	-0.001	66347055	50.0	43.8	
						RPD = 23.41	
40 Endrin ketone							
1	8.400	8.400	0.000	491692053	50.0	49.7	
2	8.334	8.335	-0.001	70784185	50.0	42.5	
						RPD = 15.58	
$ 41 DCB Decachlorobiphenyl							
1	9.414	9.415	-0.001	127334608	20.0	20.6	
2	9.604	9.605	-0.001	19405050	20.0	17.1	
						RPD = 18.33	

Reagents:

8081_IS_00008 Amount Added: 75.00 Units: uL Run Reagent

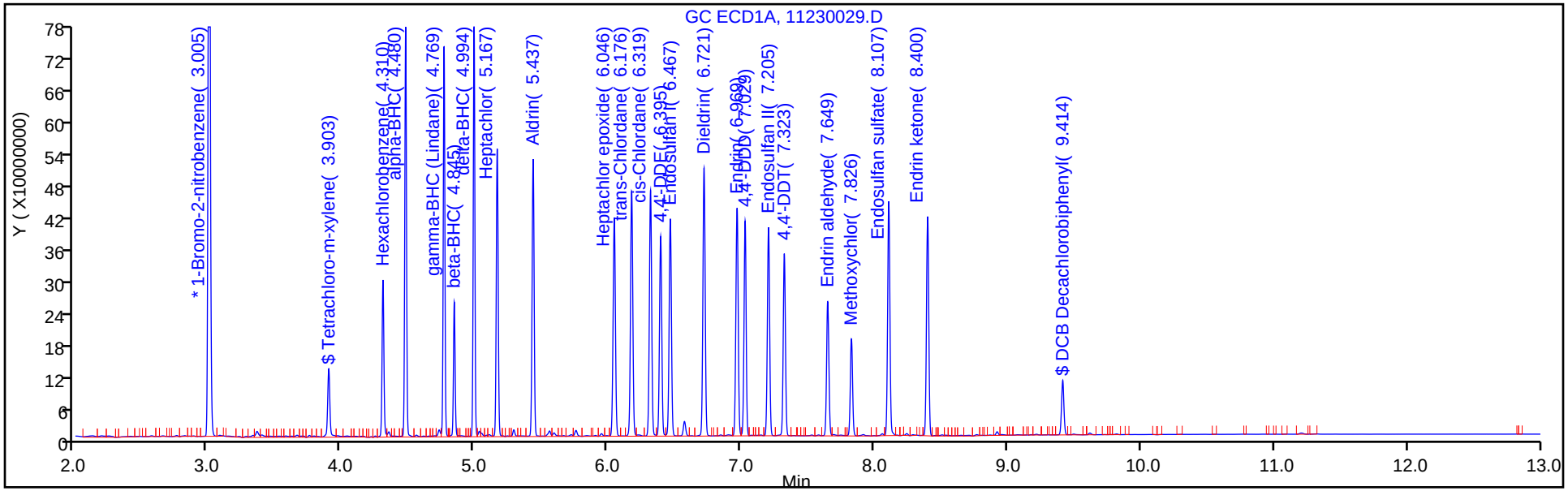
Report Date: 25-Nov-2018 19:32:29 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

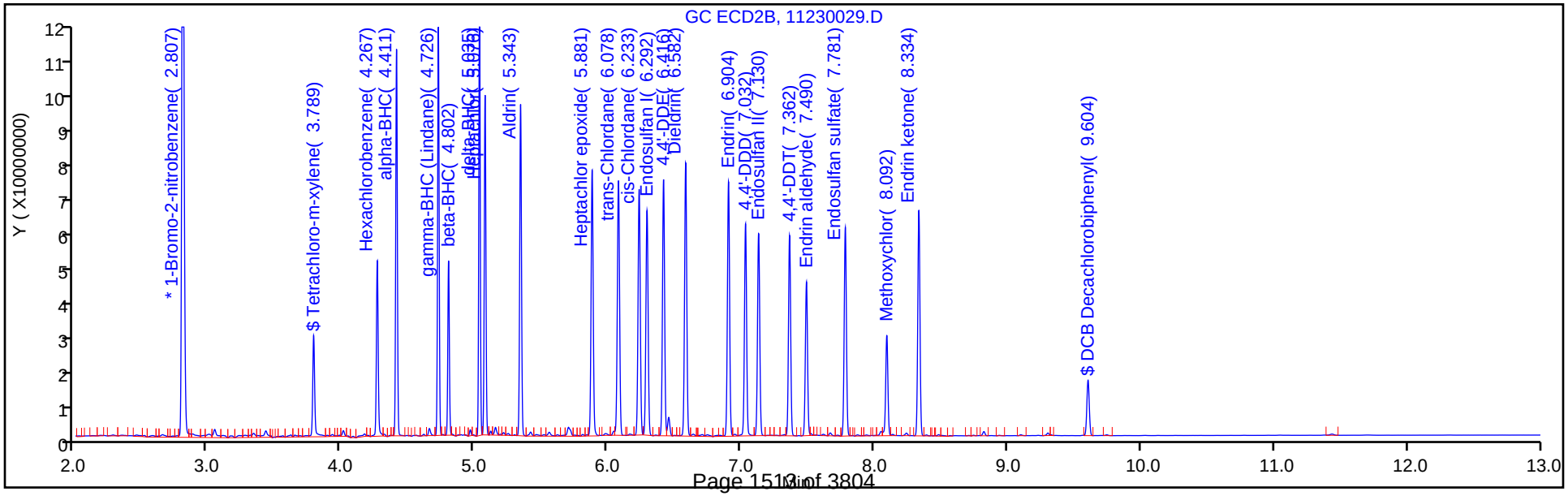
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230029.D

Injection Date:	24-Nov-2018 00:35:25	Instrument ID:	SGC_P2	Operator ID:	TEM
Lims ID:	LCSD 280-436649/3-A			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	P2 8081 IS	Limit Group:	GCSV - 8081A - IS		

Column: CLP1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



Column: CLP2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Peak: 3



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\11230029.D				
Lims ID:	LCSD 280-436649/3-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	24-Nov-2018 00:35:25	ALS Bottle#:	23	Worklist Smp#:	29
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 280-436649/				
Misc. Info.:	280-0076490-029				
Operator ID:	TEM	Instrument ID:	SGC_P2		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_P2\20181123-76490.b\P2 8081 IS.m				
Limit Group:	GCSV - 8081A - IS				
Last Update:	25-Nov-2018 19:32:09	Calib Date:	13-Oct-2018 20:49:46		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\SGC_P2\20181013-75051.b\027F3501.D				
Column 1 :	CLP1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0312				

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	13.1	65.54
$ 41 DCB Decachlorobiphenyl	20.0	20.6	102.85

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 Tetrachloro-m-xylene	20.0	15.6	78.21
$ 41 DCB Decachlorobiphenyl	20.0	17.1	85.58

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Start Date: 10/13/2018 13:16

Analysis Batch Number: 433303 End Date: 10/14/2018 04:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PEM 280-433303/6		10/13/2018 13:16	1		CLP1 0.32(mm)
PEM 280-433303/6		10/13/2018 13:16	1		CLP2 0.32(mm)
STD7 280-433303/9 IC		10/13/2018 14:08	1		CLP1 0.32(mm)
STD7 280-433303/9 IC		10/13/2018 14:08	1		CLP2 0.32(mm)
STD6 280-433303/10 IC		10/13/2018 14:26	1		CLP1 0.32(mm)
STD6 280-433303/10 IC		10/13/2018 14:26	1		CLP2 0.32(mm)
STD5 280-433303/11 IC		10/13/2018 14:43	1		CLP1 0.32(mm)
STD5 280-433303/11 IC		10/13/2018 14:43	1		CLP2 0.32(mm)
STD4 280-433303/12 IC		10/13/2018 15:01	1		CLP1 0.32(mm)
STD4 280-433303/12 IC		10/13/2018 15:01	1		CLP2 0.32(mm)
STD3 280-433303/13 IC		10/13/2018 15:18	1		CLP1 0.32(mm)
STD3 280-433303/13 IC		10/13/2018 15:18	1		CLP2 0.32(mm)
STD2 280-433303/14 IC		10/13/2018 15:35	1		CLP1 0.32(mm)
STD2 280-433303/14 IC		10/13/2018 15:35	1		CLP2 0.32(mm)
STD1 280-433303/15 IC		10/13/2018 15:53	1		CLP1 0.32(mm)
STD1 280-433303/15 IC		10/13/2018 15:53	1		CLP2 0.32(mm)
STD6 280-433303/16 IC		10/13/2018 16:10	1	011F1901.D	CLP1 0.32(mm)
STD6 280-433303/16 IC		10/13/2018 16:10	1	011F1901.D	CLP2 0.32(mm)
STD5 280-433303/17 IC		10/13/2018 16:28	1	012F2001.D	CLP1 0.32(mm)
STD5 280-433303/17 IC		10/13/2018 16:28	1	012F2001.D	CLP2 0.32(mm)
STD4 280-433303/18 IC		10/13/2018 16:45	1	013F2101.D	CLP1 0.32(mm)
STD4 280-433303/18 IC		10/13/2018 16:45	1	013F2101.D	CLP2 0.32(mm)
STD3 280-433303/19 IC		10/13/2018 17:03	1	014F2201.D	CLP1 0.32(mm)
STD3 280-433303/19 IC		10/13/2018 17:03	1	014F2201.D	CLP2 0.32(mm)
STD2 280-433303/20 IC		10/13/2018 17:20	1	015F2301.D	CLP1 0.32(mm)
STD2 280-433303/20 IC		10/13/2018 17:20	1	015F2301.D	CLP2 0.32(mm)
STD1 280-433303/21 IC		10/13/2018 17:37	1	016F2401.D	CLP1 0.32(mm)
STD1 280-433303/21 IC		10/13/2018 17:37	1	016F2401.D	CLP2 0.32(mm)
STD5 280-433303/22 IC		10/13/2018 17:55	1		CLP1 0.32(mm)
STD5 280-433303/22 IC		10/13/2018 17:55	1		CLP2 0.32(mm)
STD4 280-433303/23 IC		10/13/2018 18:12	1		CLP1 0.32(mm)
STD4 280-433303/23 IC		10/13/2018 18:12	1		CLP2 0.32(mm)
STD3 280-433303/24 IC		10/13/2018 18:30	1		CLP1 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Start Date: 10/13/2018 13:16

Analysis Batch Number: 433303 End Date: 10/14/2018 04:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD3 280-433303/24 IC		10/13/2018 18:30	1		CLP2 0.32(mm)
STD2 280-433303/25 IC		10/13/2018 18:47	1		CLP1 0.32(mm)
STD2 280-433303/25 IC		10/13/2018 18:47	1		CLP2 0.32(mm)
STD1 280-433303/26 IC		10/13/2018 19:05	1		CLP1 0.32(mm)
STD1 280-433303/26 IC		10/13/2018 19:05	1		CLP2 0.32(mm)
STD6 280-433303/27 IC		10/13/2018 19:22	1	022F3001.D	CLP1 0.32(mm)
STD6 280-433303/27 IC		10/13/2018 19:22	1	022F3001.D	CLP2 0.32(mm)
STD5 280-433303/28 IC		10/13/2018 19:39	1	023F3101.D	CLP1 0.32(mm)
STD5 280-433303/28 IC		10/13/2018 19:39	1	023F3101.D	CLP2 0.32(mm)
STD4 280-433303/29 ICIS		10/13/2018 19:57	1	024F3201.D	CLP1 0.32(mm)
STD4 280-433303/29 ICIS		10/13/2018 19:57	1	024F3201.D	CLP2 0.32(mm)
STD3 280-433303/30 IC		10/13/2018 20:14	1	025F3301.D	CLP1 0.32(mm)
STD3 280-433303/30 IC		10/13/2018 20:14	1	025F3301.D	CLP2 0.32(mm)
STD2 280-433303/31 IC		10/13/2018 20:32	1	026F3401.D	CLP1 0.32(mm)
STD2 280-433303/31 IC		10/13/2018 20:32	1	026F3401.D	CLP2 0.32(mm)
STD1 280-433303/32 IC		10/13/2018 20:49	1	027F3501.D	CLP1 0.32(mm)
STD1 280-433303/32 IC		10/13/2018 20:49	1	027F3501.D	CLP2 0.32(mm)
ICV 280-433303/33		10/13/2018 21:07	1	028F3601.D	CLP1 0.32(mm)
ICV 280-433303/33		10/13/2018 21:07	1	028F3601.D	CLP2 0.32(mm)
ICV 280-433303/34		10/13/2018 21:24	1	029F3701.D	CLP1 0.32(mm)
ICV 280-433303/34		10/13/2018 21:24	1	029F3701.D	CLP2 0.32(mm)
ICV 280-433303/35		10/13/2018 21:41	1	030F3801.D	CLP1 0.32(mm)
ICV 280-433303/35		10/13/2018 21:41	1	030F3801.D	CLP2 0.32(mm)
ICV 280-433303/36		10/13/2018 21:59	1	031F3901.D	CLP1 0.32(mm)
ICV 280-433303/36		10/13/2018 21:59	1	031F3901.D	CLP2 0.32(mm)
PEM 280-433303/37		10/13/2018 22:16	1		CLP1 0.32(mm)
PEM 280-433303/37		10/13/2018 22:16	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 22:34	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 22:34	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 22:51	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 22:51	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 23:08	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 23:08	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 23:26	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 23:26	1		CLP2 0.32(mm)
ZZZZZ		10/13/2018 23:43	1		CLP1 0.32(mm)
ZZZZZ		10/13/2018 23:43	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:00	1		CLP1 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Start Date: 10/13/2018 13:16

Analysis Batch Number: 433303 End Date: 10/14/2018 04:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		10/14/2018 00:00	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:18	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 00:18	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:35	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 00:35	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 00:53	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 00:53	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 01:10	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 01:10	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 01:27	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 01:27	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 01:45	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 01:45	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:02	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:02	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:19	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:19	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:37	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:37	1		CLP2 0.32(mm)
ZZZZZ		10/14/2018 02:54	1		CLP1 0.32(mm)
ZZZZZ		10/14/2018 02:54	1		CLP2 0.32(mm)
CCV 280-433303/54		10/14/2018 03:11	1		CLP1 0.32(mm)
CCV 280-433303/54		10/14/2018 03:11	1		CLP2 0.32(mm)
CCV 280-433303/55		10/14/2018 03:29	1		CLP1 0.32(mm)
CCV 280-433303/55		10/14/2018 03:29	1		CLP2 0.32(mm)
CCV 280-433303/56		10/14/2018 03:46	1		CLP1 0.32(mm)
CCV 280-433303/56		10/14/2018 03:46	1		CLP2 0.32(mm)
CCV 280-433303/57		10/14/2018 04:03	1		CLP1 0.32(mm)
CCV 280-433303/57		10/14/2018 04:03	1		CLP2 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Start Date: 11/23/2018 18:09

Analysis Batch Number: 438595 End Date: 11/24/2018 07:19

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PEM 280-438595/7		11/23/2018 18:09	1	11230007.D	CLP1 0.32(mm)
PEM 280-438595/7		11/23/2018 18:09	1	11230007.D	CLP2 0.32(mm)
CCV 280-438595/10		11/23/2018 19:01	1		CLP1 0.32(mm)
CCV 280-438595/10		11/23/2018 19:01	1		CLP2 0.32(mm)
CCV 280-438595/11		11/23/2018 19:19	1		CLP1 0.32(mm)
CCV 280-438595/11		11/23/2018 19:19	1		CLP2 0.32(mm)
CCV 280-438595/12		11/23/2018 19:36	1		CLP1 0.32(mm)
CCV 280-438595/12		11/23/2018 19:36	1		CLP2 0.32(mm)
CCVIS 280-438595/13		11/23/2018 19:54	1	11230013.D	CLP1 0.32(mm)
CCVIS 280-438595/13		11/23/2018 19:54	1	11230013.D	CLP2 0.32(mm)
ZZZZZ		11/23/2018 20:11	1		CLP1 0.32(mm)
ZZZZZ		11/23/2018 20:11	1		CLP2 0.32(mm)
ZZZZZ		11/23/2018 20:29	1		CLP1 0.32(mm)
ZZZZZ		11/23/2018 20:29	1		CLP2 0.32(mm)
ZZZZZ		11/23/2018 20:46	1		CLP1 0.32(mm)
ZZZZZ		11/23/2018 20:46	1		CLP2 0.32(mm)
ZZZZZ		11/23/2018 21:04	1		CLP1 0.32(mm)
ZZZZZ		11/23/2018 21:04	1		CLP2 0.32(mm)
ZZZZZ		11/23/2018 21:22	1		CLP1 0.32(mm)
ZZZZZ		11/23/2018 21:22	1		CLP2 0.32(mm)
ZZZZZ		11/23/2018 21:39	1		CLP1 0.32(mm)
ZZZZZ		11/23/2018 21:39	1		CLP2 0.32(mm)
ZZZZZ		11/23/2018 21:57	1		CLP1 0.32(mm)
ZZZZZ		11/23/2018 21:57	1		CLP2 0.32(mm)
ZZZZZ		11/23/2018 22:14	1		CLP1 0.32(mm)
ZZZZZ		11/23/2018 22:14	1		CLP2 0.32(mm)
ZZZZZ		11/23/2018 22:32	1		CLP1 0.32(mm)
ZZZZZ		11/23/2018 22:32	1		CLP2 0.32(mm)
CCV 280-438595/23		11/23/2018 22:50	1		CLP1 0.32(mm)
CCV 280-438595/23		11/23/2018 22:50	1		CLP2 0.32(mm)
CCV 280-438595/24		11/23/2018 23:07	1	11230024.D	CLP1 0.32(mm)
CCV 280-438595/24		11/23/2018 23:07	1	11230024.D	CLP2 0.32(mm)
CCV 280-438595/25		11/23/2018 23:25	1		CLP1 0.32(mm)
CCV 280-438595/25		11/23/2018 23:25	1		CLP2 0.32(mm)
CCV 280-438595/26		11/23/2018 23:42	1	11230026.D	CLP1 0.32(mm)
CCV 280-438595/26		11/23/2018 23:42	1	11230026.D	CLP2 0.32(mm)
MB 280-436649/1-A		11/24/2018 00:00	1	11230027.D	CLP1 0.32(mm)
MB 280-436649/1-A		11/24/2018 00:00	1	11230027.D	CLP2 0.32(mm)
LCS 280-436649/2-A		11/24/2018 00:17	1	11230028.D	CLP1 0.32(mm)
LCS 280-436649/2-A		11/24/2018 00:17	1	11230028.D	CLP2 0.32(mm)
LCSD 280-436649/3-A		11/24/2018 00:35	1	11230029.D	CLP1 0.32(mm)
LCSD 280-436649/3-A		11/24/2018 00:35	1	11230029.D	CLP2 0.32(mm)
ZZZZZ		11/24/2018 00:53	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 00:53	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 01:10	1		CLP1 0.32(mm)

PESTICIDES ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_P2 Start Date: 11/23/2018 18:09

Analysis Batch Number: 438595 End Date: 11/24/2018 07:19

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		11/24/2018 01:10	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 01:28	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 01:28	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 01:45	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 01:45	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 02:03	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 02:03	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 02:20	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 02:20	1		CLP2 0.32(mm)
280-116538-1		11/24/2018 02:38	1	11230036.D	CLP1 0.32(mm)
280-116538-1		11/24/2018 02:38	1	11230036.D	CLP2 0.32(mm)
280-116538-2		11/24/2018 02:55	1	11230037.D	CLP1 0.32(mm)
280-116538-2		11/24/2018 02:55	1	11230037.D	CLP2 0.32(mm)
ZZZZZ		11/24/2018 03:13	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 03:13	1		CLP2 0.32(mm)
LCS 280-436649/6-A		11/24/2018 03:30	1	11230039.D	CLP1 0.32(mm)
LCS 280-436649/6-A		11/24/2018 03:30	1	11230039.D	CLP2 0.32(mm)
CCV 280-438595/40		11/24/2018 03:48	1		CLP1 0.32(mm)
CCV 280-438595/40		11/24/2018 03:48	1		CLP2 0.32(mm)
CCV 280-438595/41		11/24/2018 04:06	1	11230041.D	CLP1 0.32(mm)
CCV 280-438595/41		11/24/2018 04:06	1	11230041.D	CLP2 0.32(mm)
CCV 280-438595/42		11/24/2018 04:23	1		CLP1 0.32(mm)
CCV 280-438595/42		11/24/2018 04:23	1		CLP2 0.32(mm)
CCV 280-438595/43		11/24/2018 04:41	1	11230043.D	CLP1 0.32(mm)
CCV 280-438595/43		11/24/2018 04:41	1	11230043.D	CLP2 0.32(mm)
ZZZZZ		11/24/2018 05:16	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 05:16	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 05:34	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 05:34	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 05:51	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 05:51	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 06:09	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 06:09	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 06:26	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 06:26	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 06:44	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 06:44	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 07:01	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 07:01	1		CLP2 0.32(mm)
ZZZZZ		11/24/2018 07:19	1		CLP1 0.32(mm)
ZZZZZ		11/24/2018 07:19	1		CLP2 0.32(mm)

PESTICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436649 Batch Start Date: 11/07/18 10:54 Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C Batch End Date: 11/08/18 21:49

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	8081 LCS 00450
MB 280-436649/1		3510C, 8081B				1000 mL	10 mL	7 SU	
LCS 280-436649/2		3510C, 8081B				1000 mL	10 mL	7 SU	1 mL
LCSD 280-436649/3		3510C, 8081B				1000 mL	10 mL	7 SU	1 mL
LCS 280-436649/6		3510C, 8081B				1000 mL	10 mL	7 SU	
280-116538-D-1	SCLmw-001-181001-GW	3510C, 8081B	T	1405.3 g	501.5 g	903.8 mL	10 mL	7 SU	
280-116538-D-2	SCLmw-003-181001-GW	3510C, 8081B	T	1423.8 g	500.1 g	923.7 mL	10 mL	7 SU	

Lab Sample ID	Client Sample ID	Method Chain	Basis	8081/82 Surr 00105	8081Toxaphene 00031	AnalysisComment			
MB 280-436649/1		3510C, 8081B		1 mL					
LCS 280-436649/2		3510C, 8081B		1 mL		8081			
LCSD 280-436649/3		3510C, 8081B		1 mL		8081			
LCS 280-436649/6		3510C, 8081B		1 mL	1 mL	tox			
280-116538-D-1	SCLmw-001-181001-GW	3510C, 8081B	T	1 mL					
280-116538-D-2	SCLmw-003-181001-GW	3510C, 8081B	T	1 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PESTICIDES BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436649 Batch Start Date: 11/07/18 10:54 Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C Batch End Date: 11/08/18 21:49

Batch Notes	
Balance ID	B439B3239
Batch Comment	DV-OP-0006/0007; BB8 @10.00 mL
Analyst ID - Concentration	CR(Trainer)/KA(Trainee)
Concentration 1 Corrected Temperature	88 Degrees C
Equipment ID - Concentration 1	B
Exchange Solvent ID	Hexane_cycl_00053
Analyst ID - Extraction	KS(trainee)+AAG(trainer)
Florisil ID	phenomenex prod lot #S18-003670/phenomenex prod lot #S18-002991
Florisil Solution Reagent ID	FlorisilSol_00155
Method/Fraction	3510C/608/8081DOD5/8082DOD5
Na2SO4 ID	0000205461_00008
NaCl ID	173831
Pipette/Syringe/Dispenser ID	1n2s
Prep Solvent ID	MeCl2_Cycl_00412
Prep Solvent Volume Used	180 mL
Analyst ID - Spike Analyst	KS
Analyst ID - Spike Witness Analyst	Reviewer: JZ
Sufficient Volume for Batch QC	Yes
Concentration 1 Uncorrected Temperature	87 Degrees C
Reagent Water ID	S. ELGA

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8082A_DOD5

Polychlorinated Biphenyls (PCBs) by Gas Chromatography

FORM II
PCBS SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): CLP2 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	TCX1 #	DCBP1 #
SCLmw-001-181001-GW	280-116538-1	88	96 Q
SCLmw-003-181001-GW	280-116538-2	86	97 Q
	MB 280-436649/1-A	90	88
	LCS 280-436649/4-A	82	100
	LCSD 280-436649/5-A	87	106

	QC LIMITS
TCX = Tetrachloro-m-xylene	25-120
DCBP = DCB Decachlorobiphenyl	30-136

Column to be used to flag recovery values

FORM II 8082A

FORM III
PCBS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11271811.D

Lab ID: LCS 280-436649/4-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
PCB-1016	2.00	1.82	91	46-129	
PCB-1260	2.00	1.99	99	45-134	

Column to be used to flag recovery and RPD values

FORM III 8082A

FORM III
PCBS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11271812.D

Lab ID: LCSD 280-436649/5-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
PCB-1016	2.00	1.89	95	4	30	46-129	
PCB-1260	2.00	2.10	105	5	30	45-134	

Column to be used to flag recovery and RPD values

FORM III 8082A

FORM IV
PCBS METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: MB 280-436649/1-A

Matrix: Water Date Extracted: 11/07/2018 10:54

Lab File ID:(1) 11271810.D Lab File ID:(2) 11271810.D

Date Analyzed:(1) 11/27/2018 17:21 Date Analyzed:(2) 11/27/2018 17:21

Instrument ID:(1) SGC_J Instrument ID:(2) SGC_J

GC Column:(1) CLP2 ID: 0.32(mm) GC Column:(2) CLP1 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-436649/4-A	11/27/2018 17:42	11/27/2018 17:42
	LCSD 280-436649/5-A	11/27/2018 18:03	11/27/2018 18:03
SCLmw-001-181001-GW	280-116538-1	11/27/2018 18:24	11/27/2018 18:24
SCLmw-003-181001-GW	280-116538-2	11/27/2018 18:45	11/27/2018 18:45

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: STDL51660 280-438388/20 Date Analyzed: 11/21/2018 15:27

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 11211820.D Heated Purge: (Y/N) N

Calibration ID: 34386

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		29769998	1.97				
UPPER LIMIT		59539996	2.47				
LOWER LIMIT		14884999	1.47				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-438388/39		27962663	1.97				
ICV 280-438388/40		29773128	1.97				
ICV 280-438388/41		26927485	1.97				
ICV 280-438388/42		26954302	1.97				
ICV 280-438388/43		30567576	1.97				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: STDL51660 280-438388/20 Date Analyzed: 11/21/2018 15:27

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 11211820.D Heated Purge: (Y/N) N

Calibration ID: 34387

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		167274345	1.75				
UPPER LIMIT		334548690	2.25				
LOWER LIMIT		83637173	1.25				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 280-438388/39		158680424	1.75				
ICV 280-438388/40		167287659	1.75				
ICV 280-438388/41		153501296	1.75				
ICV 280-438388/42		152978208	1.75				
ICV 280-438388/43		172646811	1.75				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: CCVIS 280-438897/4 Date Analyzed: 11/27/2018 15:13

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm)

Lab File ID (Standard): 11271804.D Heated Purge: (Y/N) N

Calibration ID: 34394

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		36068276	1.97				
UPPER LIMIT		72136552	2.47				
LOWER LIMIT		18034138	1.47				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 280-436649/1-A		35397323	1.97				
LCS 280-436649/4-A		35385370	1.97				
LCSD 280-436649/5-A		34343421	1.97				
280-116538-1	SCLmw-001-181001-GW	37407825	1.97				
280-116538-2	SCLmw-003-181001-GW	36271065	1.97				
CCV 280-438897/19		38939893	1.97				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM VIII
PCBS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Sample No.: CCVIS 280-438897/4 Date Analyzed: 11/27/2018 15:13

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm)

Lab File ID (Standard): 11271804.D Heated Purge: (Y/N) N

Calibration ID: 34395

		BNB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		178826630	1.74				
UPPER LIMIT		357653260	2.24				
LOWER LIMIT		89413315	1.24				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 280-436649/1-A		176458774	1.74				
LCS 280-436649/4-A		176482503	1.74				
LCSD 280-436649/5-A		172764652	1.74				
280-116538-1	SCLmw-001-181001-GW	185983763	1.74				
280-116538-2	SCLmw-003-181001-GW	180336308	1.74				
CCV 280-438897/19		191402215	1.74				

BNB = 1-Bromo-2-nitrobenzene

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8082A

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-436649/4-A

Instrument ID (1): SGC_J Instrument ID (2): SGC_J

Date Analyzed (1): 11/27/2018 17:42 Date Analyzed (2): 11/27/2018 17:42

GC Column (1): CLP2 ID: 0.32(mm) GC Column (2): CLP1 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
PCB-1016	1	1	3.27	3.02	3.52	1.92	1.82	8.2
		2	3.66	3.41	3.91	1.69		
		3	4.12	3.87	4.37	1.81		
		4	4.26	4.01	4.51	1.83		
		5	4.50	4.24	4.74	1.84		
	2	1	3.27	3.02	3.52	1.86	1.68	
		2	3.63	3.38	3.88	1.66		
		3	4.12	3.87	4.37	1.55		
		4	4.27	4.01	4.51	1.64		
		5	4.73	4.48	4.98	1.67		
PCB-1260	1	1	6.65	6.39	6.89	2.17	1.99	13.0
		2	7.11	6.86	7.36	2.35		
		3	7.64	7.39	7.89	1.78		
		4	8.01	7.76	8.26	1.80		
		5	8.51	8.26	8.76	1.84		
	2	1	6.25	6.00	6.50	1.89	1.75	
		2	7.00	6.75	7.25	2.04		
		3	7.49	7.24	7.74	1.53		
		4	7.93	7.68	8.18	1.53		
		5	8.33	8.07	8.57	1.73		

FORM X
IDENTIFICATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 280-436649/5-A

Instrument ID (1): SGC_J Instrument ID (2): SGC_J

Date Analyzed (1): 11/27/2018 18:03 Date Analyzed (2): 11/27/2018 18:03

GC Column (1): CLP2 ID: 0.32(mm) GC Column (2): CLP1 ID: 0.32(mm)

ANALYTE	COL	PEAK	RT	RT WINDOW		CONCENTRATION		RPD
				FROM	TO	PEAK	MEAN	
PCB-1016	1	1	3.27	3.02	3.52	1.99	1.89	5.5
		2	3.66	3.41	3.91	1.76		
		3	4.12	3.87	4.37	1.88		
		4	4.26	4.01	4.51	1.90		
		5	4.49	4.24	4.74	1.92		
	2	1	3.27	3.02	3.52	2.06	1.79	
		2	3.63	3.38	3.88	1.76		
		3	4.12	3.87	4.37	1.63		
		4	4.26	4.01	4.51	1.73		
		5	4.73	4.48	4.98	1.77		
PCB-1260	1	1	6.64	6.39	6.89	2.27	2.10	11.3
		2	7.11	6.86	7.36	2.48		
		3	7.64	7.39	7.89	1.87		
		4	8.01	7.76	8.26	1.91		
		5	8.51	8.26	8.76	1.96		
	2	1	6.25	6.00	6.50	2.02	1.87	
		2	6.99	6.75	7.25	2.17		
		3	7.49	7.24	7.74	1.69		
		4	7.93	7.68	8.18	1.65		
		5	8.32	8.07	8.57	1.85		

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW | Lab Sample ID: 280-116538-1

Matrix: Water | Lab File ID: 11271813.D

Analysis Method: 8082A | Date Collected: 11/02/2018 10:45

Extraction Method: 3510C | Date Extracted: 11/07/2018 10:54

Sample wt/vol: 903.8(mL) | Date Analyzed: 11/27/2018 18:24

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438897 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	0.44	U M	1.1	0.44	0.14
11104-28-2	PCB-1221	0.28	U M	1.1	0.28	0.24
11141-16-5	PCB-1232	0.66	U M	1.1	0.66	0.18
53469-21-9	PCB-1242	0.33	U M	1.1	0.33	0.12
12672-29-6	PCB-1248	0.33	U Q M	1.1	0.33	0.10
11097-69-1	PCB-1254	0.28	U M	1.1	0.28	0.13
11096-82-5	PCB-1260	0.44	U M	1.1	0.44	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	88		25-120
2051-24-3	DCB Decachlorobiphenyl	96	Q	30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271813.D
Lims ID: 280-116538-D-1-B
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 27-Nov-2018 18:24:36 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-D-1-B
Misc. Info.: 280-0076564-013
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Nov-2018 08:50:17 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0318

First Level Reviewer: patadiab Date: 29-Nov-2018 17:40:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene						
1	1.968	1.966	0.002	37407825	1000.0	
2	1.741	1.743	-0.002	185983763	1000.0	
					RPD = 0.00	
$ 14 Tetrachloro-m-xylene						
1	2.878	2.880	-0.002	14644773	15.0	
2	2.774	2.773	0.001	42553013	17.6	
					RPD = 16.35	
3 PCB-1221						U
1		3.085			ND	
1		3.232				
1		3.269				
2		3.092				
2		3.222				
2		3.276				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
7	PCB-1232					U
1		3.088			ND	
1		3.271				
1		4.118				
1		4.264				
1		4.731				
2		3.275				
2		3.665				
2		4.121				
2		4.265				
2		4.928				
1	PCB-1016					U
1		3.270			ND	
1		3.633				
1		4.116				
1		4.263				
1		4.733				
2		3.273				
2		3.663				
2		4.116				
2		4.263				
2		4.493				
4	PCB-1248					U
1		3.629			ND	
1		4.115				
1		4.729				
1		5.505				
1		6.005				
2		4.119				
2		4.499				
2		4.789				
2		4.929				
2		6.102				
10	PCB-1242					U
1		3.631			ND	
1		4.117				
1		4.264				
1		5.237				
1		5.261				
2		3.664				
2		4.121				
2		4.264				
2		4.788				
2		4.928				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
9 PCB-1254						U
1		5.182			ND	
1		5.509				
1		5.849				
1		6.622				
1		6.995				
2		5.529				
2		5.952				
2		6.402				
2		6.649				
2		7.119				
5 PCB-1262						U
1		6.248			ND	
1		7.154				
1		7.488				
1		7.931				
1		8.321				
2		6.648				
2		7.248				
2		7.645				
2		8.011				
2		8.515				
12 PCB-1260						U
1		6.250			ND	
1		6.996				
1		7.493				
1		7.933				
1		8.323				
2		6.643				
2		7.113				
2		7.643				
2		8.010				
2		8.513				
13 PCB-1268						U
1		8.381			ND	
1		8.434				
1		8.707				
1		9.224				
1		9.637				
2		8.511				
2		8.574				
2		8.928				
2		9.358				
2		9.821				
$ 15 DCB Decachlorobiphenyl						
1	9.914	9.913	0.001	12935527	16.9	
2	10.181	10.180	0.001	52917482	19.1	
					RPD = 12.38	
S 8 Polychlorinated biphenyls, Total						
1		0.000			ND	
2		0.000				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
2 PCB-5460						
1		0.000			ND	
1		12.739				
1		0.000				
1		13.802				
1		14.259				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
6 PCB-5432						
1		7.063			ND	
1		7.693				
1		8.203				
1		9.029				
1		9.459				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
11 PCB-5442						
1		9.459			ND	
1		9.923				
1		10.079				
1		10.289				
1		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

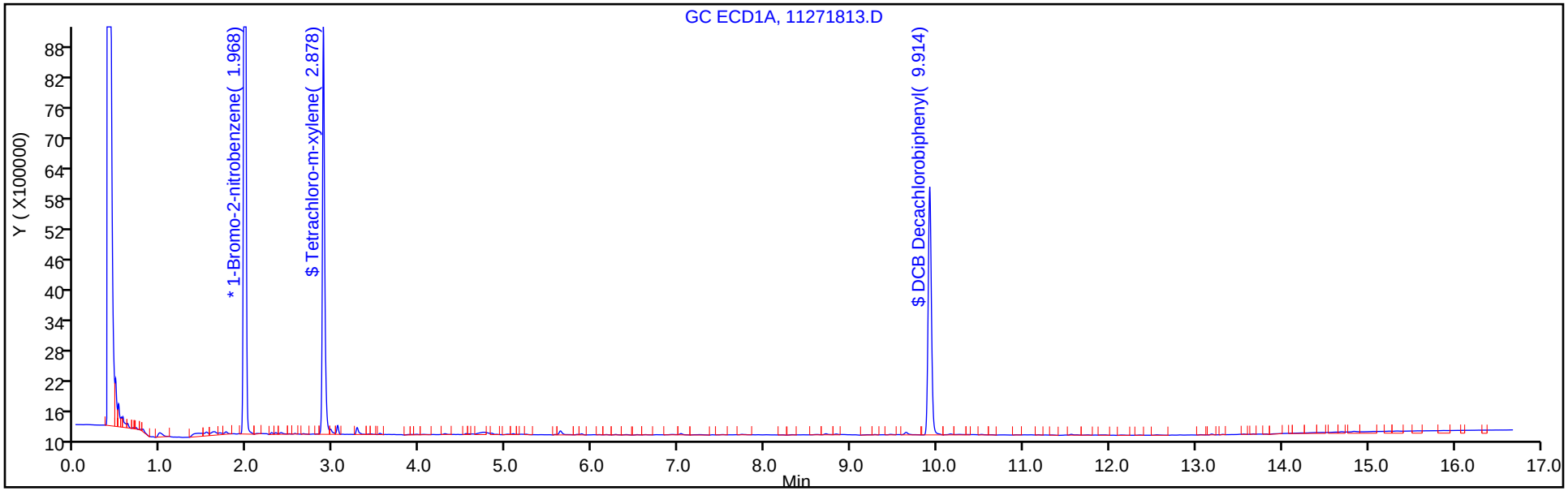
Report Date: 30-Nov-2018 08:50:36 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

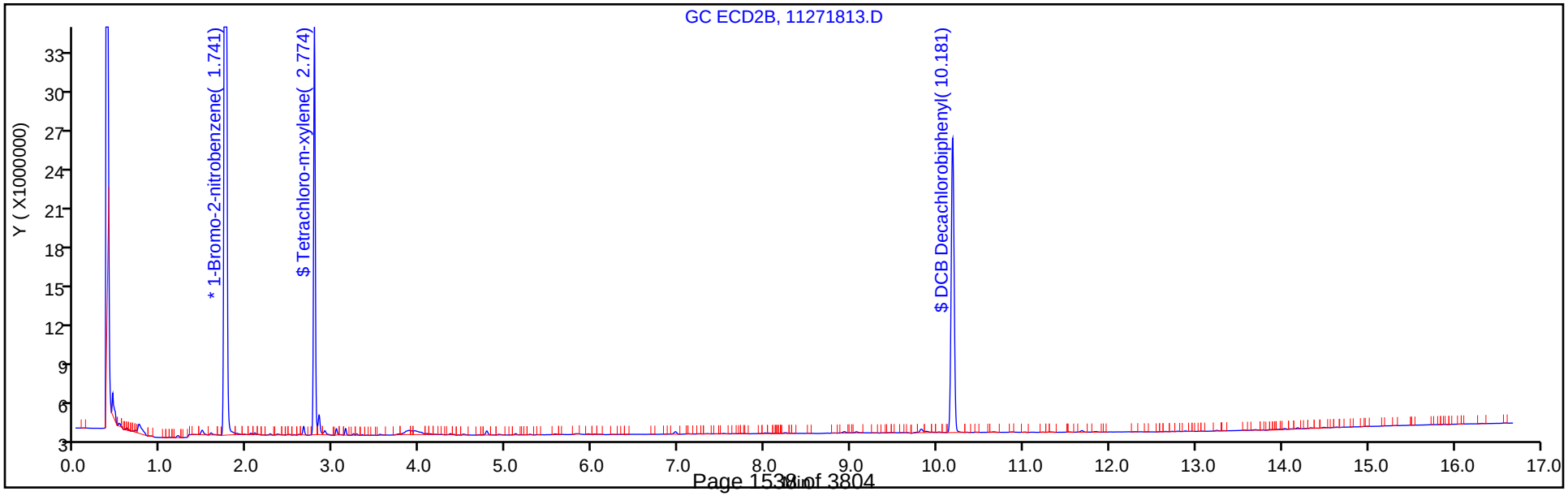
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271813.D

Injection Date:	27-Nov-2018 18:24:36	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	280-116538-D-1-B	Lab Sample ID:	280-116538-1	Worklist Smp#:	13
Client ID:	SCLmw-001-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271813.D				
Lims ID:	280-116538-D-1-B				
Client ID:	SCLmw-001-181001-GW				
Sample Type:	Client				
Inject. Date:	27-Nov-2018 18:24:36	ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-D-1-B				
Misc. Info.:	280-0076564-013				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	30-Nov-2018 08:50:17	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0318				
First Level Reviewer: patadiab		Date:	29-Nov-2018 17:40:56		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	15.0	74.80
$ 15 DCB Decachlorobiphenyl	20.0	16.9	84.57

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	17.6	88.13
$ 15 DCB Decachlorobiphenyl	20.0	19.1	95.73

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-003-181001-GW | Lab Sample ID: 280-116538-2

Matrix: Water | Lab File ID: 11271814.D

Analysis Method: 8082A | Date Collected: 11/02/2018 11:10

Extraction Method: 3510C | Date Extracted: 11/07/2018 10:54

Sample wt/vol: 923.7(mL) | Date Analyzed: 11/27/2018 18:45

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438897 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	0.43	U M	1.1	0.43	0.13
11104-28-2	PCB-1221	0.27	U M	1.1	0.27	0.23
11141-16-5	PCB-1232	0.65	U M	1.1	0.65	0.18
53469-21-9	PCB-1242	0.32	U M	1.1	0.32	0.11
12672-29-6	PCB-1248	0.32	U Q M	1.1	0.32	0.099
11097-69-1	PCB-1254	0.27	U M	1.1	0.27	0.12
11096-82-5	PCB-1260	0.43	U M	1.1	0.43	0.17

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	86		25-120
2051-24-3	DCB Decachlorobiphenyl	97	Q	30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271814.D
Lims ID: 280-116538-D-2-B
Client ID: SCLmw-003-181001-GW
Sample Type: Client
Inject. Date: 27-Nov-2018 18:45:48 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-D-2-B
Misc. Info.: 280-0076564-014
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Nov-2018 08:50:17 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0318

First Level Reviewer: patadiab Date: 29-Nov-2018 17:41:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene						
1	1.965	1.966	-0.001	36271065	1000.0	
2	1.742	1.743	-0.001	180336308	1000.0	
					RPD = 0.00	
$ 14 Tetrachloro-m-xylene						
1	2.878	2.880	-0.002	12996883	13.7	
2	2.775	2.773	0.002	40329662	17.2	
					RPD = 22.71	
3 PCB-1221						U
1		3.085			ND	
1		3.232				
1		3.269				
2		3.092				
2		3.222				
2		3.276				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
7	PCB-1232					U
1		3.088			ND	
1		3.271				
1		4.118				
1		4.264				
1		4.731				
2		3.275				
2		3.665				
2		4.121				
2		4.265				
2		4.928				
1	PCB-1016					U
1		3.270			ND	
1		3.633				
1		4.116				
1		4.263				
1		4.733				
2		3.273				
2		3.663				
2		4.116				
2		4.263				
2		4.493				
4	PCB-1248					U
1		3.629			ND	
1		4.115				
1		4.729				
1		5.505				
1		6.005				
2		4.119				
2		4.499				
2		4.789				
2		4.929				
2		6.102				
10	PCB-1242					U
1		3.631			ND	
1		4.117				
1		4.264				
1		5.237				
1		5.261				
2		3.664				
2		4.121				
2		4.264				
2		4.788				
2		4.928				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
9 PCB-1254						U
1		5.182			ND	
1		5.509				
1		5.849				
1		6.622				
1		6.995				
2		5.529				
2		5.952				
2		6.402				
2		6.649				
2		7.119				
5 PCB-1262						U
1		6.248			ND	
1		7.154				
1		7.488				
1		7.931				
1		8.321				
2		6.648				
2		7.248				
2		7.645				
2		8.011				
2		8.515				
12 PCB-1260						U
1		6.250			ND	
1		6.996				
1		7.493				
1		7.933				
1		8.323				
2		6.643				
2		7.113				
2		7.643				
2		8.010				
2		8.513				
13 PCB-1268						U
1		8.381			ND	
1		8.434				
1		8.707				
1		9.224				
1		9.637				
2		8.511				
2		8.574				
2		8.928				
2		9.358				
2		9.821				
$ 15 DCB Decachlorobiphenyl						
1	9.915	9.913	0.002	12659824	17.1	
2	10.182	10.180	0.002	52011168	19.4	
					RPD = 12.82	
S 8 Polychlorinated biphenyls, Total						
1		0.000			ND	
2		0.000				

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags
2 PCB-5460						
1		0.000			ND	
1		12.739				
1		0.000				
1		13.802				
1		14.259				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
6 PCB-5432						
1		7.063			ND	
1		7.693				
1		8.203				
1		9.029				
1		9.459				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
11 PCB-5442						
1		9.459			ND	
1		9.923				
1		10.079				
1		10.289				
1		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				
2		0.000				

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

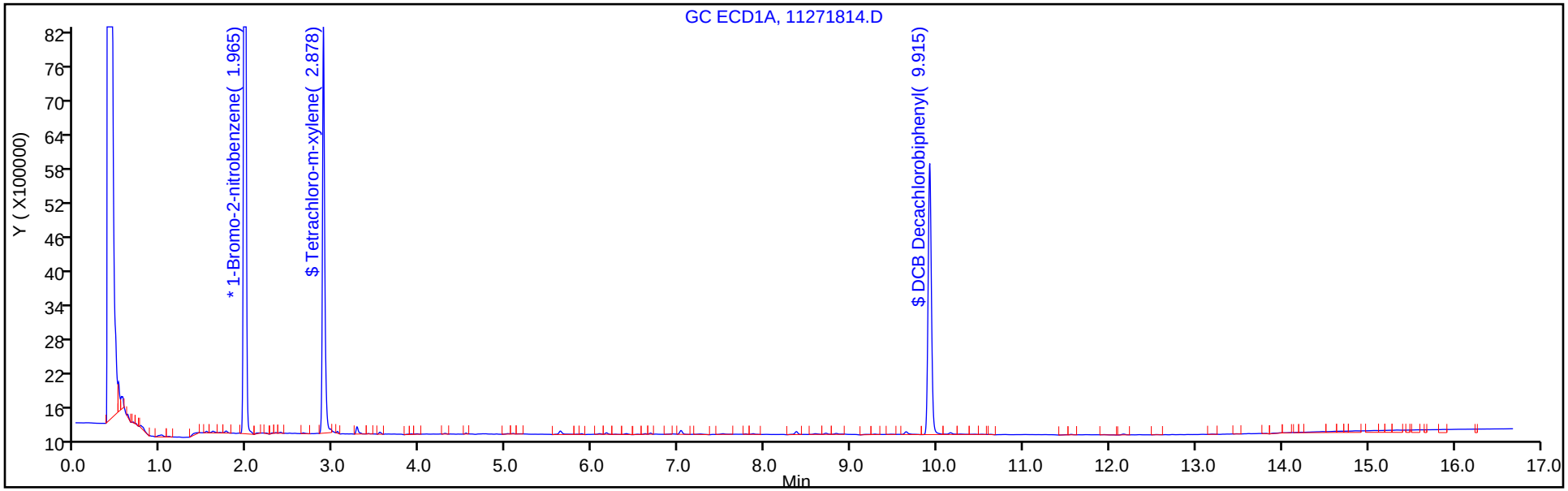
Report Date: 30-Nov-2018 08:50:37 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

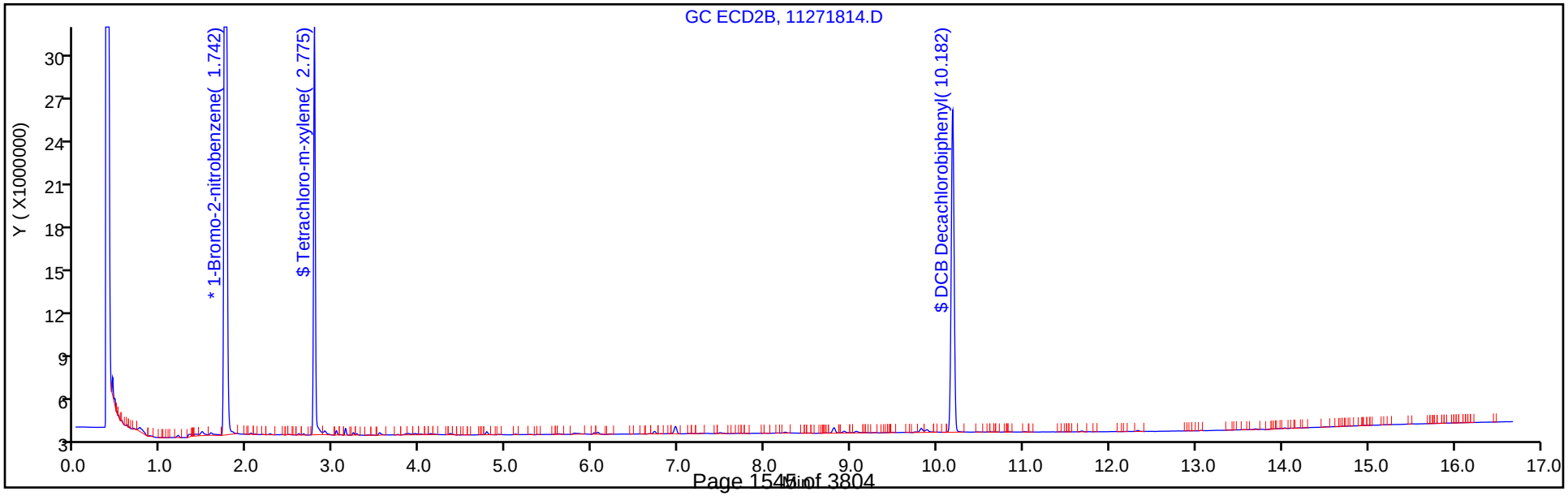
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271814.D

Injection Date:	27-Nov-2018 18:45:48	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	280-116538-D-2-B	Lab Sample ID:	280-116538-2	Worklist Smp#:	14
Client ID:	SCLmw-003-181001-GW				
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271814.D				
Lims ID:	280-116538-D-2-B				
Client ID:	SCLmw-003-181001-GW				
Sample Type:	Client				
Inject. Date:	27-Nov-2018 18:45:48	ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-D-2-B				
Misc. Info.:	280-0076564-014				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	30-Nov-2018 08:50:17	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0318				
First Level Reviewer: patadiab		Date:	29-Nov-2018 17:41:14		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	13.7	68.52
$ 15 DCB Decachlorobiphenyl	20.0	17.1	85.39

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	17.2	86.07
$ 15 DCB Decachlorobiphenyl	20.0	19.4	97.09

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.7122 0.4127	0.6118 0.4011	0.5704	0.4630	0.4556	Lin1	9.8720	0.4076							0.9960		0.9900
PCB-1248 Peak 2	1.0403 0.8770	0.9550 0.9026	1.0280	0.8779	0.9242	Lin1	4.6019	0.8921							0.9990		0.9900
PCB-1248 Peak 3	1.2895 0.9992	1.1836 1.0099	1.2299	1.0238	1.0668	Lin1	9.5371	1.0079							0.9980		0.9900
PCB-1248 Peak 4	0.8968 0.6951	0.8199 0.7107	0.8337	0.7223	0.7530	Lin1	6.0934	0.7077							0.9990		0.9900
PCB-1248 Peak 5	0.5801 0.4479	0.5241 0.4719	0.5587	0.4626	0.4874	Lin1	3.7614	0.4626							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34378

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Lin1	499158 9442915	908243 11858019	1647978	3572971	6545537	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 2	BNB	Lin1	729109 20068466	1417622 26688023	2970012	6774612	13279339	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 3	BNB	Lin1	903744 22864792	1757060 29858711	3553415	7900982	15327875	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 4	BNB	Lin1	628528 15905035	1217158 21012955	2408573	5573784	10818763	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 5	BNB	Lin1	406565 10248925	778039 13952293	1614155	3570034	7003033	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D
Lims ID: STDL71248
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 09:48:04 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71248
Misc. Info.: 280-0076428-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	29567346	1000.0	1000.0	
2	1.748	1.744	0.004	169218357	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	11858019	1000.0	959.6	
1	4.114	4.115	-0.001	26688023	1000.0	1006.7	
1	4.731	4.729	0.002	29858711	1000.0	992.4	
1	5.504	5.505	-0.001	21012955	1000.0	995.6	
1	6.004	6.005	-0.001	13952293	1000.0	1012.0	
		Average of Peak Amounts =				993.3	
2	4.121	4.119	0.002	83375893	1000.0	957.5	
2	4.498	4.499	-0.001	49673627	1000.0	973.7	
2	4.791	4.789	0.002	68034804	1000.0	970.6	
2	4.927	4.929	-0.002	74524210	1000.0	959.9	
2	6.101	6.102	-0.001	51421671	1000.0	963.6	
		Average of Peak Amounts =				965.0	
						RPD = 2.88	
S 8 Polychlorinated biphenyls, Total							
1						993.3	
2						965.0	
						RPD = 2.88	

Reagents:

AR_1248_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

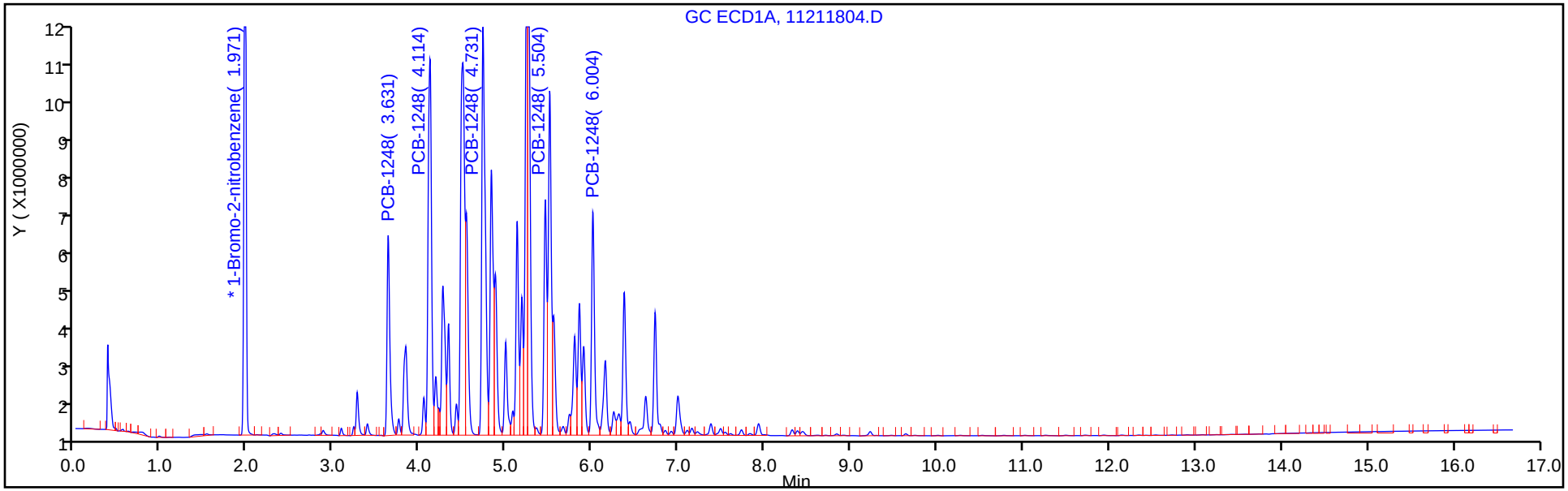
Report Date: 23-Nov-2018 11:01:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

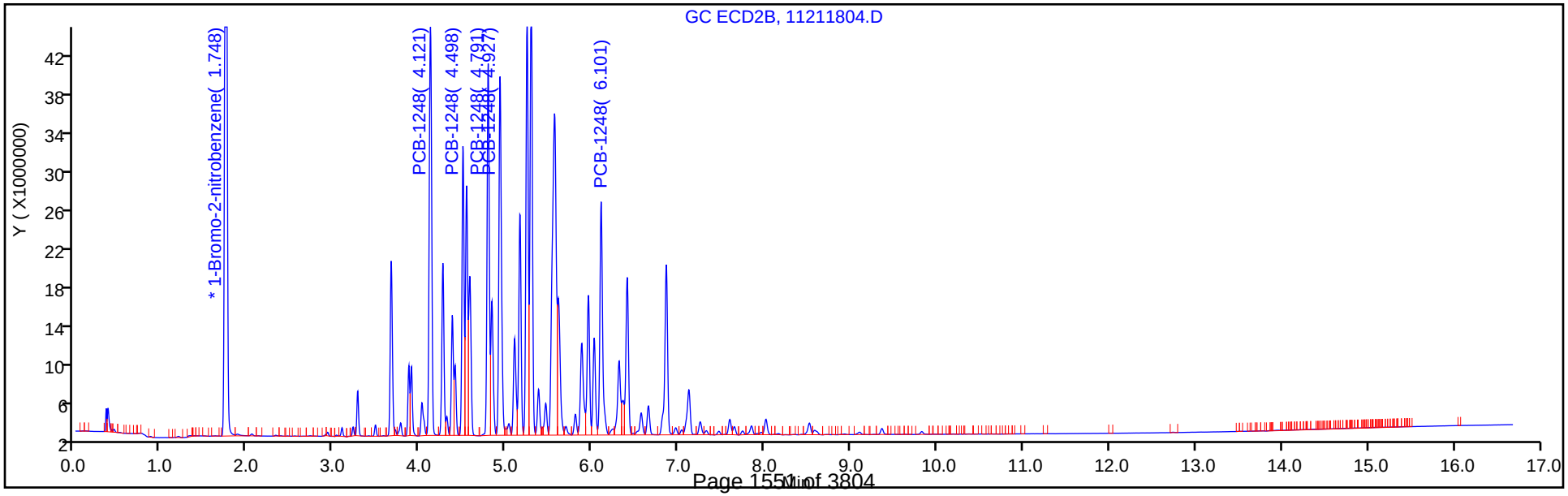
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D

Injection Date:	21-Nov-2018 09:48:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71248			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D
Lims ID: STDL61248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 10:09:17 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61248
Misc. Info.: 280-0076428-005
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:51 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:05:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	30510716	1000.0	1000.0	
2	1.748	1.744	0.004	173614890	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.631	3.629	0.002	9442915	750.0	735.0	
1	4.115	4.115	0.000	20068466	750.0	732.2	
1	4.731	4.729	0.002	22864792	750.0	734.0	
1	5.505	5.505	0.000	15905035	750.0	728.0	M
1	6.005	6.005	0.000	10248925	750.0	718.0	
		Average of Peak Amounts =				729.5	
2	4.118	4.119	-0.001	66929326	750.0	745.5	
2	4.498	4.499	-0.001	38624976	750.0	733.4	
2	4.791	4.789	0.002	53290956	750.0	736.2	
2	4.928	4.929	-0.001	59463126	750.0	742.7	
2	6.101	6.102	-0.001	40520608	750.0	736.4	
		Average of Peak Amounts =				738.8	
						RPD = 1.28	
S 8 Polychlorinated biphenyls, Total							
1						729.5	
2						738.8	
						RPD = 1.28	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1248_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

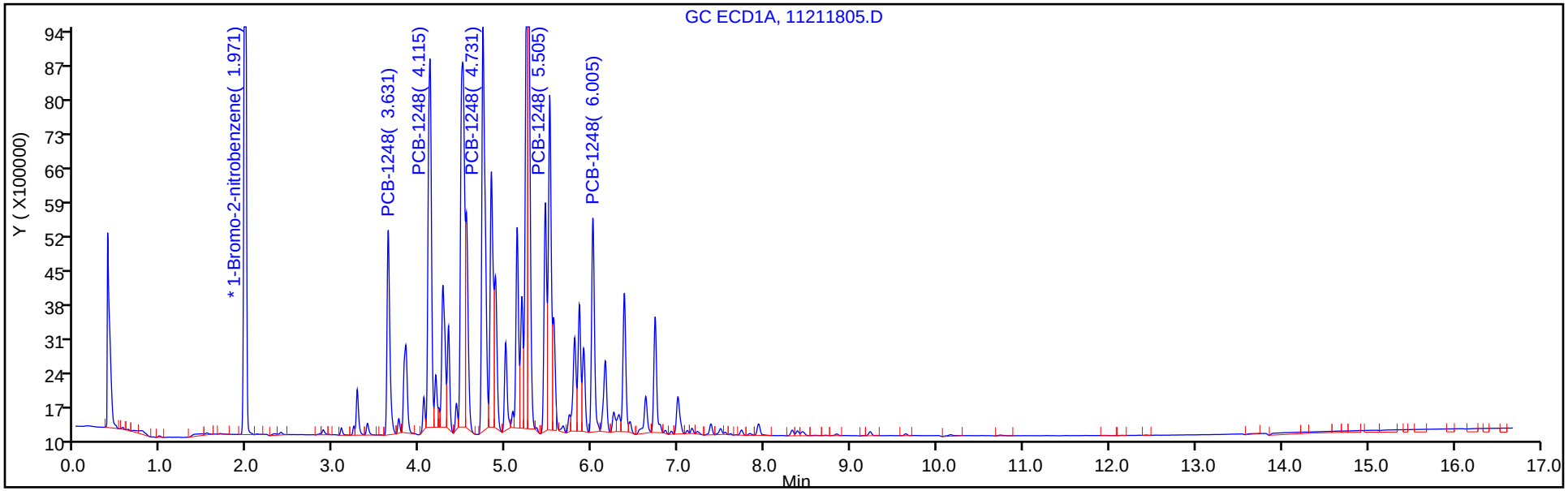
Report Date: 23-Nov-2018 11:01:52 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

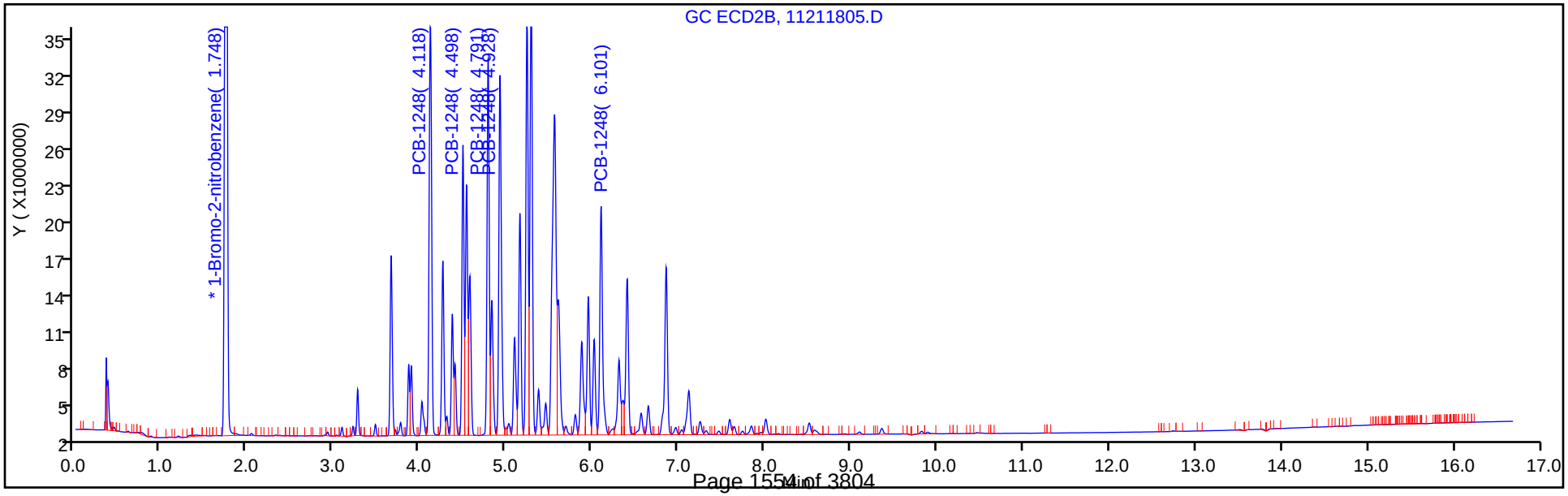
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D

Injection Date:	21-Nov-2018 10:09:17	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61248			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:01:52 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D

Injection Date: 21-Nov-2018 10:09:17 Instrument ID: SGC_J

Lims ID: STDL61248

Client ID:

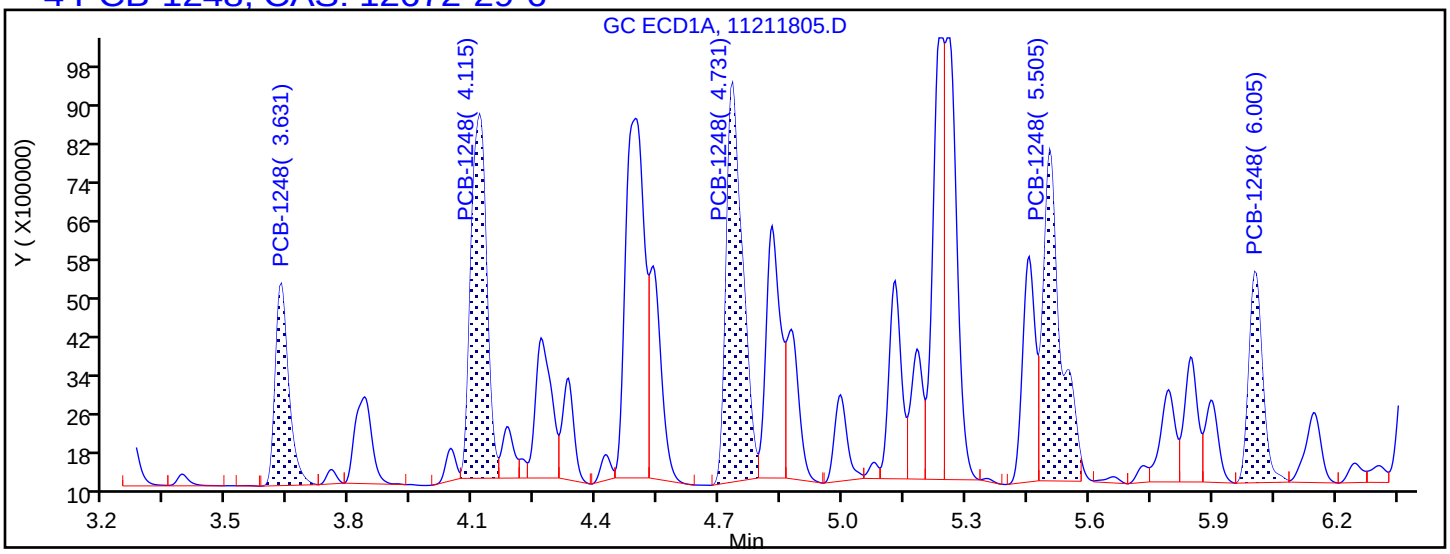
Operator ID: ALS ALS Bottle#: 5 Worklist Smp#: 5

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

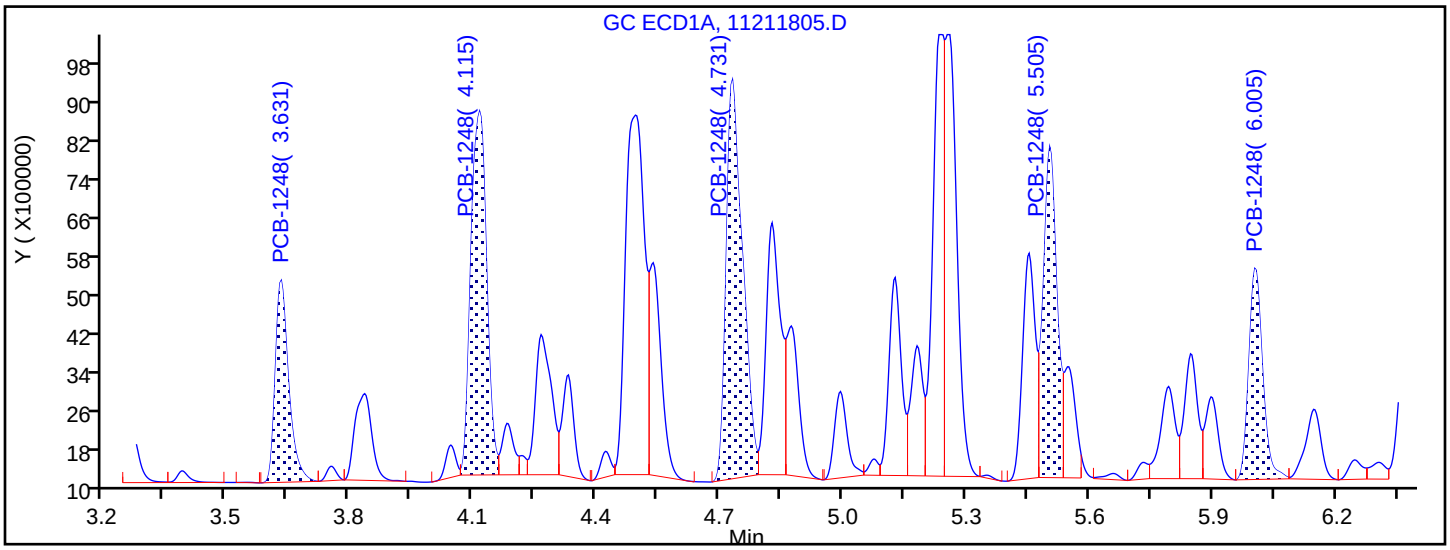
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

4 PCB-1248, CAS: 12672-29-6



Processing Integration Results

3.631	Response = 9442915
4.115	Response = 20068466
4.731	Response = 22864792
5.505	Response = 20328921
6.005	Response = 10248925



Manual Integration Results

3.631	Response = 9442915	
4.115	Response = 20068466	
4.731	Response = 22864792	
5.505	Response = 15905035	M
6.005	Response = 10248925	

Reviewer: patadiab, 21-Nov-2018 11:04:58

Audit Action: Split an Integrated Peak Audit Reason: Shouldering

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D
Lims ID: STDL51248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 10:30:25 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51248
Misc. Info.: 280-0076428-006
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28736785	1000.0	1000.0	
2	1.745	1.745	0.000	164020581	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.629	3.629	0.000	6545537	500.0	534.6	
1	4.115	4.115	0.000	13279339	500.0	512.9	
1	4.729	4.729	0.000	15327875	500.0	519.7	
1	5.505	5.505	0.000	10818763	500.0	523.3	M
1	6.005	6.005	0.000	7003033	500.0	518.7	
		Average of Peak Amounts =				521.8	
2	4.119	4.119	0.000	45483505	500.0	531.6	
2	4.499	4.499	0.000	26585884	500.0	529.3	
2	4.789	4.789	0.000	36645923	500.0	530.3	
2	4.929	4.929	0.000	40664465	500.0	532.9	
2	6.102	6.102	0.000	28205008	500.0	538.4	
		Average of Peak Amounts =				532.5	
						RPD = 2.02	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

AR_1248_L5_00021 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

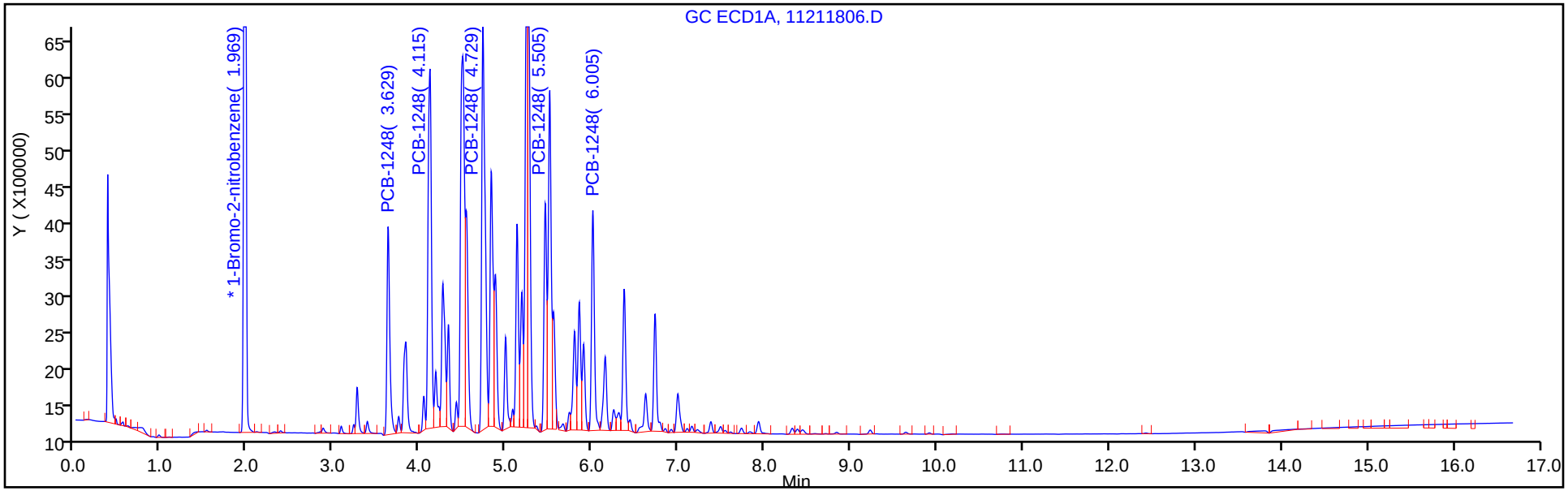
Report Date: 23-Nov-2018 11:01:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

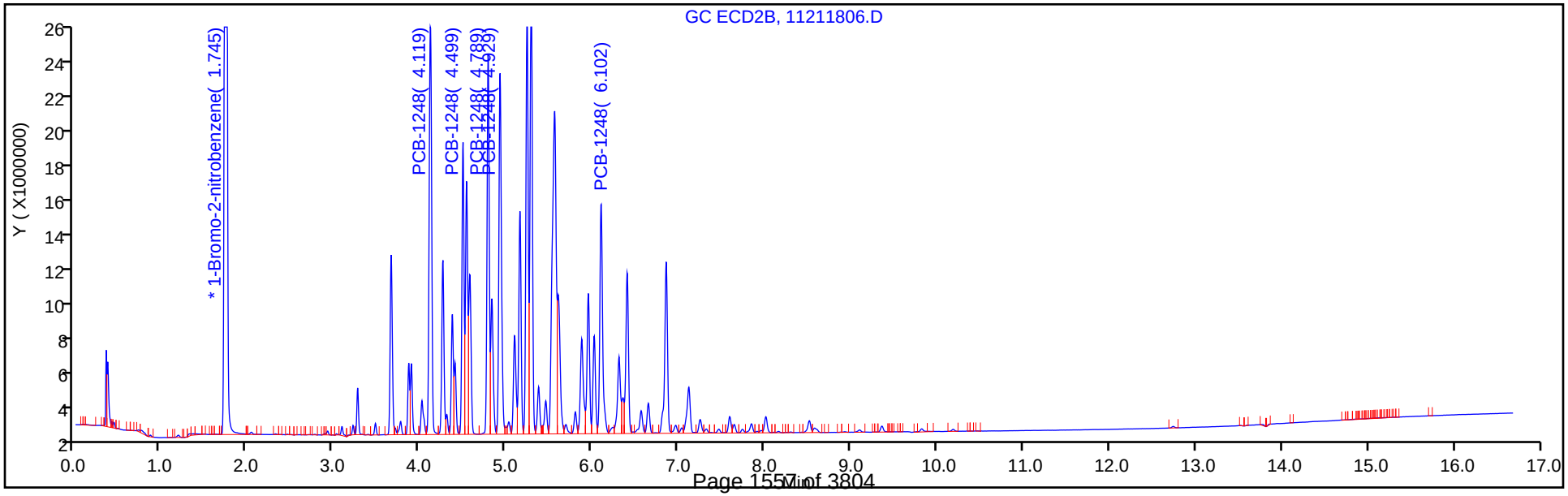
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D

Injection Date:	21-Nov-2018 10:30:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51248			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:01:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D

Injection Date: 21-Nov-2018 10:30:25 Instrument ID: SGC_J

Lims ID: STDL51248

Client ID:

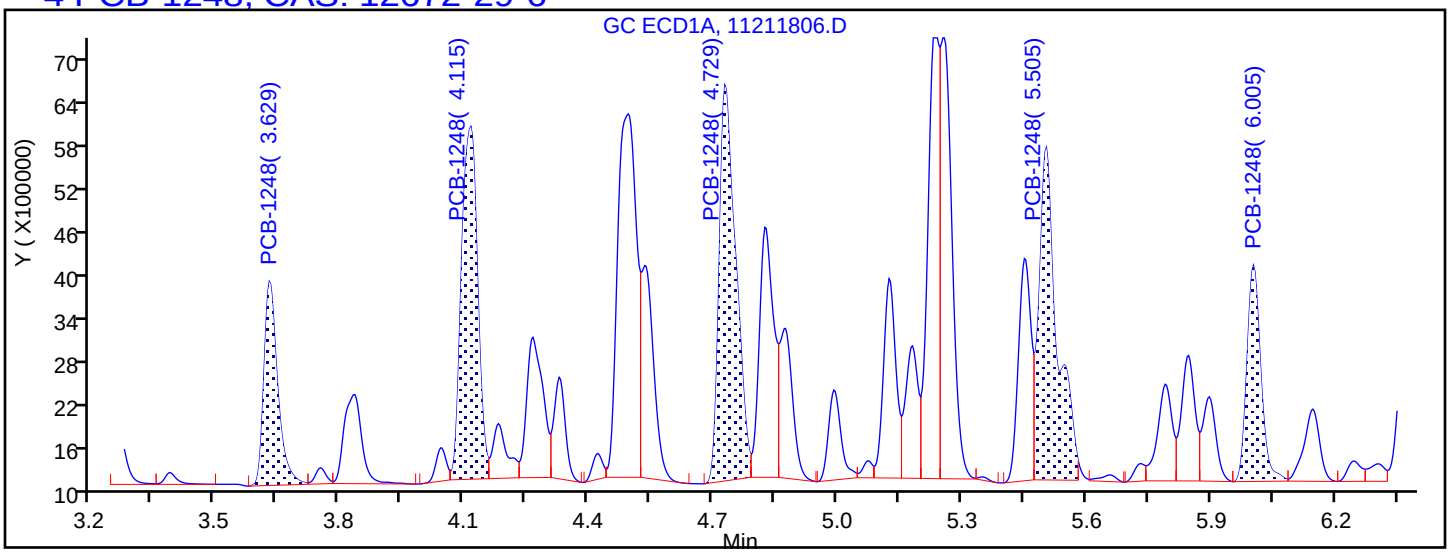
Operator ID: ALS ALS Bottle#: 6 Worklist Smp#: 6

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

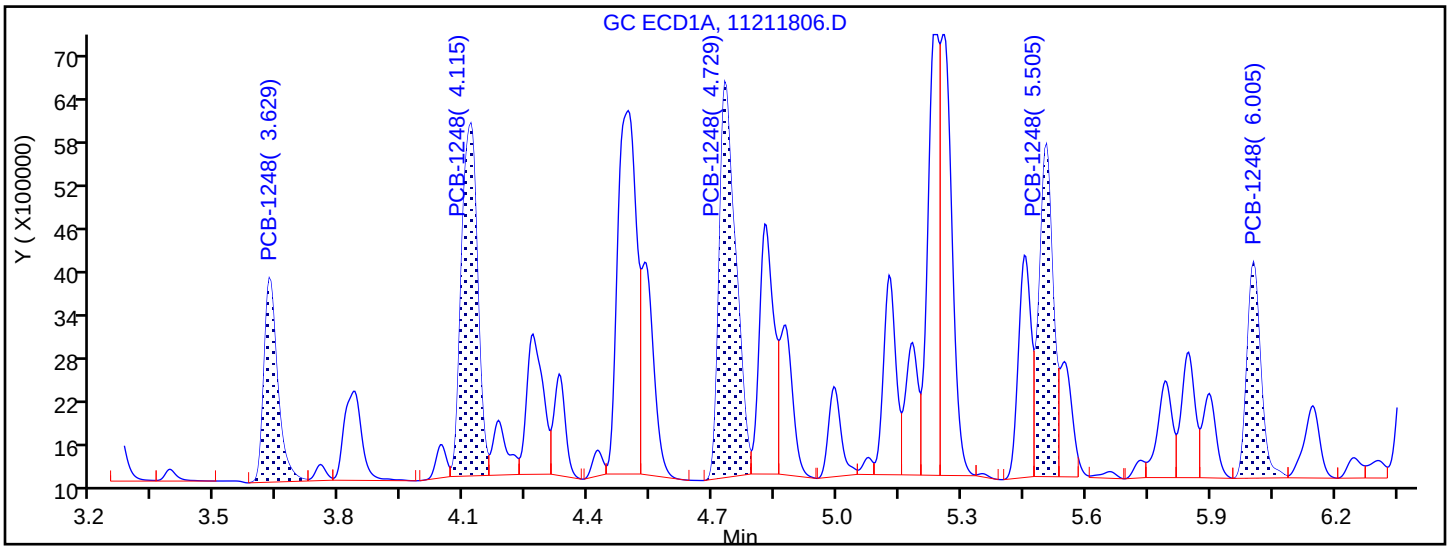
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

4 PCB-1248, CAS: 12672-29-6



Processing Integration Results

3.629	Response = 6545537
4.115	Response = 13279339
4.729	Response = 15327875
5.505	Response = 14072476
6.005	Response = 7003033



Manual Integration Results

3.629	Response = 6545537	
4.115	Response = 13279339	
4.729	Response = 15327875	
5.505	Response = 10818763	M
6.005	Response = 7003033	

Reviewer: mooret, 21-Nov-2018 15:16:01

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D
Lims ID: STDL41248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 10:51:35 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41248
Misc. Info.: 280-0076428-007
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:55 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:16:19

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	30868128	1000.0	1000.0	
2	1.748	1.745	0.003	175701150	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	3572971	250.0	259.7	
1	4.114	4.115	-0.001	6774612	250.0	240.9	
1	4.731	4.729	0.002	7900982	250.0	244.5	
1	5.504	5.505	-0.001	5573784	250.0	246.5	
1	6.004	6.005	-0.001	3570034	250.0	241.9	
		Average of Peak Amounts =				246.7	
2	4.121	4.119	0.002	24413334	250.0	258.1	
2	4.498	4.499	-0.001	14232505	250.0	255.2	
2	4.791	4.789	0.002	19636547	250.0	255.1	
2	4.928	4.929	-0.001	21701862	250.0	256.9	
2	6.101	6.102	-0.001	14716689	250.0	254.0	
		Average of Peak Amounts =				255.9	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						246.7	
2						255.9	
						RPD = 3.64	

Reagents:

AR_1248_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

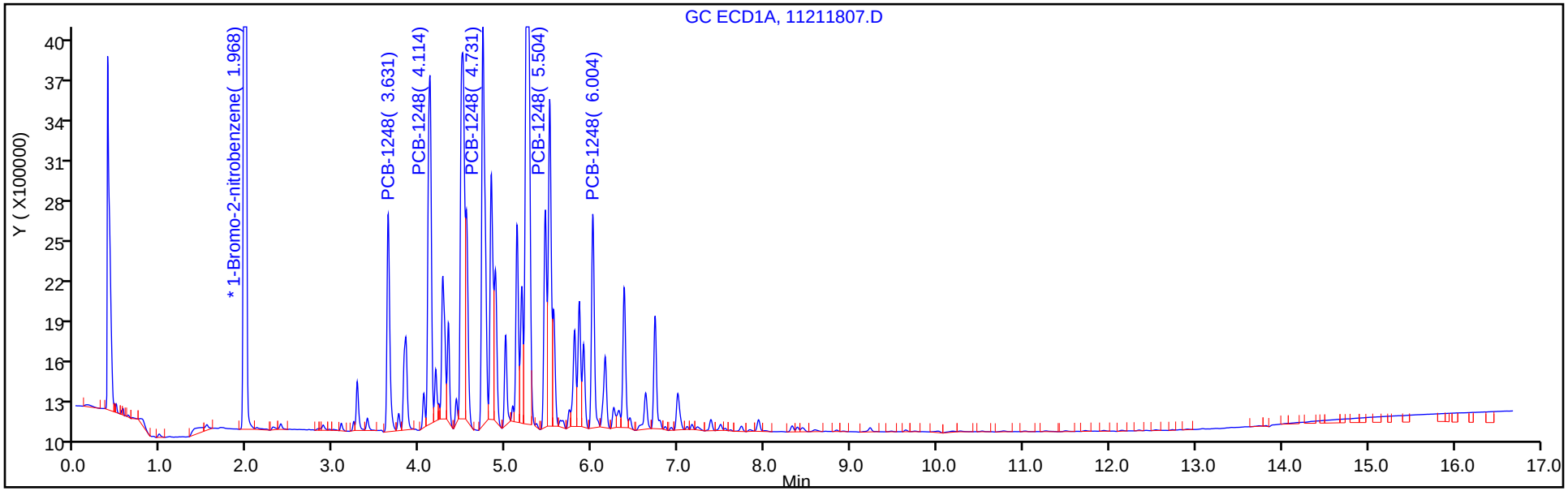
Report Date: 23-Nov-2018 11:01:56 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

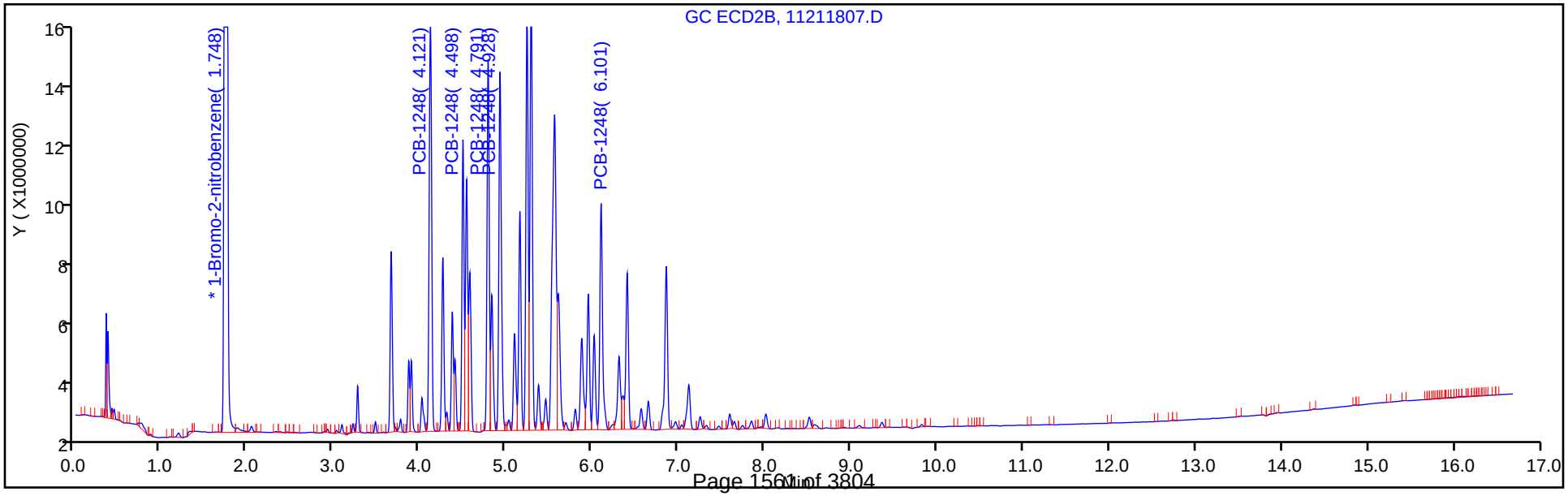
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D

Injection Date:	21-Nov-2018 10:51:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41248			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D
Lims ID: STDL31248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 11:12:45 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31248
Misc. Info.: 280-0076428-008
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:41:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	28891546	1000.0	1000.0	
2	1.746	1.745	0.001	164562398	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	1647978	100.0	115.7	
1	4.113	4.115	-0.002	2970012	100.0	110.1	
1	4.730	4.729	0.001	3553415	100.0	112.6	
1	5.506	5.505	0.001	2408573	100.0	109.2	
1	6.006	6.005	0.001	1614155	100.0	112.6	
		Average of Peak Amounts =				112.0	
2	4.120	4.119	0.001	10526463	100.0	109.8	
2	4.500	4.499	0.001	6322335	100.0	111.3	
2	4.790	4.789	0.001	8735777	100.0	110.4	
2	4.930	4.929	0.001	9459919	100.0	110.4	
2	6.103	6.102	0.001	6426439	100.0	109.9	
		Average of Peak Amounts =				110.4	
						RPD = 1.50	
S 8 Polychlorinated biphenyls, Total							
1						112.0	
2						110.4	
						RPD = 1.50	

Reagents:

AR_1248_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

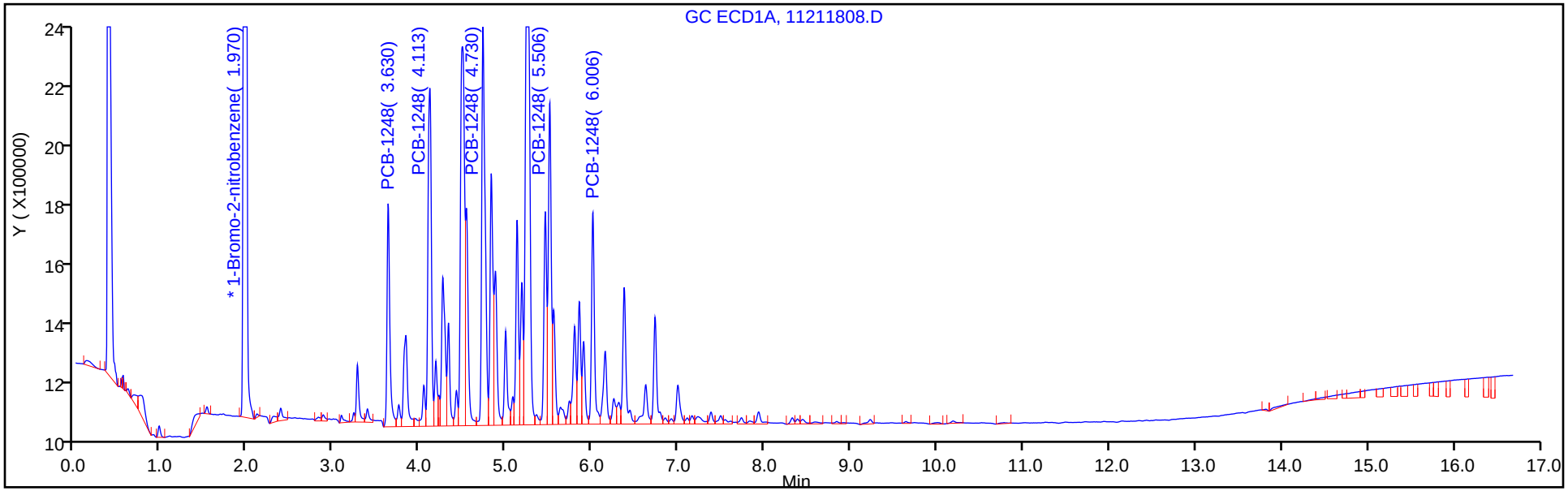
Report Date: 23-Nov-2018 11:01:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

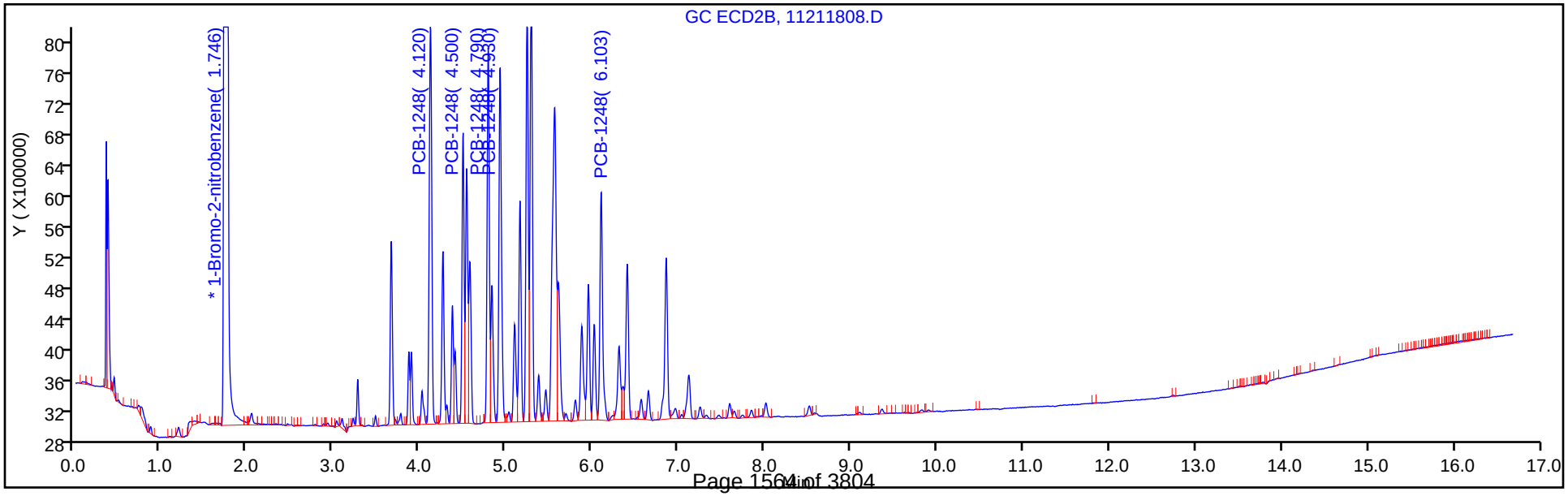
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D

Injection Date:	21-Nov-2018 11:12:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31248			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D
Lims ID: STDL21248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 11:33:58 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21248
Misc. Info.: 280-0076428-009
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:59 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:58:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	29689350	1000.0	1000.0	
2	1.748	1.745	0.003	167941963	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	908243	50.0	50.8	
1	4.111	4.115	-0.004	1417622	50.0	48.4	
1	4.728	4.729	-0.001	1757060	50.0	49.3	
1	5.505	5.505	0.000	1217158	50.0	49.3	
1	6.005	6.005	0.000	778039	50.0	48.5	
		Average of Peak Amounts =				49.3	
2	4.121	4.119	0.002	5857367	50.0	52.3	
2	4.498	4.499	-0.001	3480448	50.0	51.5	
2	4.791	4.789	0.002	4913700	50.0	51.7	
2	4.928	4.929	-0.001	5227558	50.0	51.9	
2	6.101	6.102	-0.001	3543306	50.0	52.0	
		Average of Peak Amounts =				51.9	
						RPD = 5.21	
S 8 Polychlorinated biphenyls, Total							
1						49.3	
2						51.9	
						RPD = 5.21	

Reagents:

AR_1248_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

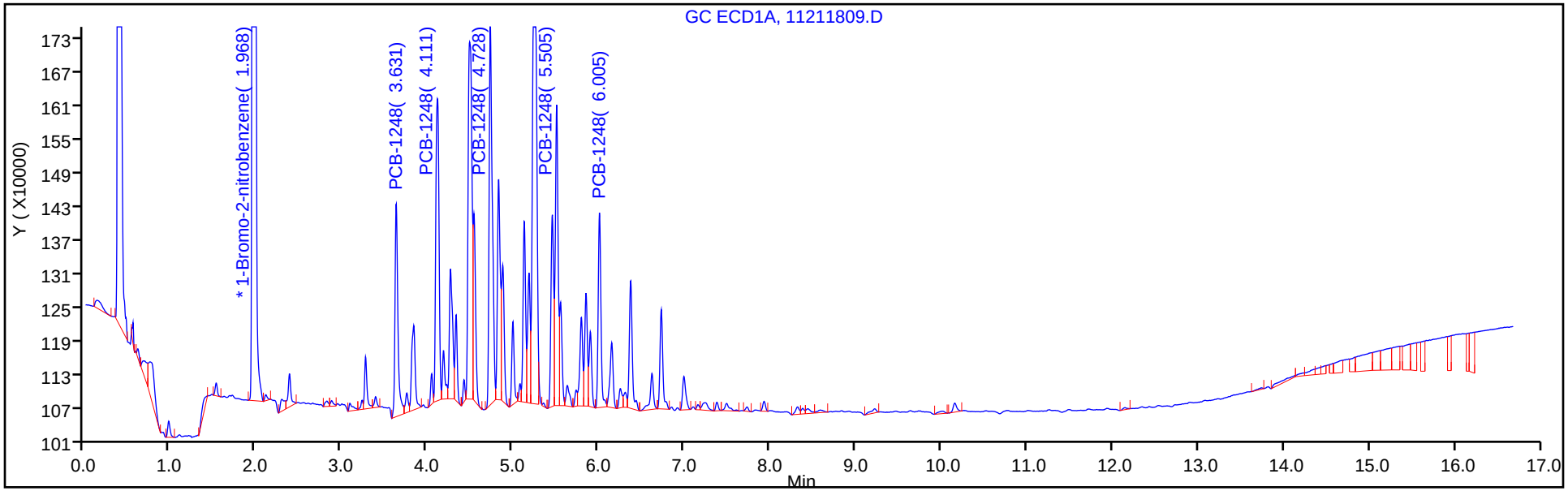
Report Date: 23-Nov-2018 11:02:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

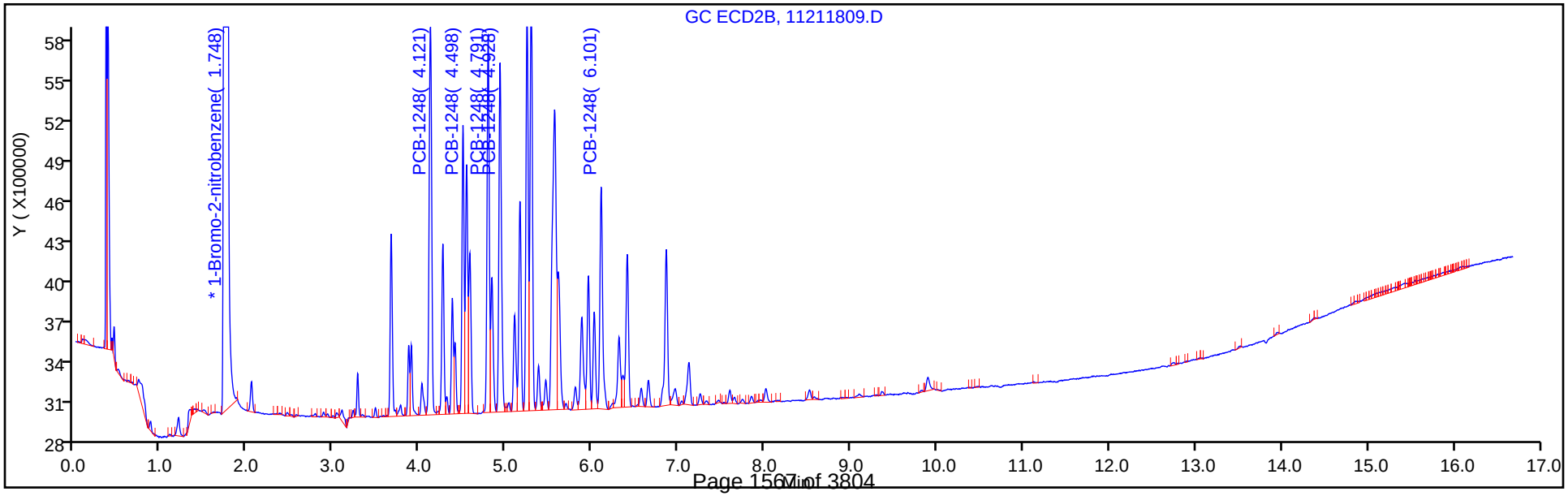
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D

Injection Date:	21-Nov-2018 11:33:58	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21248			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D
Lims ID: STDL11248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 11:55:11 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11248
Misc. Info.: 280-0076428-010
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 12:21:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.969	-0.002	28034459	1000.0	1000.0	
2	1.747	1.745	0.002	159672391	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	499158	25.0	19.5	
1	4.113	4.115	-0.002	729109	25.0	24.0	
1	4.730	4.729	0.001	903744	25.0	22.5	
1	5.503	5.505	-0.002	628528	25.0	23.1	
1	6.003	6.005	-0.002	406565	25.0	23.2	
		Average of Peak Amounts =				22.5	
2	4.120	4.119	0.001	2976466	25.0	20.2	
2	4.497	4.499	-0.002	1854776	25.0	20.7	
2	4.790	4.789	0.001	2664448	25.0	20.7	
2	4.927	4.929	-0.002	2696182	25.0	20.3	
2	6.100	6.102	-0.002	1808002	25.0	20.5	
		Average of Peak Amounts =				20.5	
						RPD = 9.11	
S 8 Polychlorinated biphenyls, Total							
1						22.5	
2						20.5	
						RPD = 9.11	

Reagents:

AR_1248_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

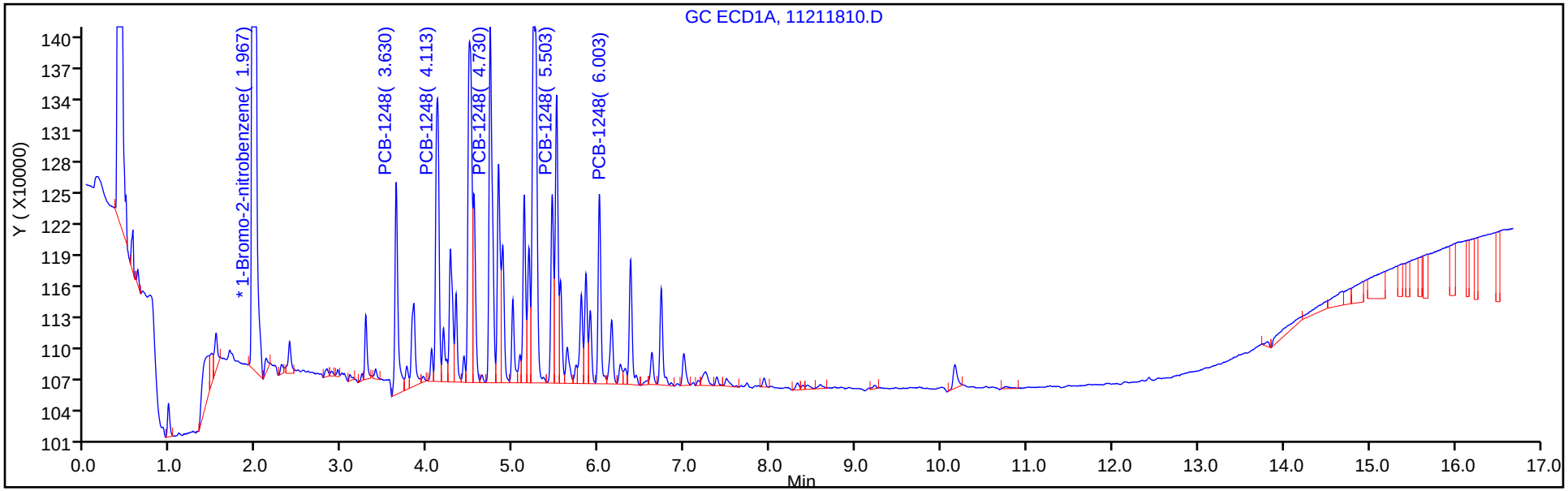
Report Date: 23-Nov-2018 11:02:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

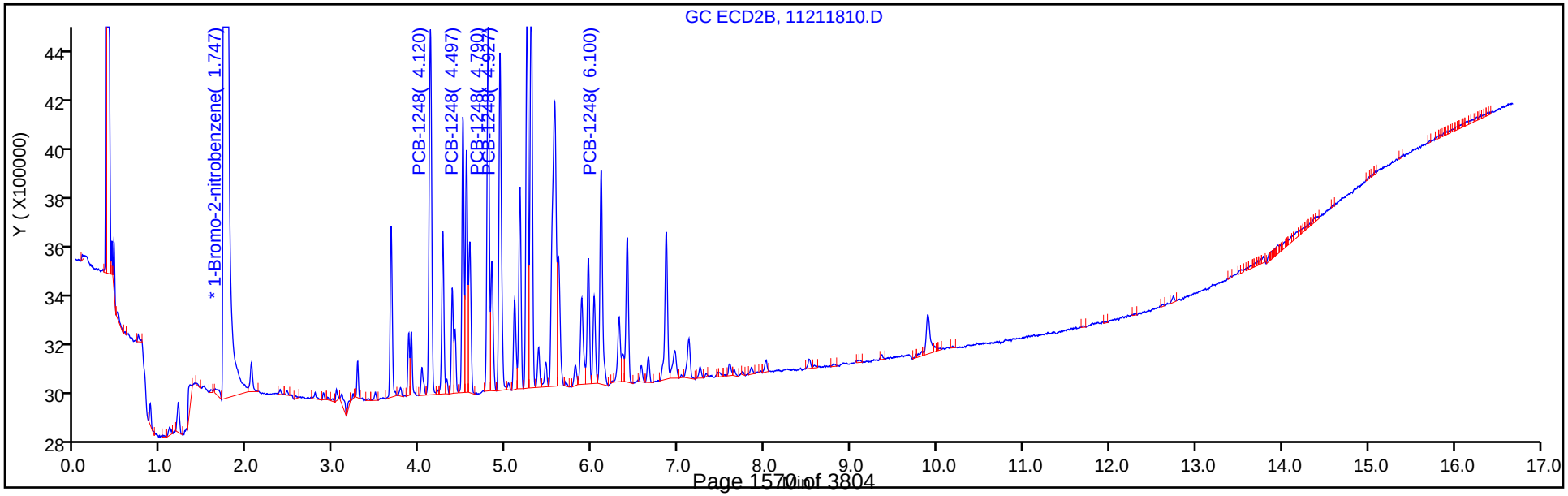
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D

Injection Date:	21-Nov-2018 11:55:11	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11248			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34379

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1248 Peak 1	0.7456 0.5140	0.6975 0.4927	0.6397	0.5558	0.5546	Lin1	8.4168	0.5058							0.9970		0.9900
PCB-1248 Peak 2	0.4646 0.2966	0.4145 0.2935	0.3842	0.3240	0.3242	Lin1	5.4995	0.2958							0.9980		0.9900
PCB-1248 Peak 3	0.6675 0.4093	0.5852 0.4021	0.5308	0.4470	0.4468	Lin1	8.2830	0.4057							0.9980		0.9900
PCB-1248 Peak 4	0.6754 0.4567	0.6225 0.4404	0.5749	0.4941	0.4958	Lin1	7.7151	0.4508							0.9970		0.9900
PCB-1248 Peak 5	0.4529 0.3112	0.4220 0.3039	0.3905	0.3350	0.3439	Lin1	4.9536	0.3102							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 09:48 Calibration End Date: 11/21/2018 11:55 Calibration ID: 34379

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11248 280-438388/10	11211810.D
Level 2	STDL21248 280-438388/9	11211809.D
Level 3	STDL31248 280-438388/8	11211808.D
Level 4	STDL41248 280-438388/7	11211807.D
Level 5	STDL51248 280-438388/6	11211806.D
Level 6	STDL61248 280-438388/5	11211805.D
Level 7	STDL71248 280-438388/4	11211804.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1248 Peak 1	BNB	Lin1	2976466 66929326	5857367 83375893	10526463	24413334	45483505	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 2	BNB	Lin1	1854776 38624976	3480448 49673627	6322335	14232505	26585884	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 3	BNB	Lin1	2664448 53290956	4913700 68034804	8735777	19636547	36645923	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 4	BNB	Lin1	2696182 59463126	5227558 74524210	9459919	21701862	40664465	25.0 750	50.0 1000	100	250	500
PCB-1248 Peak 5	BNB	Lin1	1808002 40520608	3543306 51421671	6426439	14716689	28205008	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D
Lims ID: STDL71248
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 09:48:04 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71248
Misc. Info.: 280-0076428-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:51

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	29567346	1000.0	1000.0	
2	1.748	1.744	0.004	169218357	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	11858019	1000.0	959.6	
1	4.114	4.115	-0.001	26688023	1000.0	1006.7	
1	4.731	4.729	0.002	29858711	1000.0	992.4	
1	5.504	5.505	-0.001	21012955	1000.0	995.6	
1	6.004	6.005	-0.001	13952293	1000.0	1012.0	
		Average of Peak Amounts =				993.3	
2	4.121	4.119	0.002	83375893	1000.0	957.5	
2	4.498	4.499	-0.001	49673627	1000.0	973.7	
2	4.791	4.789	0.002	68034804	1000.0	970.6	
2	4.927	4.929	-0.002	74524210	1000.0	959.9	
2	6.101	6.102	-0.001	51421671	1000.0	963.6	
		Average of Peak Amounts =				965.0	
						RPD = 2.88	
S 8 Polychlorinated biphenyls, Total							
1						993.3	
2						965.0	
						RPD = 2.88	

Reagents:

AR_1248_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

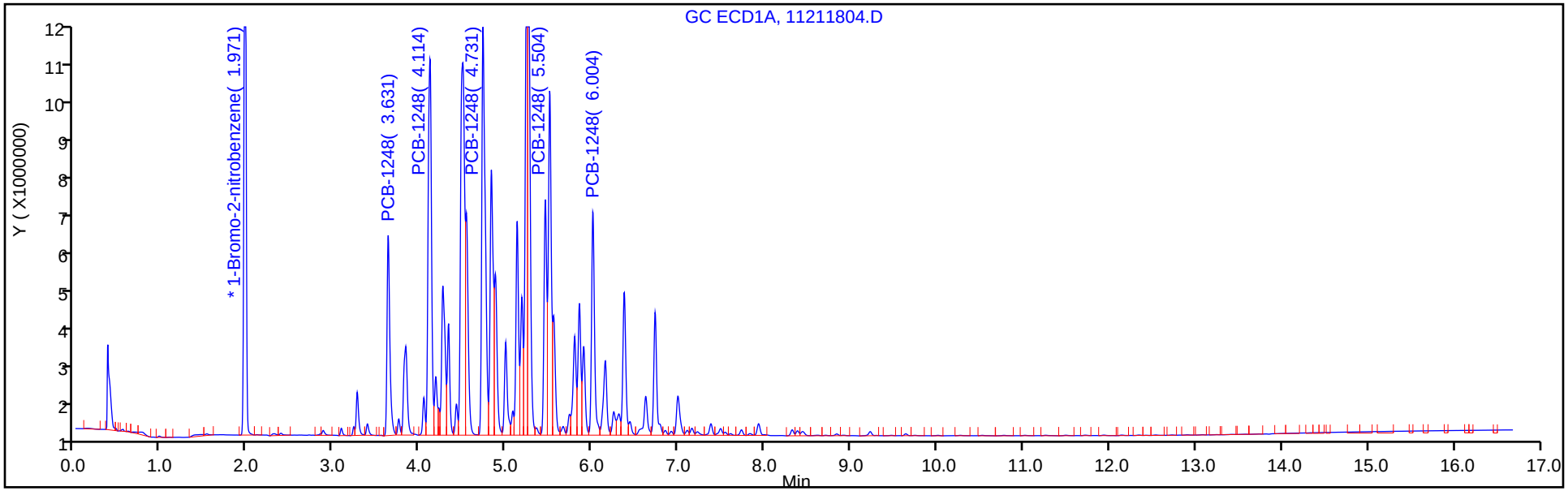
Report Date: 23-Nov-2018 11:01:50 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

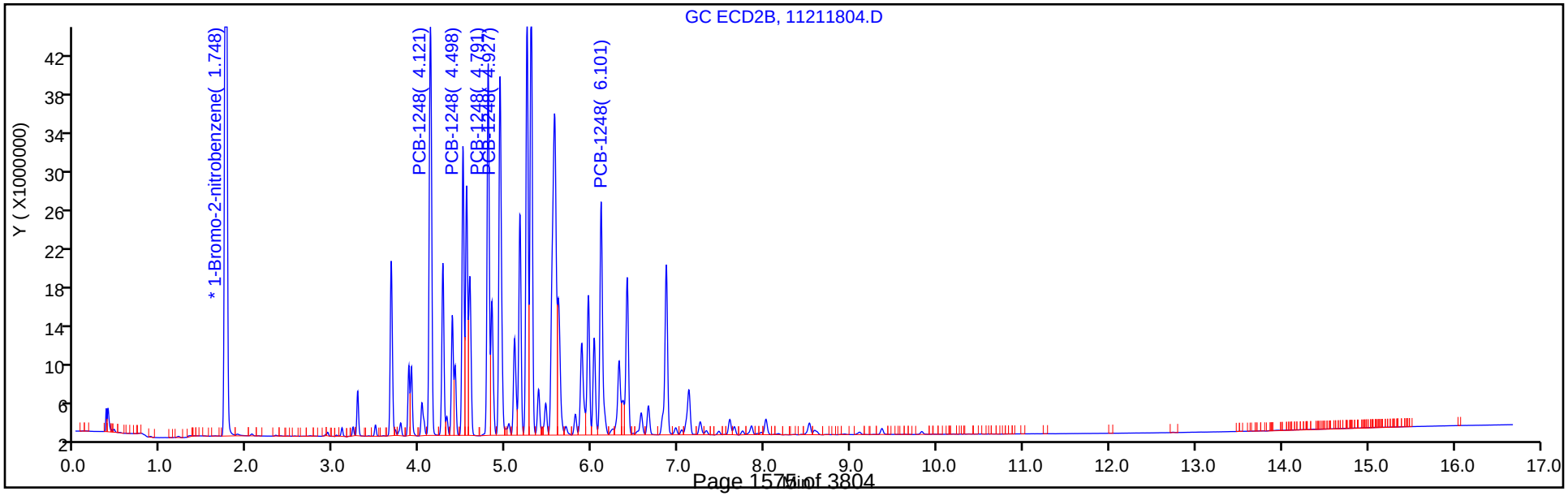
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211804.D

Injection Date:	21-Nov-2018 09:48:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71248			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D
Lims ID: STDL61248
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 10:09:17 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61248
Misc. Info.: 280-0076428-005
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:51 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:05:29

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.971	1.967	0.004	30510716	1000.0	1000.0	
2	1.748	1.744	0.004	173614890	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.631	3.629	0.002	9442915	750.0	735.0	
1	4.115	4.115	0.000	20068466	750.0	732.2	
1	4.731	4.729	0.002	22864792	750.0	734.0	
1	5.505	5.505	0.000	15905035	750.0	728.0	M
1	6.005	6.005	0.000	10248925	750.0	718.0	
		Average of Peak Amounts =				729.5	
2	4.118	4.119	-0.001	66929326	750.0	745.5	
2	4.498	4.499	-0.001	38624976	750.0	733.4	
2	4.791	4.789	0.002	53290956	750.0	736.2	
2	4.928	4.929	-0.001	59463126	750.0	742.7	
2	6.101	6.102	-0.001	40520608	750.0	736.4	
		Average of Peak Amounts =				738.8	
						RPD = 1.28	
S 8 Polychlorinated biphenyls, Total							
1						729.5	
2						738.8	
						RPD = 1.28	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1248_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

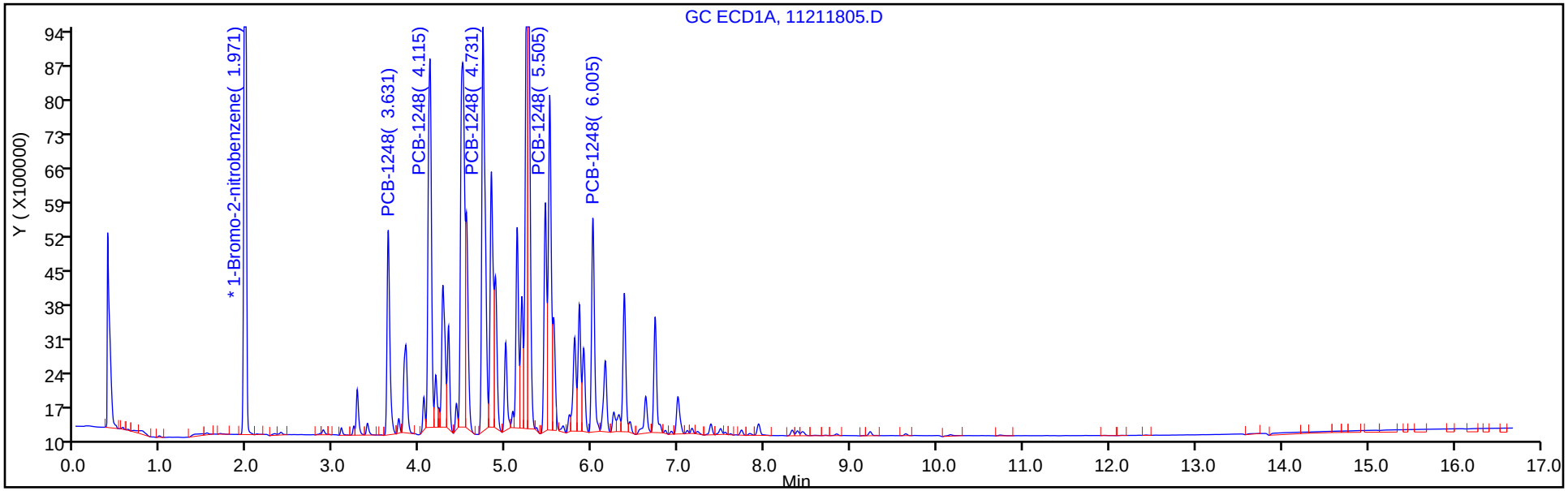
Report Date: 23-Nov-2018 11:01:52 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

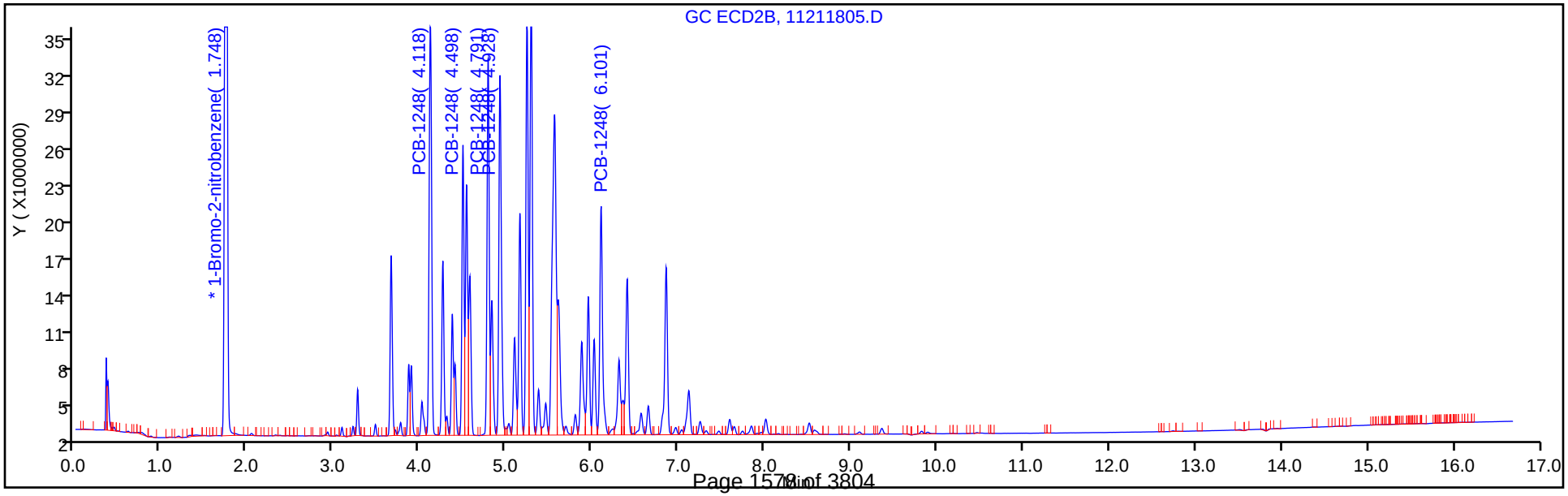
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211805.D

Injection Date:	21-Nov-2018 10:09:17	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61248			Worklist Smp#:	5
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D
Lims ID: STDL51248
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 10:30:25 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51248
Misc. Info.: 280-0076428-006
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:00:11

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28736785	1000.0	1000.0	
2	1.745	1.745	0.000	164020581	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							M
1	3.629	3.629	0.000	6545537	500.0	534.6	
1	4.115	4.115	0.000	13279339	500.0	512.9	
1	4.729	4.729	0.000	15327875	500.0	519.7	
1	5.505	5.505	0.000	10818763	500.0	523.3	M
1	6.005	6.005	0.000	7003033	500.0	518.7	
		Average of Peak Amounts =				521.8	
2	4.119	4.119	0.000	45483505	500.0	531.6	
2	4.499	4.499	0.000	26585884	500.0	529.3	
2	4.789	4.789	0.000	36645923	500.0	530.3	
2	4.929	4.929	0.000	40664465	500.0	532.9	
2	6.102	6.102	0.000	28205008	500.0	538.4	
		Average of Peak Amounts =				532.5	
						RPD = 2.02	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

AR_1248_L5_00021 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

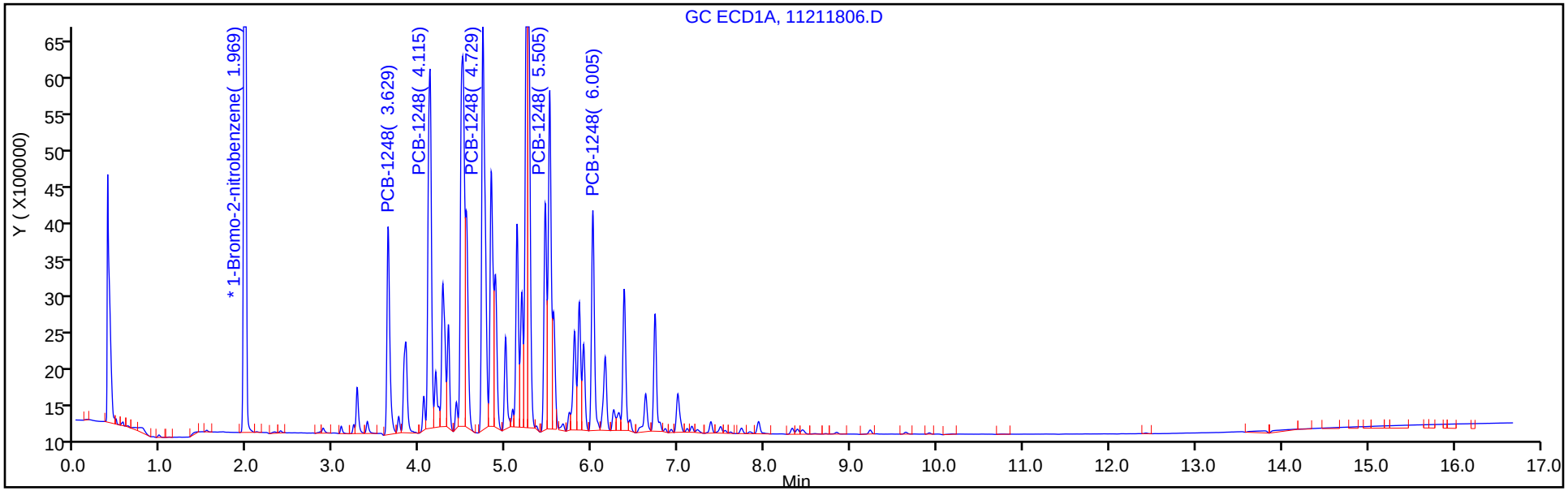
Report Date: 23-Nov-2018 11:01:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

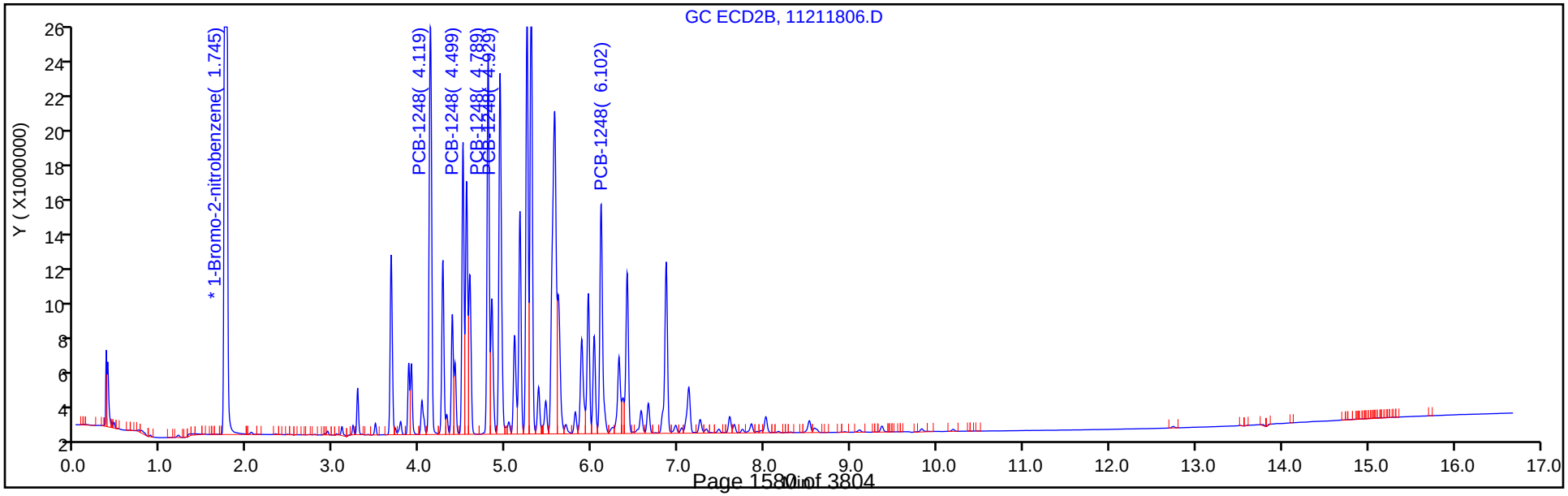
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211806.D

Injection Date:	21-Nov-2018 10:30:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51248			Worklist Smp#:	6
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D
Lims ID: STDL41248
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 10:51:35 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41248
Misc. Info.: 280-0076428-007
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:55 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:16:19

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	30868128	1000.0	1000.0	
2	1.748	1.745	0.003	175701150	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	3572971	250.0	259.7	
1	4.114	4.115	-0.001	6774612	250.0	240.9	
1	4.731	4.729	0.002	7900982	250.0	244.5	
1	5.504	5.505	-0.001	5573784	250.0	246.5	
1	6.004	6.005	-0.001	3570034	250.0	241.9	
		Average of Peak Amounts =				246.7	
2	4.121	4.119	0.002	24413334	250.0	258.1	
2	4.498	4.499	-0.001	14232505	250.0	255.2	
2	4.791	4.789	0.002	19636547	250.0	255.1	
2	4.928	4.929	-0.001	21701862	250.0	256.9	
2	6.101	6.102	-0.001	14716689	250.0	254.0	
		Average of Peak Amounts =				255.9	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						246.7	
2						255.9	
						RPD = 3.64	

Reagents:

AR_1248_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

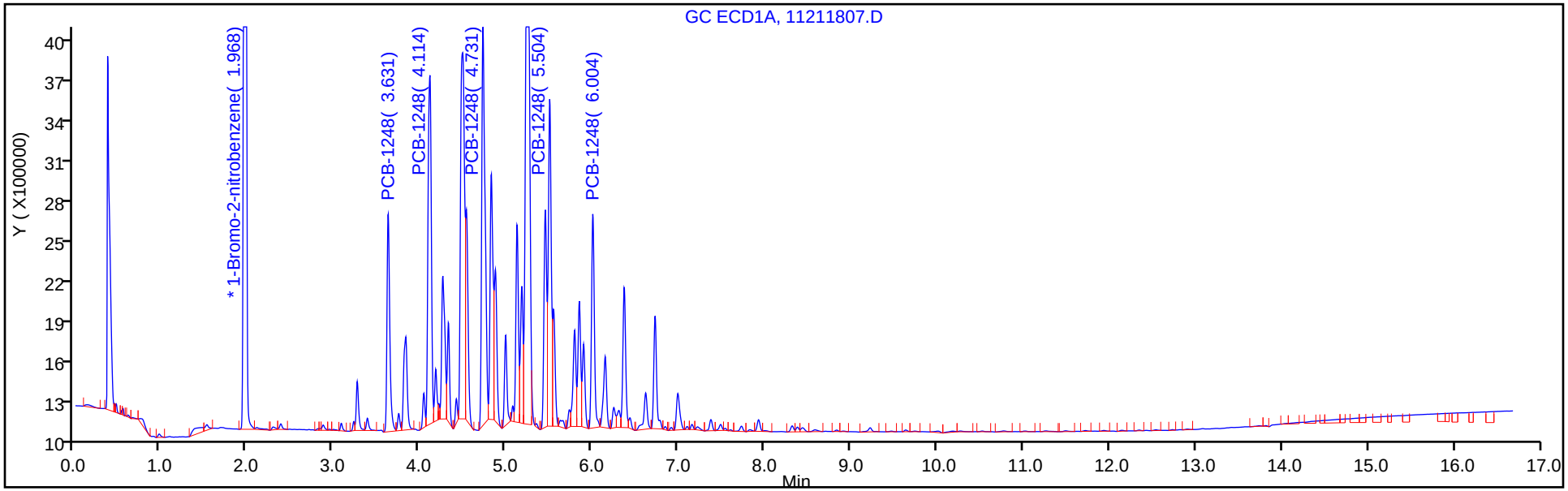
Report Date: 23-Nov-2018 11:01:56 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

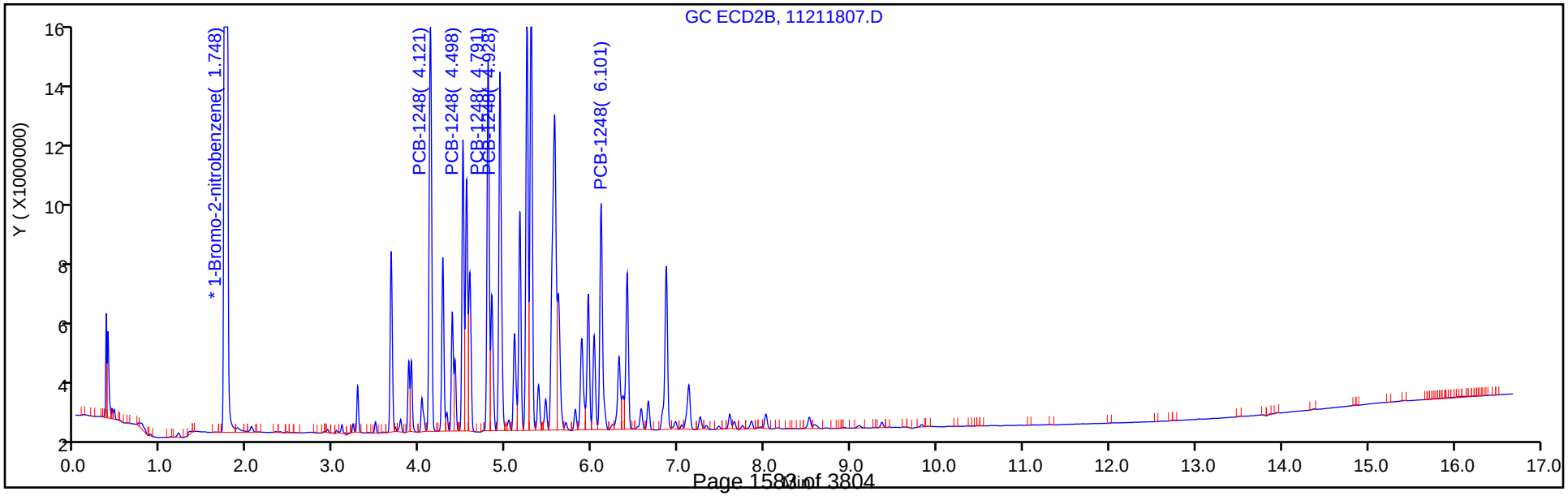
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211807.D

Injection Date:	21-Nov-2018 10:51:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41248			Worklist Smp#:	7
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D
Lims ID: STDL31248
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 11:12:45 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31248
Misc. Info.: 280-0076428-008
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:41:03

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	28891546	1000.0	1000.0	
2	1.746	1.745	0.001	164562398	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	1647978	100.0	115.7	
1	4.113	4.115	-0.002	2970012	100.0	110.1	
1	4.730	4.729	0.001	3553415	100.0	112.6	
1	5.506	5.505	0.001	2408573	100.0	109.2	
1	6.006	6.005	0.001	1614155	100.0	112.6	
		Average of Peak Amounts =				112.0	
2	4.120	4.119	0.001	10526463	100.0	109.8	
2	4.500	4.499	0.001	6322335	100.0	111.3	
2	4.790	4.789	0.001	8735777	100.0	110.4	
2	4.930	4.929	0.001	9459919	100.0	110.4	
2	6.103	6.102	0.001	6426439	100.0	109.9	
		Average of Peak Amounts =				110.4	
						RPD = 1.50	
S 8 Polychlorinated biphenyls, Total							
1						112.0	
2						110.4	
						RPD = 1.50	

Reagents:

AR_1248_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

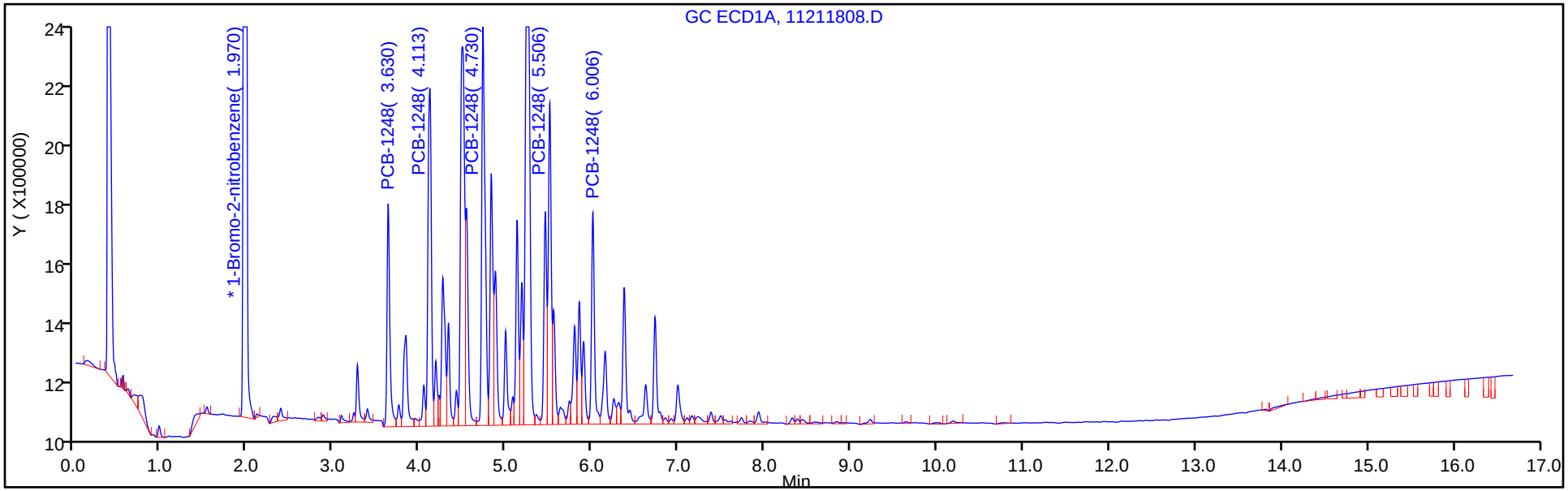
Report Date: 23-Nov-2018 11:01:58 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

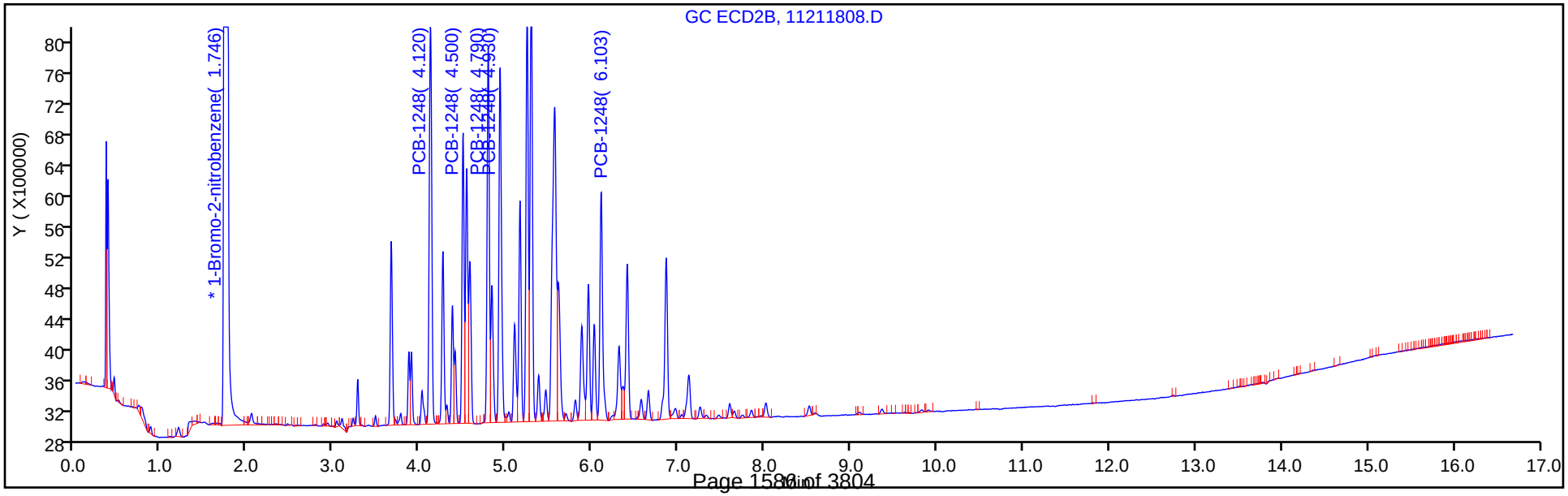
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211808.D

Injection Date:	21-Nov-2018 11:12:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31248			Worklist Smp#:	8
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D
Lims ID: STDL21248
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 11:33:58 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21248
Misc. Info.: 280-0076428-009
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:01:59 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 11:58:44

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	29689350	1000.0	1000.0	
2	1.748	1.745	0.003	167941963	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.631	3.629	0.002	908243	50.0	50.8	
1	4.111	4.115	-0.004	1417622	50.0	48.4	
1	4.728	4.729	-0.001	1757060	50.0	49.3	
1	5.505	5.505	0.000	1217158	50.0	49.3	
1	6.005	6.005	0.000	778039	50.0	48.5	
		Average of Peak Amounts =				49.3	
2	4.121	4.119	0.002	5857367	50.0	52.3	
2	4.498	4.499	-0.001	3480448	50.0	51.5	
2	4.791	4.789	0.002	4913700	50.0	51.7	
2	4.928	4.929	-0.001	5227558	50.0	51.9	
2	6.101	6.102	-0.001	3543306	50.0	52.0	
		Average of Peak Amounts =				51.9	
						RPD = 5.21	
S 8 Polychlorinated biphenyls, Total							
1						49.3	
2						51.9	
						RPD = 5.21	

Reagents:

AR_1248_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

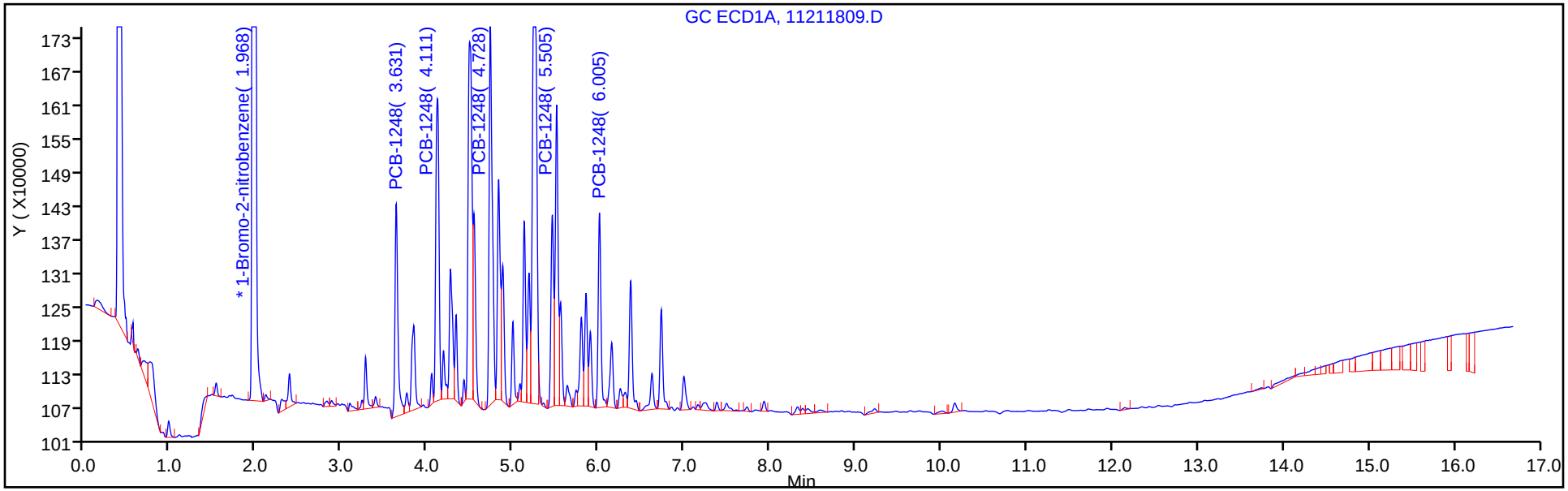
Report Date: 23-Nov-2018 11:02:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

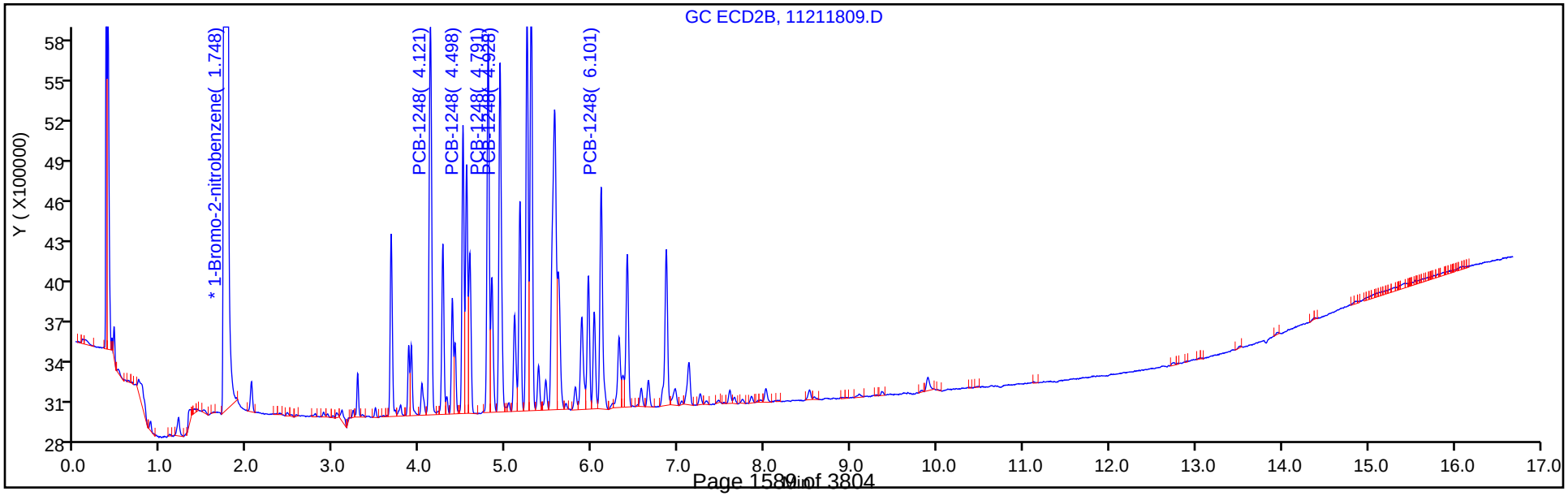
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211809.D

Injection Date:	21-Nov-2018 11:33:58	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21248			Worklist Smp#:	9
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D
Lims ID: STDL11248
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 11:55:11 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11248
Misc. Info.: 280-0076428-010
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub2

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 21-Nov-2018 12:21:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.969	-0.002	28034459	1000.0	1000.0	
2	1.747	1.745	0.002	159672391	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.630	3.629	0.001	499158	25.0	19.5	
1	4.113	4.115	-0.002	729109	25.0	24.0	
1	4.730	4.729	0.001	903744	25.0	22.5	
1	5.503	5.505	-0.002	628528	25.0	23.1	
1	6.003	6.005	-0.002	406565	25.0	23.2	
		Average of Peak Amounts =				22.5	
2	4.120	4.119	0.001	2976466	25.0	20.2	
2	4.497	4.499	-0.002	1854776	25.0	20.7	
2	4.790	4.789	0.001	2664448	25.0	20.7	
2	4.927	4.929	-0.002	2696182	25.0	20.3	
2	6.100	6.102	-0.002	1808002	25.0	20.5	
		Average of Peak Amounts =				20.5	
						RPD = 9.11	
S 8 Polychlorinated biphenyls, Total							
1						22.5	
2						20.5	
						RPD = 9.11	

Reagents:

AR_1248_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

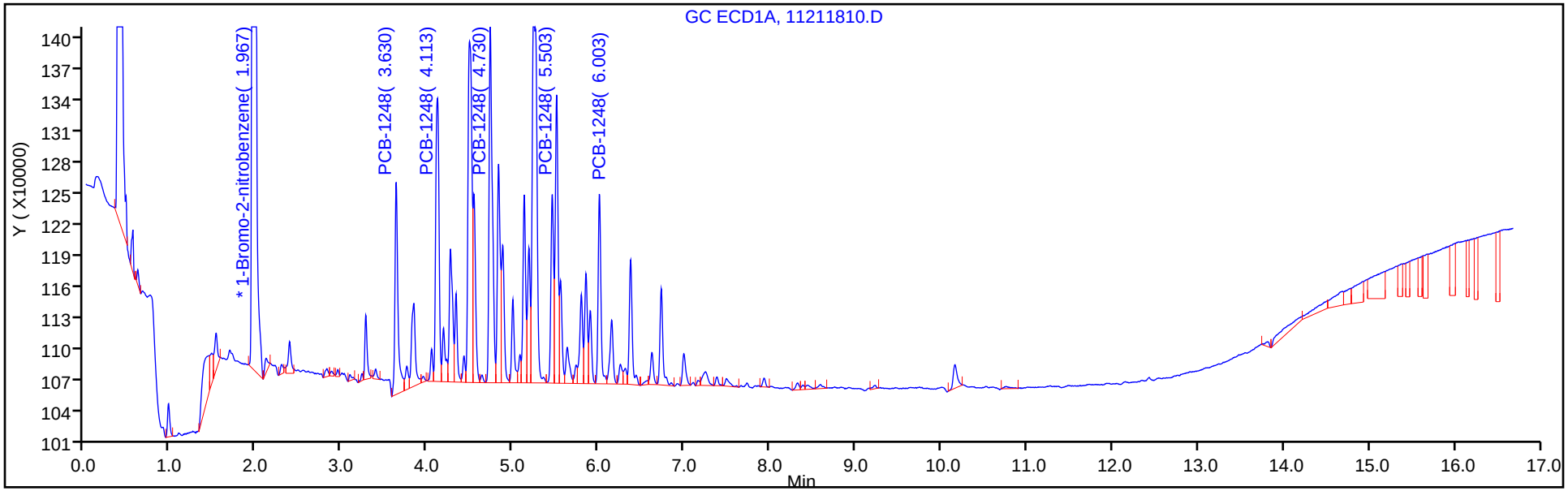
Report Date: 23-Nov-2018 11:02:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

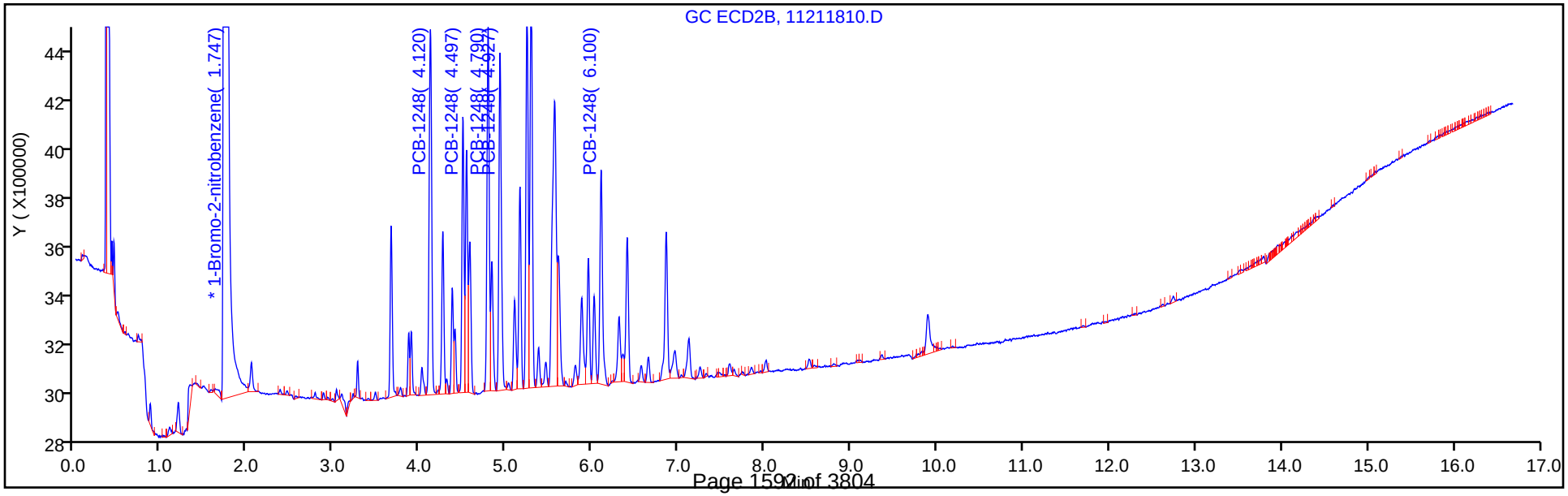
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211810.D

Injection Date:	21-Nov-2018 11:55:11	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11248			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.3324 0.2543	0.3063 0.2408	0.2831	0.2742	0.2560	Lin1	2.7935	0.2469							0.9990		0.9900
PCB-1221 Peak 2	0.2001 0.1490	0.1916 0.1317	0.1804	0.1697	0.1512	Lin1	2.3729	0.1411							0.9920		0.9900
PCB-1221 Peak 3	0.7629 0.6346	0.7594 0.5938	0.7881	0.6927	0.6412	Lin1	7.0937	0.6167							0.9960		0.9900
PCB-1254 Peak 1	1.0411 0.7678	1.0771 0.7457	0.9481	0.8237	0.7656	Lin1	11.881	0.7483							0.9980		0.9900
PCB-1254 Peak 2	1.3591 1.1371	1.4854 1.0678	1.3447	1.2147	1.1311	Lin1	13.399	1.0986							0.9970		0.9900
PCB-1254 Peak 3	0.9424 0.8572	1.0002 0.8194	0.9434	0.8812	0.8159	Lin1	5.8262	0.8290							0.9990		0.9900
PCB-1254 Peak 4	1.2545 1.0368	1.3517 0.9872	1.2209	1.1047	1.0311	Lin1	11.971	1.0070							0.9980		0.9900
PCB-1254 Peak 5	1.5798 1.4286	1.7199 1.3750	1.5764	1.4700	1.4137	Lin1	10.152	1.3955							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34382

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Lin1	258968 5979075	422934 7654096	794996	2063928	3897553	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 2	BNB	Lin1	155902 3504422	264535 4185310	506503	1277667	2302370	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 3	BNB	Lin1	594265 14922887	1048520 18870386	2212927	5214449	9761452	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 1	BNB	Lin1	810954 18053312	1487053 23698129	2662071	6200718	11654391	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 2	BNB	Lin1	1058665 26738366	2050858 33934042	3775608	9144535	17219418	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 3	BNB	Lin1	734067 20156036	1380932 26040802	2648846	6634099	12420039	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 4	BNB	Lin1	977183 24380329	1866154 31371863	3428029	8316205	15696475	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 5	BNB	Lin1	1230625 33590891	2374593 43698000	4426432	11066699	21521176	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D
Lims ID: STDL72154
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 12:16:22 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL72154
Misc. Info.: 280-0076428-011
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:04 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31780064	1000.0	1000.0	
2	1.748	1.745	0.003	176632693	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.088	3.085	0.003	7654096	1000.0	964.1	
1	3.231	3.232	-0.001	4185310	1000.0	916.3	
1	3.271	3.269	0.002	18870386	1000.0	951.3	
		Average of Peak Amounts =				943.9	
2	3.094	3.092	0.002	23025045	1000.0	950.4	
2	3.221	3.222	-0.001	15205275	1000.0	956.1	
2	3.278	3.276	0.002	52969181	1000.0	950.9	
		Average of Peak Amounts =				952.5	
						RPD = 0.90	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.181	5.182	-0.001	23698129	1000.0	980.6	
1	5.508	5.509	-0.001	33934042	1000.0	959.7	
1	5.848	5.849	-0.001	26040802	1000.0	981.4	
1	6.621	6.622	-0.001	31371863	1000.0	968.4	
1	6.994	6.995	-0.001	43698000	1000.0	978.1	
		Average of Peak Amounts =				973.6	
2	5.531	5.529	0.002	96750392	1000.0	950.5	
2	5.951	5.952	-0.001	75935033	1000.0	949.3	
2	6.404	6.402	0.002	102458024	1000.0	940.6	
2	6.648	6.649	-0.001	61272987	1000.0	948.5	
2	7.118	7.119	-0.001	150030344	1000.0	953.5	
		Average of Peak Amounts =				948.5	
						RPD = 2.62	
S 8 Polychlorinated biphenyls, Total							
1						1917.5	
2						1901.0	
						RPD = 0.87	

Reagents:

AR_2154_L7_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

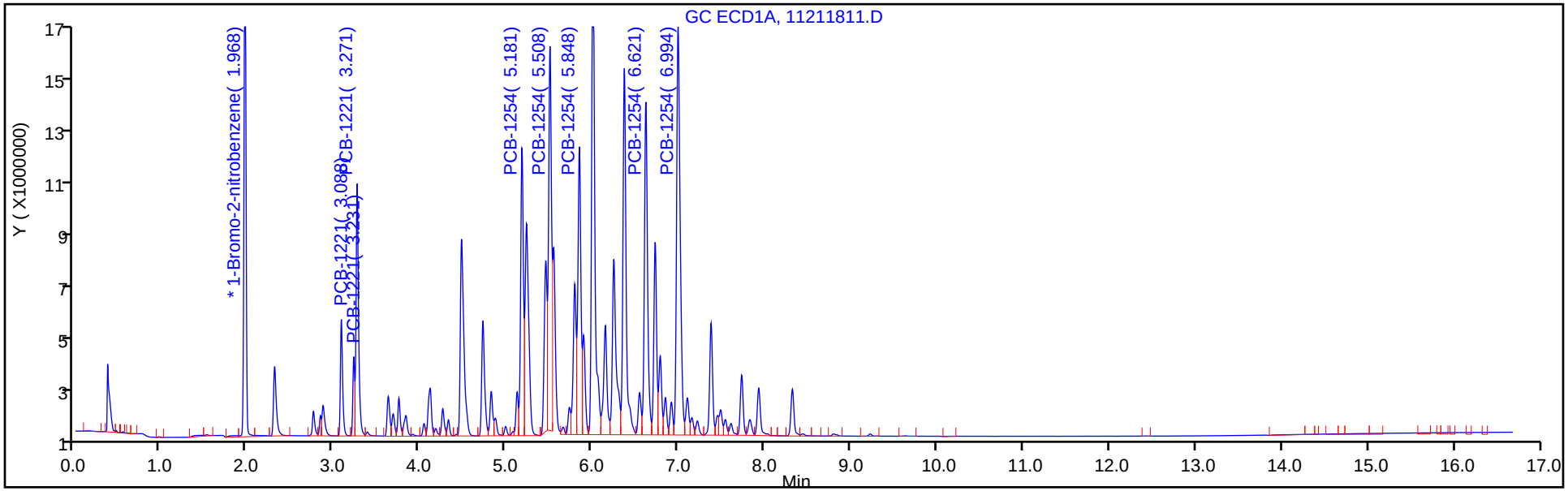
Report Date: 23-Nov-2018 11:02:05 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

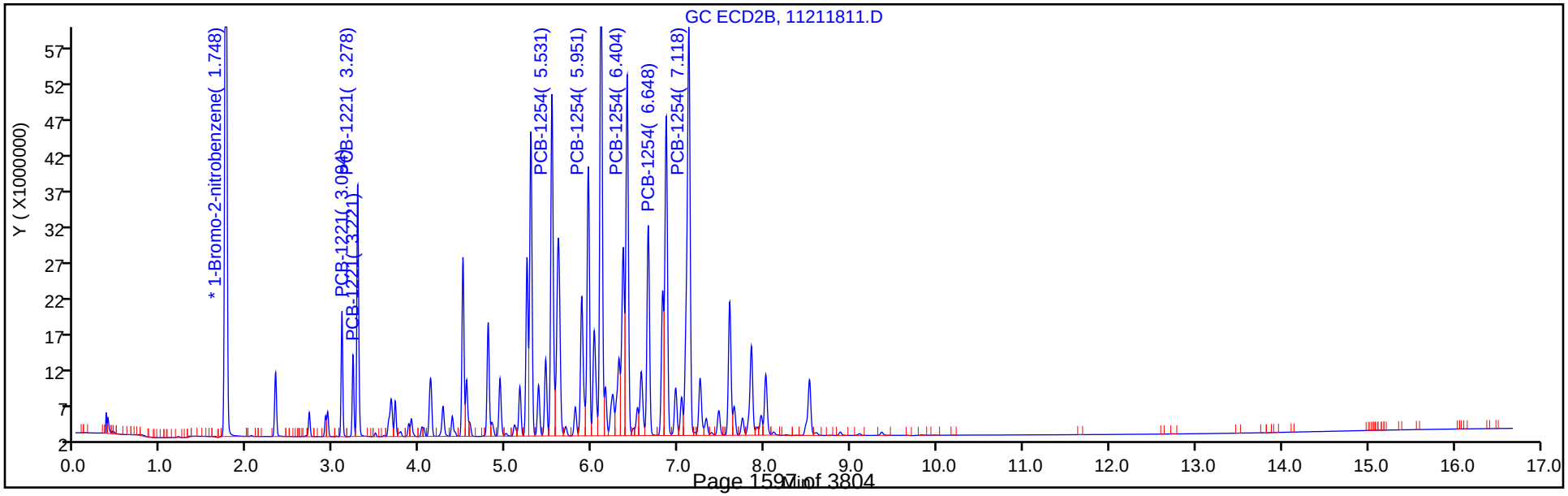
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D

Injection Date:	21-Nov-2018 12:16:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL72154			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D
Lims ID: STDL62154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 12:37:32 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL62154
Misc. Info.: 280-0076428-012
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:06 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	31351854	1000.0	1000.0	
2	1.746	1.745	0.001	175195598	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	5979075	750.0	761.1	
1	3.230	3.232	-0.002	3504422	750.0	775.2	
1	3.270	3.269	0.001	14922887	750.0	760.3	
		Average of Peak Amounts =				765.5	
2	3.093	3.092	0.001	18439769	750.0	763.3	
2	3.223	3.222	0.001	12375313	750.0	782.0	
2	3.276	3.276	0.000	42701683	750.0	769.7	
		Average of Peak Amounts =				771.7	
						RPD = 0.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	18053312	750.0	753.6	
1	5.506	5.509	-0.003	26738366	750.0	764.1	
1	5.850	5.849	0.001	20156036	750.0	768.4	
1	6.620	6.622	-0.002	24380329	750.0	760.3	
1	6.993	6.995	-0.002	33590891	750.0	760.5	
		Average of Peak Amounts =				761.4	
2	5.530	5.529	0.001	76003812	750.0	748.9	
2	5.953	5.952	0.001	60170755	750.0	755.0	
2	6.403	6.402	0.001	82164284	750.0	757.0	
2	6.650	6.649	0.001	48574994	750.0	754.4	
2	7.120	7.119	0.001	117808494	750.0	751.3	
		Average of Peak Amounts =				753.3	
						RPD = 1.07	
S 8 Polychlorinated biphenyls, Total							
1						1526.9	
2						1525.0	
						RPD = 0.12	

Reagents:

AR_2154_L6_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

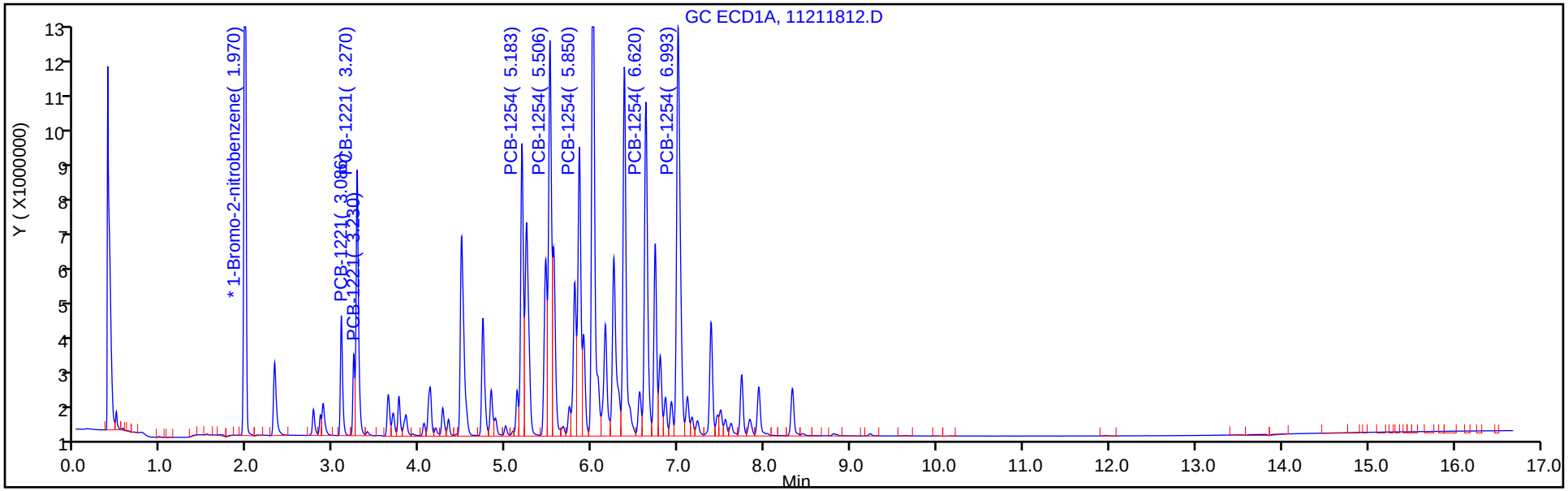
Report Date: 23-Nov-2018 11:02:07 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

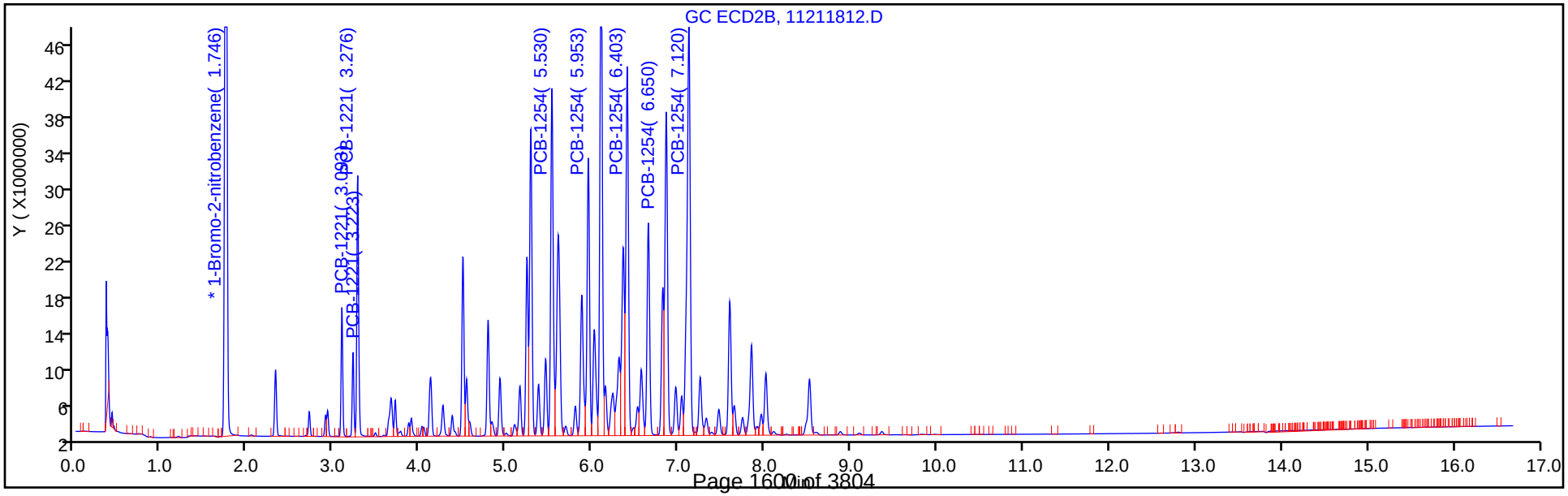
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D

Injection Date:	21-Nov-2018 12:37:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL62154			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D
Lims ID: STDL52154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 12:58:43 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL52154
Misc. Info.: 280-0076428-013
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:10 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	30445909	1000.0	1000.0	
2	1.749	1.749	0.000	171268741	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	3897553	500.0	507.1	
1	3.232	3.232	0.000	2302370	500.0	519.0	
1	3.269	3.269	0.000	9761452	500.0	508.4	
		Average of Peak Amounts =				511.5	
2	3.092	3.092	0.000	12215805	500.0	510.5	
2	3.222	3.222	0.000	7689765	500.0	492.0	
2	3.276	3.276	0.000	27611810	500.0	503.2	
		Average of Peak Amounts =				501.9	
						RPD = 1.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	11654391	500.0	495.7	
1	5.509	5.509	0.000	17219418	500.0	502.6	M
1	5.849	5.849	0.000	12420039	500.0	485.0	
1	6.622	6.622	0.000	15696475	500.0	500.1	
1	6.995	6.995	0.000	21521176	500.0	499.3	
		Average of Peak Amounts =				496.5	
2	5.529	5.529	0.000	51845638	500.0	516.9	
2	5.952	5.952	0.000	40591711	500.0	515.7	
2	6.402	6.402	0.000	55787230	500.0	520.3	
2	6.649	6.649	0.000	32678665	500.0	513.5	
2	7.119	7.119	0.000	79736218	500.0	514.8	
		Average of Peak Amounts =				516.3	
						RPD = 3.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L5_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

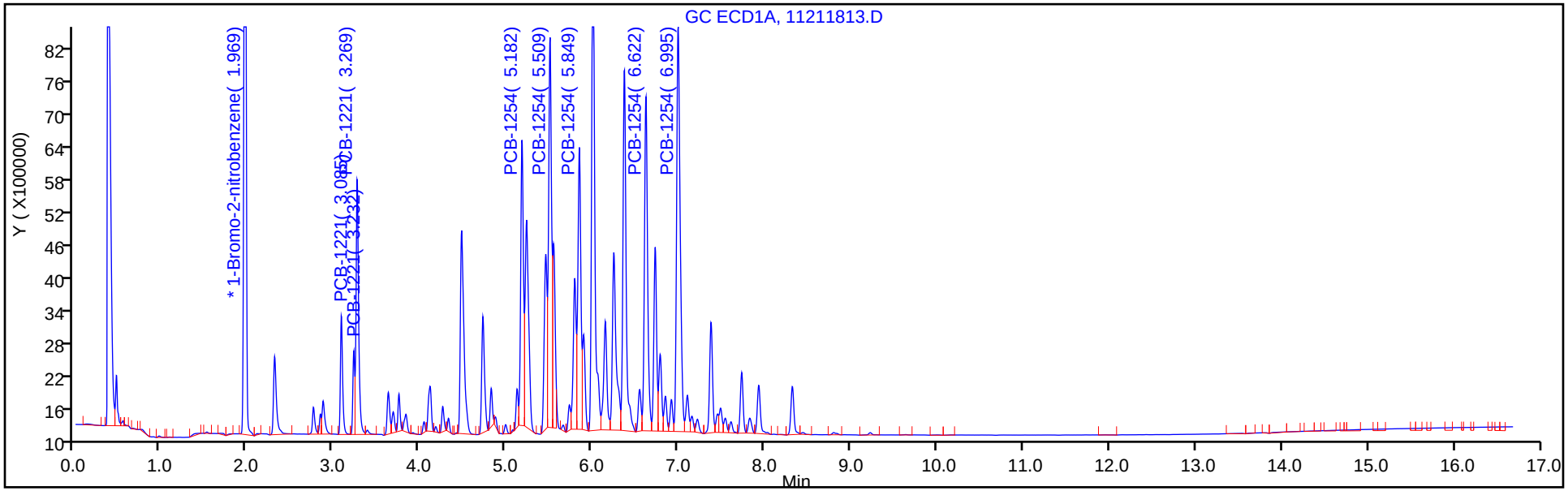
Report Date: 23-Nov-2018 11:02:10 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

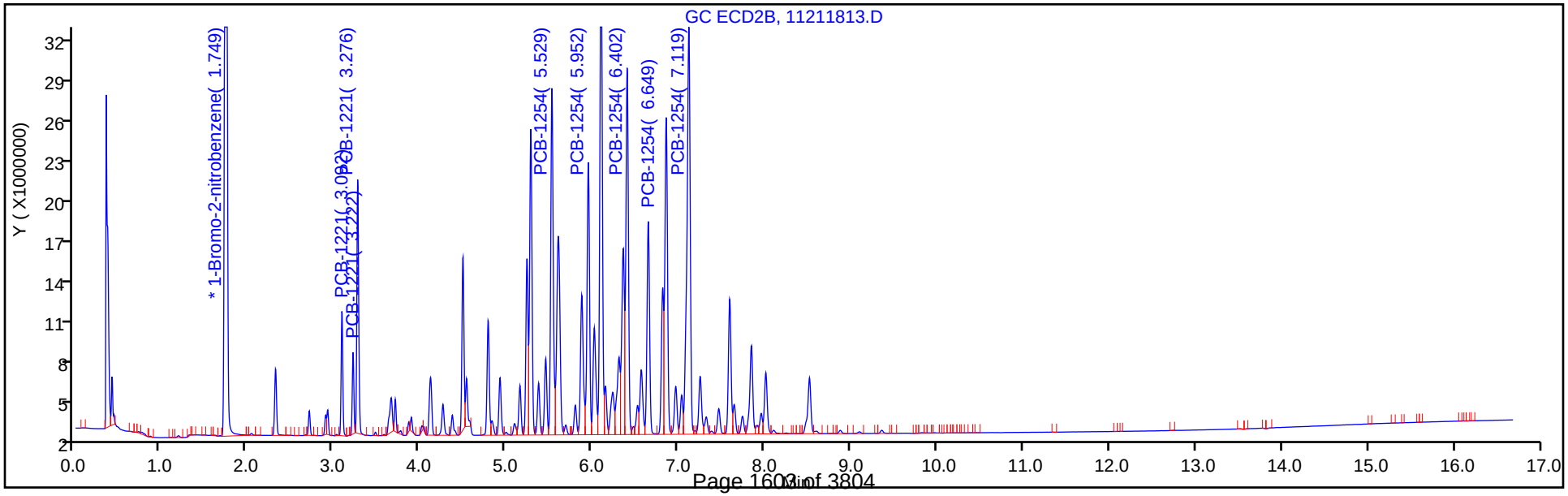
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D

Injection Date:	21-Nov-2018 12:58:43	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL52154			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:10 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D

Injection Date: 21-Nov-2018 12:58:43 Instrument ID: SGC_J

Lims ID: STDL52154

Client ID:

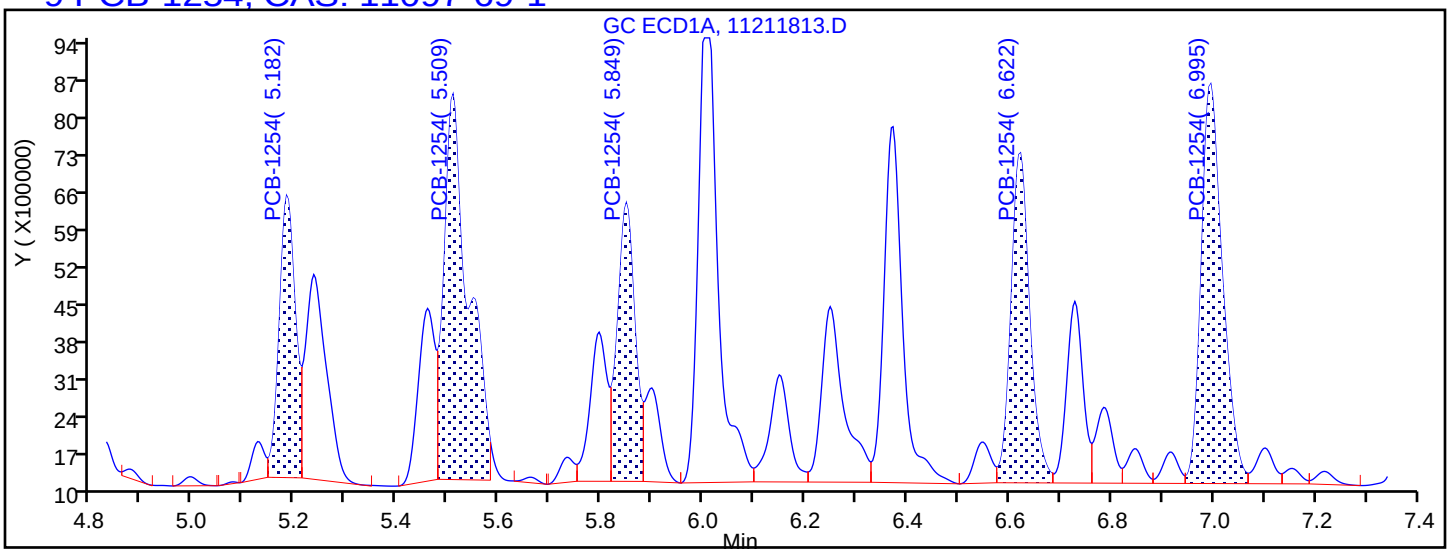
Operator ID: ALS ALS Bottle#: 13 Worklist Smp#: 13

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

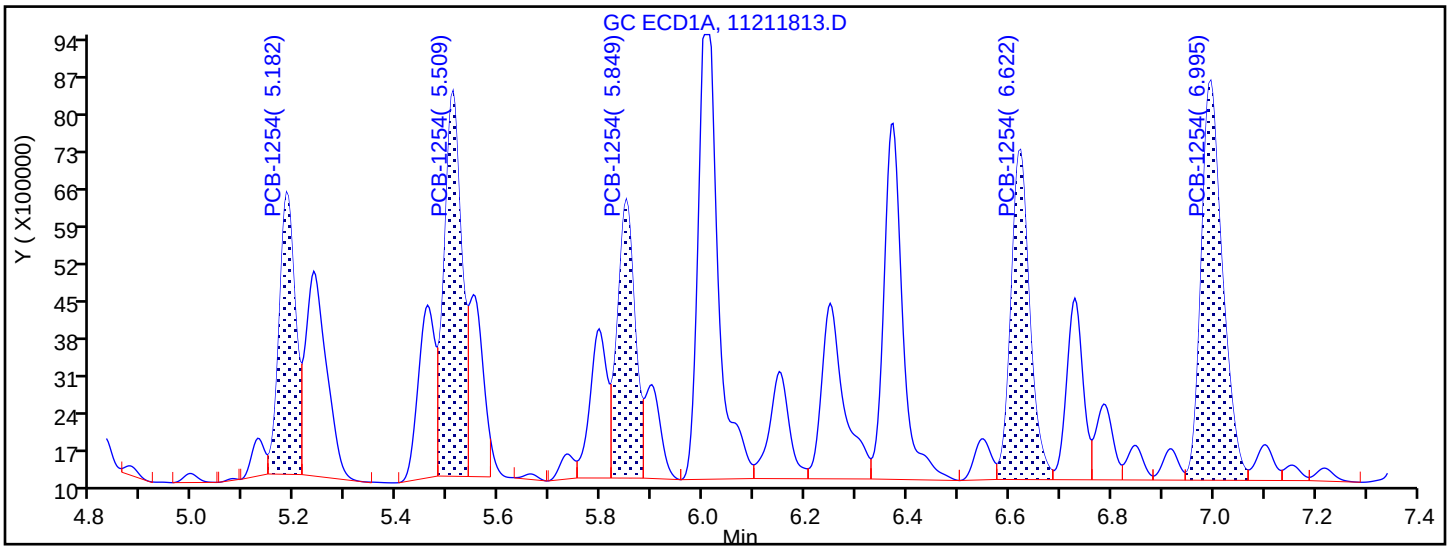
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.182	Response = 11654391
5.509	Response = 23607478
5.849	Response = 12420039
6.622	Response = 15696475
6.995	Response = 21521176



Manual Integration Results

5.182	Response = 11654391	
5.509	Response = 17219418	M
5.849	Response = 12420039	
6.622	Response = 15696475	
6.995	Response = 21521176	

Reviewer: mooret, 21-Nov-2018 15:10:54

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D
Lims ID: STDL42154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 13:19:55 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL42154
Misc. Info.: 280-0076428-014
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:12 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30112720	1000.0	1000.0	
2	1.747	1.749	-0.002	169613542	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2063928	250.0	266.3	
1	3.230	3.232	-0.002	1277667	250.0	283.8	
1	3.270	3.269	0.001	5214449	250.0	269.3	
		Average of Peak Amounts =				273.1	
2	3.093	3.092	0.001	6662383	250.0	271.7	
2	3.223	3.222	0.001	4151876	250.0	261.9	
2	3.277	3.276	0.001	14954730	250.0	267.4	
		Average of Peak Amounts =				267.0	
						RPD = 2.27	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6200718	250.0	259.3	
1	5.506	5.509	-0.003	9144535	250.0	264.2	M
1	5.846	5.849	-0.003	6634099	250.0	258.7	
1	6.620	6.622	-0.002	8316205	250.0	262.4	
1	6.993	6.995	-0.002	11066699	250.0	256.1	
		Average of Peak Amounts =				260.1	
2	5.530	5.529	0.001	27978613	250.0	273.1	
2	5.953	5.952	0.001	21681477	250.0	270.3	
2	6.403	6.402	0.001	29833754	250.0	272.7	
2	6.650	6.649	0.001	17685692	250.0	272.4	
2	7.120	7.119	0.001	42598206	250.0	269.8	
		Average of Peak Amounts =				271.7	
						RPD = 4.33	
S 8 Polychlorinated biphenyls, Total							
1						533.3	
2						538.7	
						RPD = 1.01	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

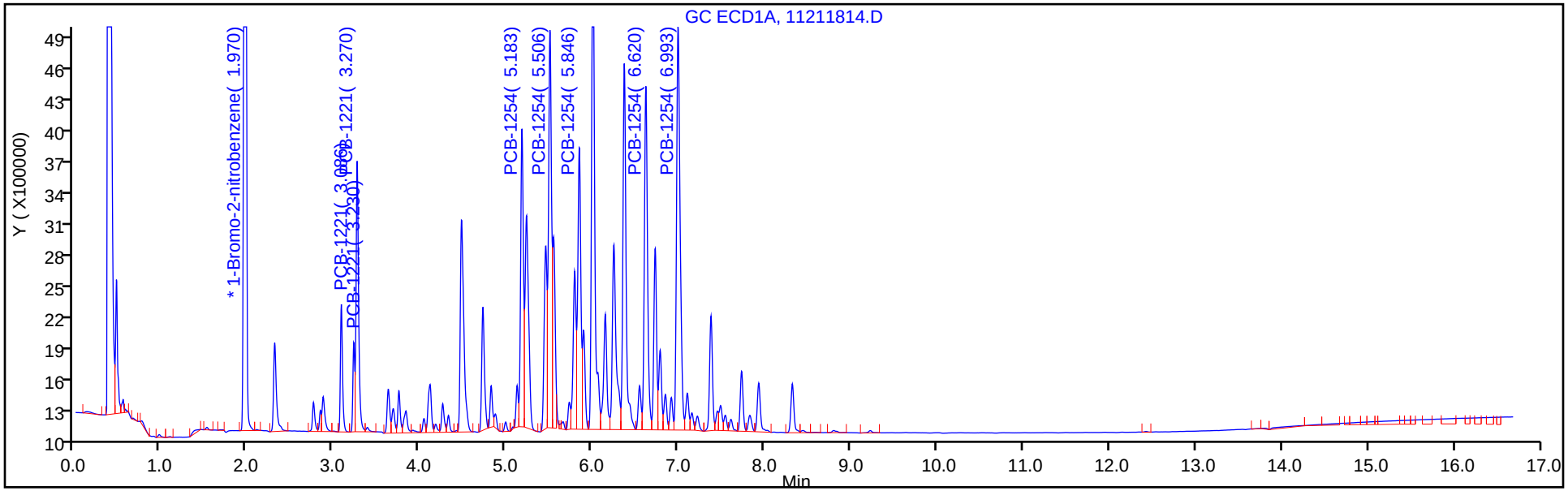
Report Date: 23-Nov-2018 11:02:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

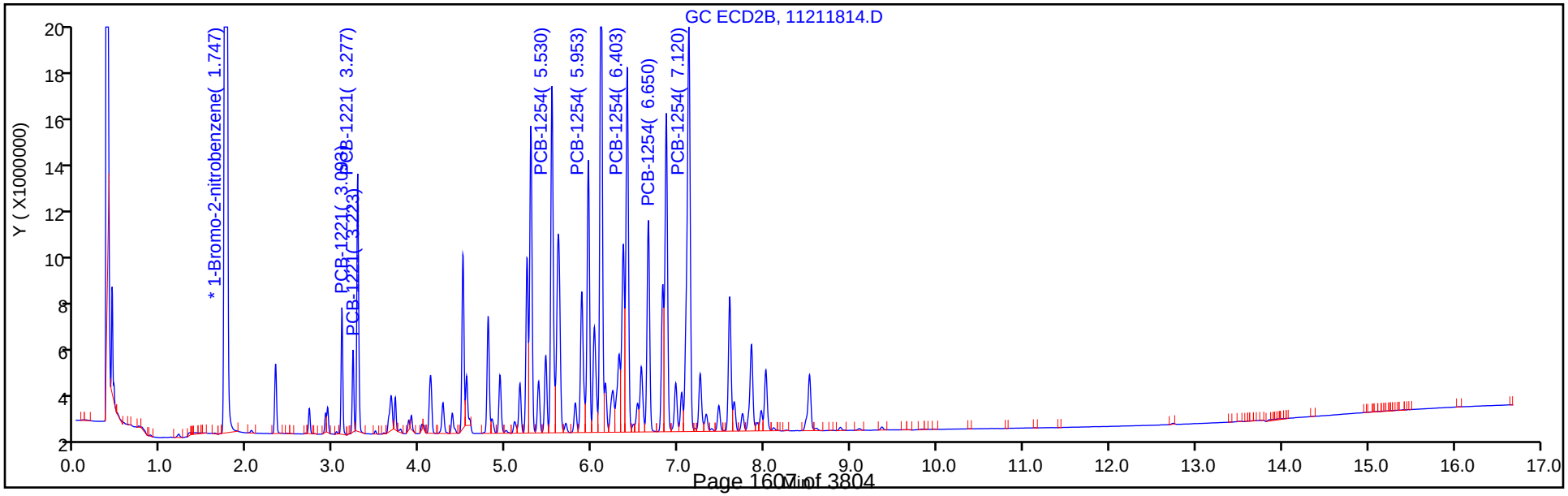
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D

Injection Date:	21-Nov-2018 13:19:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL42154			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D

Injection Date: 21-Nov-2018 13:19:55 Instrument ID: SGC_J

Lims ID: STDL42154

Client ID:

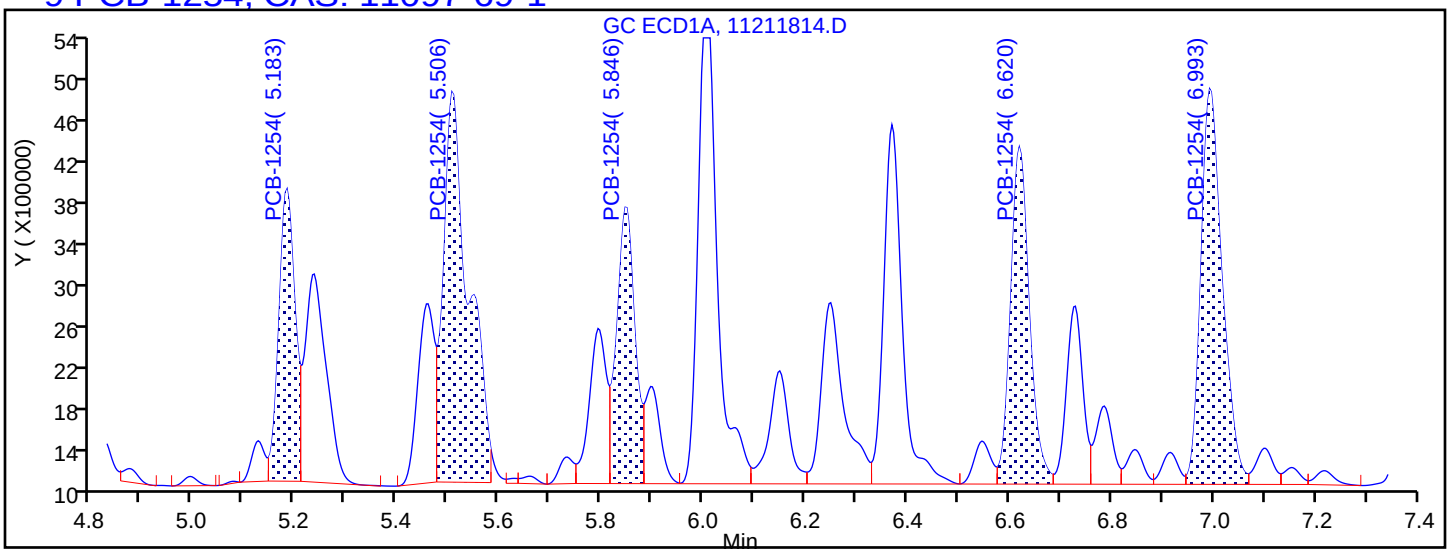
Operator ID: ALS ALS Bottle#: 14 Worklist Smp#: 14

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

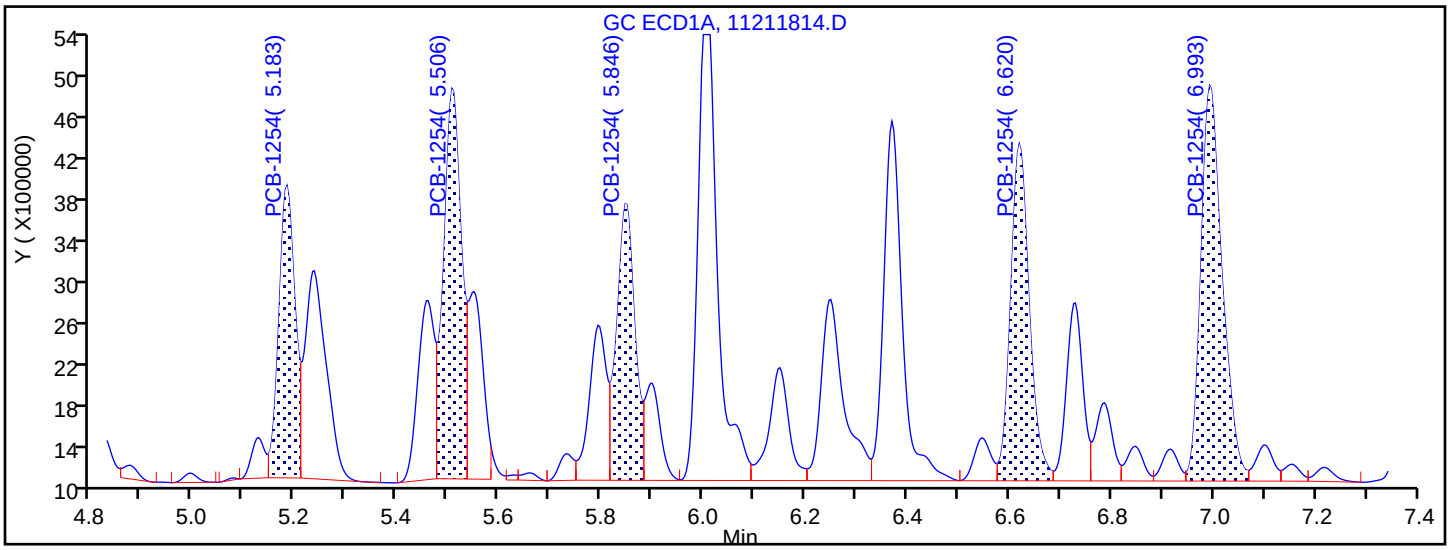
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.183	Response = 6200718
5.506	Response = 12802421
5.846	Response = 6634099
6.620	Response = 8316205
6.993	Response = 11066699



Manual Integration Results

5.183	Response = 6200718	
5.506	Response = 9144535	M
5.846	Response = 6634099	
6.620	Response = 8316205	
6.993	Response = 11066699	

Reviewer: mooret, 21-Nov-2018 15:11:16

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D
Lims ID: STDL32154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 13:41:08 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL32154
Misc. Info.: 280-0076428-015
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28078685	1000.0	1000.0	
2	1.746	1.749	-0.003	159417859	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	794996	100.0	103.4	
1	3.229	3.232	-0.003	506503	100.0	111.0	
1	3.269	3.269	0.000	2212927	100.0	116.3	
		Average of Peak Amounts =				110.2	
2	3.093	3.092	0.001	2763923	100.0	108.2	
2	3.223	3.222	0.001	1748923	100.0	109.7	
2	3.276	3.276	0.000	6335939	100.0	111.0	
		Average of Peak Amounts =				109.6	
						RPD = 0.52	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	2662071	100.0	110.8	
1	5.506	5.509	-0.003	3775608	100.0	110.2	M
1	5.849	5.849	0.000	2648846	100.0	106.8	
1	6.619	6.622	-0.003	3428029	100.0	109.3	
1	6.993	6.995	-0.002	4426432	100.0	105.7	
		Average of Peak Amounts =				108.6	
2	5.529	5.529	0.000	11951653	100.0	113.9	
2	5.953	5.952	0.001	9184571	100.0	112.5	
2	6.403	6.402	0.001	12571284	100.0	112.4	
2	6.649	6.649	0.000	7560827	100.0	113.9	
2	7.119	7.119	0.000	18178594	100.0	113.0	
		Average of Peak Amounts =				113.1	
						RPD = 4.13	
S 8 Polychlorinated biphenyls, Total							
1						218.8	
2						222.8	
						RPD = 1.82	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

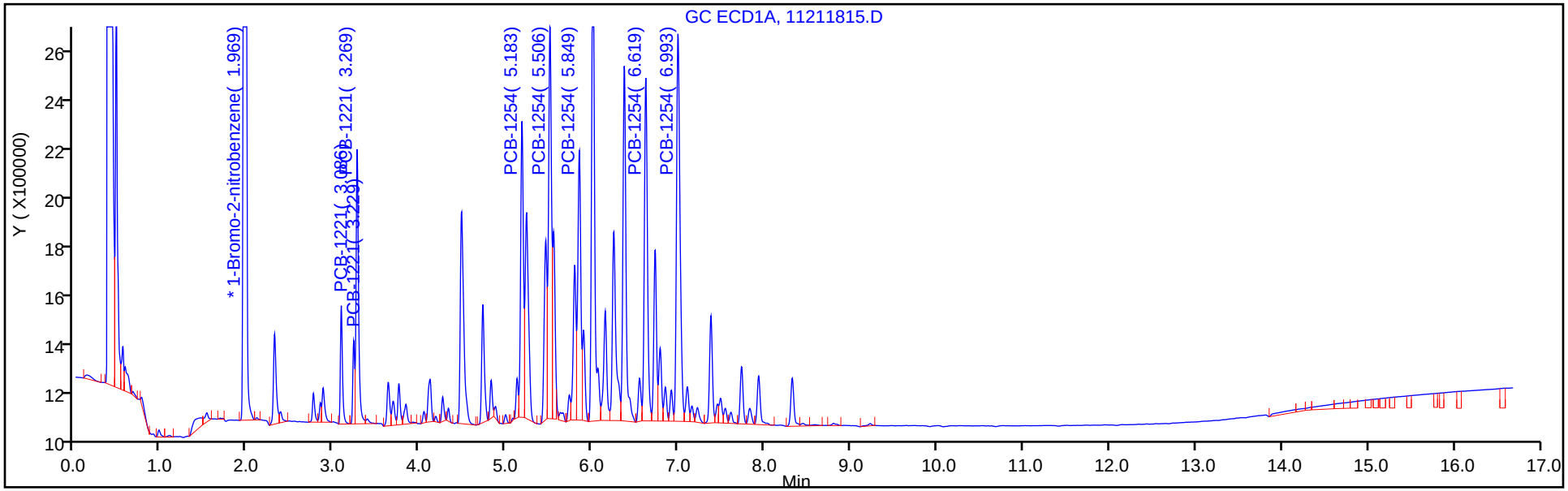
Report Date: 23-Nov-2018 11:02:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

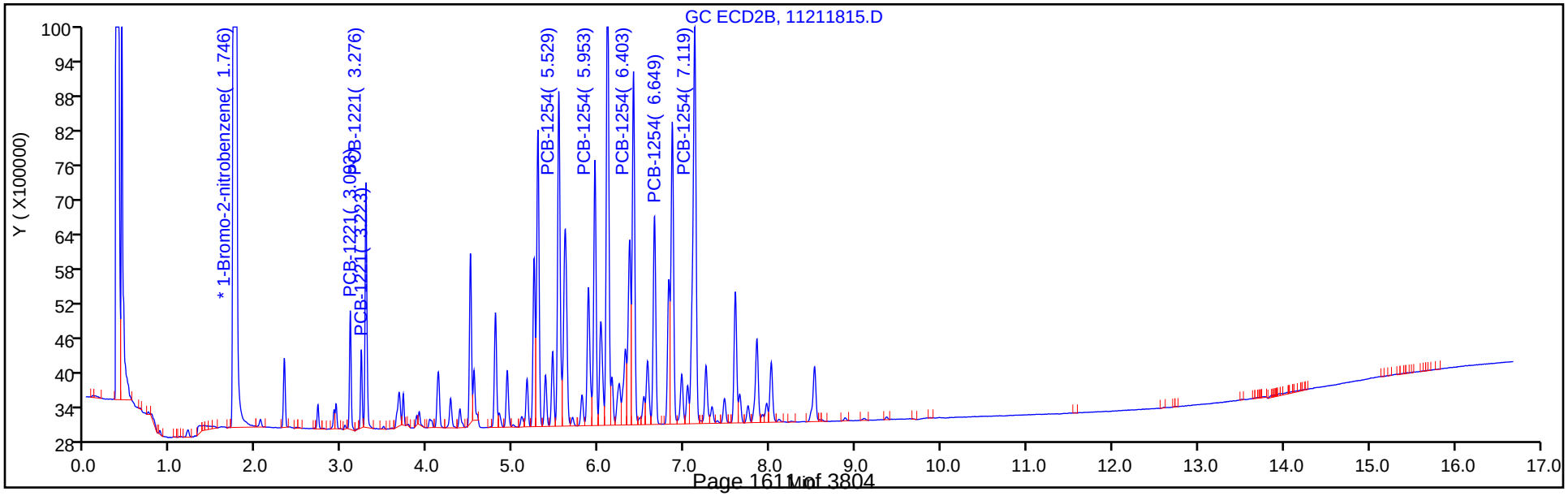
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D

Injection Date:	21-Nov-2018 13:41:08	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL32154			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D

Injection Date: 21-Nov-2018 13:41:08 Instrument ID: SGC_J

Lims ID: STDL32154

Client ID:

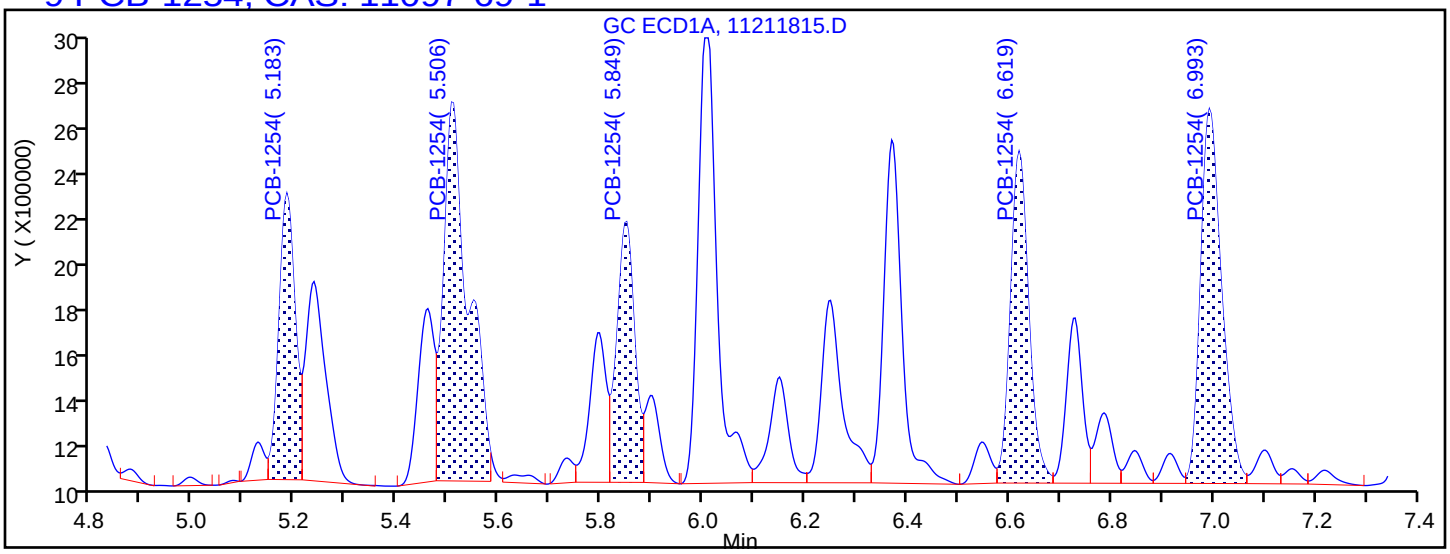
Operator ID: ALS ALS Bottle#: 15 Worklist Smp#: 15

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

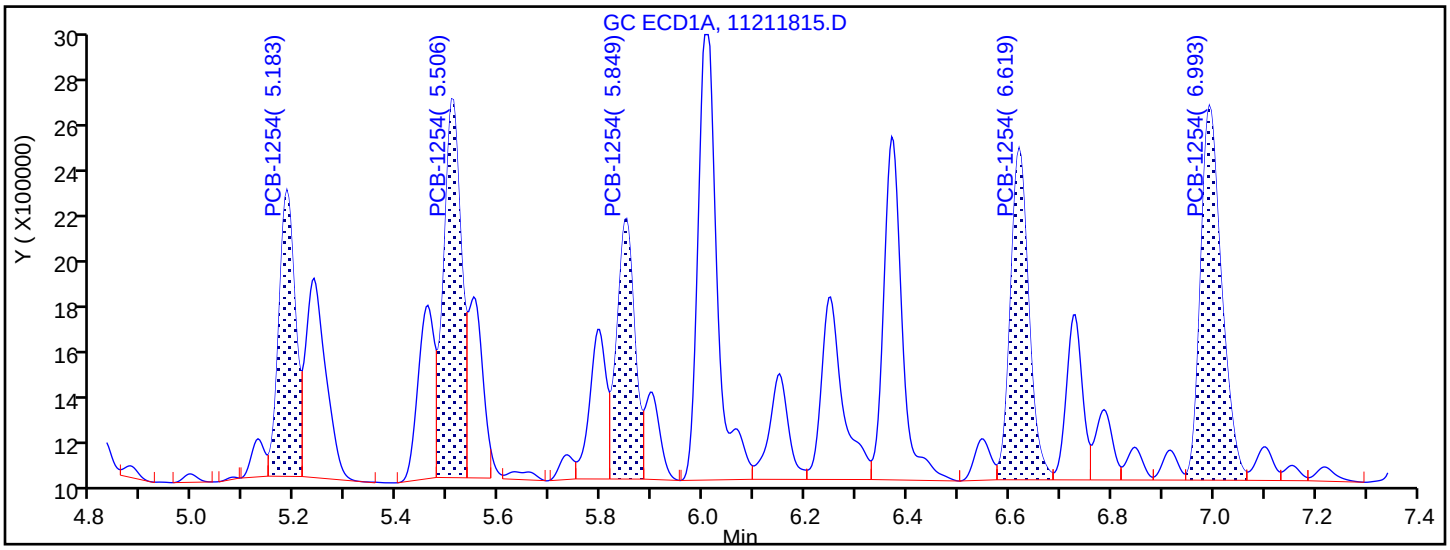
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.183	Response = 2662071
5.506	Response = 5259178
5.849	Response = 2648846
6.619	Response = 3428029
6.993	Response = 4426432



Manual Integration Results

5.183	Response = 2662071	
5.506	Response = 3775608	M
5.849	Response = 2648846	
6.619	Response = 3428029	
6.993	Response = 4426432	

Reviewer: mooret, 21-Nov-2018 15:11:33

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D
Lims ID: STDL22154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 14:02:19 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL22154
Misc. Info.: 280-0076428-016
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	27612767	1000.0	1000.0	
2	1.746	1.749	-0.003	155958976	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	422934	50.0	50.7	
1	3.229	3.232	-0.003	264535	50.0	51.1	
1	3.269	3.269	0.000	1048520	50.0	50.1	
		Average of Peak Amounts =				50.6	
2	3.093	3.092	0.001	1479927	50.0	49.7	
2	3.223	3.222	0.001	922521	50.0	52.8	
2	3.276	3.276	0.000	3428605	50.0	53.7	
		Average of Peak Amounts =				52.0	
						RPD = 2.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	1487053	50.0	56.1	
1	5.506	5.509	-0.003	2050858	50.0	55.4	
1	5.846	5.849	-0.003	1380932	50.0	53.3	
1	6.619	6.622	-0.003	1866154	50.0	55.2	
1	6.993	6.995	-0.002	2374593	50.0	54.4	
		Average of Peak Amounts =				54.9	
2	5.530	5.529	0.001	6401352	50.0	53.9	
2	5.953	5.952	0.001	4927585	50.0	54.0	
2	6.403	6.402	0.001	6824249	50.0	54.3	
2	6.646	6.649	-0.003	4105287	50.0	55.1	
2	7.120	7.119	0.001	9840352	50.0	54.8	
		Average of Peak Amounts =				54.4	
						RPD = 0.81	
S 8 Polychlorinated biphenyls, Total							
1						105.5	
2						106.5	
						RPD = 0.93	

Reagents:

AR_2154_L2_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

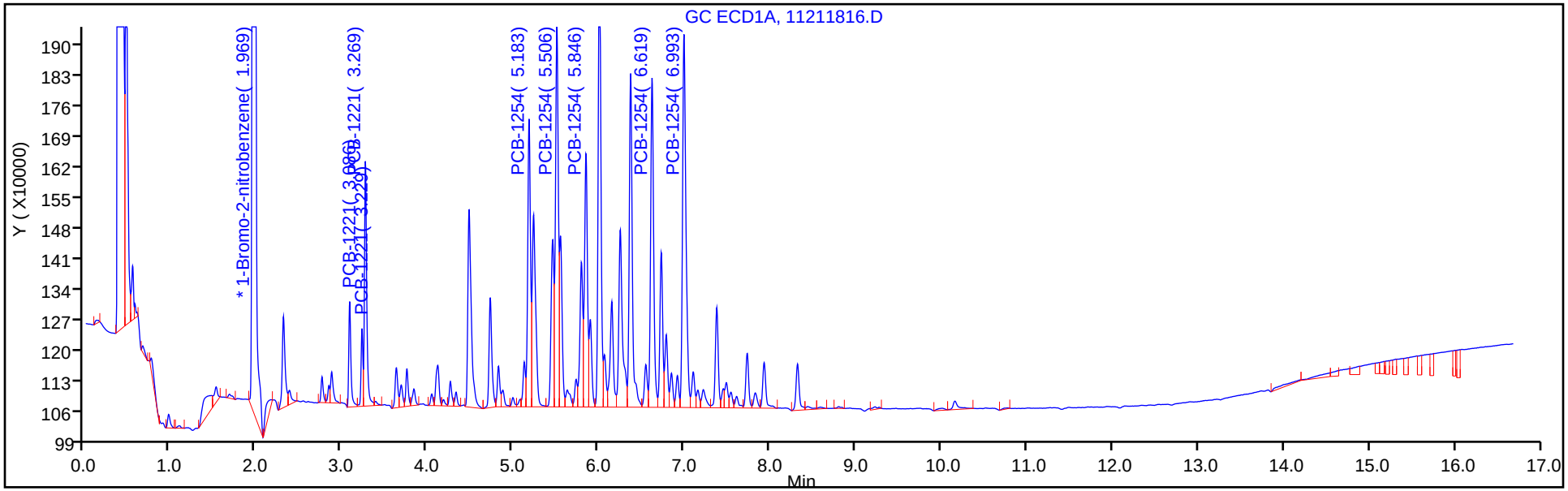
Report Date: 23-Nov-2018 11:02:18 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

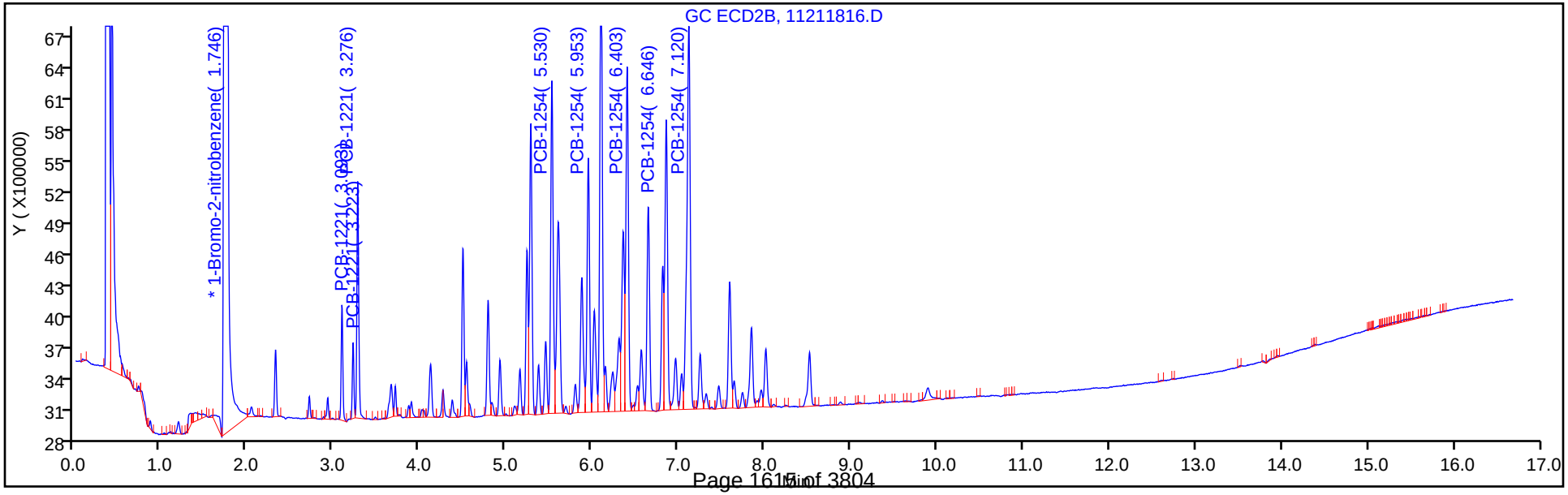
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D

Injection Date:	21-Nov-2018 14:02:19	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL22154			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D
Lims ID: STDL12154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 14:23:32 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL12154
Misc. Info.: 280-0076428-017
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:20 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:12:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31158892	1000.0	1000.0	
2	1.749	1.749	0.000	174644682	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	258968	25.0	22.3	
1	3.229	3.232	-0.003	155902	25.0	18.6	
1	3.272	3.269	0.003	594265	25.0	19.4	
		Average of Peak Amounts =				20.1	
2	3.092	3.092	0.000	990606	25.0	21.2	
2	3.222	3.222	0.000	531473	25.0	20.4	
2	3.276	3.276	0.000	1966030	25.0	19.1	
		Average of Peak Amounts =				20.2	
						RPD = 0.49	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	810954	25.0	18.9	
1	5.509	5.509	0.000	1058665	25.0	18.7	M
1	5.849	5.849	0.000	734067	25.0	21.4	
1	6.619	6.622	-0.003	977183	25.0	19.3	
1	6.992	6.995	-0.003	1230625	25.0	21.0	
		Average of Peak Amounts =				19.9	
2	5.529	5.529	0.000	3601131	25.0	17.7	
2	5.952	5.952	0.000	2735694	25.0	18.2	
2	6.402	6.402	0.000	3769252	25.0	17.7	
2	6.649	6.649	0.000	2218210	25.0	17.2	
2	7.119	7.119	0.000	5349050	25.0	17.7	
		Average of Peak Amounts =				17.7	
						RPD = 11.52	
S 8 Polychlorinated biphenyls, Total							
1						40.0	
2						37.9	
						RPD = 5.30	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

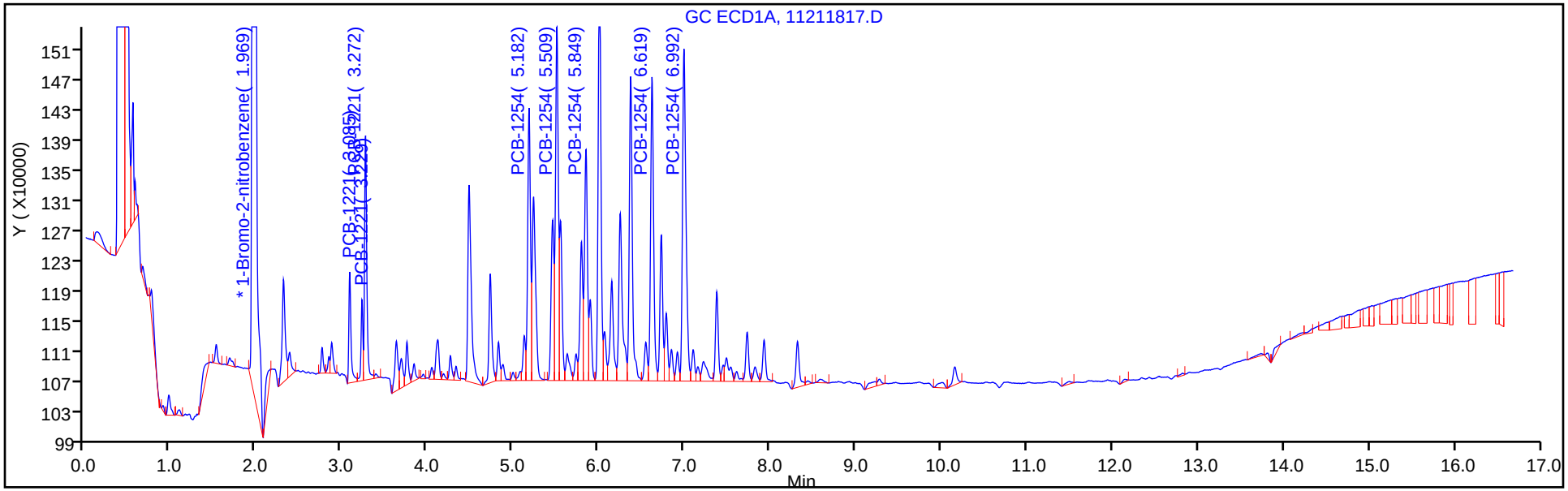
Report Date: 23-Nov-2018 11:02:20 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

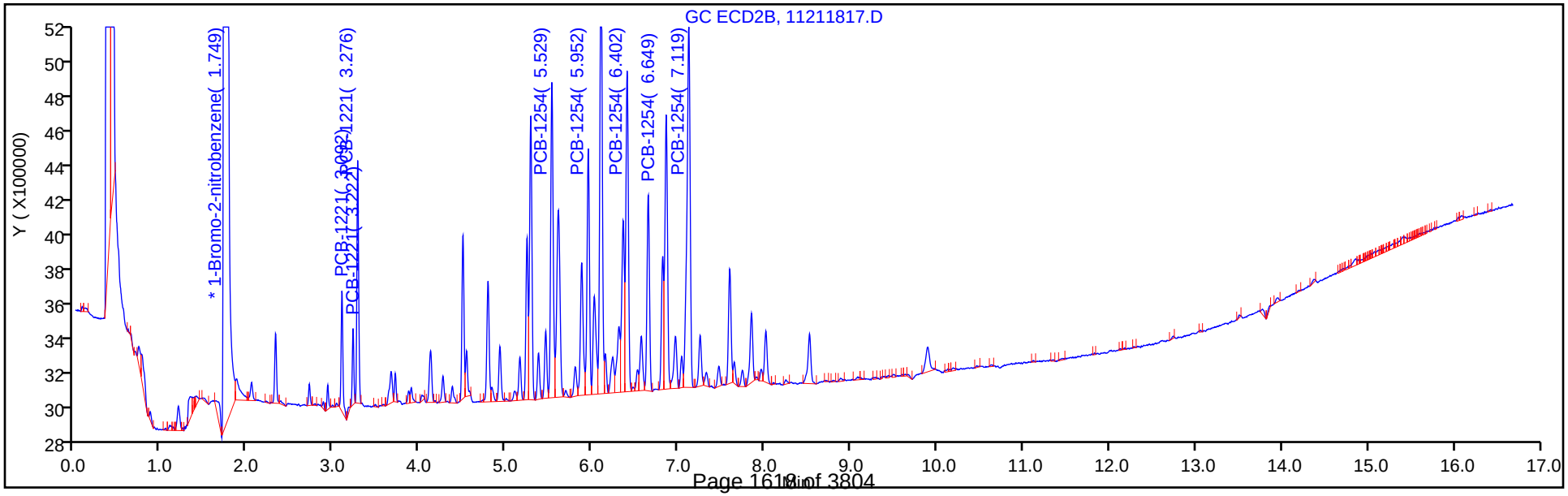
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D

Injection Date:	21-Nov-2018 14:23:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL12154			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



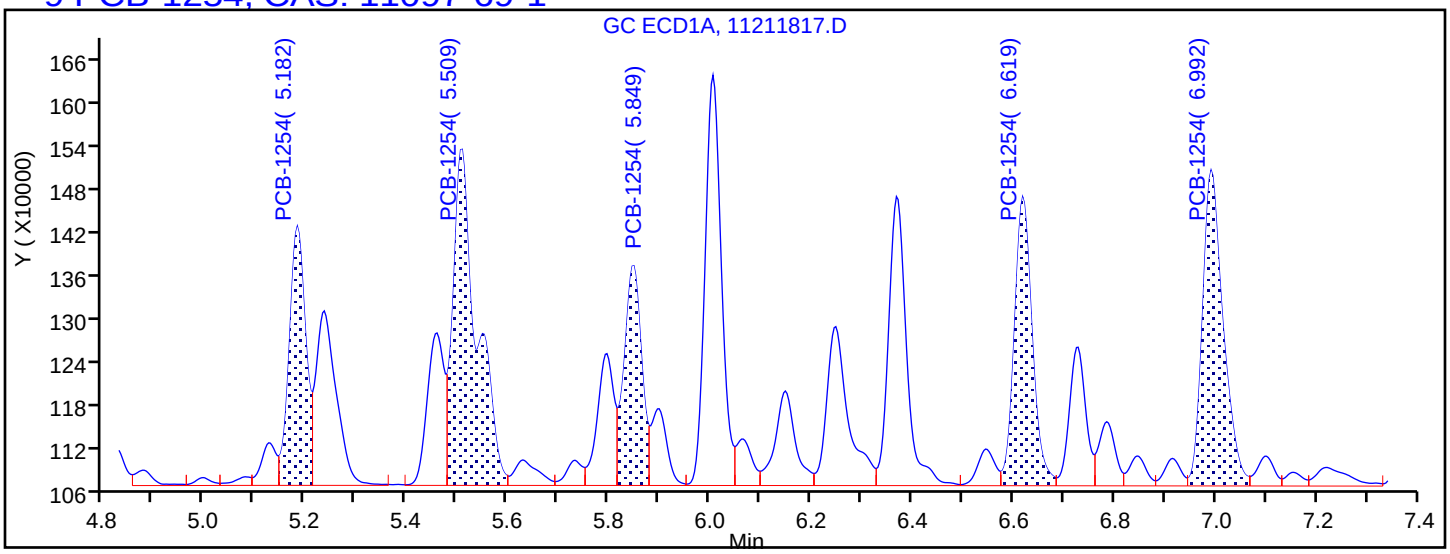
Report Date: 23-Nov-2018 11:02:20 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D

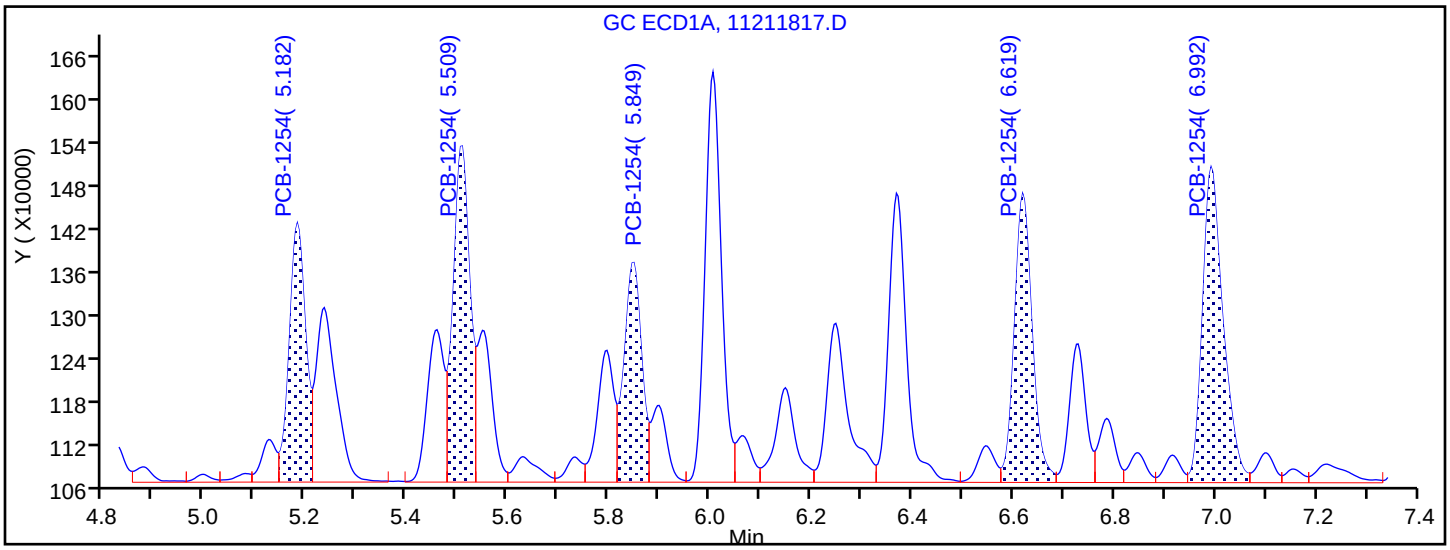
Injection Date:	21-Nov-2018 14:23:32	Instrument ID:	SGC_J		
Lims ID:	STDL12154				
Client ID:					
Operator ID:	ALS	ALS Bottle#:	17	Worklist Smp#:	17
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		
Column:	CLP1 Pesticides Column 1 (0.32 mm)	Detector	GC ECD1A		

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.182	Response = 810954
5.509	Response = 1501336
5.849	Response = 734067
6.619	Response = 977183
6.992	Response = 1230625



Manual Integration Results

5.182	Response = 810954	
5.509	Response = 1058665	M
5.849	Response = 734067	
6.619	Response = 977183	
6.992	Response = 1230625	

Reviewer: mooret, 21-Nov-2018 15:12:00

Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34383

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1221 Peak 1	0.2269 0.1403	0.1898 0.1304	0.1734	0.1571	0.1427	Lin1	2.8240	0.1342							0.9970		0.9900
PCB-1221 Peak 2	0.1217 0.0942	0.1183 0.0861	0.1097	0.0979	0.0898	Lin1	1.2314	0.0888							0.9970		0.9900
PCB-1221 Peak 3	0.4503 0.3250	0.4397 0.2999	0.3974	0.3527	0.3224	Lin1	5.3527	0.3097							0.9970		0.9900
PCB-1254 Peak 1	0.8248 0.5784	0.8209 0.5477	0.7497	0.6598	0.6054	Lin1	10.612	0.5651							0.9950		0.9900
PCB-1254 Peak 2	0.6266 0.4579	0.6319 0.4299	0.5761	0.5113	0.4740	Lin1	7.5798	0.4449							0.9960		0.9900
PCB-1254 Peak 3	0.8633 0.6253	0.8751 0.5801	0.7886	0.7036	0.6515	Lin1	10.868	0.6052							0.9950		0.9900
PCB-1254 Peak 4	0.5081 0.3697	0.5265 0.3469	0.4743	0.4171	0.3816	Lin1	6.5376	0.3588							0.9950		0.9900
PCB-1254 Peak 5	1.2251 0.8966	1.2619 0.8494	1.1403	1.0046	0.9311	Lin1	15.121	0.8749							0.9960		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 12:16 Calibration End Date: 11/21/2018 14:23 Calibration ID: 34383

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL12154 280-438388/17	11211817.D
Level 2	STDL22154 280-438388/16	11211816.D
Level 3	STDL32154 280-438388/15	11211815.D
Level 4	STDL42154 280-438388/14	11211814.D
Level 5	STDL52154 280-438388/13	11211813.D
Level 6	STDL62154 280-438388/12	11211812.D
Level 7	STDL72154 280-438388/11	11211811.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1221 Peak 1	BNB	Lin1	990606 18439769	1479927 23025045	2763923	6662383	12215805	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 2	BNB	Lin1	531473 12375313	922521 15205275	1748923	4151876	7689765	25.0 750	50.0 1000	100	250	500
PCB-1221 Peak 3	BNB	Lin1	1966030 42701683	3428605 52969181	6335939	14954730	27611810	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 1	BNB	Lin1	3601131 76003812	6401352 96750392	11951653	27978613	51845638	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 2	BNB	Lin1	2735694 60170755	4927585 75935033	9184571	21681477	40591711	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 3	BNB	Lin1	3769252 82164284	6824249 102458024	12571284	29833754	55787230	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 4	BNB	Lin1	2218210 48574994	4105287 61272987	7560827	17685692	32678665	25.0 750	50.0 1000	100	250	500
PCB-1254 Peak 5	BNB	Lin1	5349050 117808494	9840352 150030344	18178594	42598206	79736218	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D
Lims ID: STDL72154
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 12:16:22 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL72154
Misc. Info.: 280-0076428-011
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:04 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31780064	1000.0	1000.0	
2	1.748	1.745	0.003	176632693	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.088	3.085	0.003	7654096	1000.0	964.1	
1	3.231	3.232	-0.001	4185310	1000.0	916.3	
1	3.271	3.269	0.002	18870386	1000.0	951.3	
		Average of Peak Amounts =				943.9	
2	3.094	3.092	0.002	23025045	1000.0	950.4	
2	3.221	3.222	-0.001	15205275	1000.0	956.1	
2	3.278	3.276	0.002	52969181	1000.0	950.9	
		Average of Peak Amounts =				952.5	
						RPD = 0.90	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.181	5.182	-0.001	23698129	1000.0	980.6	
1	5.508	5.509	-0.001	33934042	1000.0	959.7	
1	5.848	5.849	-0.001	26040802	1000.0	981.4	
1	6.621	6.622	-0.001	31371863	1000.0	968.4	
1	6.994	6.995	-0.001	43698000	1000.0	978.1	
		Average of Peak Amounts =				973.6	
2	5.531	5.529	0.002	96750392	1000.0	950.5	
2	5.951	5.952	-0.001	75935033	1000.0	949.3	
2	6.404	6.402	0.002	102458024	1000.0	940.6	
2	6.648	6.649	-0.001	61272987	1000.0	948.5	
2	7.118	7.119	-0.001	150030344	1000.0	953.5	
		Average of Peak Amounts =				948.5	
						RPD = 2.62	
S 8 Polychlorinated biphenyls, Total							
1						1917.5	
2						1901.0	
						RPD = 0.87	

Reagents:

AR_2154_L7_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

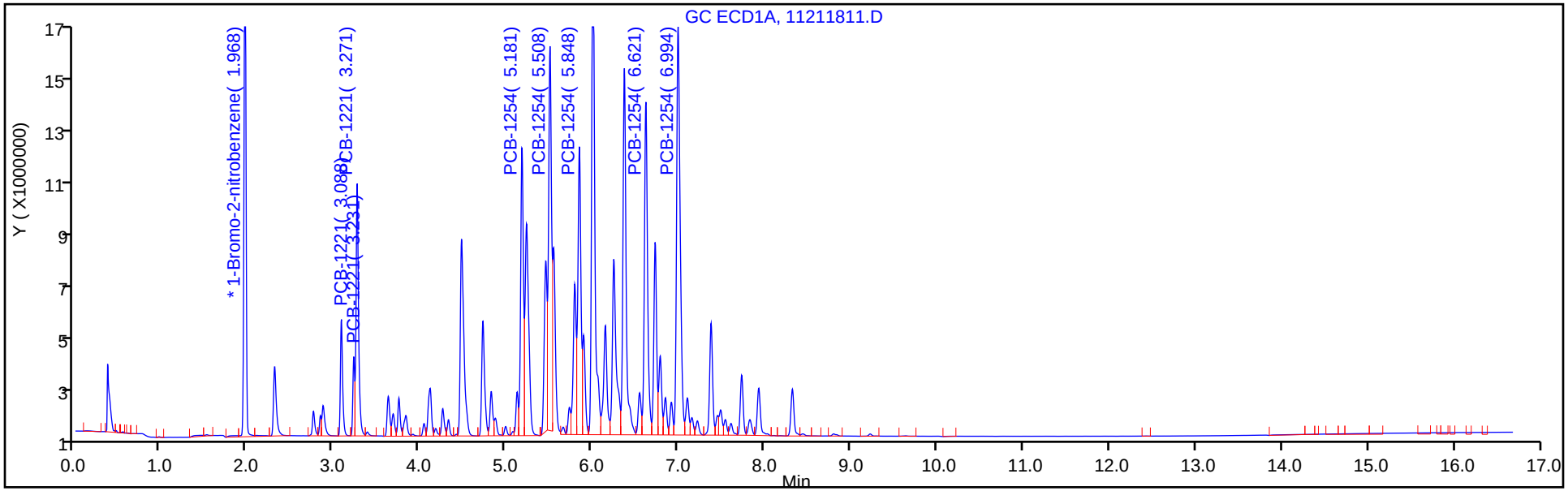
Report Date: 23-Nov-2018 11:02:05 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

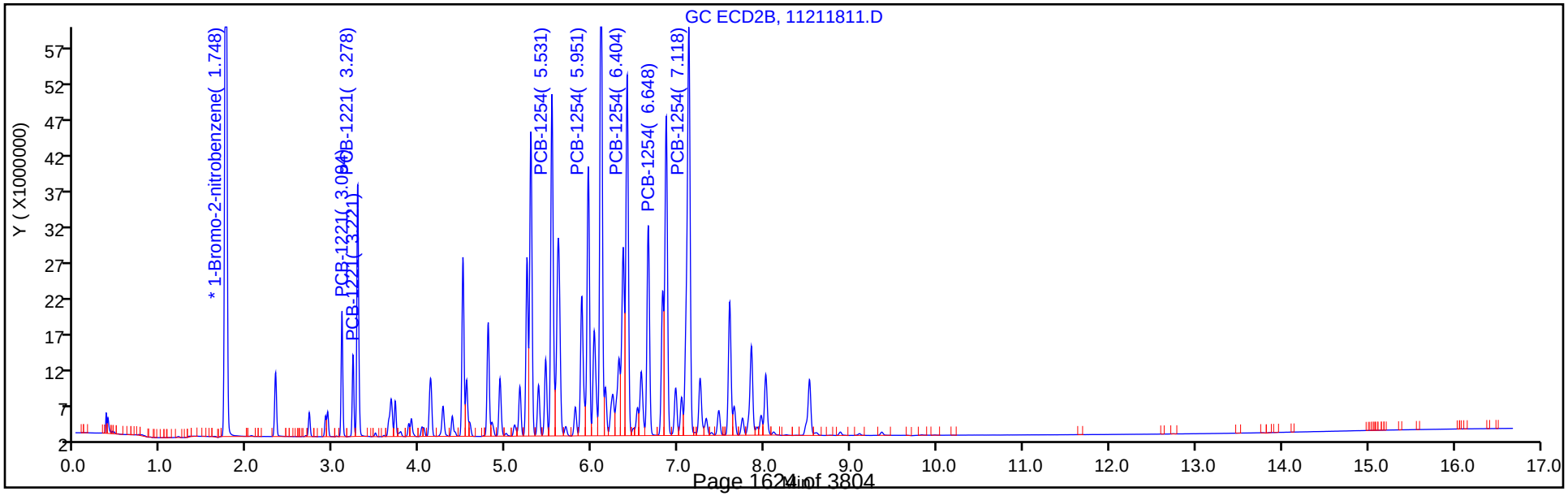
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211811.D

Injection Date:	21-Nov-2018 12:16:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL72154			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D
Lims ID: STDL62154
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 12:37:32 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL62154
Misc. Info.: 280-0076428-012
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:06 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:10:41

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	31351854	1000.0	1000.0	
2	1.746	1.745	0.001	175195598	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	5979075	750.0	761.1	
1	3.230	3.232	-0.002	3504422	750.0	775.2	
1	3.270	3.269	0.001	14922887	750.0	760.3	
		Average of Peak Amounts =				765.5	
2	3.093	3.092	0.001	18439769	750.0	763.3	
2	3.223	3.222	0.001	12375313	750.0	782.0	
2	3.276	3.276	0.000	42701683	750.0	769.7	
		Average of Peak Amounts =				771.7	
						RPD = 0.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	18053312	750.0	753.6	
1	5.506	5.509	-0.003	26738366	750.0	764.1	
1	5.850	5.849	0.001	20156036	750.0	768.4	
1	6.620	6.622	-0.002	24380329	750.0	760.3	
1	6.993	6.995	-0.002	33590891	750.0	760.5	
		Average of Peak Amounts =				761.4	
2	5.530	5.529	0.001	76003812	750.0	748.9	
2	5.953	5.952	0.001	60170755	750.0	755.0	
2	6.403	6.402	0.001	82164284	750.0	757.0	
2	6.650	6.649	0.001	48574994	750.0	754.4	
2	7.120	7.119	0.001	117808494	750.0	751.3	
		Average of Peak Amounts =				753.3	
						RPD = 1.07	
S 8 Polychlorinated biphenyls, Total							
1						1526.9	
2						1525.0	
						RPD = 0.12	

Reagents:

AR_2154_L6_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

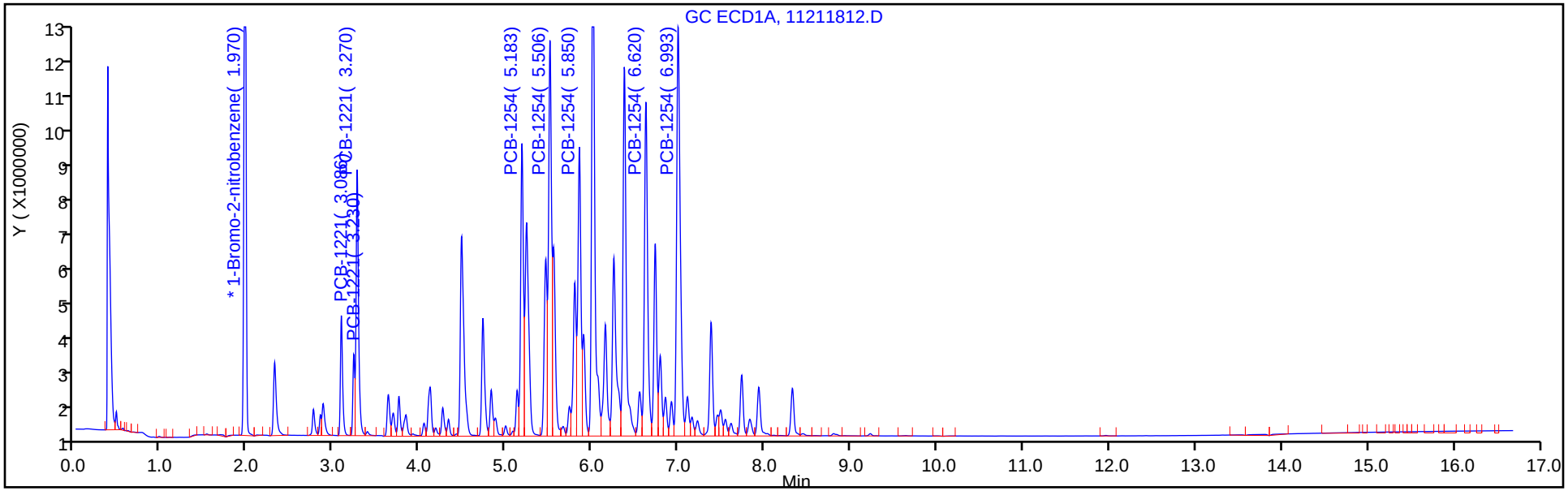
Report Date: 23-Nov-2018 11:02:07 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

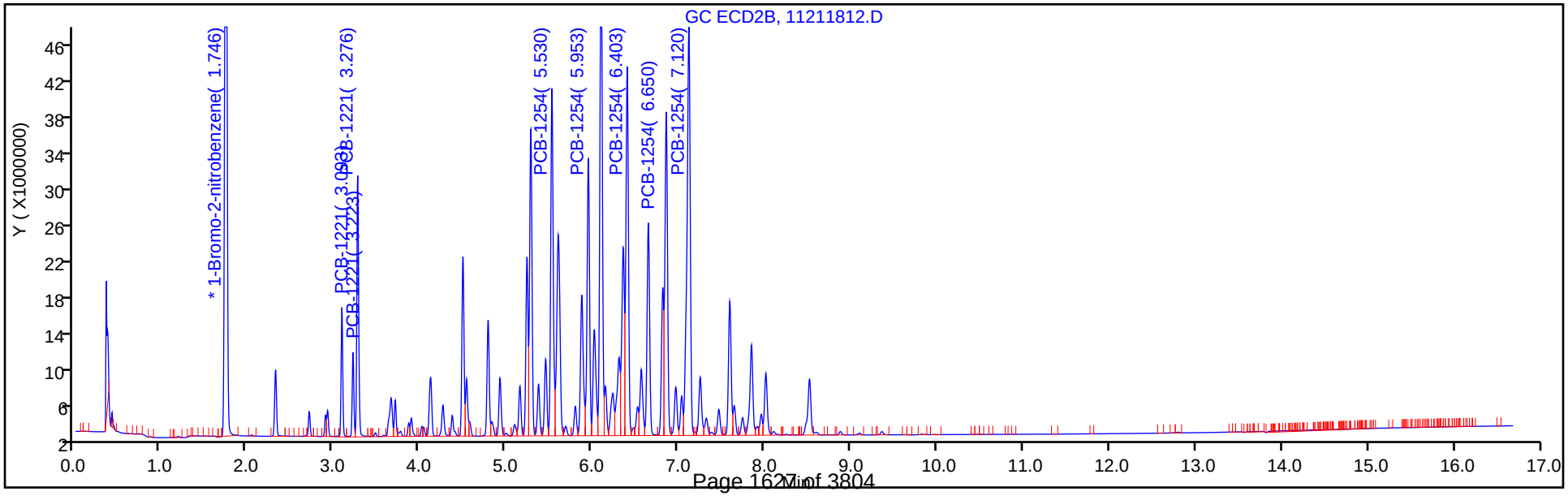
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211812.D

Injection Date:	21-Nov-2018 12:37:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL62154			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D
Lims ID: STDL52154
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 12:58:43 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL52154
Misc. Info.: 280-0076428-013
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:10 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:30

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	30445909	1000.0	1000.0	
2	1.749	1.749	0.000	171268741	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	3897553	500.0	507.1	
1	3.232	3.232	0.000	2302370	500.0	519.0	
1	3.269	3.269	0.000	9761452	500.0	508.4	
		Average of Peak Amounts =				511.5	
2	3.092	3.092	0.000	12215805	500.0	510.5	
2	3.222	3.222	0.000	7689765	500.0	492.0	
2	3.276	3.276	0.000	27611810	500.0	503.2	
		Average of Peak Amounts =				501.9	
						RPD = 1.89	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	11654391	500.0	495.7	
1	5.509	5.509	0.000	17219418	500.0	502.6	M
1	5.849	5.849	0.000	12420039	500.0	485.0	
1	6.622	6.622	0.000	15696475	500.0	500.1	
1	6.995	6.995	0.000	21521176	500.0	499.3	
		Average of Peak Amounts =				496.5	
2	5.529	5.529	0.000	51845638	500.0	516.9	
2	5.952	5.952	0.000	40591711	500.0	515.7	
2	6.402	6.402	0.000	55787230	500.0	520.3	
2	6.649	6.649	0.000	32678665	500.0	513.5	
2	7.119	7.119	0.000	79736218	500.0	514.8	
		Average of Peak Amounts =				516.3	
						RPD = 3.89	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L5_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

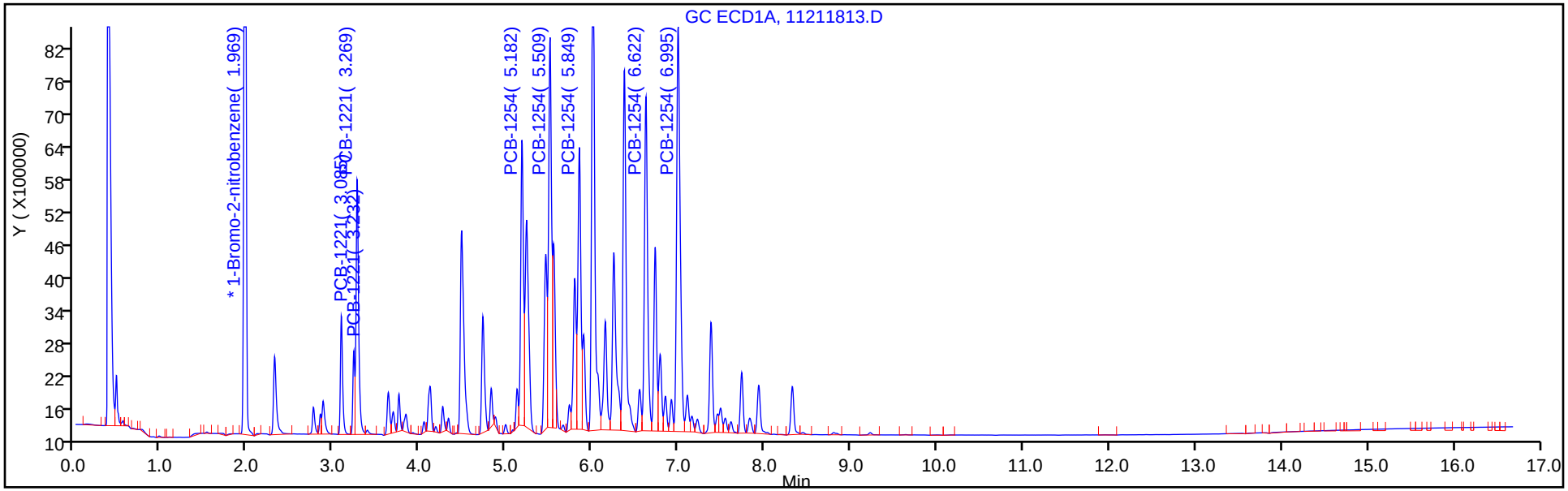
Report Date: 23-Nov-2018 11:02:11 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

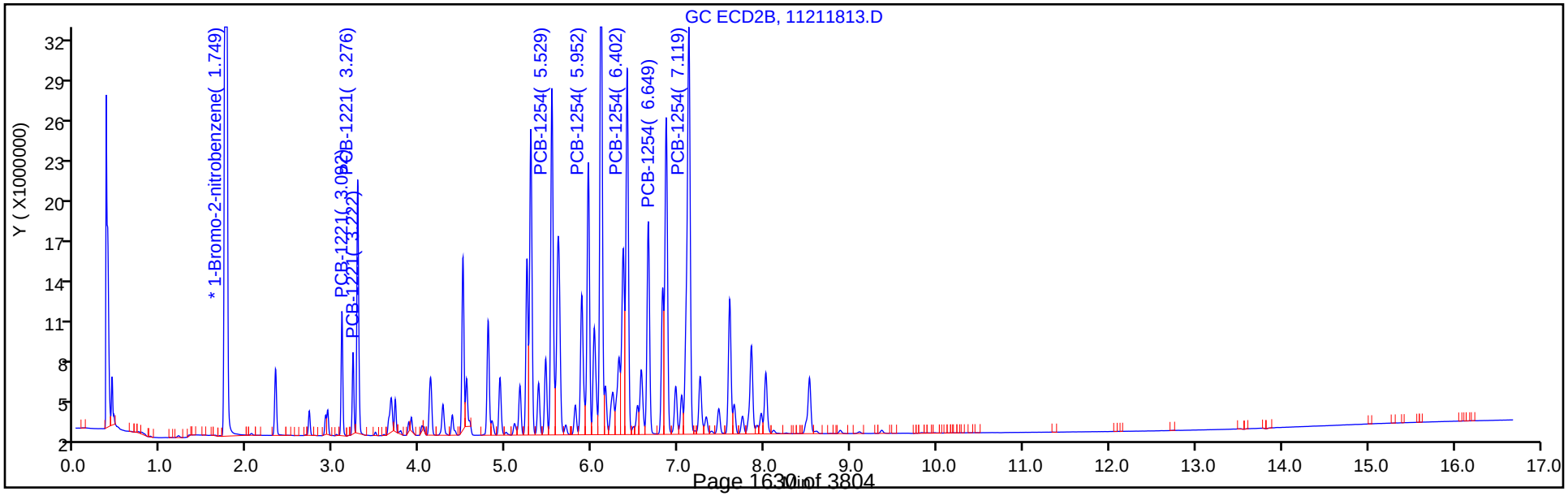
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211813.D

Injection Date:	21-Nov-2018 12:58:43	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL52154			Worklist Smp#:	13
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D
Lims ID: STDL42154
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 13:19:55 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL42154
Misc. Info.: 280-0076428-014
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:12 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:09:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30112720	1000.0	1000.0	
2	1.747	1.749	-0.002	169613542	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2063928	250.0	266.3	
1	3.230	3.232	-0.002	1277667	250.0	283.8	
1	3.270	3.269	0.001	5214449	250.0	269.3	
		Average of Peak Amounts =				273.1	
2	3.093	3.092	0.001	6662383	250.0	271.7	
2	3.223	3.222	0.001	4151876	250.0	261.9	
2	3.277	3.276	0.001	14954730	250.0	267.4	
		Average of Peak Amounts =				267.0	
						RPD = 2.27	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6200718	250.0	259.3	
1	5.506	5.509	-0.003	9144535	250.0	264.2	M
1	5.846	5.849	-0.003	6634099	250.0	258.7	
1	6.620	6.622	-0.002	8316205	250.0	262.4	
1	6.993	6.995	-0.002	11066699	250.0	256.1	
		Average of Peak Amounts =				260.1	
2	5.530	5.529	0.001	27978613	250.0	273.1	
2	5.953	5.952	0.001	21681477	250.0	270.3	
2	6.403	6.402	0.001	29833754	250.0	272.7	
2	6.650	6.649	0.001	17685692	250.0	272.4	
2	7.120	7.119	0.001	42598206	250.0	269.8	
		Average of Peak Amounts =				271.7	
						RPD = 4.33	
S 8 Polychlorinated biphenyls, Total							
1						533.3	
2						538.7	
						RPD = 1.01	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

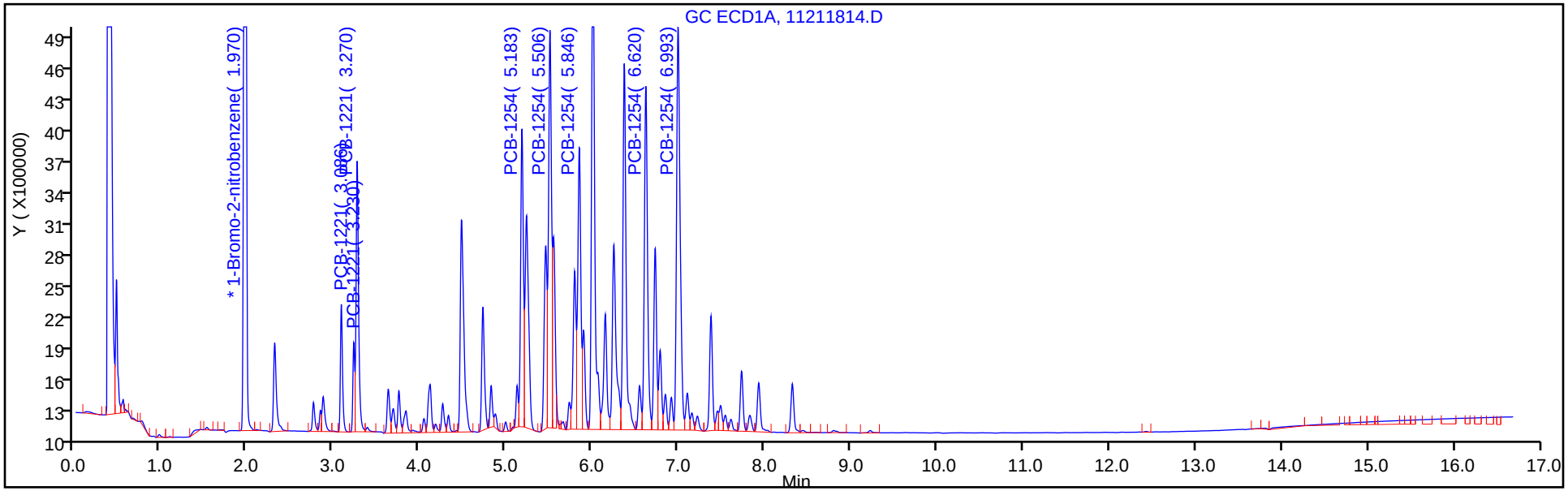
Report Date: 23-Nov-2018 11:02:13 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

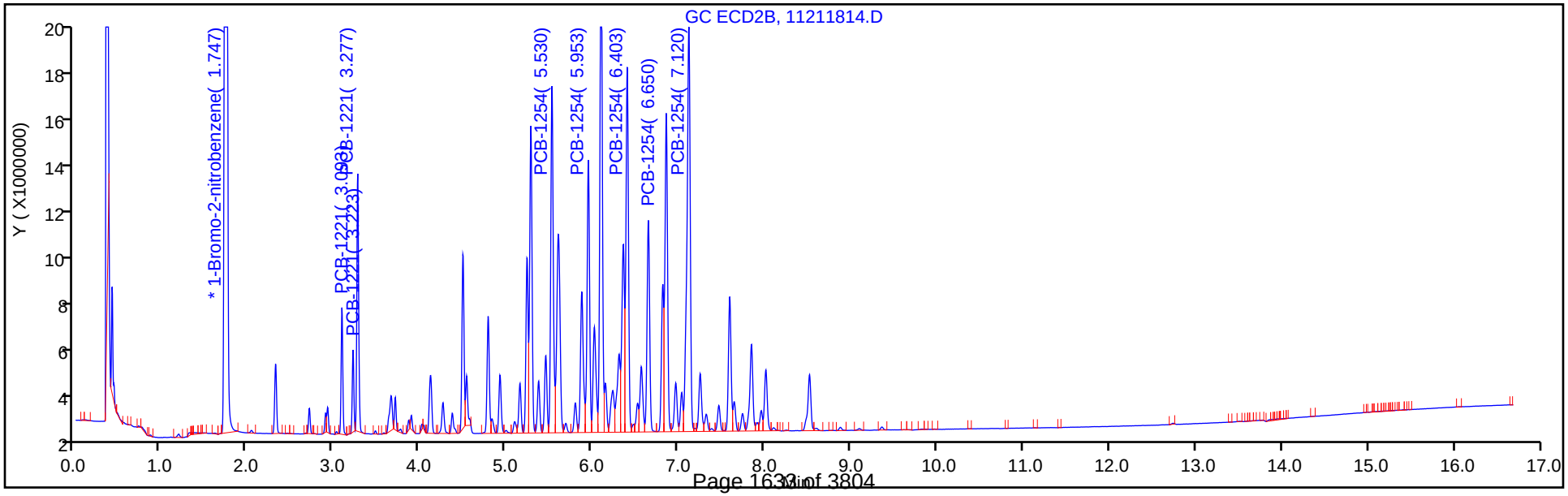
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211814.D

Injection Date:	21-Nov-2018 13:19:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL42154			Worklist Smp#:	14
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D
Lims ID: STDL32154
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 13:41:08 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL32154
Misc. Info.: 280-0076428-015
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	28078685	1000.0	1000.0	
2	1.746	1.749	-0.003	159417859	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	794996	100.0	103.4	
1	3.229	3.232	-0.003	506503	100.0	111.0	
1	3.269	3.269	0.000	2212927	100.0	116.3	
		Average of Peak Amounts =				110.2	
2	3.093	3.092	0.001	2763923	100.0	108.2	
2	3.223	3.222	0.001	1748923	100.0	109.7	
2	3.276	3.276	0.000	6335939	100.0	111.0	
		Average of Peak Amounts =				109.6	
						RPD = 0.52	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	2662071	100.0	110.8	
1	5.506	5.509	-0.003	3775608	100.0	110.2	M
1	5.849	5.849	0.000	2648846	100.0	106.8	
1	6.619	6.622	-0.003	3428029	100.0	109.3	
1	6.993	6.995	-0.002	4426432	100.0	105.7	
		Average of Peak Amounts =				108.6	
2	5.529	5.529	0.000	11951653	100.0	113.9	
2	5.953	5.952	0.001	9184571	100.0	112.5	
2	6.403	6.402	0.001	12571284	100.0	112.4	
2	6.649	6.649	0.000	7560827	100.0	113.9	
2	7.119	7.119	0.000	18178594	100.0	113.0	
		Average of Peak Amounts =				113.1	
						RPD = 4.13	
S 8 Polychlorinated biphenyls, Total							
1						218.8	
2						222.8	
						RPD = 1.82	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

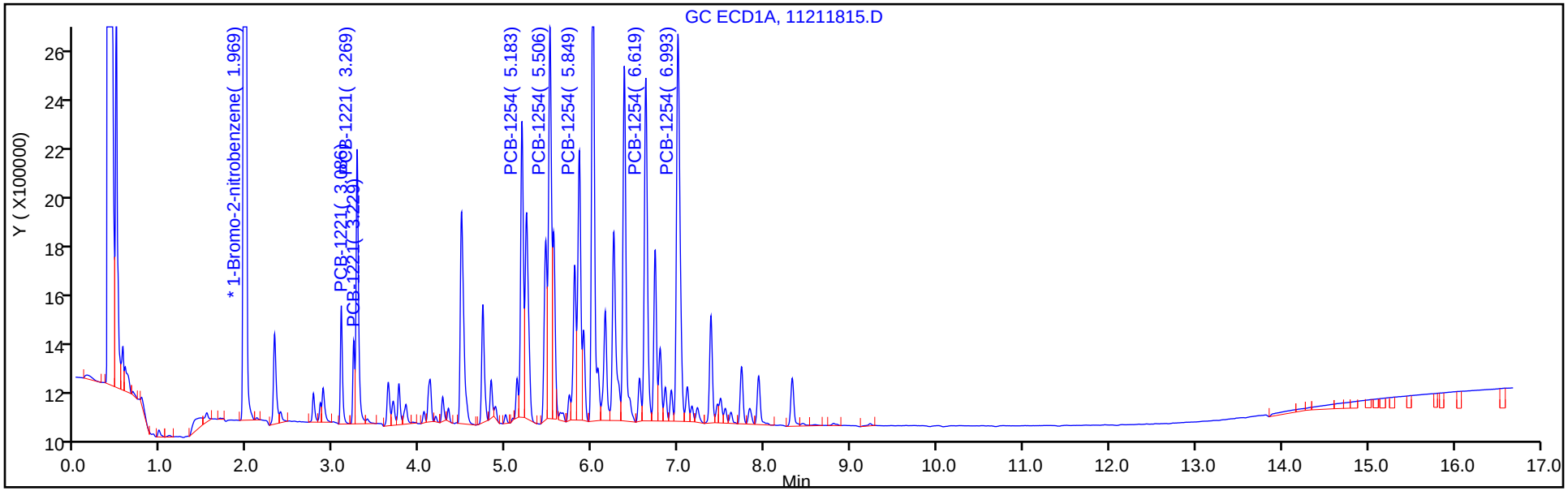
Report Date: 23-Nov-2018 11:02:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

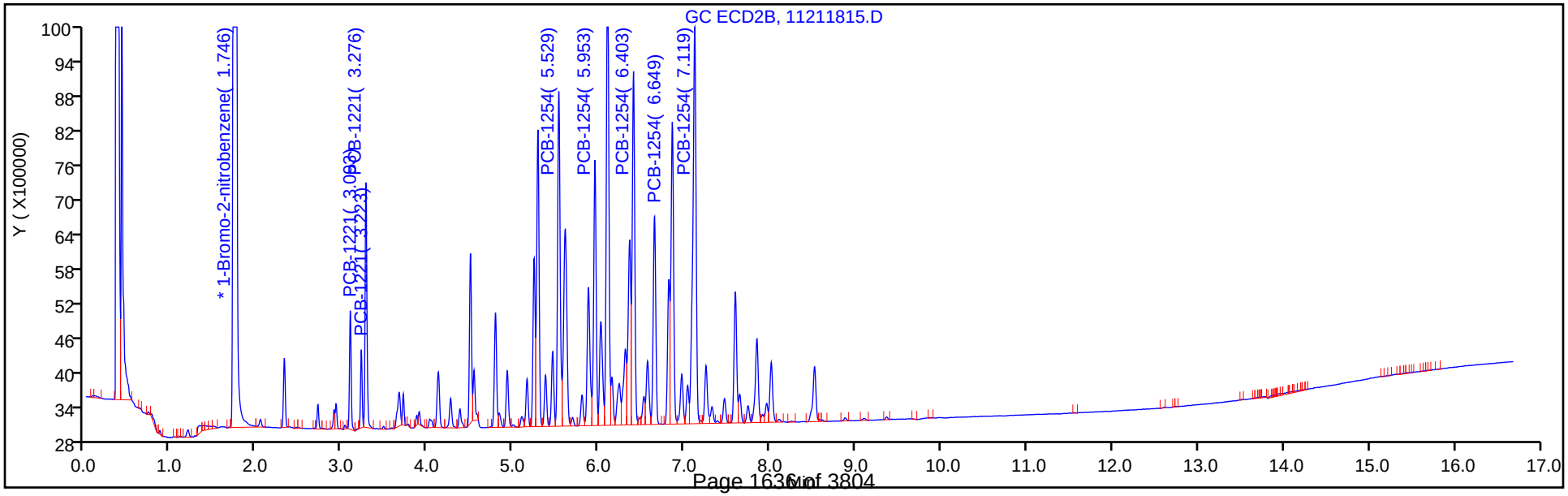
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211815.D

Injection Date:	21-Nov-2018 13:41:08	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL32154			Worklist Smp#:	15
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D
Lims ID: STDL22154
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 14:02:19 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL22154
Misc. Info.: 280-0076428-016
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:11:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	27612767	1000.0	1000.0	
2	1.746	1.749	-0.003	155958976	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	422934	50.0	50.7	
1	3.229	3.232	-0.003	264535	50.0	51.1	
1	3.269	3.269	0.000	1048520	50.0	50.1	
		Average of Peak Amounts =				50.6	
2	3.093	3.092	0.001	1479927	50.0	49.7	
2	3.223	3.222	0.001	922521	50.0	52.8	
2	3.276	3.276	0.000	3428605	50.0	53.7	
		Average of Peak Amounts =				52.0	
						RPD = 2.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							
1	5.183	5.182	0.001	1487053	50.0	56.1	
1	5.506	5.509	-0.003	2050858	50.0	55.4	
1	5.846	5.849	-0.003	1380932	50.0	53.3	
1	6.619	6.622	-0.003	1866154	50.0	55.2	
1	6.993	6.995	-0.002	2374593	50.0	54.4	
		Average of Peak Amounts =				54.9	
2	5.530	5.529	0.001	6401352	50.0	53.9	
2	5.953	5.952	0.001	4927585	50.0	54.0	
2	6.403	6.402	0.001	6824249	50.0	54.3	
2	6.646	6.649	-0.003	4105287	50.0	55.1	
2	7.120	7.119	0.001	9840352	50.0	54.8	
		Average of Peak Amounts =				54.4	
						RPD = 0.81	
S 8 Polychlorinated biphenyls, Total							
1						105.5	
2						106.5	
						RPD = 0.93	

Reagents:

AR_2154_L2_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

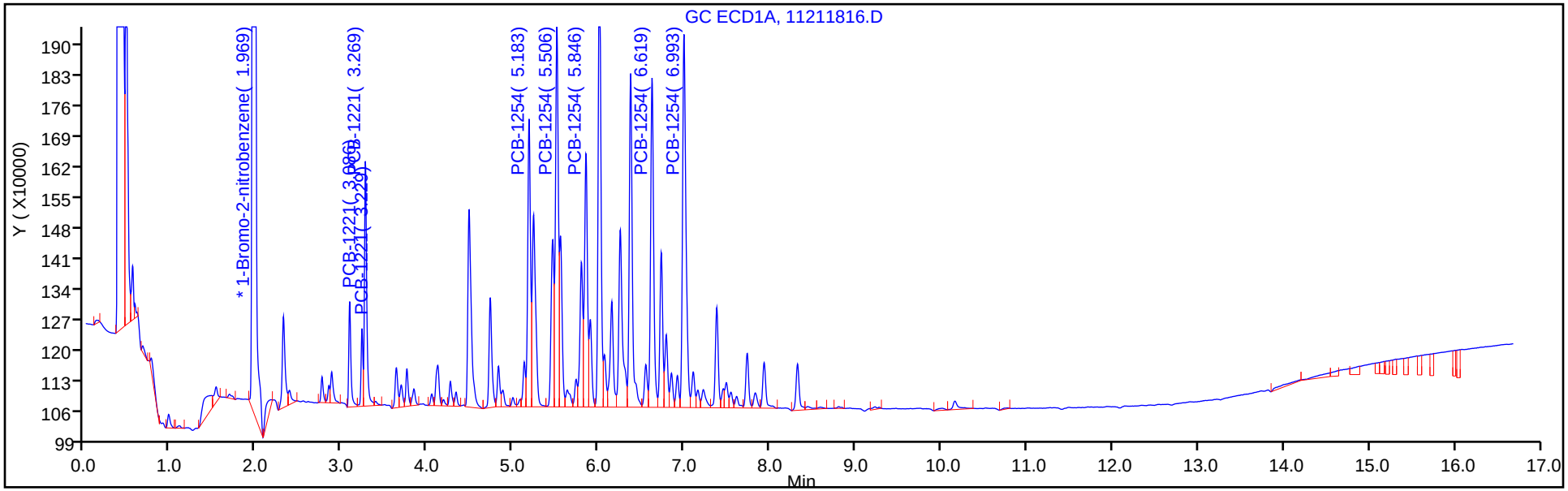
Report Date: 23-Nov-2018 11:02:18 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

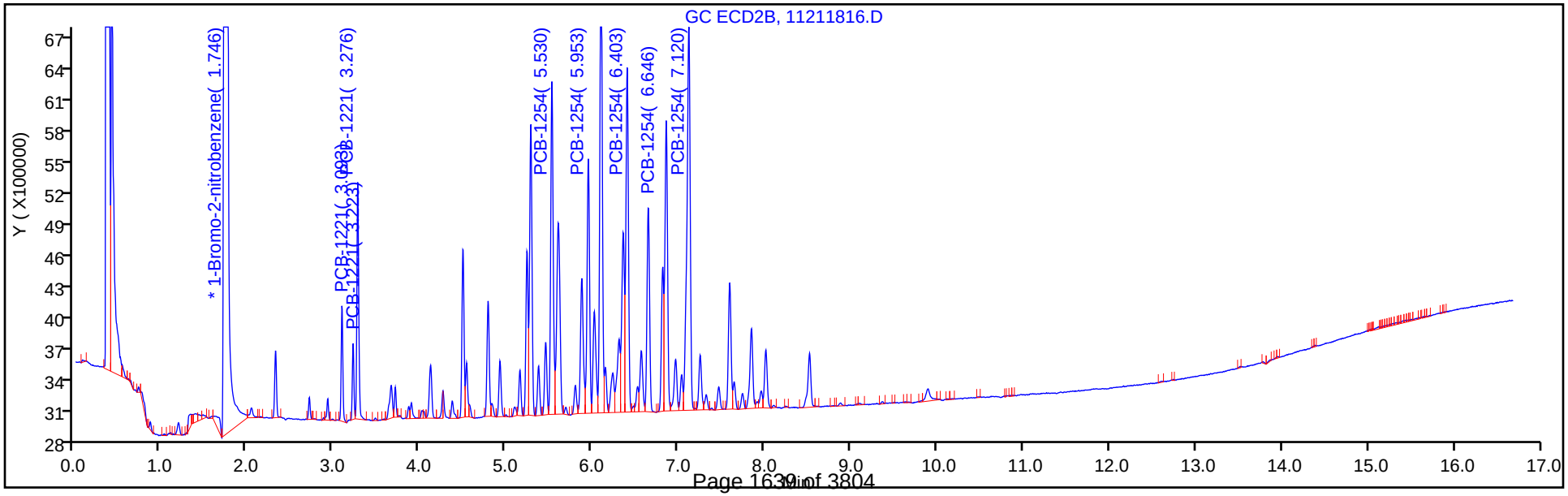
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211816.D

Injection Date:	21-Nov-2018 14:02:19	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL22154			Worklist Smp#:	16
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D
Lims ID: STDL12154
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 14:23:32 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL12154
Misc. Info.: 280-0076428-017
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub3

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:20 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:12:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31158892	1000.0	1000.0	
2	1.749	1.749	0.000	174644682	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.085	3.085	0.000	258968	25.0	22.3	
1	3.229	3.232	-0.003	155902	25.0	18.6	
1	3.272	3.269	0.003	594265	25.0	19.4	
		Average of Peak Amounts =				20.1	
2	3.092	3.092	0.000	990606	25.0	21.2	
2	3.222	3.222	0.000	531473	25.0	20.4	
2	3.276	3.276	0.000	1966030	25.0	19.1	
		Average of Peak Amounts =				20.2	
						RPD = 0.49	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.182	5.182	0.000	810954	25.0	18.9	
1	5.509	5.509	0.000	1058665	25.0	18.7	M
1	5.849	5.849	0.000	734067	25.0	21.4	
1	6.619	6.622	-0.003	977183	25.0	19.3	
1	6.992	6.995	-0.003	1230625	25.0	21.0	
		Average of Peak Amounts =				19.9	
2	5.529	5.529	0.000	3601131	25.0	17.7	
2	5.952	5.952	0.000	2735694	25.0	18.2	
2	6.402	6.402	0.000	3769252	25.0	17.7	
2	6.649	6.649	0.000	2218210	25.0	17.2	
2	7.119	7.119	0.000	5349050	25.0	17.7	
		Average of Peak Amounts =				17.7	
						RPD = 11.52	
S 8 Polychlorinated biphenyls, Total							
1						40.0	
2						37.9	
						RPD = 5.30	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

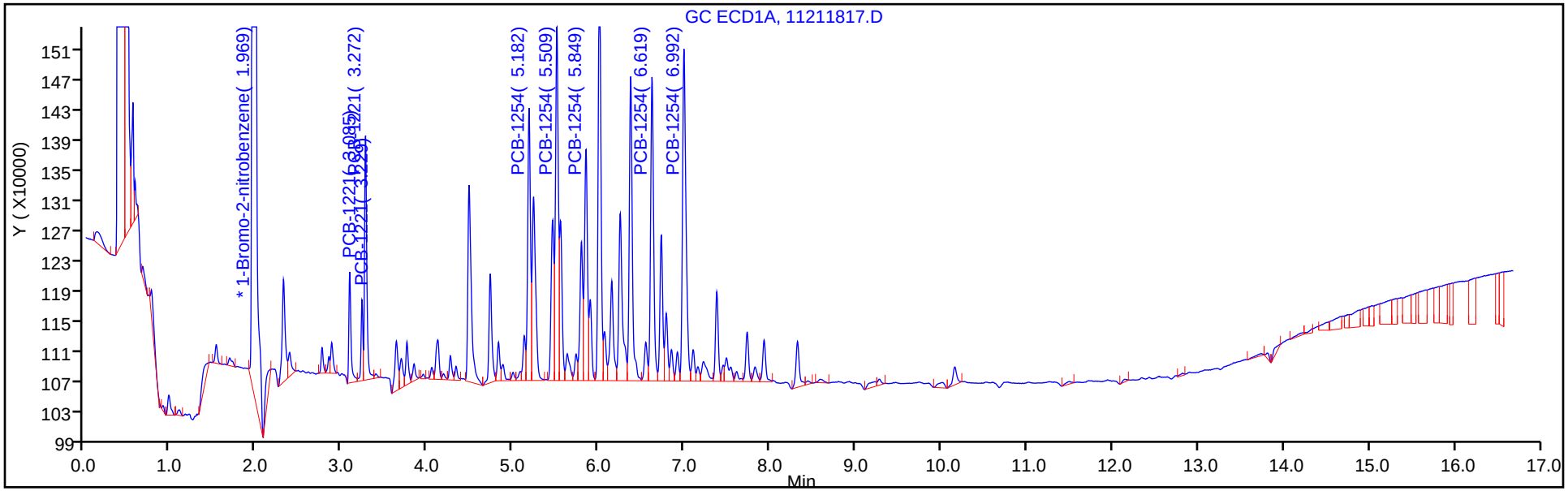
Report Date: 23-Nov-2018 11:02:21 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

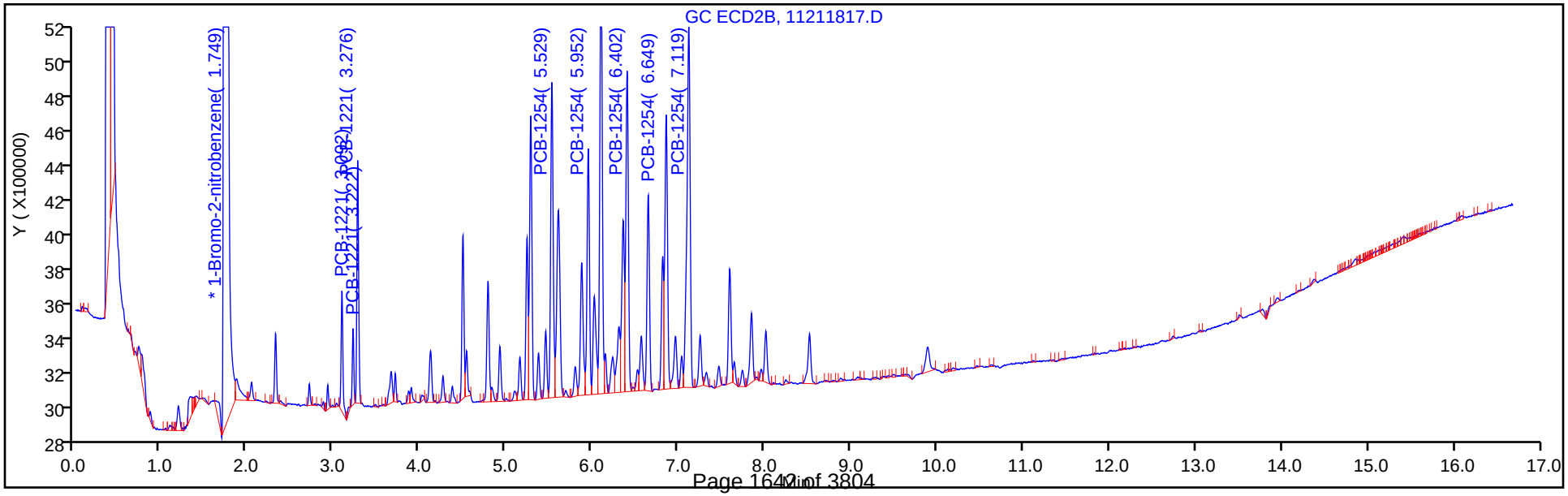
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211817.D

Injection Date:	21-Nov-2018 14:23:32	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL12154			Worklist Smp#:	17
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34386

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.5677 0.4346	0.5551 0.3962	0.5409	0.4852	0.4570	Lin1	6.3337	0.4201							0.9940		0.9900
PCB-1016 Peak 2	1.3072 0.9928	1.2929 0.9421	1.2319	1.1161	1.0742	Lin1	13.843	0.9818							0.9950		0.9900
PCB-1016 Peak 3	1.8906 1.8578	1.9617 1.8002	1.9602	1.8927	1.9482	Lin1	4.5623	1.8506							0.9990		0.9900
PCB-1016 Peak 4	0.8890 0.7766	0.9092 0.7383	0.9043	0.8365	0.8317	Lin1	6.3362	0.7699							0.9970		0.9900
PCB-1016 Peak 5	0.9487 0.8423	0.9583 0.8137	0.9580	0.8987	0.8701	Lin1	5.7144	0.8346							0.9980		0.9900
PCB-1260 Peak 1	1.3639 1.1412	1.3747 1.1236	1.3336	1.2270	1.2120	Lin1	9.8220	1.1438							0.9980		0.9900
PCB-1260 Peak 2	1.8759 1.7707	1.9174 1.7702	1.9079	1.8103	1.8575	Lin1	5.2462	1.7856							0.9990		0.9900
PCB-1260 Peak 3	1.1956 1.0408	1.1845 1.0428	1.2002	1.0955	1.1080	Lin1	6.3677	1.0526							0.9990		0.9900
PCB-1260 Peak 4	2.4858 2.3766	2.5292 2.3887	2.5314	2.4370	2.4961	Lin1	5.2228	2.4051							1.0000		0.9900
PCB-1260 Peak 5	1.1252 1.0822	1.1505 1.0911	1.1460	1.1027	1.1345	Lin1	2.0533	1.0959							1.0000		0.9900
Tetrachloro-m-xylene	24.166 26.317	25.085 26.191	25.541	25.685	26.715	Lin1	-3.160	26.379							1.0000		0.9900
DCB Decachlorobiphenyl	25.943 19.864	24.892 19.439	23.887	21.374	21.028	Lin1	11.557	19.760							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34386

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Lin1	469132 10292626	883638 12255500	1679350	3816191	6801886	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 2	BNB	Lin1	1080310 23509757	2058248 29138313	3824818	8778351	15989031	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 3	BNB	Lin1	1562445 43992946	3122897 55680903	6086050	14886212	28999155	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 4	BNB	Lin1	734649 18389026	1447486 22835416	2807752	6578902	12379838	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 5	BNB	Lin1	784034 19946184	1525625 25166398	2974460	7068443	12951678	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 1	BNB	Lin1	1127159 27023644	2188444 34751926	4140653	9650098	18040094	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 2	BNB	Lin1	1550296 41930903	3052493 54752979	5923763	14238155	27649105	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 3	BNB	Lin1	988085 24646608	1885624 32252970	3726238	8615850	16493165	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 4	BNB	Lin1	2054328 56278619	4026393 73881863	7859527	19166787	37154269	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 5	BNB	Lin1	929879 25627349	1831626 33747429	3558044	8672757	16886305	25.0 750	50.0 1000	100	250	500
Tetrachloro-m-xylene	BNB	Lin1	998558 31159991	1996738 40504428	3964953	10100542	19882681	1.25 37.5	2.50 50.0	5.00	12.5	25.0
DCB Decachlorobiphenyl	BNB	Lin1	1072007 23519401	1981347 30062336	3708204	8405396	15649907	1.25 37.5	2.50 50.0	5.00	12.5	25.0

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D
Lims ID: STDL71660
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 14:44:45 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71660
Misc. Info.: 280-0076428-018
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:22 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:26:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30929643	1000.0	1000.0	
2	1.746	1.749	-0.003	172682643	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.879	0.001	40504428	50.0	49.8	
2	2.776	2.780	-0.004	105788700	50.0	48.2	
						RPD = 3.20	
1 PCB-1016							
1	3.270	3.269	0.001	12255500	1000.0	928.2	
1	3.633	3.633	0.000	29138313	1000.0	945.4	
1	4.116	4.116	0.000	55680903	1000.0	970.3	
1	4.263	4.263	0.000	22835416	1000.0	950.7	
1	4.730	4.729	0.001	25166398	1000.0	968.1	
		Average of Peak Amounts =				952.5	
2	3.276	3.276	0.000	35638141	1000.0	956.5	
2	3.666	3.666	0.000	73285982	1000.0	952.1	
2	4.123	4.123	0.000	163781976	1000.0	957.7	
2	4.266	4.266	0.000	69518646	1000.0	946.1	
2	4.496	4.496	0.000	37279827	1000.0	943.6	
		Average of Peak Amounts =				951.2	
						RPD = 0.14	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.249	0.001	34751926	1000.0	973.7	
1	6.993	6.993	0.000	54752979	1000.0	988.5	
1	7.490	7.489	0.001	32252970	1000.0	984.6	
1	7.930	7.929	0.001	73881863	1000.0	991.0	
1	8.320	8.319	0.001	33747429	1000.0	993.7	
		Average of Peak Amounts =				986.3	
2	6.650	6.646	0.004	121750112	1000.0	963.1	
2	7.116	7.116	0.000	181248886	1000.0	965.7	
2	7.646	7.646	0.000	109270203	1000.0	970.8	
2	8.013	8.013	0.000	244056914	1000.0	967.3	
2	8.516	8.516	0.000	187015797	1000.0	968.8	
		Average of Peak Amounts =				967.2	
						RPD = 1.96	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	30062336	50.0	48.6	
2	10.186	10.186	0.000	121182268	50.0	48.3	
						RPD = 0.69	
S 8 Polychlorinated biphenyls, Total							
1						1938.9	
2						1918.4	
						RPD = 1.06	

Reagents:

AR_1660_L7_00026	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

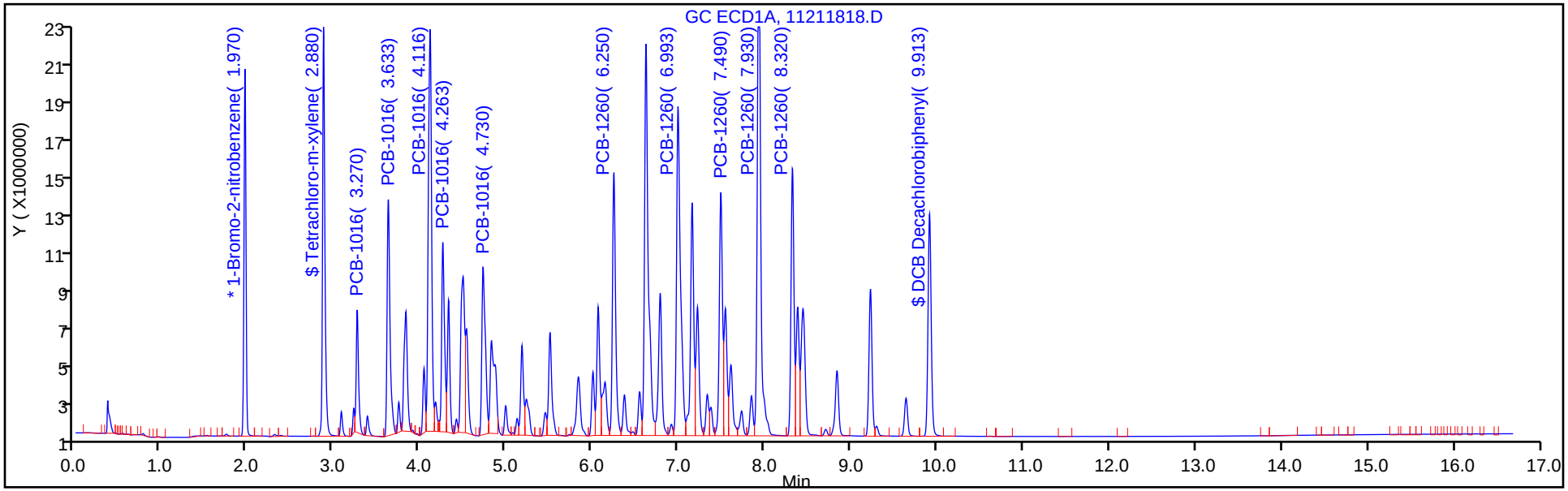
Report Date: 23-Nov-2018 11:02:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

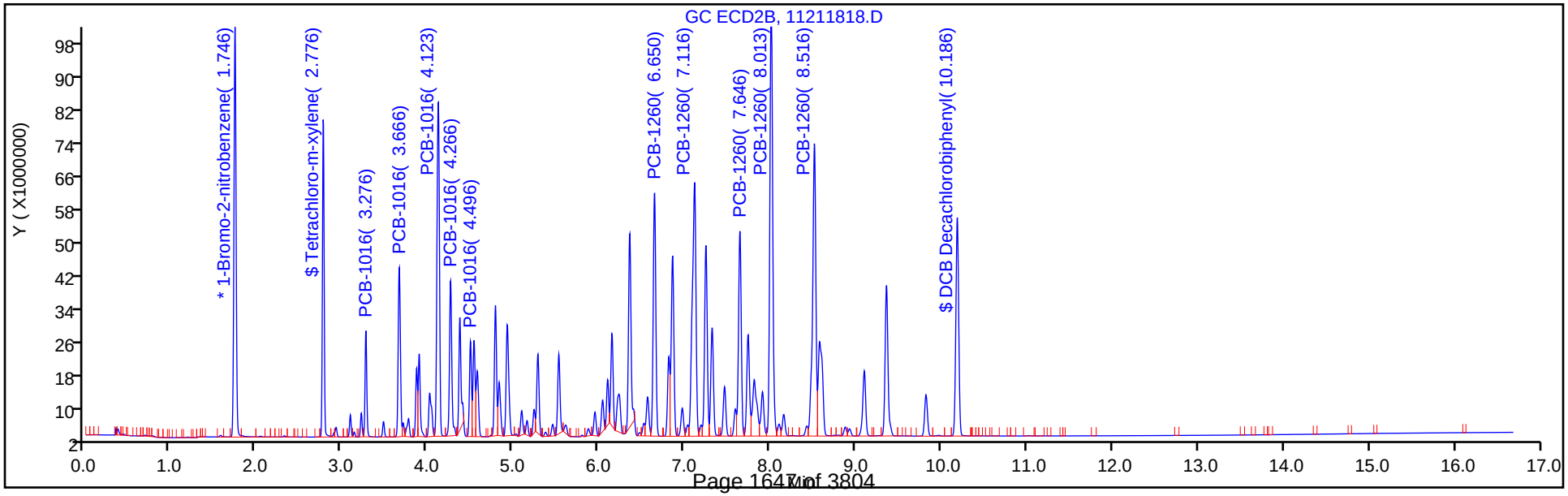
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D

Injection Date:	21-Nov-2018 14:44:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71660			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D
Lims ID: STDL61660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 15:05:56 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61660
Misc. Info.: 280-0076428-019
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:25 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:02:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31573792	1000.0	1000.0	
2	1.749	1.749	0.000	174603036	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	31159991	37.5	37.5	
2	2.779	2.780	-0.001	83308843	37.5	37.4	
						RPD = 0.34	
1 PCB-1016							
1	3.272	3.269	0.003	10292626	750.0	760.9	
1	3.632	3.633	-0.001	23509757	750.0	744.3	
1	4.118	4.116	0.002	43992946	750.0	750.5	
1	4.265	4.263	0.002	18389026	750.0	748.3	
1	4.732	4.729	0.003	19946184	750.0	750.1	
		Average of Peak Amounts =				750.8	
2	3.275	3.276	-0.001	28324629	750.0	748.3	
2	3.665	3.666	-0.001	58050459	750.0	742.3	
2	4.122	4.123	-0.001	128903407	750.0	742.4	
2	4.265	4.266	-0.001	55437372	750.0	742.9	
2	4.499	4.496	0.003	30262522	750.0	754.2	
		Average of Peak Amounts =				746.0	
						RPD = 0.64	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.248	6.249	-0.001	27023644	750.0	739.7	
1	6.992	6.993	-0.001	41930903	750.0	740.8	
1	7.488	7.489	-0.001	24646608	750.0	735.5	
1	7.932	7.929	0.003	56278619	750.0	738.9	
1	8.322	8.319	0.003	25627349	750.0	738.8	
		Average of Peak Amounts =				738.7	
2	6.649	6.646	0.003	95127310	750.0	741.1	
2	7.115	7.116	-0.001	141113456	750.0	740.7	
2	7.645	7.646	-0.001	84305248	750.0	737.8	
2	8.012	8.013	-0.001	189441684	750.0	739.9	
2	8.515	8.516	-0.001	144616476	750.0	738.0	
		Average of Peak Amounts =				739.5	
						RPD = 0.10	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	23519401	37.5	37.1	
2	10.185	10.186	-0.001	94115340	37.5	36.9	
						RPD = 0.55	
S 8 Polychlorinated biphenyls, Total							
1						1489.5	
2						1485.5	
						RPD = 0.27	

Reagents:

AR_1660_L6_00033	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

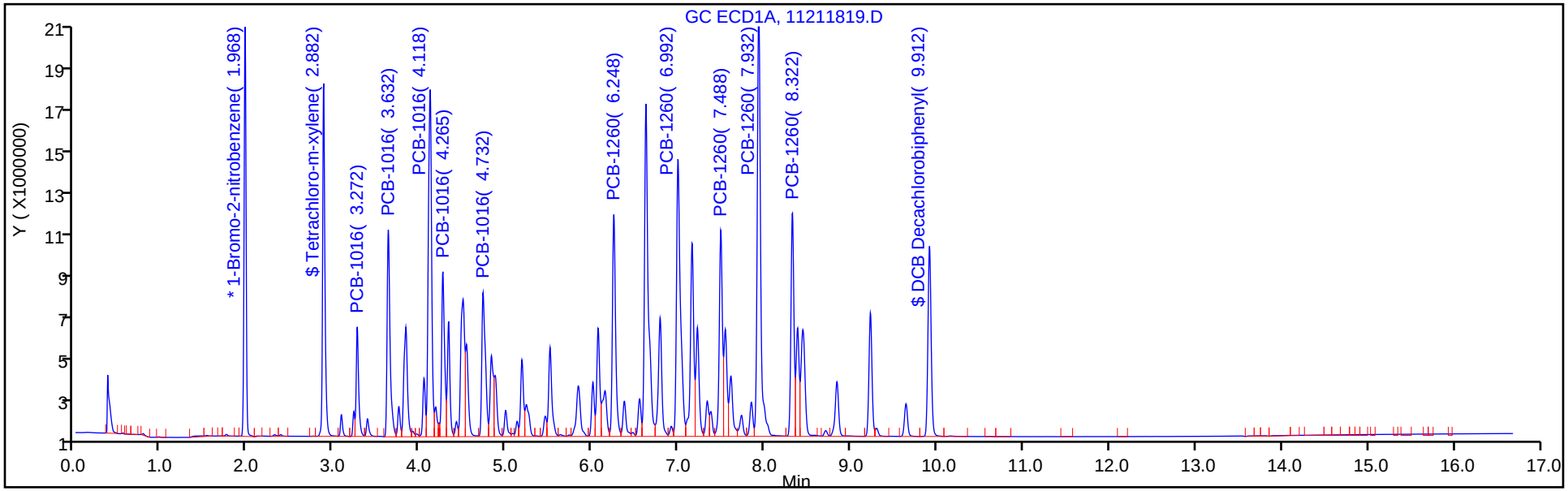
Report Date: 23-Nov-2018 11:02:25 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

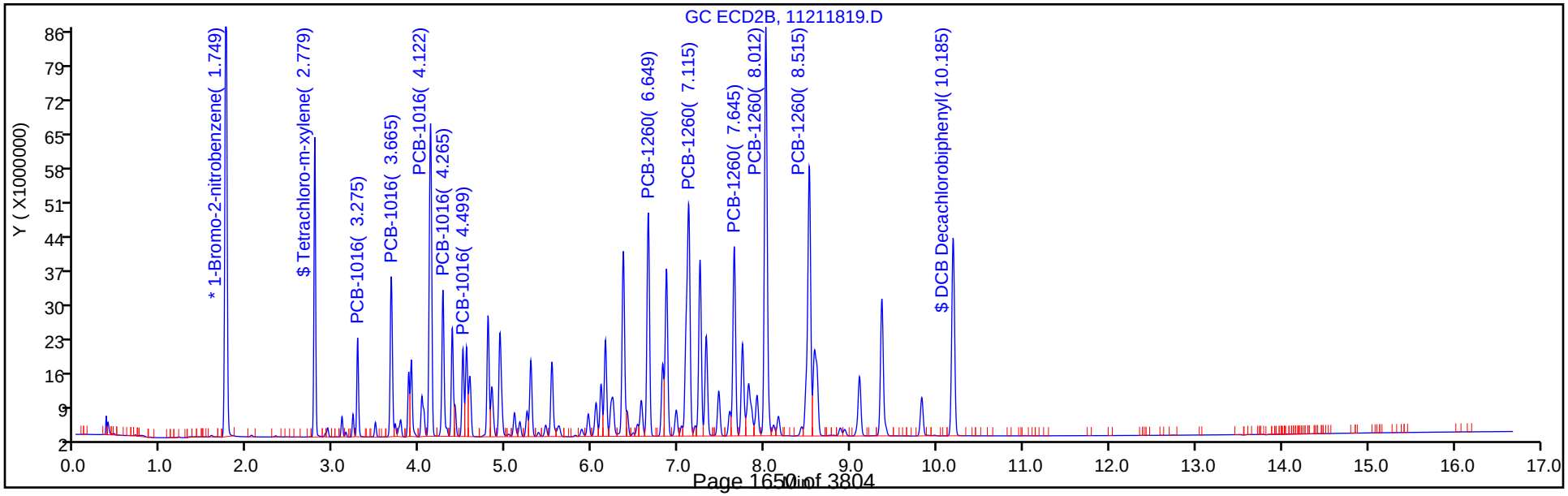
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D

Injection Date:	21-Nov-2018 15:05:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61660			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D
Lims ID: STDL51660
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 21-Nov-2018 15:27:09 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51660
Misc. Info.: 280-0076428-020
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:27 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29769998	1000.0	1000.0	
2	1.746	1.746	0.000	167274345	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	19882681	25.0	25.4	
2	2.780	2.780	0.000	55710908	25.0	25.9	
						RPD = 1.91	
1 PCB-1016							M
1	3.269	3.269	0.000	6801886	500.0	528.8	
1	3.633	3.633	0.000	15989031	500.0	532.9	
1	4.116	4.116	0.000	28999155	500.0	523.9	
1	4.263	4.263	0.000	12379838	500.0	531.9	
1	4.729	4.729	0.000	12951678	500.0	514.4	
		Average of Peak Amounts =				526.4	
2	3.276	3.276	0.000	18899868	500.0	516.1	
2	3.666	3.666	0.000	40057019	500.0	530.0	M
2	4.123	4.123	0.000	88563385	500.0	528.5	M
2	4.266	4.266	0.000	38741347	500.0	537.6	M
2	4.496	4.496	0.000	20361835	500.0	524.5	M
		Average of Peak Amounts =				527.3	
						RPD = 0.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	18040094	500.0	521.2	
1	6.993	6.993	0.000	27649105	500.0	517.2	
1	7.489	7.489	0.000	16493165	500.0	520.3	
1	7.929	7.929	0.000	37154269	500.0	516.7	
1	8.319	8.319	0.000	16886305	500.0	515.7	
		Average of Peak Amounts =				518.2	
2	6.646	6.646	0.000	64958906	500.0	524.4	
2	7.116	7.116	0.000	96225163	500.0	523.6	
2	7.646	7.646	0.000	57482127	500.0	521.5	
2	8.013	8.013	0.000	129198578	500.0	523.3	
2	8.516	8.516	0.000	99208427	500.0	525.0	
		Average of Peak Amounts =				523.6	
						RPD = 1.02	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	15649907	25.0	26.0	
2	10.186	10.186	0.000	64572494	25.0	26.2	
						RPD = 0.81	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

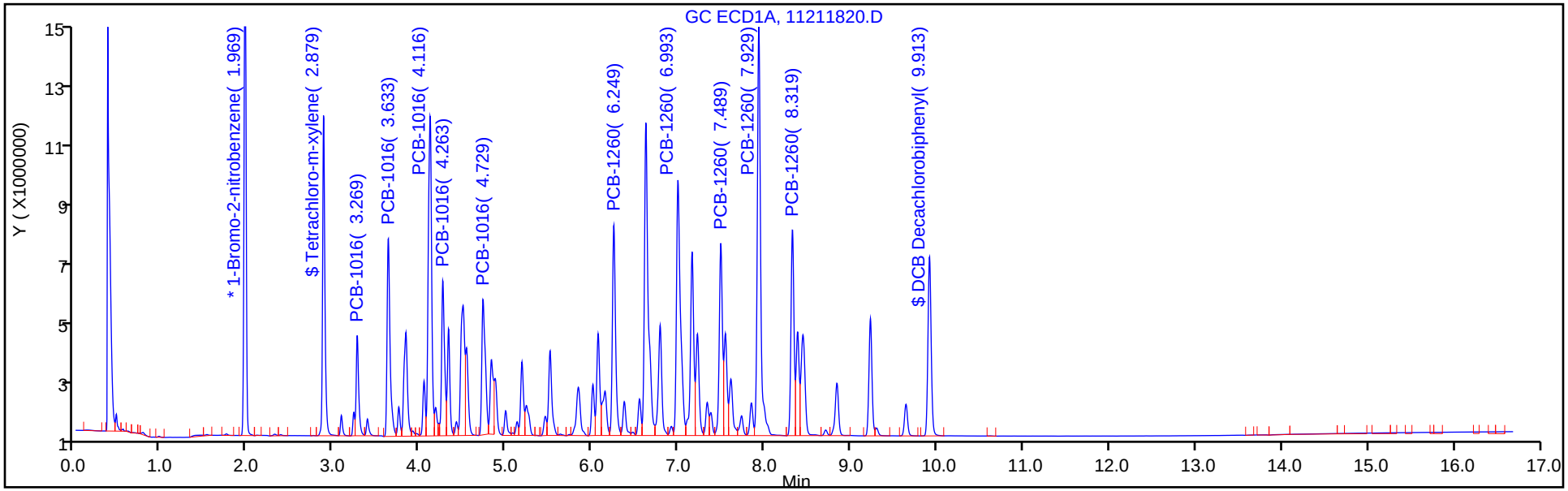
Report Date: 23-Nov-2018 11:02:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

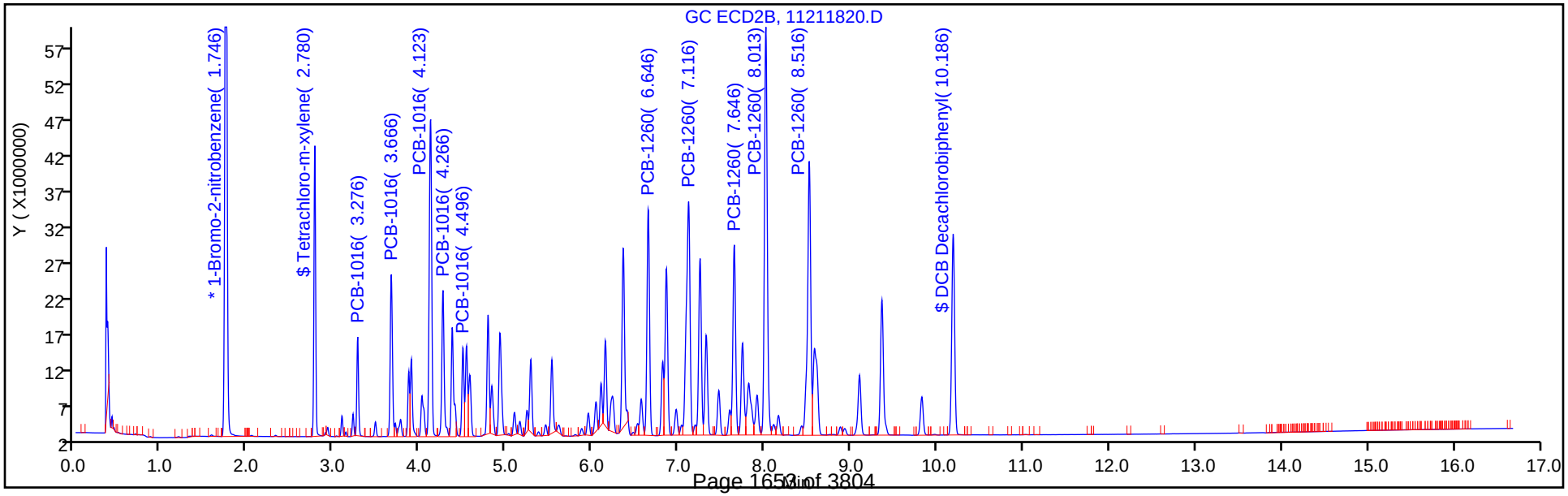
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D

Injection Date:	21-Nov-2018 15:27:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51660			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D
Lims ID: STDL41660
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 15:48:22 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41660
Misc. Info.: 280-0076428-021
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:30 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31460203	1000.0	1000.0	
2	1.749	1.746	0.003	176509413	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	10100542	12.5	12.3	
2	2.779	2.780	-0.001	30523746	12.5	13.2	
						RPD = 6.95	
1 PCB-1016							
1	3.272	3.269	0.003	3816191	250.0	273.7	
1	3.632	3.633	-0.001	8778351	250.0	270.1	
1	4.119	4.116	0.003	14886212	250.0	253.2	
1	4.265	4.263	0.002	6578902	250.0	263.4	
1	4.732	4.729	0.003	7068443	250.0	262.4	
		Average of Peak Amounts =				264.6	
2	3.275	3.276	-0.001	10752270	250.0	270.6	
2	3.665	3.666	-0.001	22260570	250.0	271.3	
2	4.122	4.123	-0.001	48351201	250.0	266.7	
2	4.265	4.266	-0.001	21045310	250.0	269.2	
2	4.499	4.496	0.003	11353500	250.0	269.0	
		Average of Peak Amounts =				269.4	
						RPD = 1.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9650098	250.0	259.6	
1	6.992	6.993	-0.001	14238155	250.0	250.5	
1	7.489	7.489	0.000	8615850	250.0	254.1	
1	7.932	7.929	0.003	19166787	250.0	251.1	
1	8.322	8.319	0.003	8672757	250.0	249.7	
		Average of Peak Amounts =				253.0	
2	6.649	6.646	0.003	35419484	250.0	264.3	
2	7.115	7.116	-0.001	52349958	250.0	263.8	
2	7.645	7.646	-0.001	31335455	250.0	263.4	
2	8.012	8.013	-0.001	70151512	250.0	263.6	
2	8.515	8.516	-0.001	53442743	250.0	262.1	
		Average of Peak Amounts =				263.4	
						RPD = 4.04	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8405396	12.5	12.9	
2	10.185	10.186	-0.001	35221995	12.5	13.2	
						RPD = 2.14	
S 8 Polychlorinated biphenyls, Total							
1						517.6	
2						532.8	
						RPD = 2.90	

Reagents:

AR_1660_L4_00068	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

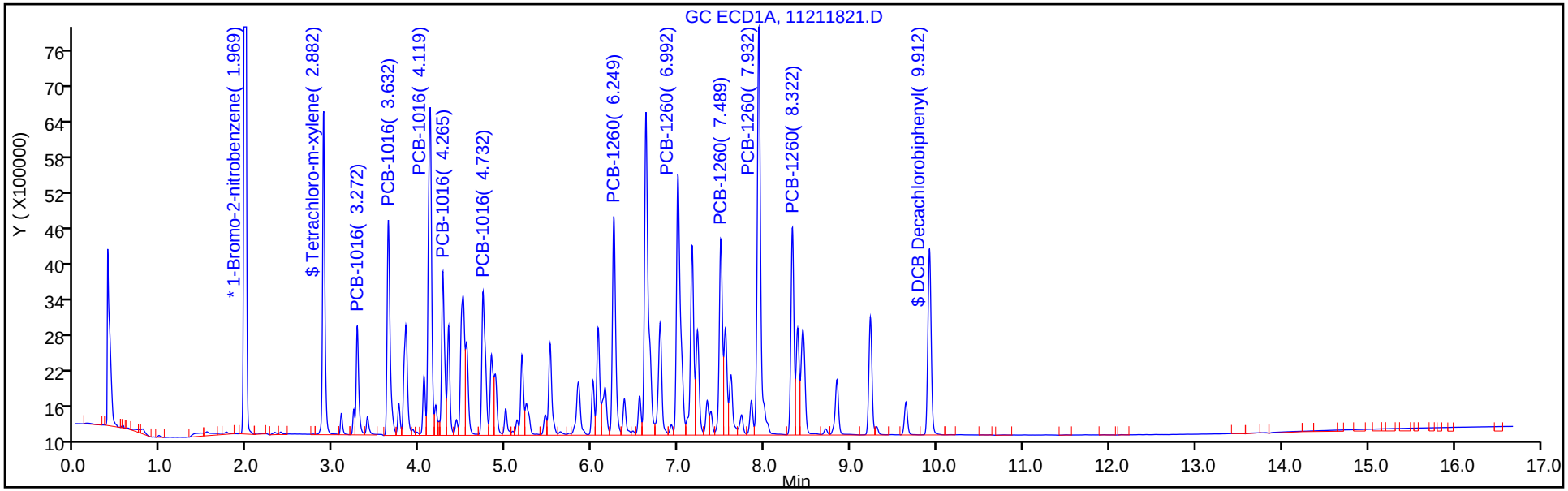
Report Date: 23-Nov-2018 11:02:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

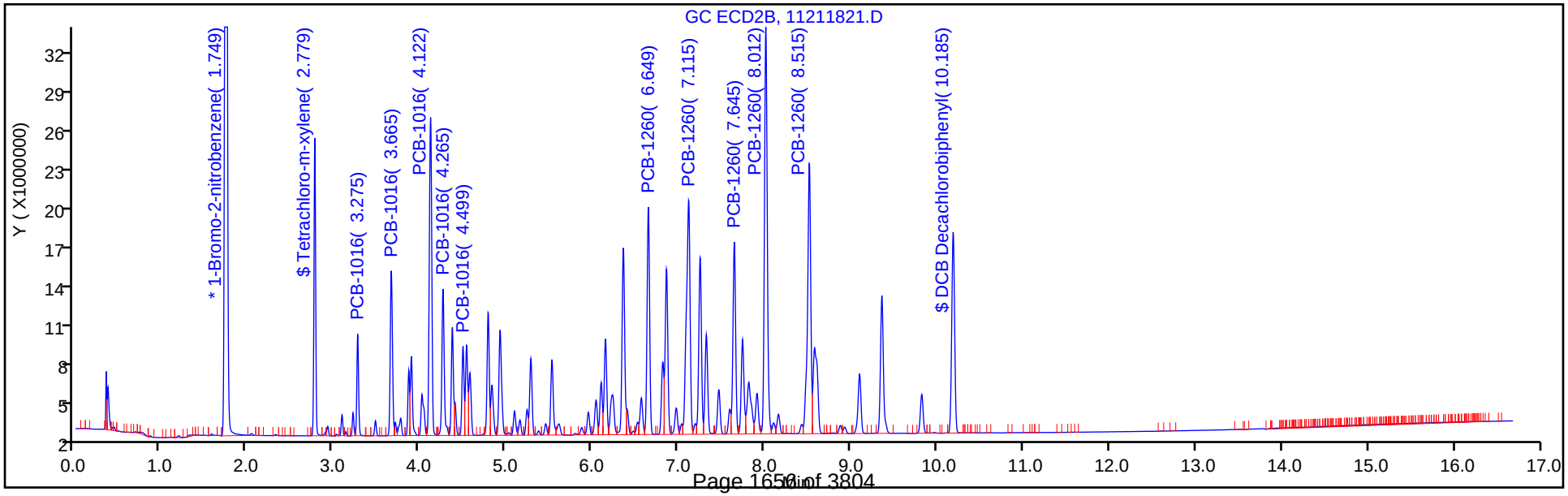
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D

Injection Date:	21-Nov-2018 15:48:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41660			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D
Lims ID: STDL31660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 16:09:34 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31660
Misc. Info.: 280-0076428-022
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:33 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:05:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31048095	1000.0	1000.0	
2	1.750	1.746	0.004	175133355	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	3964953	5.00	4.96	
2	2.780	2.780	0.000	13257502	5.00	5.43	
						RPD = 9.06	
1 PCB-1016							
1	3.269	3.269	0.000	1679350	100.0	113.7	
1	3.633	3.633	0.000	3824818	100.0	111.4	
1	4.116	4.116	0.000	6086050	100.0	103.5	
1	4.263	4.263	0.000	2807752	100.0	109.2	
1	4.729	4.729	0.000	2974460	100.0	107.9	
		Average of Peak Amounts =				109.1	
2	3.276	3.276	0.000	4799160	100.0	112.6	
2	3.666	3.666	0.000	9573999	100.0	108.2	
2	4.123	4.123	0.000	20834280	100.0	108.0	
2	4.266	4.266	0.000	9095859	100.0	108.4	
2	4.496	4.496	0.000	5107027	100.0	112.5	
		Average of Peak Amounts =				109.9	
						RPD = 0.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	4140653	100.0	108.0	
1	6.993	6.993	0.000	5923763	100.0	103.9	
1	7.489	7.489	0.000	3726238	100.0	108.0	
1	7.929	7.929	0.000	7859527	100.0	103.1	
1	8.319	8.319	0.000	3558044	100.0	102.7	
		Average of Peak Amounts =				105.1	
2	6.650	6.646	0.004	15611005	100.0	109.8	
2	7.116	7.116	0.000	22806129	100.0	108.8	
2	7.646	7.646	0.000	13672887	100.0	108.8	
2	8.013	8.013	0.000	30406302	100.0	108.5	
2	8.520	8.516	0.004	23327598	100.0	108.5	
		Average of Peak Amounts =				108.9	
						RPD = 3.50	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	3708204	5.00	5.46	
2	10.186	10.186	0.000	15646900	5.00	5.52	
						RPD = 1.19	
S 8 Polychlorinated biphenyls, Total							
1						214.3	
2						218.8	
						RPD = 2.10	

Reagents:

AR_1660_L3_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

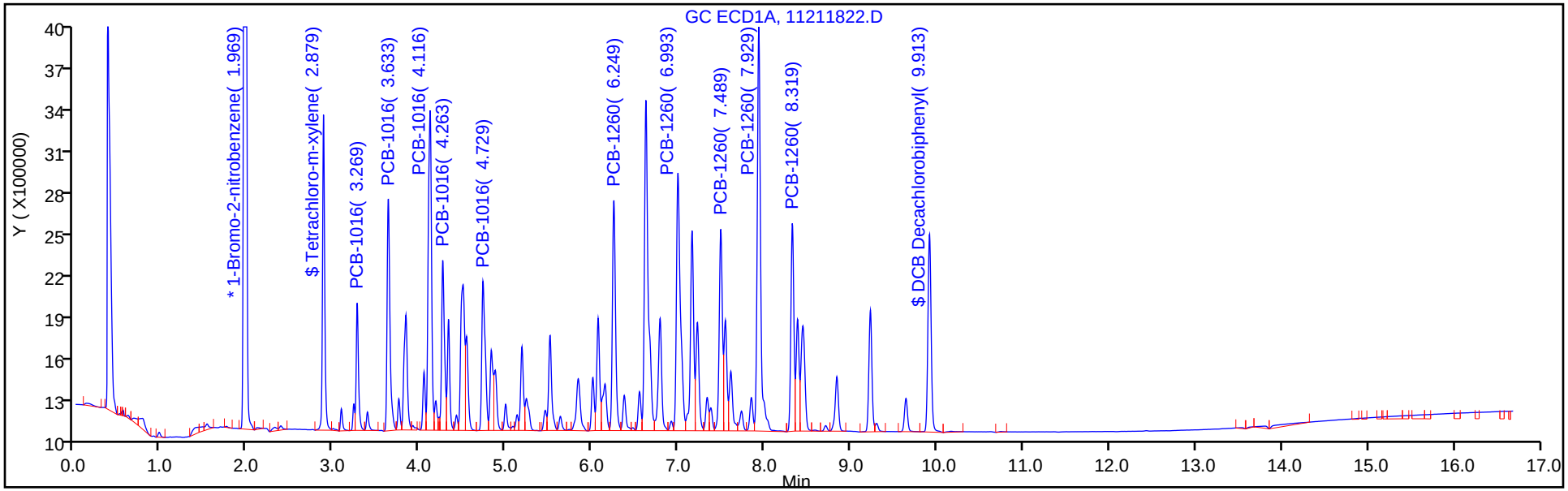
Report Date: 23-Nov-2018 11:02:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

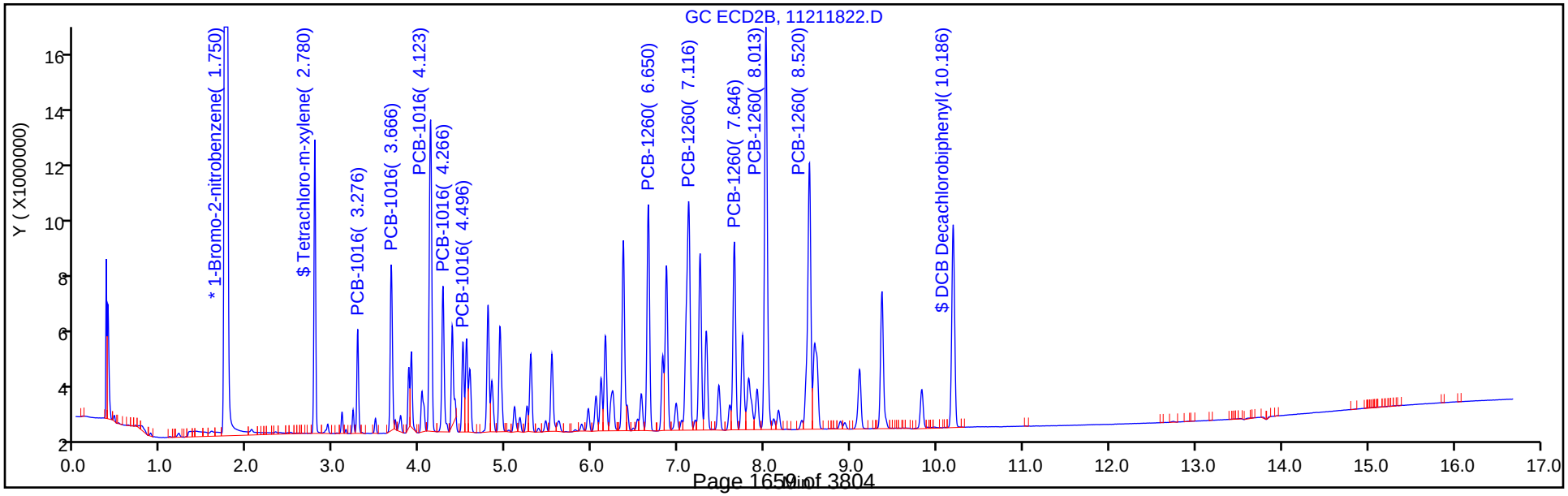
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D

Injection Date:	21-Nov-2018 16:09:34	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31660			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D
Lims ID: STDL21660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 16:30:45 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21660
Misc. Info.: 280-0076428-023
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:36 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31839217	1000.0	1000.0	
2	1.750	1.746	0.004	177179573	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	1996738	2.50	2.50	
2	2.780	2.780	0.000	7055763	2.50	2.57	
						RPD = 3.03	
1 PCB-1016							
1	3.269	3.269	0.000	883638	50.0	51.0	
1	3.629	3.633	-0.004	2058248	50.0	51.7	
1	4.116	4.116	0.000	3122897	50.0	50.5	
1	4.263	4.263	0.000	1447486	50.0	50.8	
1	4.729	4.729	0.000	1525625	50.0	50.6	
		Average of Peak Amounts =				50.9	
2	3.276	3.276	0.000	2565446	50.0	51.6	
2	3.666	3.666	0.000	5231349	50.0	50.8	
2	4.123	4.123	0.000	11249839	50.0	51.1	
2	4.266	4.266	0.000	4898205	50.0	50.4	
2	4.496	4.496	0.000	2765621	50.0	52.2	
		Average of Peak Amounts =				51.2	
						RPD = 0.60	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	2188444	50.0	51.5	
1	6.993	6.993	0.000	3052493	50.0	50.8	
1	7.489	7.489	0.000	1885624	50.0	50.2	
1	7.929	7.929	0.000	4026393	50.0	50.4	
1	8.319	8.319	0.000	1831626	50.0	50.6	
		Average of Peak Amounts =				50.7	
2	6.650	6.646	0.004	8418682	50.0	52.2	
2	7.116	7.116	0.000	12242650	50.0	51.8	
2	7.646	7.646	0.000	7400170	50.0	52.4	
2	8.013	8.013	0.000	16246619	50.0	51.8	
2	8.516	8.516	0.000	12553559	50.0	52.0	
		Average of Peak Amounts =				52.0	
						RPD = 2.58	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1981347	2.50	2.56	
2	10.183	10.186	-0.003	8427351	2.50	2.61	
						RPD = 1.72	
S 8 Polychlorinated biphenyls, Total							
1						101.6	
2						103.3	
						RPD = 1.59	

Reagents:

AR_1660_L2_00030	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

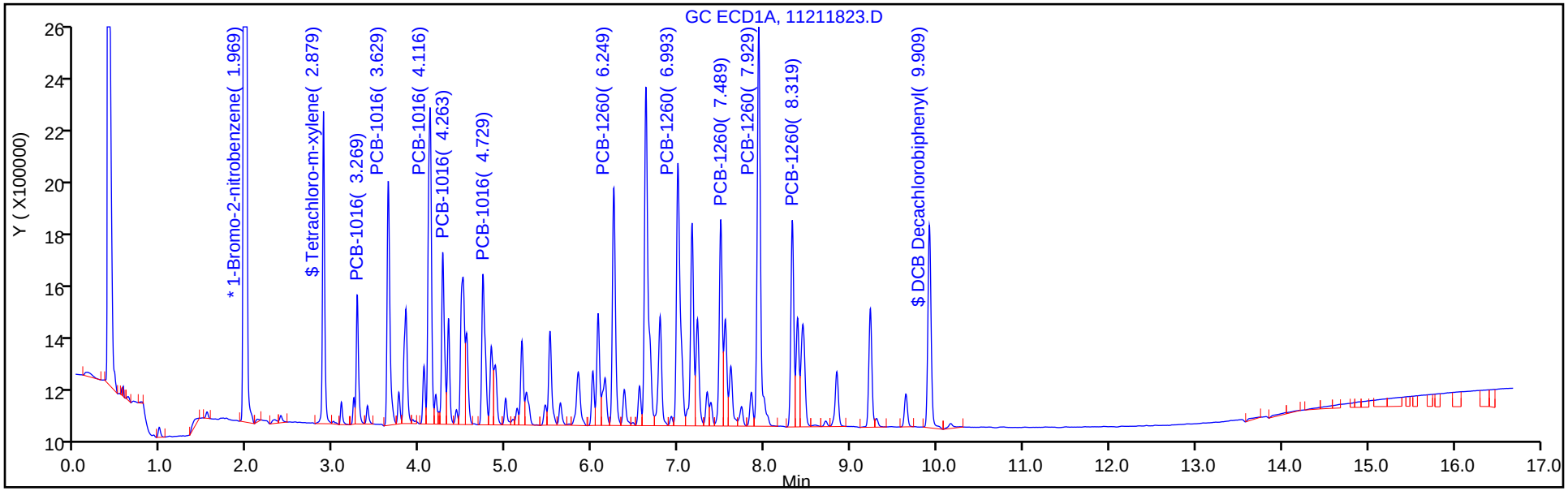
Report Date: 23-Nov-2018 11:02:37 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

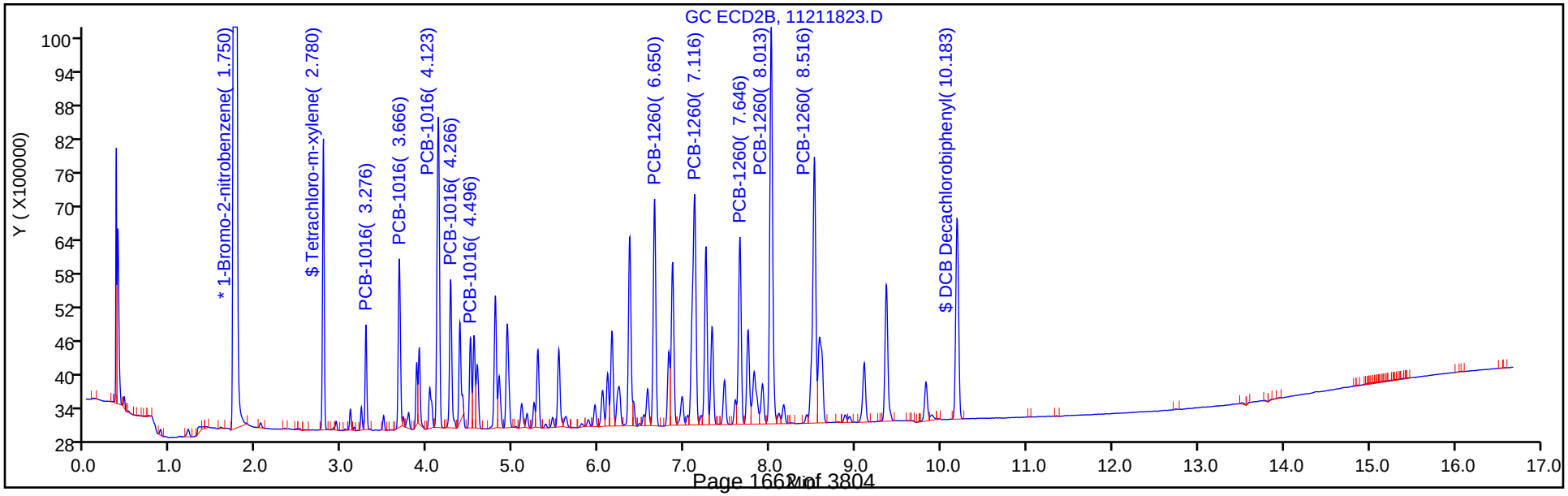
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D

Injection Date:	21-Nov-2018 16:30:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21660			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D
Lims ID: STDL11660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 16:51:56 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11660
Misc. Info.: 280-0076428-024
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:40 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	33056810	1000.0	1000.0	
2	1.749	1.746	0.003	183948370	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	998558	1.25	1.26	
2	2.779	2.780	-0.001	3780517	1.25	1.04	
						RPD = 19.58	
1 PCB-1016							
1	3.272	3.269	0.003	469132	25.0	18.7	
1	3.632	3.633	-0.001	1080310	25.0	19.2	
1	4.116	4.116	0.000	1562445	25.0	23.1	
1	4.262	4.263	-0.001	734649	25.0	20.6	
1	4.729	4.729	0.000	784034	25.0	21.6	
		Average of Peak Amounts =				20.6	
2	3.276	3.276	0.000	1402102	25.0	19.3	
2	3.666	3.666	0.000	2975533	25.0	20.4	
2	4.122	4.123	-0.001	6206319	25.0	20.7	
2	4.266	4.266	0.000	2787481	25.0	20.5	
2	4.499	4.496	0.003	1494252	25.0	18.9	
		Average of Peak Amounts =				19.9	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	1127159	25.0	21.2	
1	6.992	6.993	-0.001	1550296	25.0	23.3	
1	7.489	7.489	0.000	988085	25.0	22.3	
1	7.929	7.929	0.000	2054328	25.0	23.7	
1	8.319	8.319	0.000	929879	25.0	23.8	
		Average of Peak Amounts =				22.9	
2	6.649	6.646	0.003	4471690	25.0	20.0	
2	7.116	7.116	0.000	6532137	25.0	20.5	
2	7.646	7.646	0.000	3887676	25.0	20.3	
2	8.012	8.013	-0.001	8601587	25.0	20.6	
2	8.516	8.516	0.000	6657019	25.0	20.6	
		Average of Peak Amounts =				20.4	
						RPD = 11.35	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1072007	1.25	1.06	
2	10.186	10.186	0.000	4494073	1.25	0.99	
						RPD = 6.04	
S 8 Polychlorinated biphenyls, Total							
1						43.5	
2						40.4	
						RPD = 7.49	

Reagents:

AR_1660_L1_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

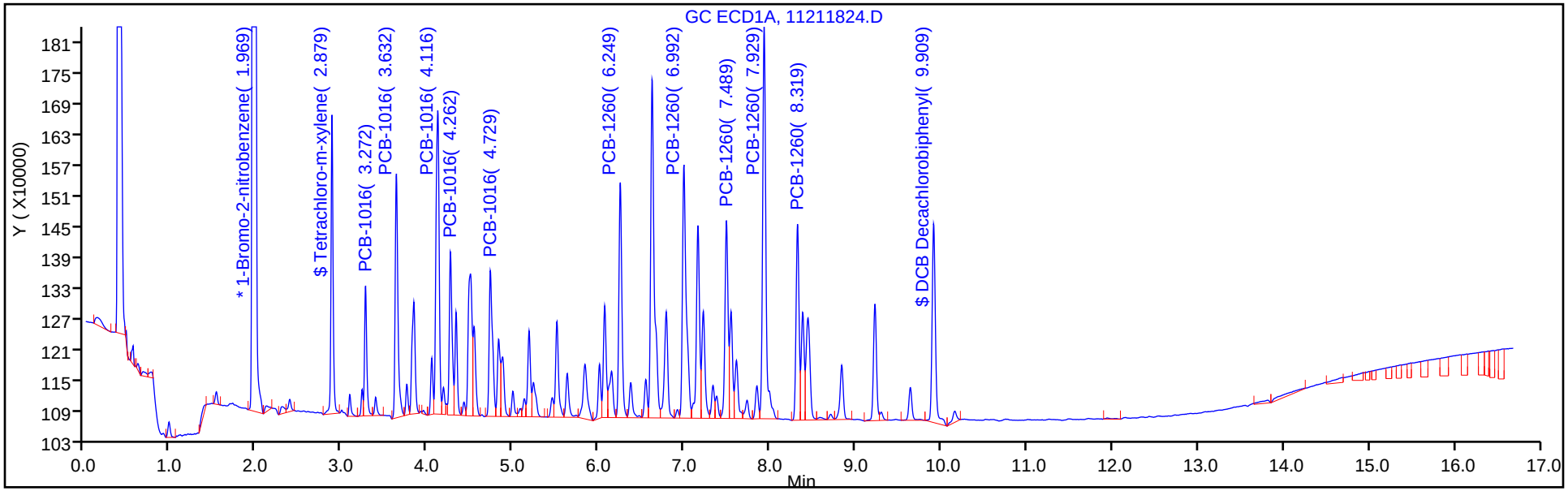
Report Date: 23-Nov-2018 11:02:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

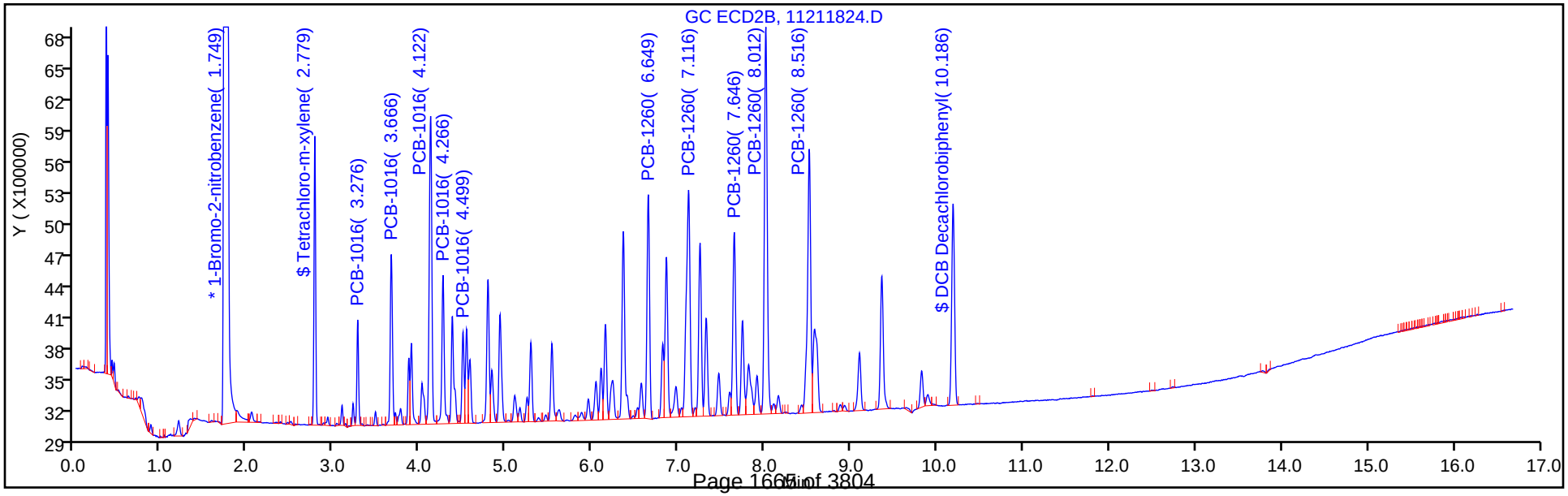
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D

Injection Date:	21-Nov-2018 16:51:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11660			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34387

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1016 Peak 1	0.3049 0.2163	0.2896 0.2064	0.2740	0.2437	0.2260	Lin1	3.5264	0.2121							0.9970		0.9900
PCB-1016 Peak 2	0.6470 0.4433	0.5905 0.4244	0.5467	0.5045	0.4789	Lin1	7.2549	0.4381							0.9960		0.9900
PCB-1016 Peak 3	1.3496 0.9844	1.2699 0.9485	1.1896	1.0957	1.0589	Lin1	13.573	0.9762							0.9970		0.9900
PCB-1016 Peak 4	0.6061 0.4233	0.5529 0.4026	0.5194	0.4769	0.4632	Lin1	6.5676	0.4186							0.9960		0.9900
PCB-1016 Peak 5	0.3249 0.2311	0.3122 0.2159	0.2916	0.2573	0.2435	Lin1	3.8771	0.2247							0.9960		0.9900
PCB-1260 Peak 1	0.9724 0.7264	0.9503 0.7051	0.8914	0.8027	0.7767	Lin1	9.8584	0.7218							0.9970		0.9900
PCB-1260 Peak 2	1.4204 1.0776	1.3819 1.0496	1.3022	1.1863	1.1505	Lin1	13.516	1.0728							0.9980		0.9900
PCB-1260 Peak 3	0.8454 0.6438	0.8353 0.6328	0.7807	0.7101	0.6873	Lin1	8.0530	0.6435							0.9980		0.9900
PCB-1260 Peak 4	1.8704 1.4466	1.8339 1.4133	1.7362	1.5898	1.5448	Lin1	16.988	1.4435							0.9980		0.9900
PCB-1260 Peak 5	1.4476 1.1043	1.4170 1.0830	1.3320	1.2111	1.1862	Lin1	13.444	1.1040							0.9980		0.9900
Tetrachloro-m-xylene	16.442 12.724	15.929 12.252	15.140	13.834	13.322	Lin1	7.5033	12.555							0.9980		0.9900
DCB Decachlorobiphenyl	19.545 14.374	19.026 14.035	17.869	15.964	15.441	Lin1	10.184	14.328							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 14:44 Calibration End Date: 11/21/2018 16:51 Calibration ID: 34387

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL11660 280-438388/24	11211824.D
Level 2	STDL21660 280-438388/23	11211823.D
Level 3	STDL31660 280-438388/22	11211822.D
Level 4	STDL41660 280-438388/21	11211821.D
Level 5	STDL51660 280-438388/20	11211820.D
Level 6	STDL61660 280-438388/19	11211819.D
Level 7	STDL71660 280-438388/18	11211818.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1016 Peak 1	BNB	Lin1	1402102 28324629	2565446 35638141	4799160	10752270	18899868	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 2	BNB	Lin1	2975533 58050459	5231349 73285982	9573999	22260570	40057019	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 3	BNB	Lin1	6206319 128903407	11249839 163781976	20834280	48351201	88563385	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 4	BNB	Lin1	2787481 55437372	4898205 69518646	9095859	21045310	38741347	25.0 750	50.0 1000	100	250	500
PCB-1016 Peak 5	BNB	Lin1	1494252 30262522	2765621 37279827	5107027	11353500	20361835	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 1	BNB	Lin1	4471690 95127310	8418682 121750112	15611005	35419484	64958906	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 2	BNB	Lin1	6532137 141113456	12242650 181248886	22806129	52349958	96225163	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 3	BNB	Lin1	3887676 84305248	7400170 109270203	13672887	31335455	57482127	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 4	BNB	Lin1	8601587 189441684	16246619 244056914	30406302	70151512	129198578	25.0 750	50.0 1000	100	250	500
PCB-1260 Peak 5	BNB	Lin1	6657019 144616476	12553559 187015797	23327598	53442743	99208427	25.0 750	50.0 1000	100	250	500
Tetrachloro-m-xylene	BNB	Lin1	3780517 83308843	7055763 105788700	13257502	30523746	55710908	1.25 37.5	2.50 50.0	5.00	12.5	25.0
DCB Decachlorobiphenyl	BNB	Lin1	4494073 94115340	8427351 121182268	15646900	35221995	64572494	1.25 37.5	2.50 50.0	5.00	12.5	25.0

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D
Lims ID: STDL71660
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 14:44:45 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL71660
Misc. Info.: 280-0076428-018
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:22 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: mooret Date: 21-Nov-2018 15:26:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	30929643	1000.0	1000.0	
2	1.746	1.749	-0.003	172682643	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.879	0.001	40504428	50.0	49.8	
2	2.776	2.780	-0.004	105788700	50.0	48.2	
						RPD = 3.20	
1 PCB-1016							
1	3.270	3.269	0.001	12255500	1000.0	928.2	
1	3.633	3.633	0.000	29138313	1000.0	945.4	
1	4.116	4.116	0.000	55680903	1000.0	970.3	
1	4.263	4.263	0.000	22835416	1000.0	950.7	
1	4.730	4.729	0.001	25166398	1000.0	968.1	
		Average of Peak Amounts =				952.5	
2	3.276	3.276	0.000	35638141	1000.0	956.5	
2	3.666	3.666	0.000	73285982	1000.0	952.1	
2	4.123	4.123	0.000	163781976	1000.0	957.7	
2	4.266	4.266	0.000	69518646	1000.0	946.1	
2	4.496	4.496	0.000	37279827	1000.0	943.6	
		Average of Peak Amounts =				951.2	
						RPD = 0.14	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.249	0.001	34751926	1000.0	973.7	
1	6.993	6.993	0.000	54752979	1000.0	988.5	
1	7.490	7.489	0.001	32252970	1000.0	984.6	
1	7.930	7.929	0.001	73881863	1000.0	991.0	
1	8.320	8.319	0.001	33747429	1000.0	993.7	
		Average of Peak Amounts =				986.3	
2	6.650	6.646	0.004	121750112	1000.0	963.1	
2	7.116	7.116	0.000	181248886	1000.0	965.7	
2	7.646	7.646	0.000	109270203	1000.0	970.8	
2	8.013	8.013	0.000	244056914	1000.0	967.3	
2	8.516	8.516	0.000	187015797	1000.0	968.8	
		Average of Peak Amounts =				967.2	
						RPD = 1.96	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	30062336	50.0	48.6	
2	10.186	10.186	0.000	121182268	50.0	48.3	
						RPD = 0.69	
S 8 Polychlorinated biphenyls, Total							
1						1938.9	
2						1918.4	
						RPD = 1.06	

Reagents:

AR_1660_L7_00026	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

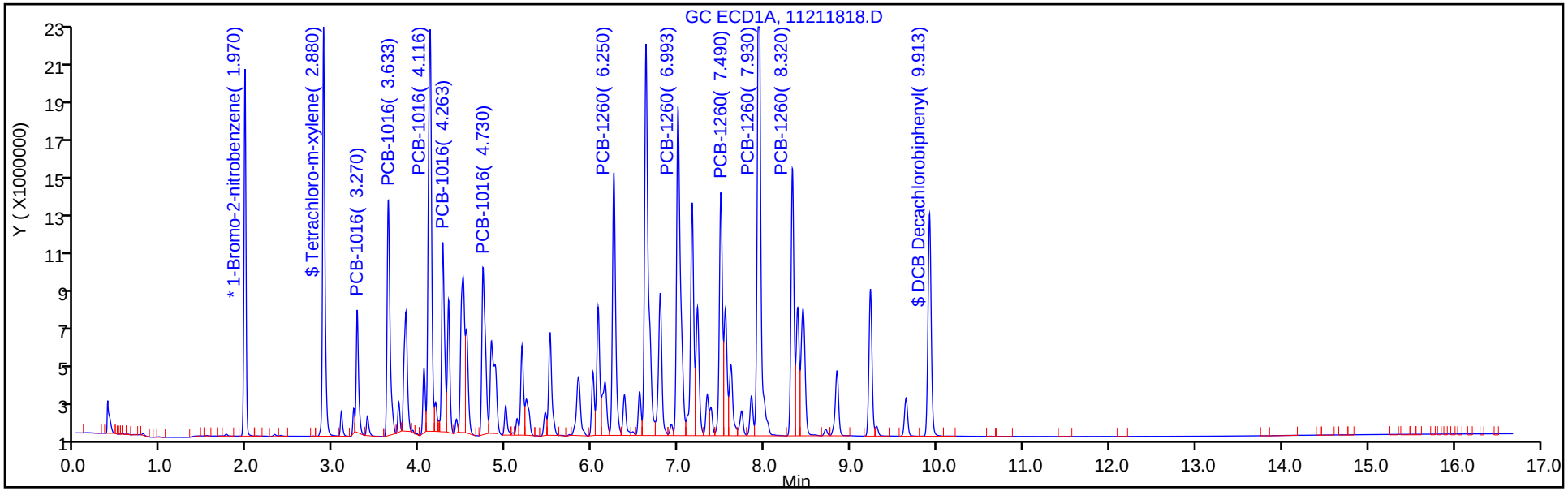
Report Date: 23-Nov-2018 11:02:23 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

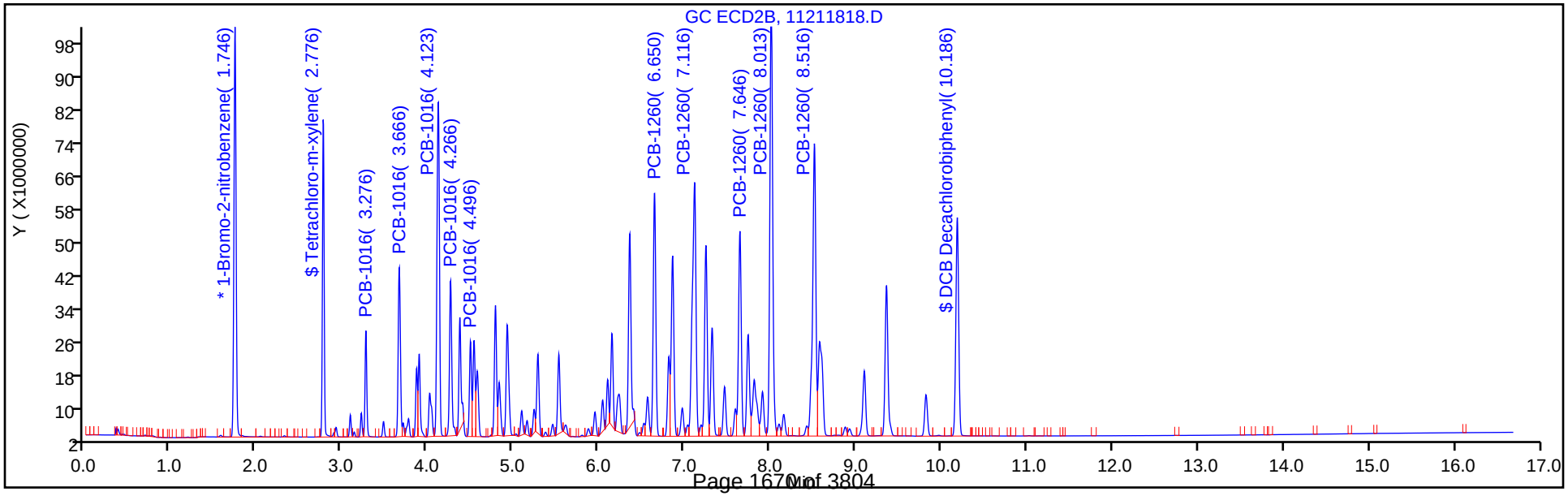
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211818.D

Injection Date:	21-Nov-2018 14:44:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL71660			Worklist Smp#:	18
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D
Lims ID: STDL61660
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 15:05:56 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL61660
Misc. Info.: 280-0076428-019
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:25 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:02:20

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.969	-0.001	31573792	1000.0	1000.0	
2	1.749	1.749	0.000	174603036	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	31159991	37.5	37.5	
2	2.779	2.780	-0.001	83308843	37.5	37.4	
						RPD = 0.34	
1 PCB-1016							
1	3.272	3.269	0.003	10292626	750.0	760.9	
1	3.632	3.633	-0.001	23509757	750.0	744.3	
1	4.118	4.116	0.002	43992946	750.0	750.5	
1	4.265	4.263	0.002	18389026	750.0	748.3	
1	4.732	4.729	0.003	19946184	750.0	750.1	
		Average of Peak Amounts =				750.8	
2	3.275	3.276	-0.001	28324629	750.0	748.3	
2	3.665	3.666	-0.001	58050459	750.0	742.3	
2	4.122	4.123	-0.001	128903407	750.0	742.4	
2	4.265	4.266	-0.001	55437372	750.0	742.9	
2	4.499	4.496	0.003	30262522	750.0	754.2	
		Average of Peak Amounts =				746.0	
						RPD = 0.64	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.248	6.249	-0.001	27023644	750.0	739.7	
1	6.992	6.993	-0.001	41930903	750.0	740.8	
1	7.488	7.489	-0.001	24646608	750.0	735.5	
1	7.932	7.929	0.003	56278619	750.0	738.9	
1	8.322	8.319	0.003	25627349	750.0	738.8	
		Average of Peak Amounts =				738.7	
2	6.649	6.646	0.003	95127310	750.0	741.1	
2	7.115	7.116	-0.001	141113456	750.0	740.7	
2	7.645	7.646	-0.001	84305248	750.0	737.8	
2	8.012	8.013	-0.001	189441684	750.0	739.9	
2	8.515	8.516	-0.001	144616476	750.0	738.0	
		Average of Peak Amounts =				739.5	
						RPD = 0.10	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	23519401	37.5	37.1	
2	10.185	10.186	-0.001	94115340	37.5	36.9	
						RPD = 0.55	
S 8 Polychlorinated biphenyls, Total							
1						1489.5	
2						1485.5	
						RPD = 0.27	

Reagents:

AR_1660_L6_00033	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

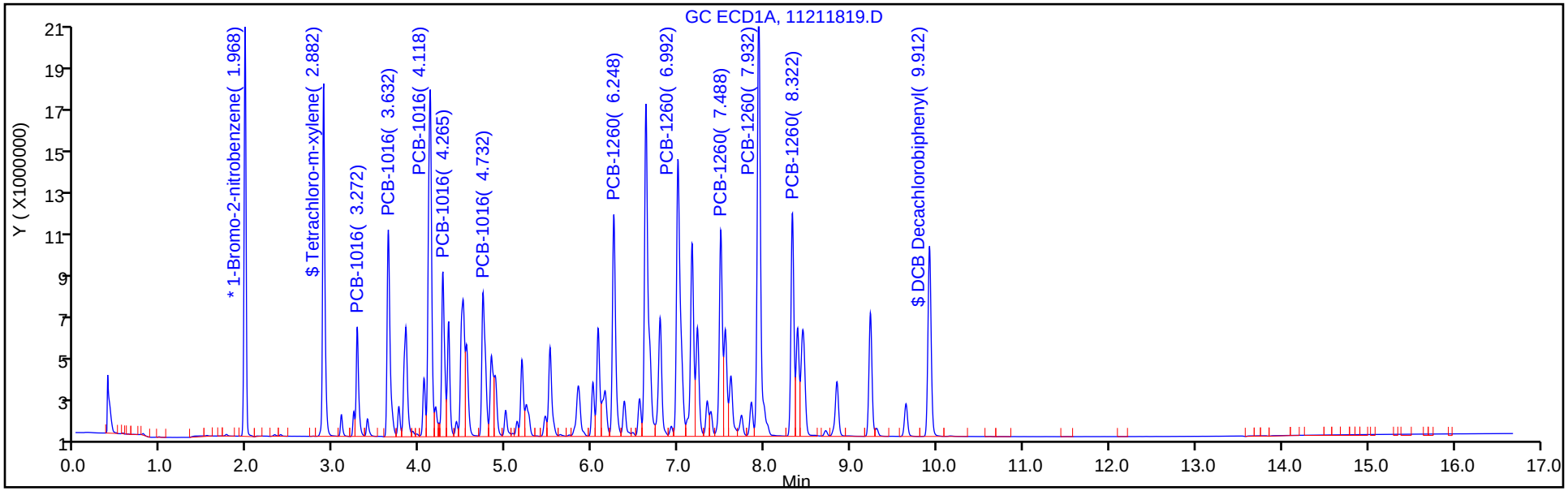
Report Date: 23-Nov-2018 11:02:26 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

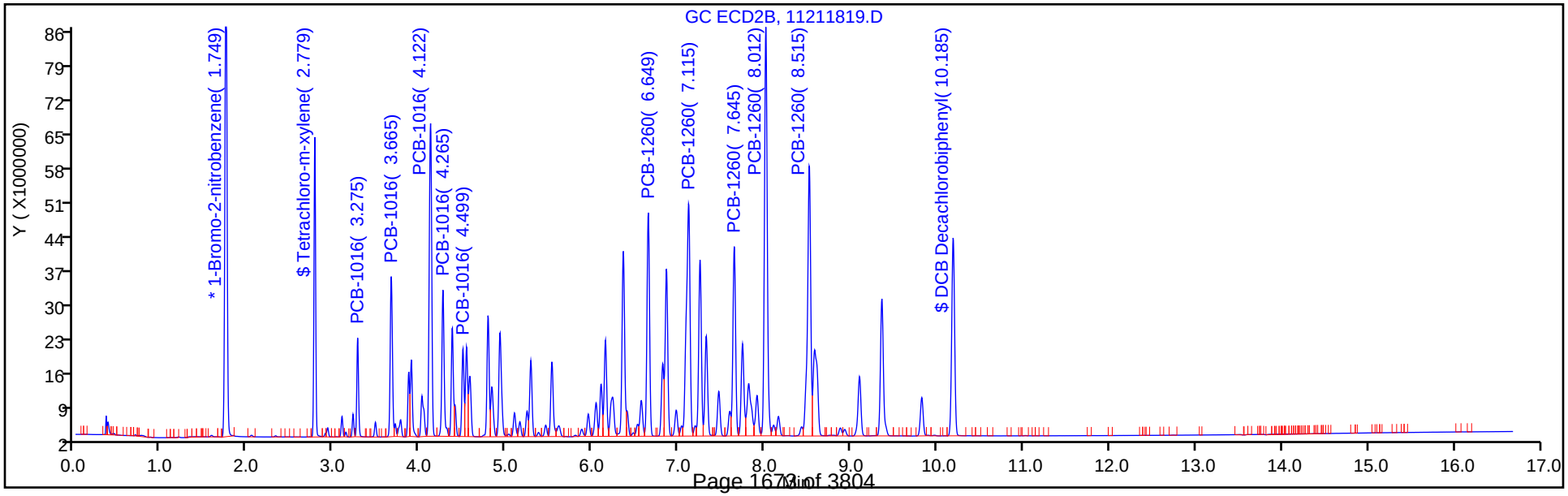
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211819.D

Injection Date:	21-Nov-2018 15:05:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL61660			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D
Lims ID: STDL51660
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 21-Nov-2018 15:27:09 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL51660
Misc. Info.: 280-0076428-020
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:27 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:16

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29769998	1000.0	1000.0	
2	1.746	1.746	0.000	167274345	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	19882681	25.0	25.4	
2	2.780	2.780	0.000	55710908	25.0	25.9	
						RPD = 1.91	
1 PCB-1016							M
1	3.269	3.269	0.000	6801886	500.0	528.8	
1	3.633	3.633	0.000	15989031	500.0	532.9	
1	4.116	4.116	0.000	28999155	500.0	523.9	
1	4.263	4.263	0.000	12379838	500.0	531.9	
1	4.729	4.729	0.000	12951678	500.0	514.4	
		Average of Peak Amounts =				526.4	
2	3.276	3.276	0.000	18899868	500.0	516.1	
2	3.666	3.666	0.000	40057019	500.0	530.0	M
2	4.123	4.123	0.000	88563385	500.0	528.5	M
2	4.266	4.266	0.000	38741347	500.0	537.6	M
2	4.496	4.496	0.000	20361835	500.0	524.5	M
		Average of Peak Amounts =				527.3	
						RPD = 0.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	18040094	500.0	521.2	
1	6.993	6.993	0.000	27649105	500.0	517.2	
1	7.489	7.489	0.000	16493165	500.0	520.3	
1	7.929	7.929	0.000	37154269	500.0	516.7	
1	8.319	8.319	0.000	16886305	500.0	515.7	
		Average of Peak Amounts =				518.2	
2	6.646	6.646	0.000	64958906	500.0	524.4	
2	7.116	7.116	0.000	96225163	500.0	523.6	
2	7.646	7.646	0.000	57482127	500.0	521.5	
2	8.013	8.013	0.000	129198578	500.0	523.3	
2	8.516	8.516	0.000	99208427	500.0	525.0	
		Average of Peak Amounts =				523.6	
						RPD = 1.02	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	15649907	25.0	26.0	
2	10.186	10.186	0.000	64572494	25.0	26.2	
						RPD = 0.81	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

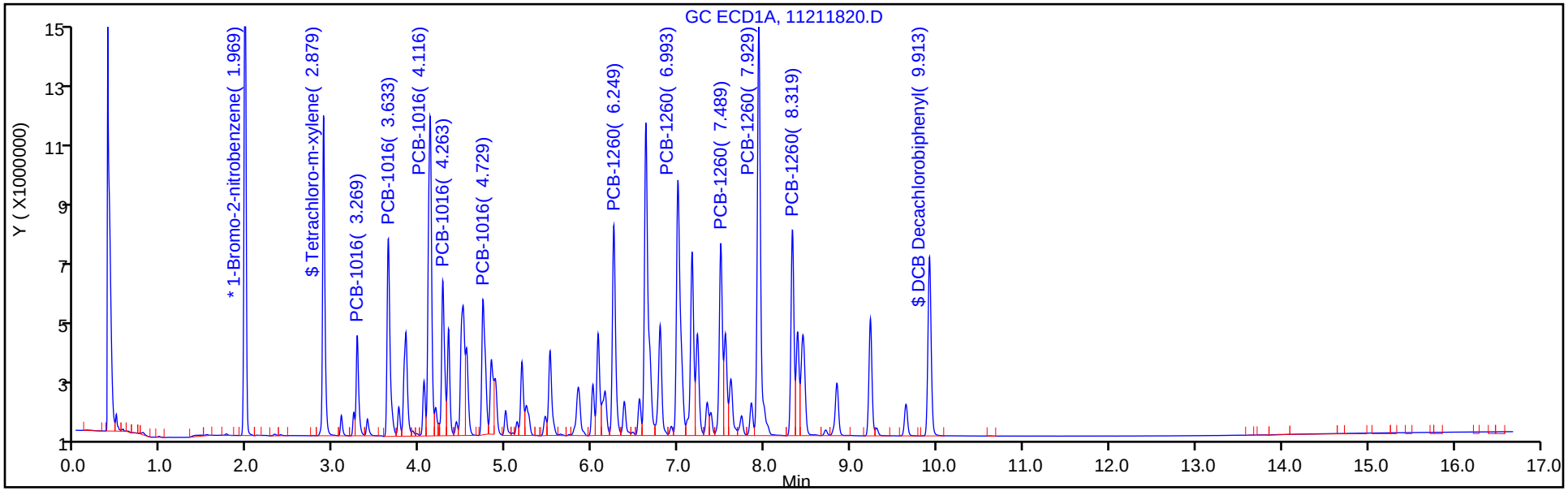
Report Date: 23-Nov-2018 11:02:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

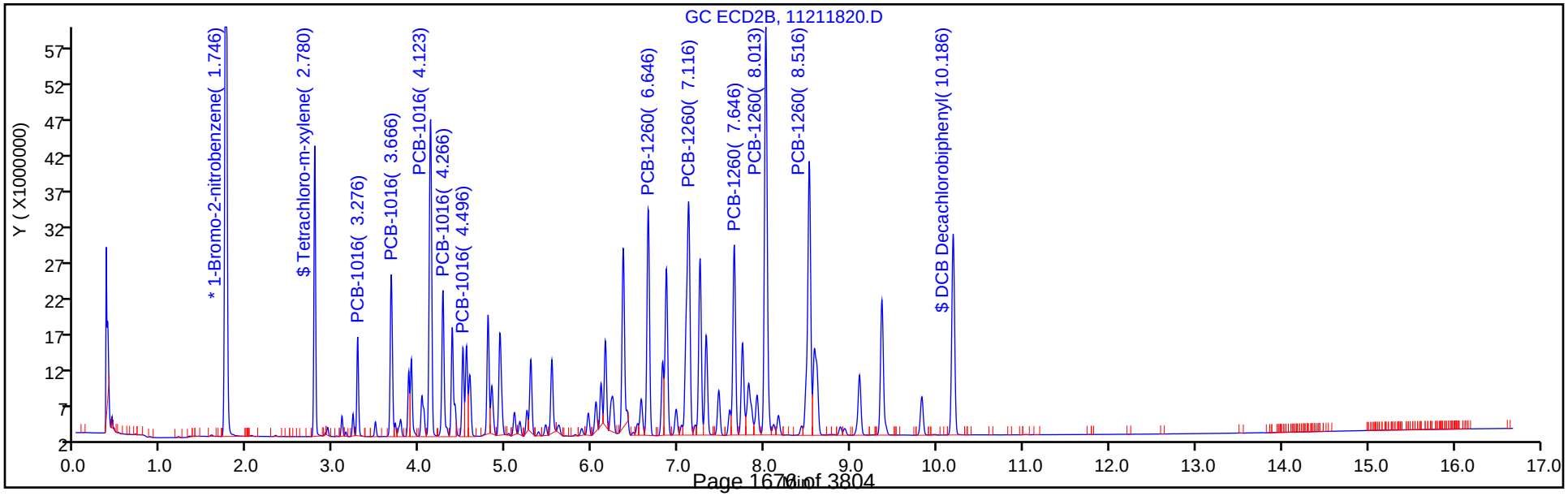
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D

Injection Date:	21-Nov-2018 15:27:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL51660			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:28 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211820.D

Injection Date: 21-Nov-2018 15:27:09 Instrument ID: SGC_J

Lims ID: STDL51660

Client ID:

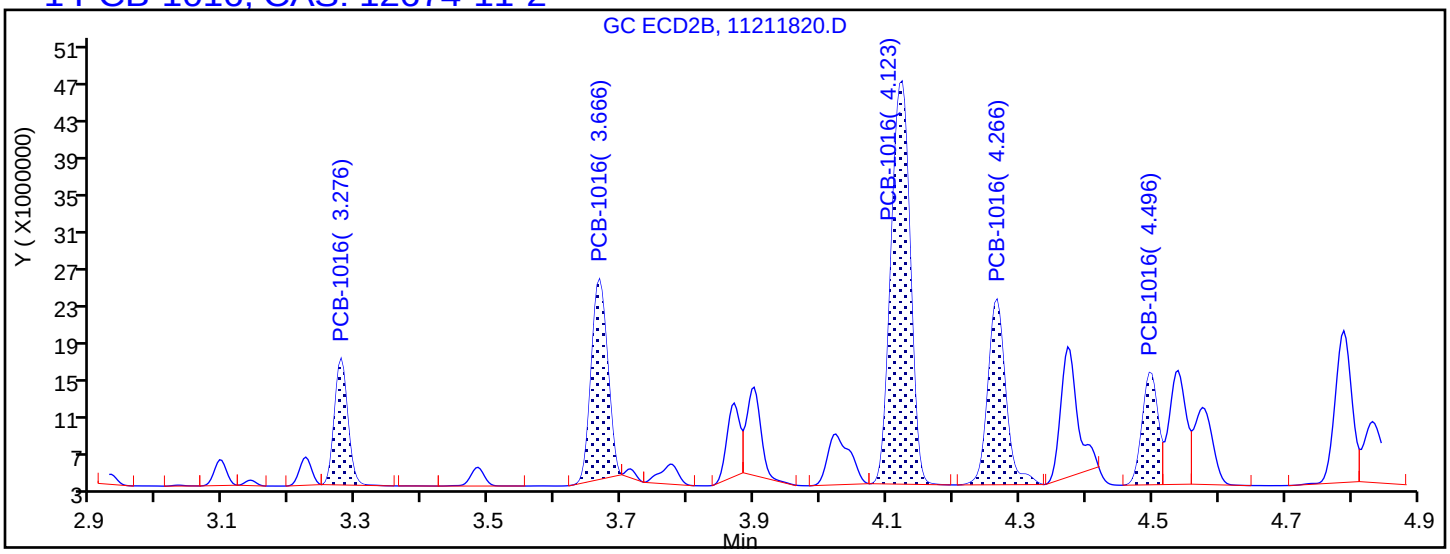
Operator ID: ALS ALS Bottle#: 20 Worklist Smp#: 20

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

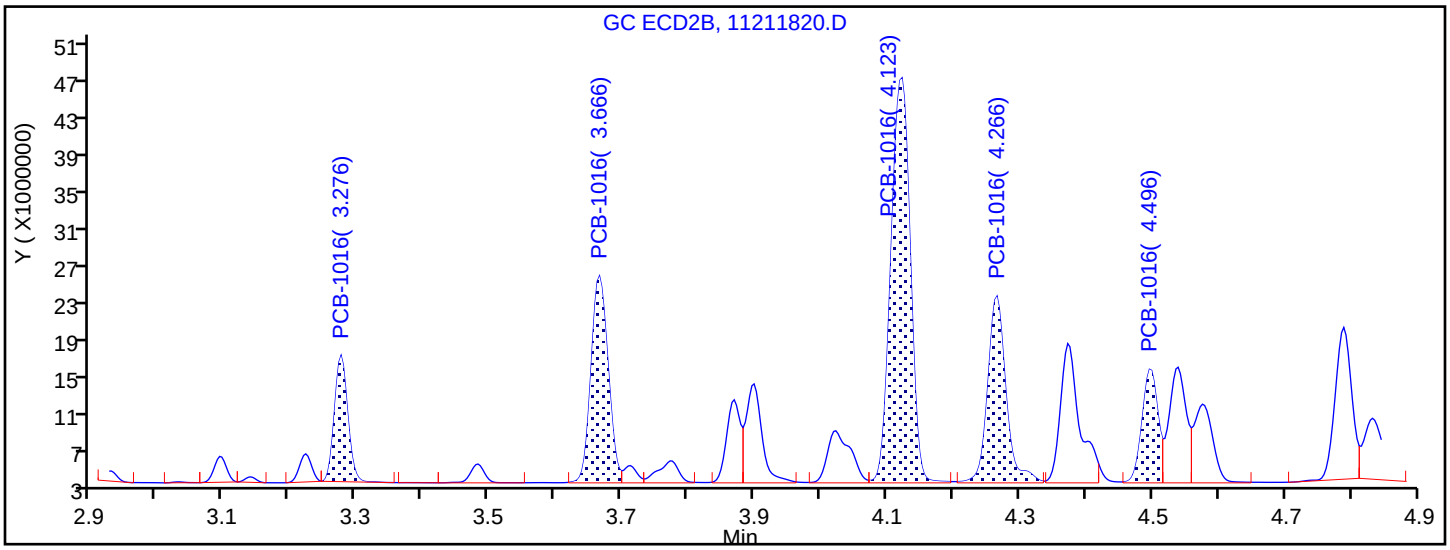
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

1 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.276	Response = 18899868	
3.666	Response = 37059133	
4.123	Response = 87084066	
4.266	Response = 37557635	
4.496	Response = 19881812	



Manual Integration Results

3.276	Response = 18899868	
3.666	Response = 40057019	M
4.123	Response = 88563385	M
4.266	Response = 38741347	M
4.496	Response = 20361835	M

Reviewer: patadiab, 23-Nov-2018 10:03:15

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D
Lims ID: STDL41660
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 15:48:22 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL41660
Misc. Info.: 280-0076428-021
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:30 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 09:53:59

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31460203	1000.0	1000.0	
2	1.749	1.746	0.003	176509413	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.882	2.879	0.003	10100542	12.5	12.3	
2	2.779	2.780	-0.001	30523746	12.5	13.2	
						RPD = 6.95	
1 PCB-1016							
1	3.272	3.269	0.003	3816191	250.0	273.7	
1	3.632	3.633	-0.001	8778351	250.0	270.1	
1	4.119	4.116	0.003	14886212	250.0	253.2	
1	4.265	4.263	0.002	6578902	250.0	263.4	
1	4.732	4.729	0.003	7068443	250.0	262.4	
		Average of Peak Amounts =				264.6	
2	3.275	3.276	-0.001	10752270	250.0	270.6	
2	3.665	3.666	-0.001	22260570	250.0	271.3	
2	4.122	4.123	-0.001	48351201	250.0	266.7	
2	4.265	4.266	-0.001	21045310	250.0	269.2	
2	4.499	4.496	0.003	11353500	250.0	269.0	
		Average of Peak Amounts =				269.4	
						RPD = 1.80	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9650098	250.0	259.6	
1	6.992	6.993	-0.001	14238155	250.0	250.5	
1	7.489	7.489	0.000	8615850	250.0	254.1	
1	7.932	7.929	0.003	19166787	250.0	251.1	
1	8.322	8.319	0.003	8672757	250.0	249.7	
		Average of Peak Amounts =				253.0	
2	6.649	6.646	0.003	35419484	250.0	264.3	
2	7.115	7.116	-0.001	52349958	250.0	263.8	
2	7.645	7.646	-0.001	31335455	250.0	263.4	
2	8.012	8.013	-0.001	70151512	250.0	263.6	
2	8.515	8.516	-0.001	53442743	250.0	262.1	
		Average of Peak Amounts =				263.4	
						RPD = 4.04	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8405396	12.5	12.9	
2	10.185	10.186	-0.001	35221995	12.5	13.2	
						RPD = 2.14	
S 8 Polychlorinated biphenyls, Total							
1						517.6	
2						532.8	
						RPD = 2.90	

Reagents:

AR_1660_L4_00068	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

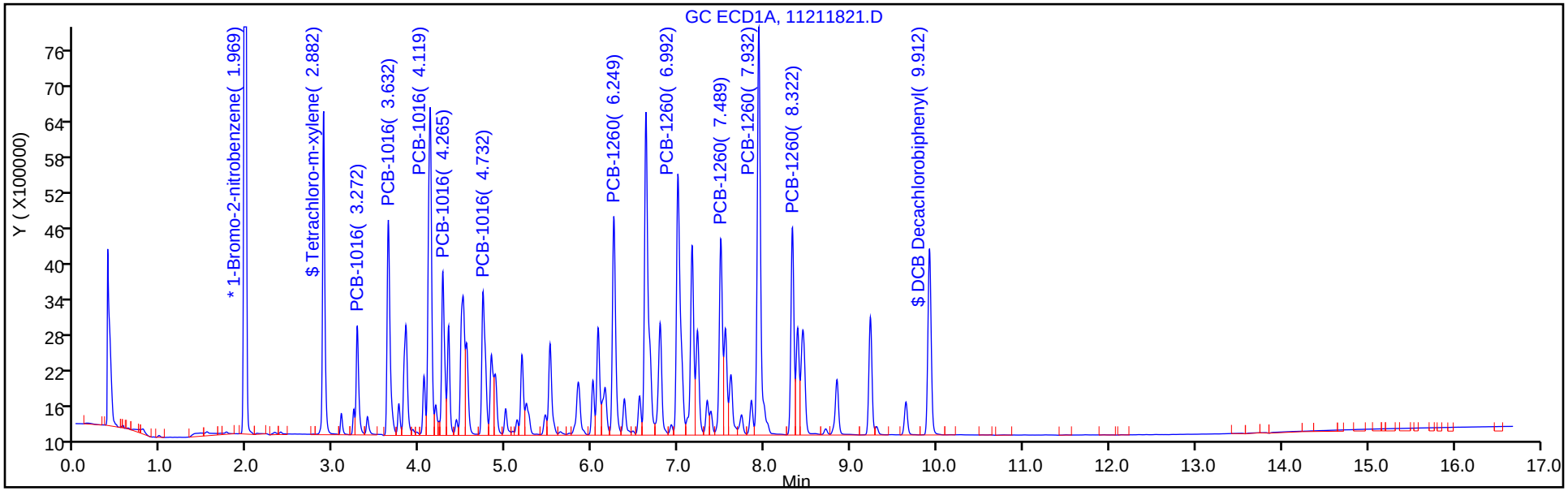
Report Date: 23-Nov-2018 11:02:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

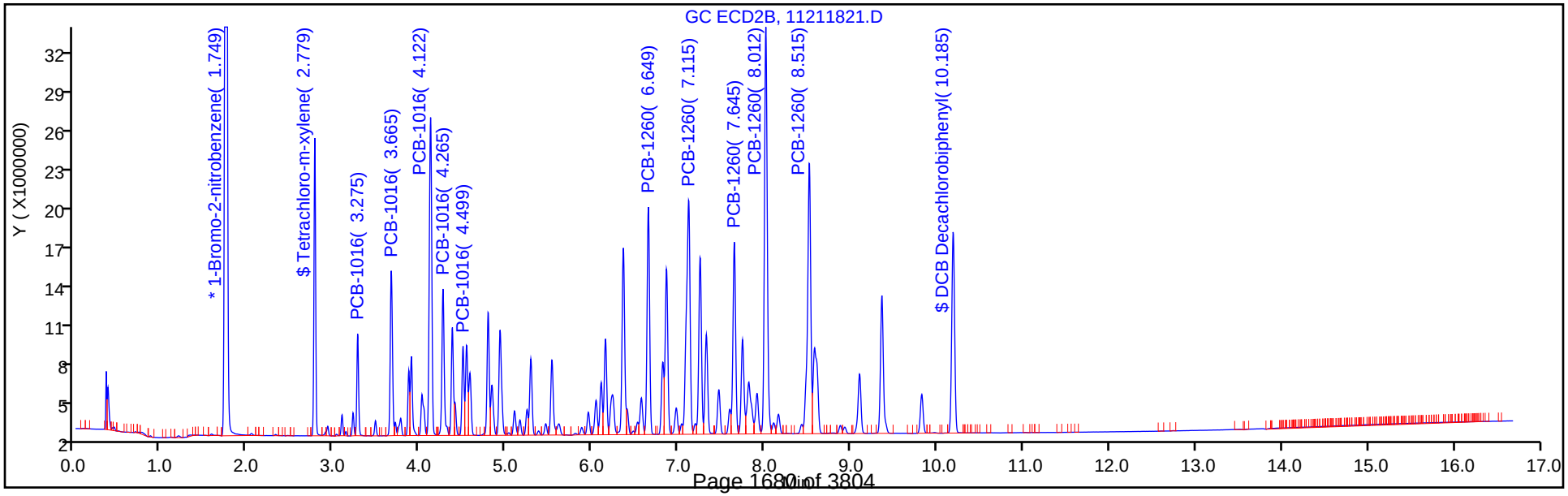
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211821.D

Injection Date:	21-Nov-2018 15:48:22	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL41660			Worklist Smp#:	21
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D
Lims ID: STDL31660
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 16:09:34 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL31660
Misc. Info.: 280-0076428-022
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:33 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:05:33

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31048095	1000.0	1000.0	
2	1.750	1.746	0.004	175133355	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	3964953	5.00	4.96	
2	2.780	2.780	0.000	13257502	5.00	5.43	
						RPD = 9.06	
1 PCB-1016							
1	3.269	3.269	0.000	1679350	100.0	113.7	
1	3.633	3.633	0.000	3824818	100.0	111.4	
1	4.116	4.116	0.000	6086050	100.0	103.5	
1	4.263	4.263	0.000	2807752	100.0	109.2	
1	4.729	4.729	0.000	2974460	100.0	107.9	
		Average of Peak Amounts =				109.1	
2	3.276	3.276	0.000	4799160	100.0	112.6	
2	3.666	3.666	0.000	9573999	100.0	108.2	
2	4.123	4.123	0.000	20834280	100.0	108.0	
2	4.266	4.266	0.000	9095859	100.0	108.4	
2	4.496	4.496	0.000	5107027	100.0	112.5	
		Average of Peak Amounts =				109.9	
						RPD = 0.73	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	4140653	100.0	108.0	
1	6.993	6.993	0.000	5923763	100.0	103.9	
1	7.489	7.489	0.000	3726238	100.0	108.0	
1	7.929	7.929	0.000	7859527	100.0	103.1	
1	8.319	8.319	0.000	3558044	100.0	102.7	
		Average of Peak Amounts =				105.1	
2	6.650	6.646	0.004	15611005	100.0	109.8	
2	7.116	7.116	0.000	22806129	100.0	108.8	
2	7.646	7.646	0.000	13672887	100.0	108.8	
2	8.013	8.013	0.000	30406302	100.0	108.5	
2	8.520	8.516	0.004	23327598	100.0	108.5	
		Average of Peak Amounts =				108.9	
						RPD = 3.50	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	3708204	5.00	5.46	
2	10.186	10.186	0.000	15646900	5.00	5.52	
						RPD = 1.19	
S 8 Polychlorinated biphenyls, Total							
1						214.3	
2						218.8	
						RPD = 2.10	

Reagents:

AR_1660_L3_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

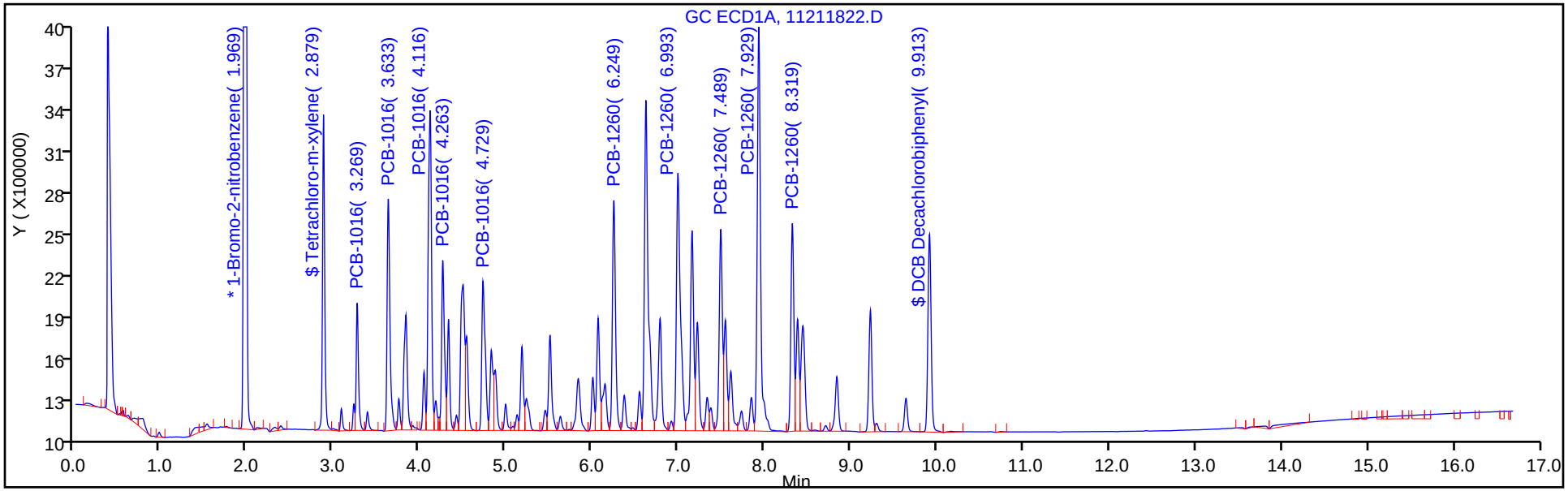
Report Date: 23-Nov-2018 11:02:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

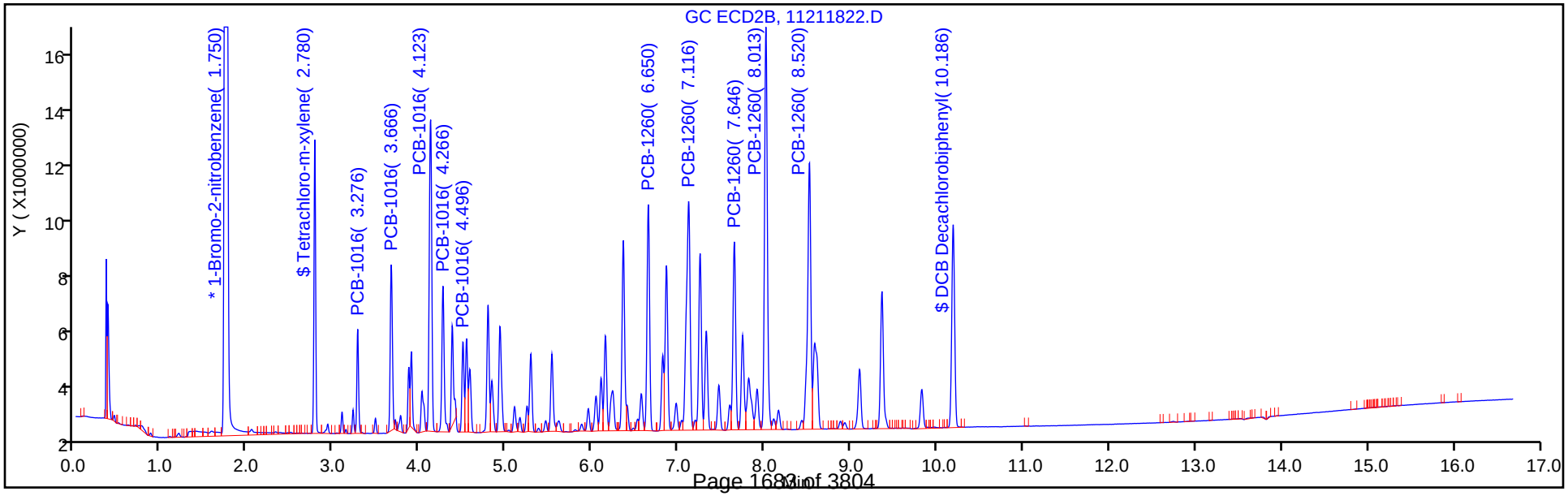
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211822.D

Injection Date:	21-Nov-2018 16:09:34	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL31660			Worklist Smp#:	22
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D
Lims ID: STDL21660
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 16:30:45 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL21660
Misc. Info.: 280-0076428-023
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:36 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:02

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	31839217	1000.0	1000.0	
2	1.750	1.746	0.004	177179573	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	1996738	2.50	2.50	
2	2.780	2.780	0.000	7055763	2.50	2.57	
						RPD = 3.03	
1 PCB-1016							
1	3.269	3.269	0.000	883638	50.0	51.0	
1	3.629	3.633	-0.004	2058248	50.0	51.7	
1	4.116	4.116	0.000	3122897	50.0	50.5	
1	4.263	4.263	0.000	1447486	50.0	50.8	
1	4.729	4.729	0.000	1525625	50.0	50.6	
		Average of Peak Amounts =				50.9	
2	3.276	3.276	0.000	2565446	50.0	51.6	
2	3.666	3.666	0.000	5231349	50.0	50.8	
2	4.123	4.123	0.000	11249839	50.0	51.1	
2	4.266	4.266	0.000	4898205	50.0	50.4	
2	4.496	4.496	0.000	2765621	50.0	52.2	
		Average of Peak Amounts =				51.2	
						RPD = 0.60	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	2188444	50.0	51.5	
1	6.993	6.993	0.000	3052493	50.0	50.8	
1	7.489	7.489	0.000	1885624	50.0	50.2	
1	7.929	7.929	0.000	4026393	50.0	50.4	
1	8.319	8.319	0.000	1831626	50.0	50.6	
		Average of Peak Amounts =				50.7	
2	6.650	6.646	0.004	8418682	50.0	52.2	
2	7.116	7.116	0.000	12242650	50.0	51.8	
2	7.646	7.646	0.000	7400170	50.0	52.4	
2	8.013	8.013	0.000	16246619	50.0	51.8	
2	8.516	8.516	0.000	12553559	50.0	52.0	
		Average of Peak Amounts =				52.0	
						RPD = 2.58	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1981347	2.50	2.56	
2	10.183	10.186	-0.003	8427351	2.50	2.61	
						RPD = 1.72	
S 8 Polychlorinated biphenyls, Total							
1						101.6	
2						103.3	
						RPD = 1.59	

Reagents:

AR_1660_L2_00030	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

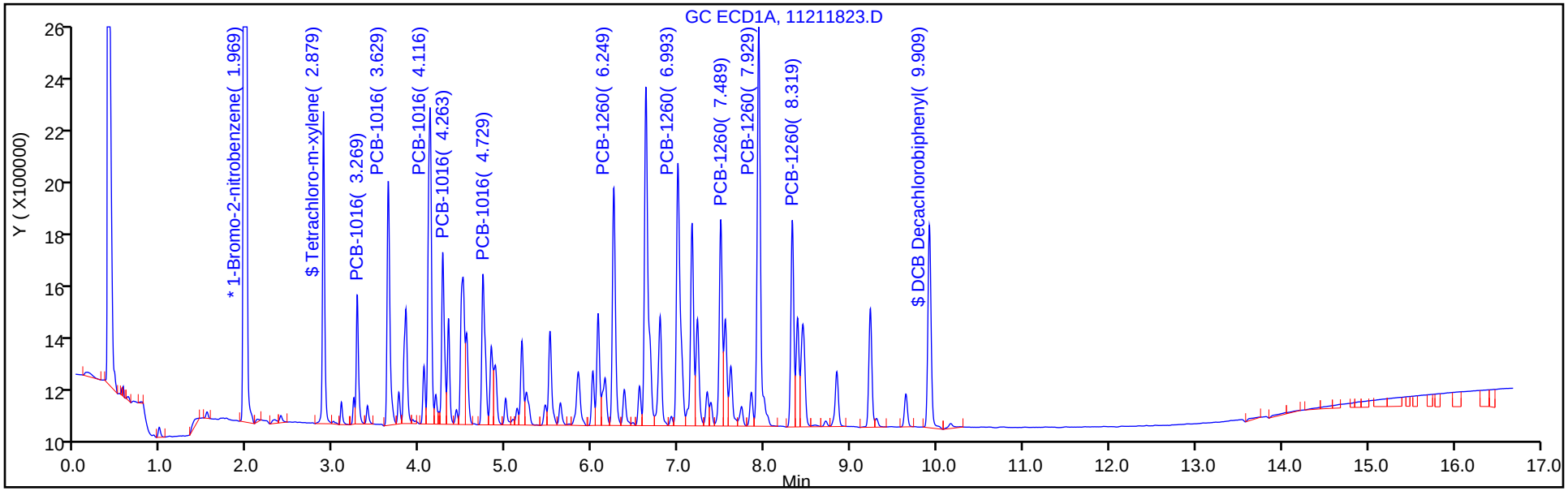
Report Date: 23-Nov-2018 11:02:38 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

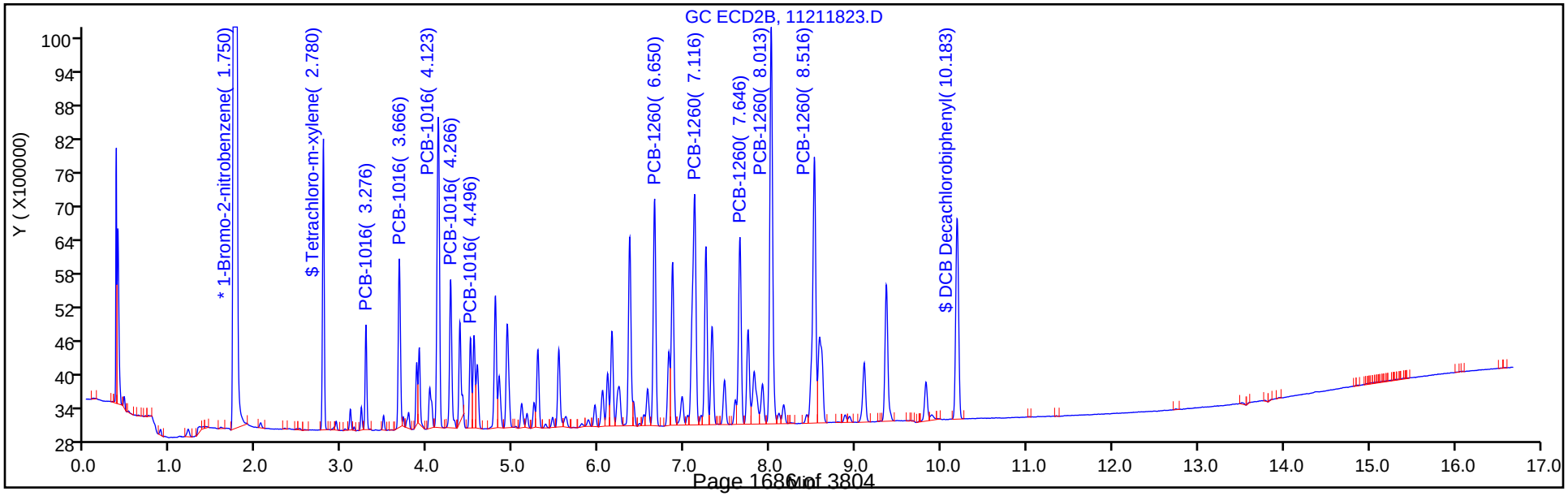
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211823.D

Injection Date:	21-Nov-2018 16:30:45	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL21660			Worklist Smp#:	23
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D
Lims ID: STDL11660
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 16:51:56 ALS Bottle#: 24 Worklist Smp#: 24
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL11660
Misc. Info.: 280-0076428-024
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:40 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:06:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	33056810	1000.0	1000.0	
2	1.749	1.746	0.003	183948370	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	998558	1.25	1.26	
2	2.779	2.780	-0.001	3780517	1.25	1.04	
						RPD = 19.58	
1 PCB-1016							
1	3.272	3.269	0.003	469132	25.0	18.7	
1	3.632	3.633	-0.001	1080310	25.0	19.2	
1	4.116	4.116	0.000	1562445	25.0	23.1	
1	4.262	4.263	-0.001	734649	25.0	20.6	
1	4.729	4.729	0.000	784034	25.0	21.6	
		Average of Peak Amounts =				20.6	
2	3.276	3.276	0.000	1402102	25.0	19.3	
2	3.666	3.666	0.000	2975533	25.0	20.4	
2	4.122	4.123	-0.001	6206319	25.0	20.7	
2	4.266	4.266	0.000	2787481	25.0	20.5	
2	4.499	4.496	0.003	1494252	25.0	18.9	
		Average of Peak Amounts =				19.9	
						RPD = 3.38	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	1127159	25.0	21.2	
1	6.992	6.993	-0.001	1550296	25.0	23.3	
1	7.489	7.489	0.000	988085	25.0	22.3	
1	7.929	7.929	0.000	2054328	25.0	23.7	
1	8.319	8.319	0.000	929879	25.0	23.8	
		Average of Peak Amounts =				22.9	
2	6.649	6.646	0.003	4471690	25.0	20.0	
2	7.116	7.116	0.000	6532137	25.0	20.5	
2	7.646	7.646	0.000	3887676	25.0	20.3	
2	8.012	8.013	-0.001	8601587	25.0	20.6	
2	8.516	8.516	0.000	6657019	25.0	20.6	
		Average of Peak Amounts =				20.4	
						RPD = 11.35	
$ 15 DCB Decachlorobiphenyl							
1	9.909	9.913	-0.004	1072007	1.25	1.06	
2	10.186	10.186	0.000	4494073	1.25	0.99	
						RPD = 6.04	
S 8 Polychlorinated biphenyls, Total							
1						43.5	
2						40.4	
						RPD = 7.49	

Reagents:

AR_1660_L1_00031	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

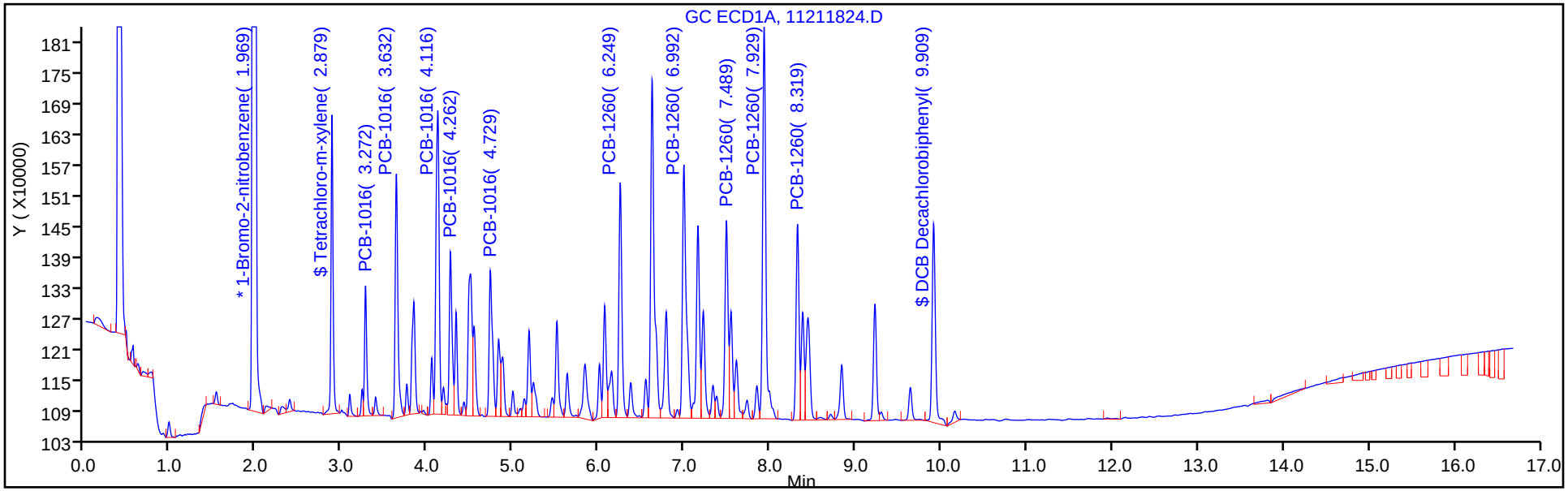
Report Date: 23-Nov-2018 11:02:41 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

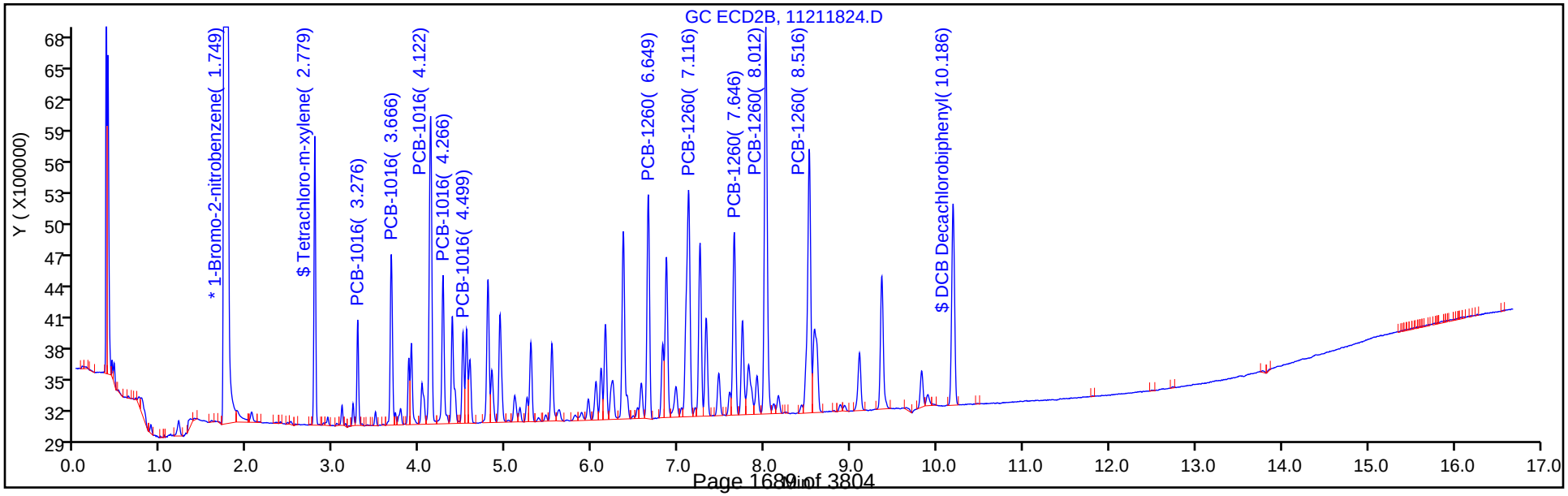
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211824.D

Injection Date:	21-Nov-2018 16:51:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL11660			Worklist Smp#:	24
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34390

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.2020 0.1716	0.2001 0.1576	0.1758	0.1799	0.1642	Lin1	1.4008	0.1631							0.9980		0.9900
PCB-1232 Peak 2	0.7316 0.5379	0.6621 0.4960	0.5963	0.5828	0.5382	Lin1	6.9182	0.5147							0.9970		0.9900
PCB-1232 Peak 3	0.8869 0.8293	0.8265 0.7752	0.7896	0.8158	0.7901	Lin1	1.9484	0.7944							0.9990		0.9900
PCB-1232 Peak 4	0.4237 0.3607	0.3807 0.3320	0.3740	0.3767	0.3499	Lin1	2.3547	0.3447							0.9980		0.9900
PCB-1232 Peak 5	0.4155 0.3609	0.3923 0.3303	0.3615	0.3738	0.3558	Lin1	2.2391	0.3450							0.9980		0.9900
PCB-1262 Peak 1	1.2460 0.9862	1.1306 0.9078	1.0330	1.0289	0.9612	Lin1	9.1979	0.9390							0.9980		0.9900
PCB-1262 Peak 2	1.9150 1.5416	1.7805 1.4315	1.5760	1.5898	1.5128	Lin1	13.088	1.4746							0.9990		0.9900
PCB-1262 Peak 3	1.6782 1.3722	1.5439 1.2785	1.3824	1.4086	1.3079	Lin1	10.443	1.3077							0.9990		0.9900
PCB-1262 Peak 4	3.2087 2.8651	2.9676 2.6722	2.6736	2.8308	2.7344	Lin1	10.149	2.7368							0.9990		0.9900
PCB-1262 Peak 5	1.0018 0.8715	0.9225 0.8216	0.8505	0.8771	0.8263	Lin1	4.1209	0.8355							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34390

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Lin1	145633 3825778	308483 4984840	547298	1392895	2583135	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 2	BNB	Lin1	527466 11992126	1020472 15689198	1856728	4511528	8464098	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 3	BNB	Lin1	639419 18488855	1273955 24520289	2458762	6315260	12426844	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 4	BNB	Lin1	305449 8040685	586726 10501101	1164474	2916425	5502198	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 5	BNB	Lin1	299569 8045853	604692 10446034	1125602	2893984	5595129	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 1	BNB	Lin1	898312 21984609	1742564 28715451	3216578	7964853	15117077	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 2	BNB	Lin1	1380613 34368147	2744291 45278660	4907514	12307287	23792647	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 3	BNB	Lin1	1209897 30590995	2379701 40438292	4304645	10904443	20569577	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 4	BNB	Lin1	2313295 63873370	4573994 84521517	8325389	21913797	43005230	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 5	BNB	Lin1	722269 19427531	1421934 25986514	2648440	6789639	12995186	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D
Lims ID: STDL73262
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 17:13:09 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL73262
Misc. Info.: 280-0076428-025
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:44 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:18:47

	Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
*	17 1-Bromo-2-nitrobenzene							
	1	1.970	1.969	0.001	31630227	1000.0	1000.0	
	2	1.747	1.746	0.001	177174681	1000.0	1000.0	
							RPD = 0.00	
	7 PCB-1232							M
	1	3.086	3.088	-0.002	4984840	1000.0	957.8	
	1	3.270	3.271	-0.001	15689198	1000.0	950.2	
	1	4.116	4.118	-0.002	24520289	1000.0	973.4	
	1	4.263	4.264	-0.001	10501101	1000.0	956.2	
	1	4.730	4.731	-0.001	10446034	1000.0	950.9	M
			Average of Peak Amounts =				957.7	
	2	3.277	3.275	0.002	43153197	1000.0	951.3	M
	2	3.667	3.665	0.002	37154008	1000.0	967.1	M
	2	4.120	4.121	-0.001	76218445	1000.0	956.2	M
	2	4.267	4.265	0.002	33438438	1000.0	958.6	M
	2	4.927	4.928	-0.001	28051936	1000.0	956.8	M
			Average of Peak Amounts =				958.0	
							RPD = 0.03	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.250	6.248	0.002	28715451	1000.0	957.0	M
1	7.156	7.154	0.002	45278660	1000.0	961.9	M
1	7.490	7.488	0.002	40438292	1000.0	969.7	M
1	7.930	7.931	-0.001	84521517	1000.0	972.7	M
1	8.320	8.321	-0.001	25986514	1000.0	978.4	M
		Average of Peak Amounts =				967.9	
2	6.647	6.648	-0.001	98230933	1000.0	943.5	M
2	7.247	7.248	-0.001	138859883	1000.0	944.4	
2	7.647	7.645	0.002	137990458	1000.0	944.0	
2	8.010	8.011	-0.001	270071150	1000.0	945.2	
2	8.517	8.515	0.002	204325846	1000.0	947.3	
		Average of Peak Amounts =				944.9	
						RPD = 2.41	
S 8 Polychlorinated biphenyls, Total							
1						1925.6	
2						1902.8	
						RPD = 1.19	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

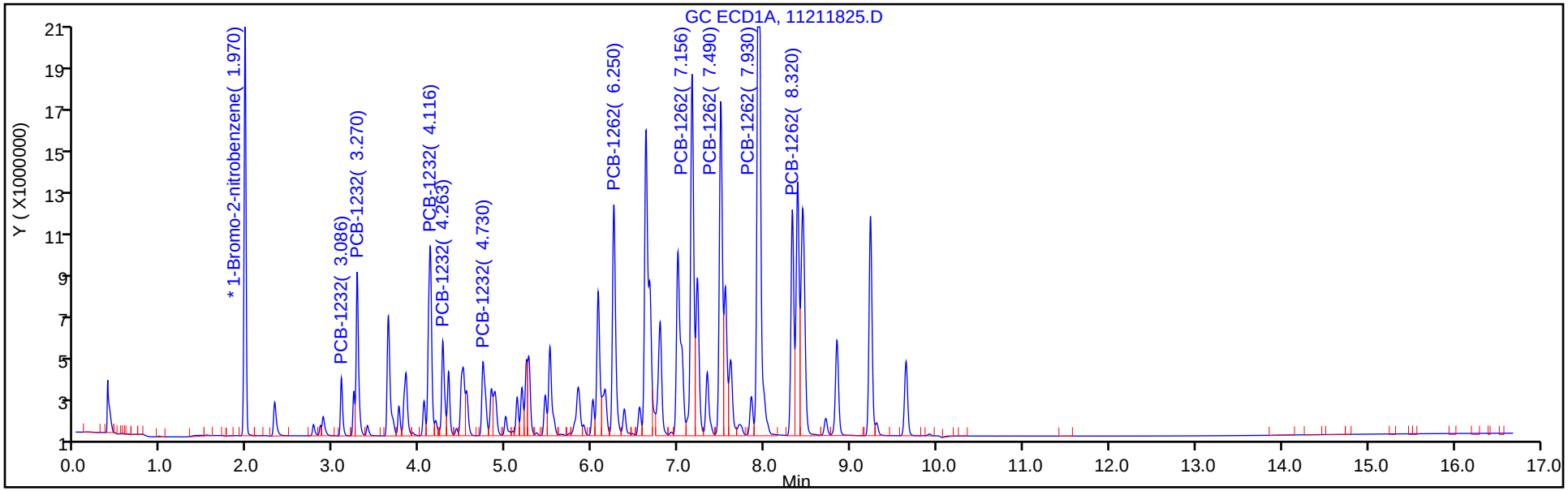
Report Date: 23-Nov-2018 11:02:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

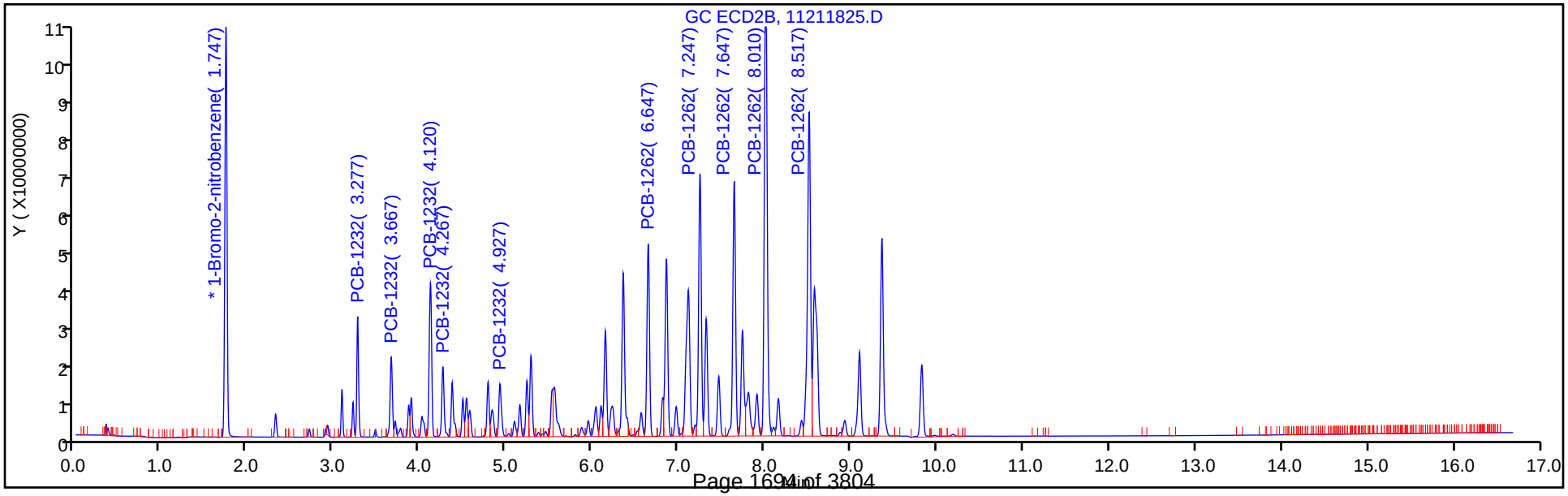
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date:	21-Nov-2018 17:13:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL73262			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

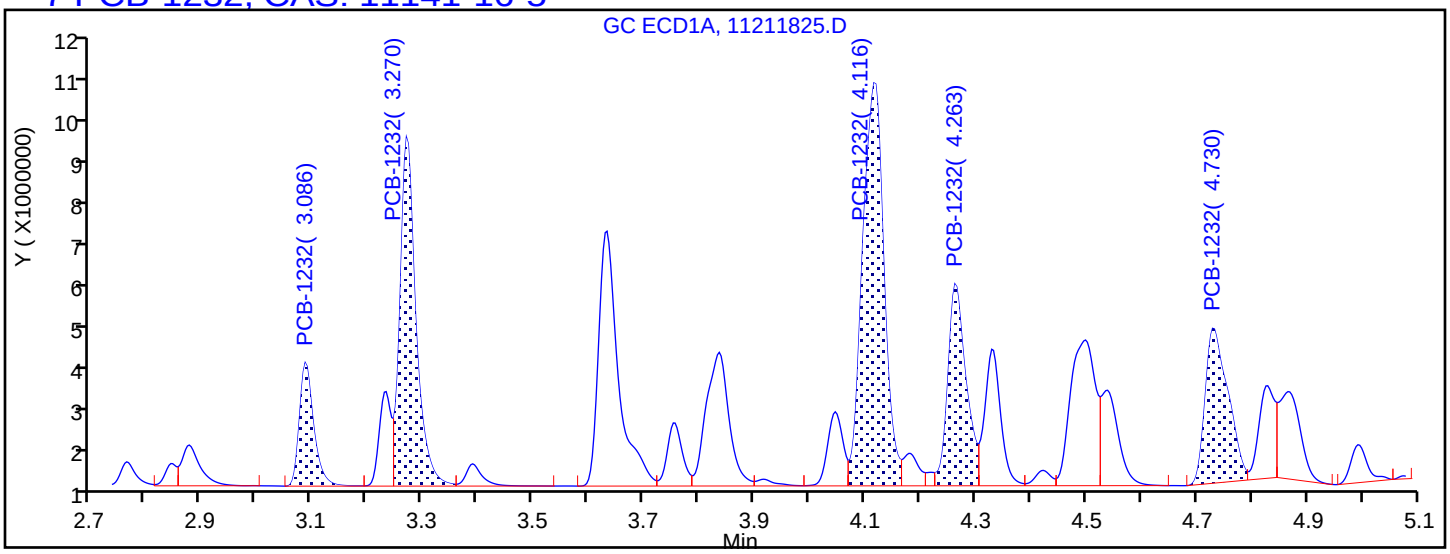
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

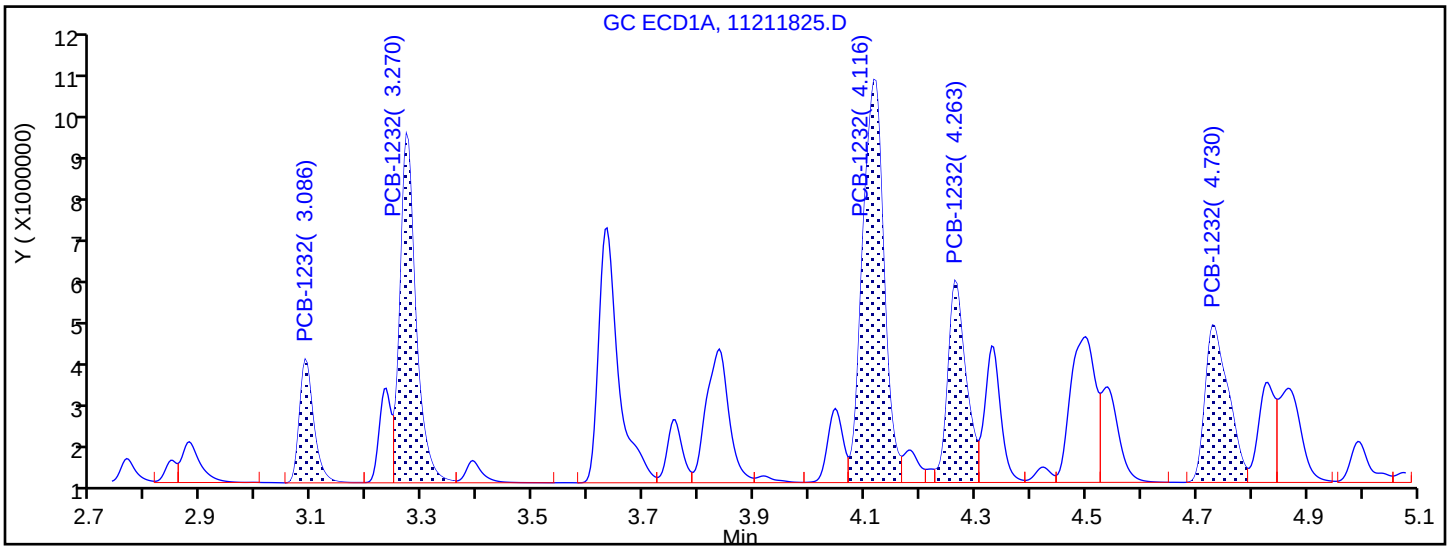
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.086	Response = 4984840
3.270	Response = 15689198
4.116	Response = 24520289
4.263	Response = 10501101
4.730	Response = 10017869



Manual Integration Results

3.086	Response = 4984840	
3.270	Response = 15689198	
4.116	Response = 24520289	
4.263	Response = 10501101	
4.730	Response = 10446034	M

Reviewer: patadiab, 23-Nov-2018 10:17:48

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

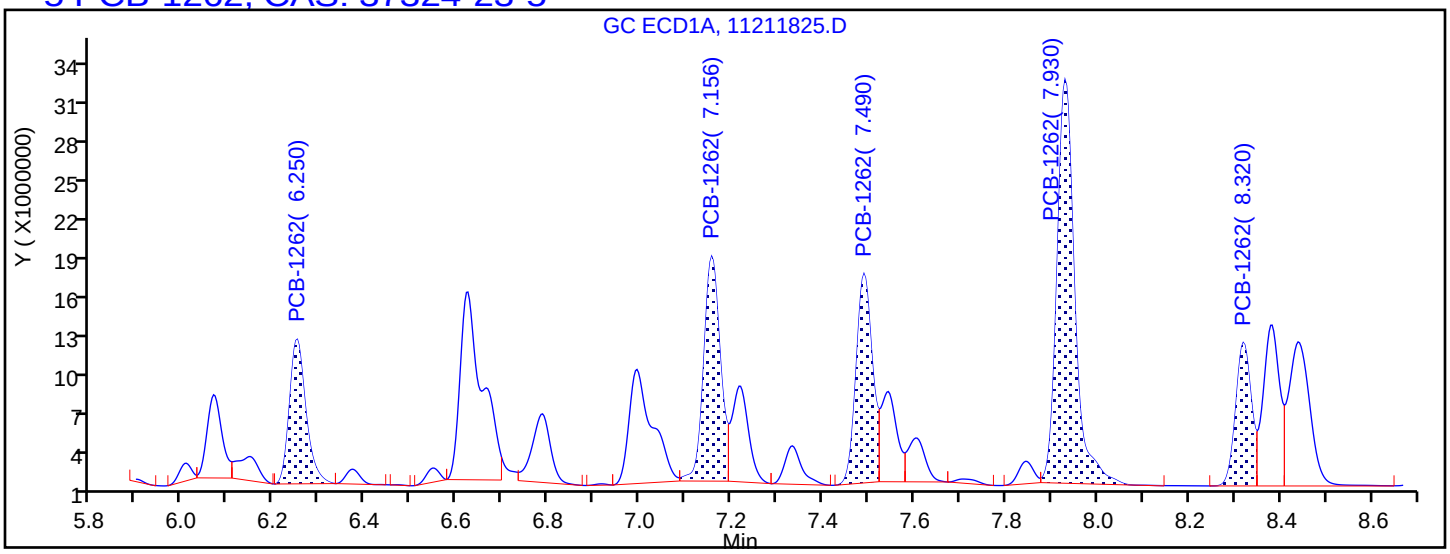
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

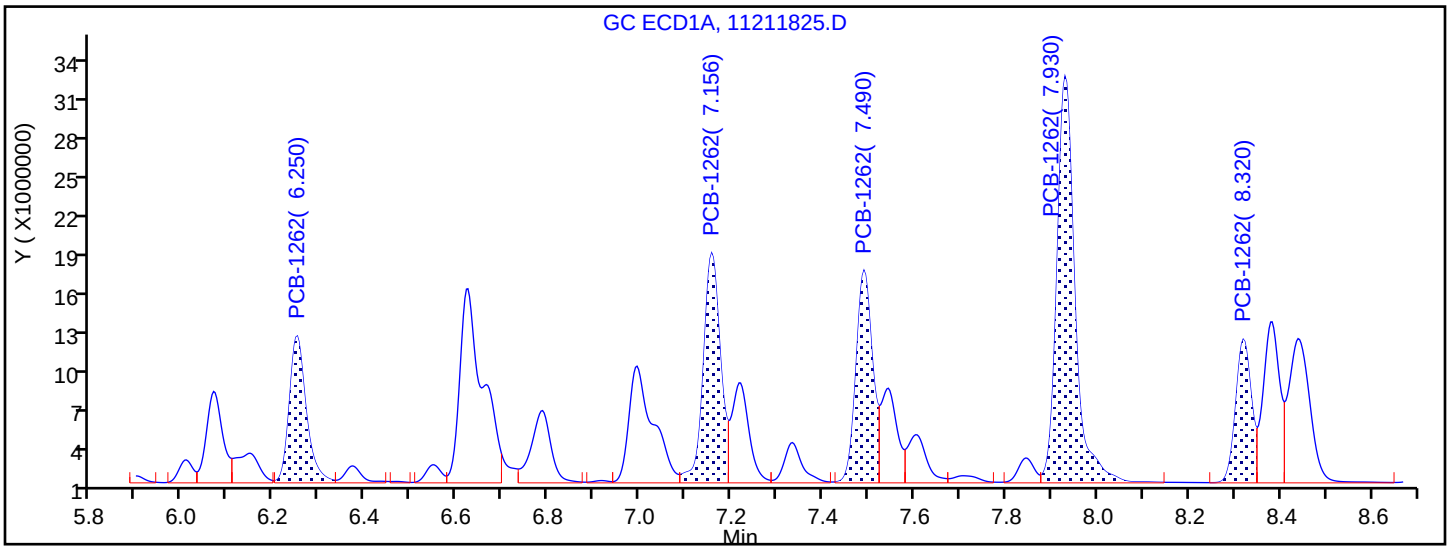
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.250	Response = 27284287
7.156	Response = 42823297
7.490	Response = 39275835
7.930	Response = 82203775
8.320	Response = 25885445



Manual Integration Results

6.250	Response = 28715451	M
7.156	Response = 45278660	M
7.490	Response = 40438292	M
7.930	Response = 84521517	M
8.320	Response = 25986514	M

Reviewer: patadiab, 23-Nov-2018 10:17:48

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D
Lims ID: STDL63262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 17:34:18 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL63262
Misc. Info.: 280-0076428-026
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:20:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29724345	1000.0	1000.0	
2	1.749	1.746	0.003	167597392	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.086	3.088	-0.002	3825778	750.0	780.6	
1	3.269	3.271	-0.002	11992126	750.0	770.4	
1	4.116	4.118	-0.002	18488855	750.0	780.5	
1	4.263	4.264	-0.001	8040685	750.0	777.9	
1	4.729	4.731	-0.002	8045853	750.0	778.2	M
		Average of Peak Amounts =				777.5	
2	3.276	3.275	0.001	33236999	750.0	771.4	
2	3.666	3.665	0.001	27752244	750.0	759.9	
2	4.123	4.121	0.002	58138353	750.0	768.0	
2	4.266	4.265	0.001	25319272	750.0	764.2	
2	4.929	4.928	0.001	21128917	750.0	758.5	
		Average of Peak Amounts =				764.4	
						RPD = 1.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.249	6.248	0.001	21984609	750.0	777.9	M
1	7.156	7.154	0.002	34368147	750.0	775.2	M
1	7.489	7.488	0.001	30590995	750.0	779.0	M
1	7.929	7.931	-0.002	63873370	750.0	781.5	M
1	8.319	8.321	-0.002	19427531	750.0	777.3	M
		Average of Peak Amounts =				778.2	
2	6.649	6.648	0.001	76501019	750.0	773.9	
2	7.249	7.248	0.001	108005184	750.0	773.7	
2	7.646	7.645	0.001	107493024	750.0	774.8	
2	8.013	8.011	0.002	210407349	750.0	776.0	
2	8.516	8.515	0.001	158732369	750.0	775.3	
		Average of Peak Amounts =				774.7	
						RPD = 0.45	
S 8 Polychlorinated biphenyls, Total							
1						1555.7	
2						1539.1	
						RPD = 1.07	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

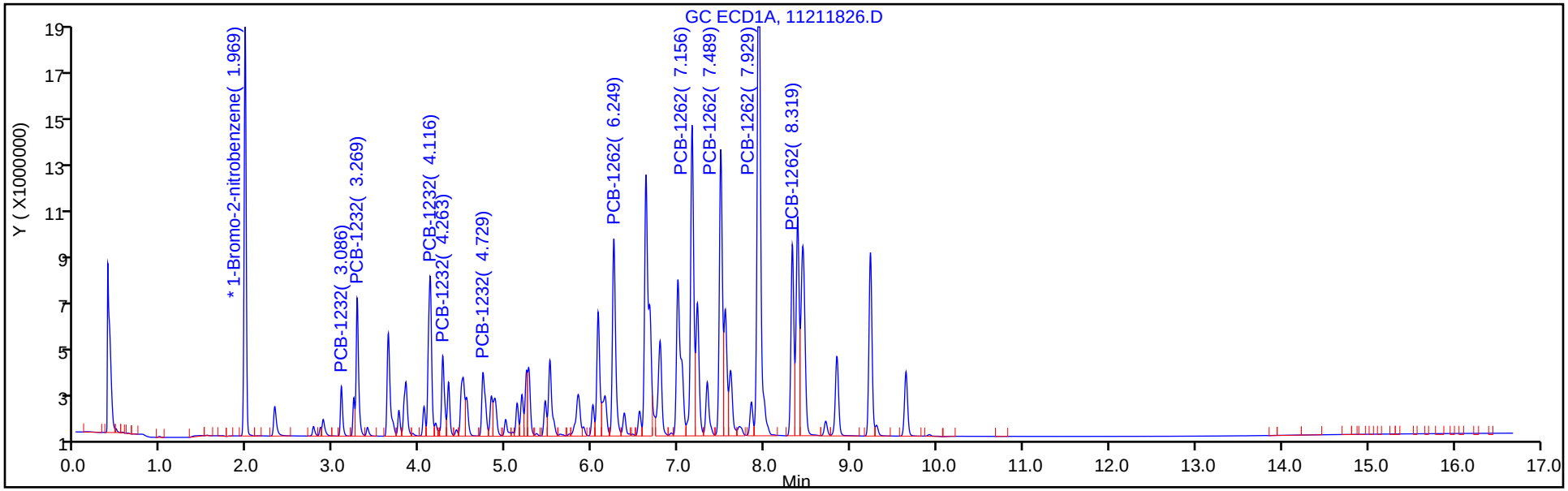
Report Date: 23-Nov-2018 11:02:50 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

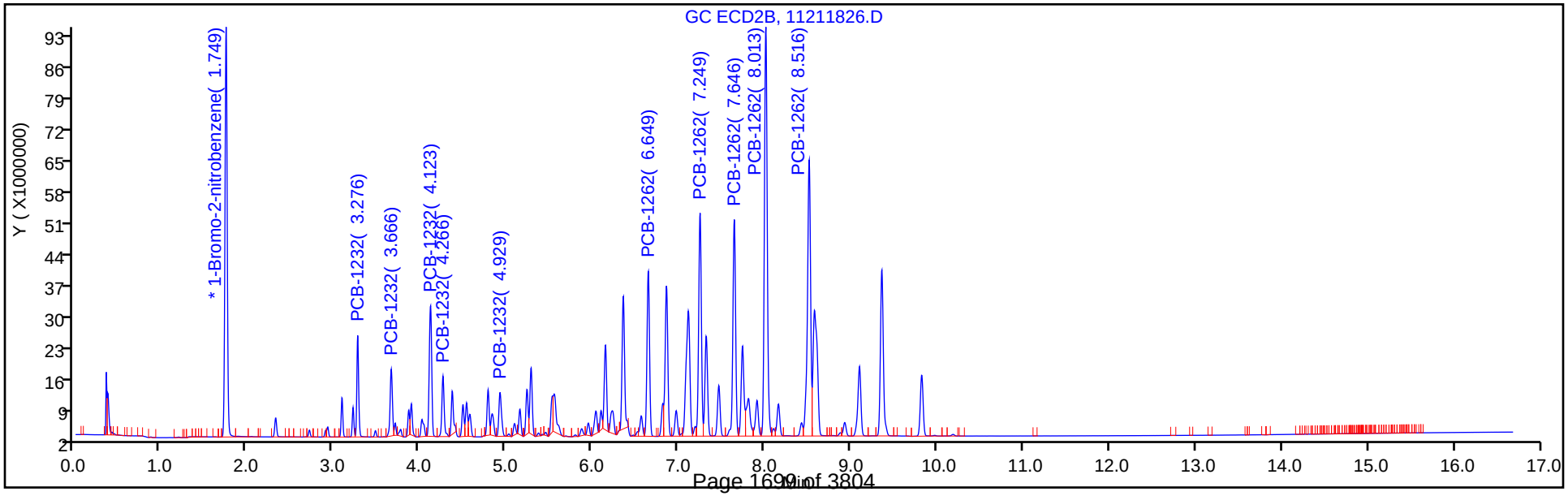
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date:	21-Nov-2018 17:34:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL63262			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date: 21-Nov-2018 17:34:18 Instrument ID: SGC_J

Lims ID: STDL63262

Client ID:

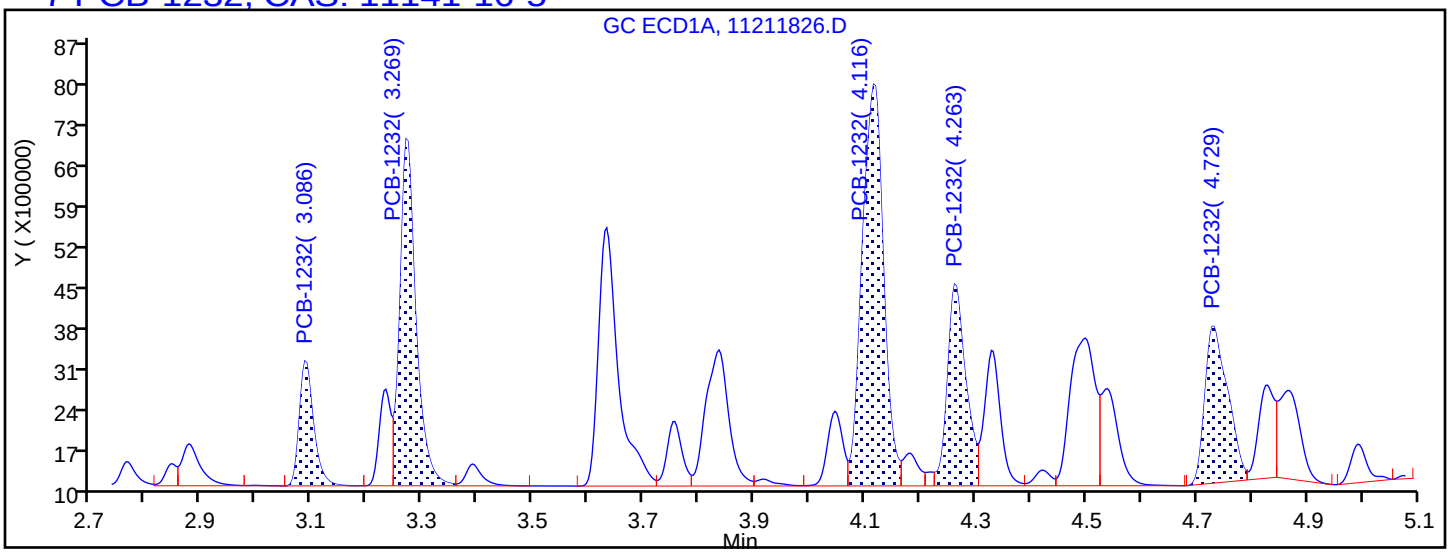
Operator ID: ALS ALS Bottle#: 26 Worklist Smp#: 26

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

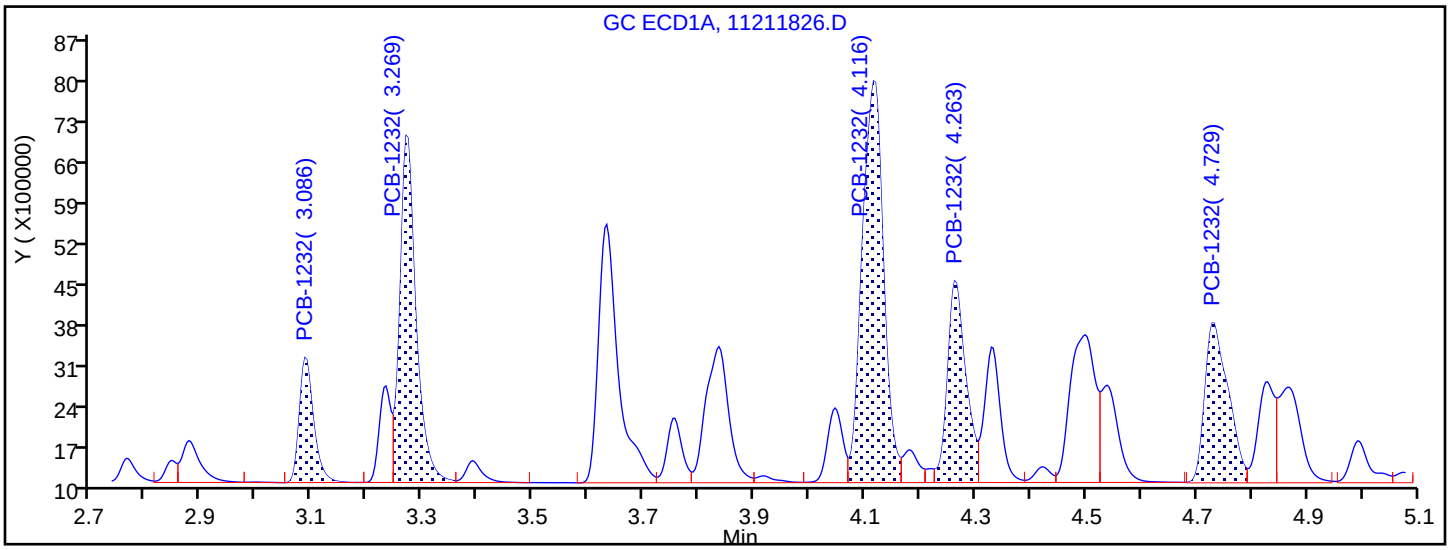
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.086	Response = 3825778
3.269	Response = 11992126
4.116	Response = 18488855
4.263	Response = 8040685
4.729	Response = 7671926



Manual Integration Results

3.086	Response = 3825778	
3.269	Response = 11992126	
4.116	Response = 18488855	
4.263	Response = 8040685	
4.729	Response = 8045853	M

Reviewer: patadiab, 23-Nov-2018 10:20:10

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date: 21-Nov-2018 17:34:18 Instrument ID: SGC_J

Lims ID: STDL63262

Client ID:

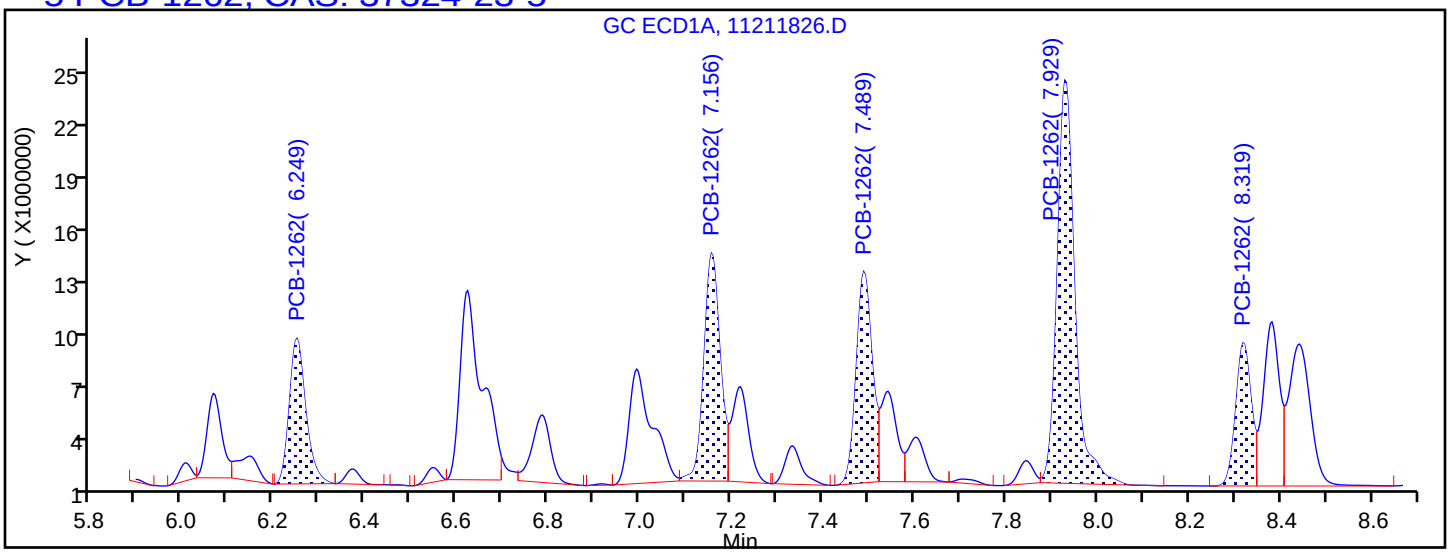
Operator ID: ALS ALS Bottle#: 26 Worklist Smp#: 26

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

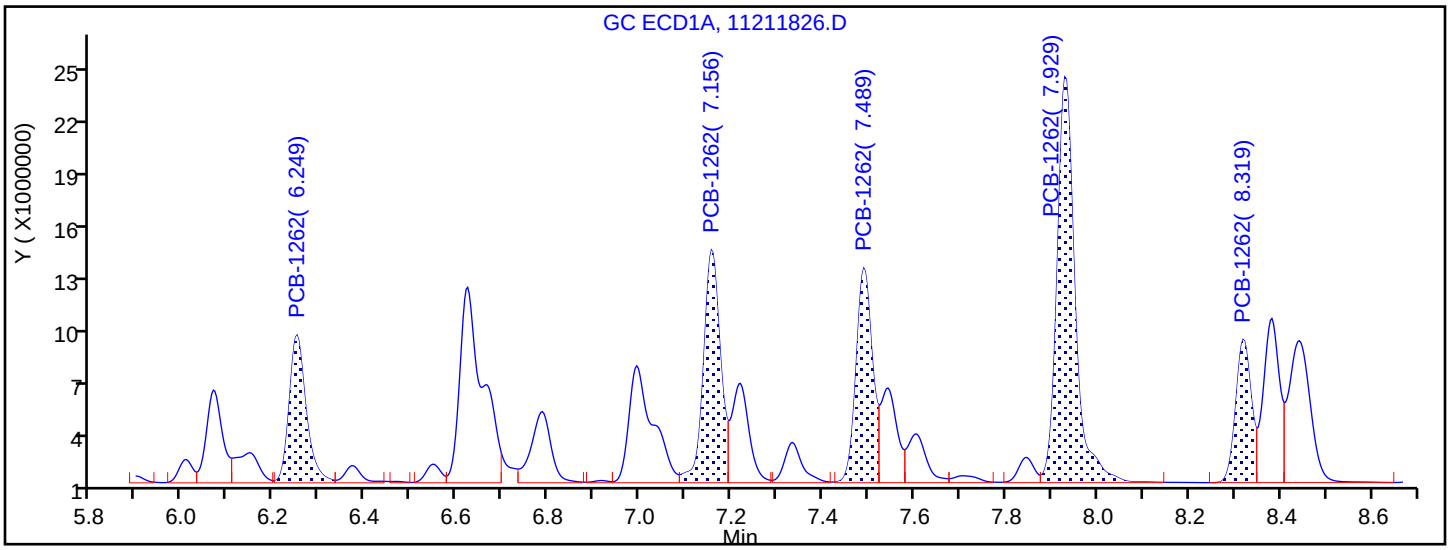
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.249	Response = 20927193
7.156	Response = 32519750
7.489	Response = 29752196
7.929	Response = 62336451
8.319	Response = 19446262



Manual Integration Results

6.249	Response = 21984609	M
7.156	Response = 34368147	M
7.489	Response = 30590995	M
7.929	Response = 63873370	M
8.319	Response = 19427531	M

Reviewer: patadiab, 23-Nov-2018 10:20:10

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D
Lims ID: STDL53262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 17:55:27 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL53262
Misc. Info.: 280-0076428-027
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:14:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	31454394	1000.0	1000.0	
2	1.748	1.748	0.000	177287409	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.088	3.088	0.000	2583135	500.0	495.0	
1	3.271	3.271	0.000	8464098	500.0	509.4	
1	4.118	4.118	0.000	12426844	500.0	494.9	M
1	4.264	4.264	0.000	5502198	500.0	500.6	M
1	4.731	4.731	0.000	5595129	500.0	509.2	M
		Average of Peak Amounts =				501.8	
2	3.275	3.275	0.000	23119208	500.0	501.5	
2	3.665	3.665	0.000	19468141	500.0	497.9	
2	4.121	4.121	0.000	40797414	500.0	504.3	
2	4.265	4.265	0.000	17838929	500.0	503.9	
2	4.928	4.928	0.000	15244324	500.0	512.0	
		Average of Peak Amounts =				503.9	
						RPD = 0.42	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.248	6.248	0.000	15117077	500.0	502.0	M
1	7.154	7.154	0.000	23792647	500.0	504.1	M
1	7.488	7.488	0.000	20569577	500.0	492.1	M
1	7.931	7.931	0.000	43005230	500.0	495.9	M
1	8.321	8.321	0.000	12995186	500.0	489.6	M
		Average of Peak Amounts =				496.7	
2	6.648	6.648	0.000	54027511	500.0	511.3	
2	7.248	7.248	0.000	76105584	500.0	510.0	
2	7.645	7.645	0.000	75571069	500.0	510.0	
2	8.011	8.011	0.000	147285972	500.0	508.7	
2	8.515	8.515	0.000	110696168	500.0	506.1	
		Average of Peak Amounts =				509.2	
						RPD = 2.49	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

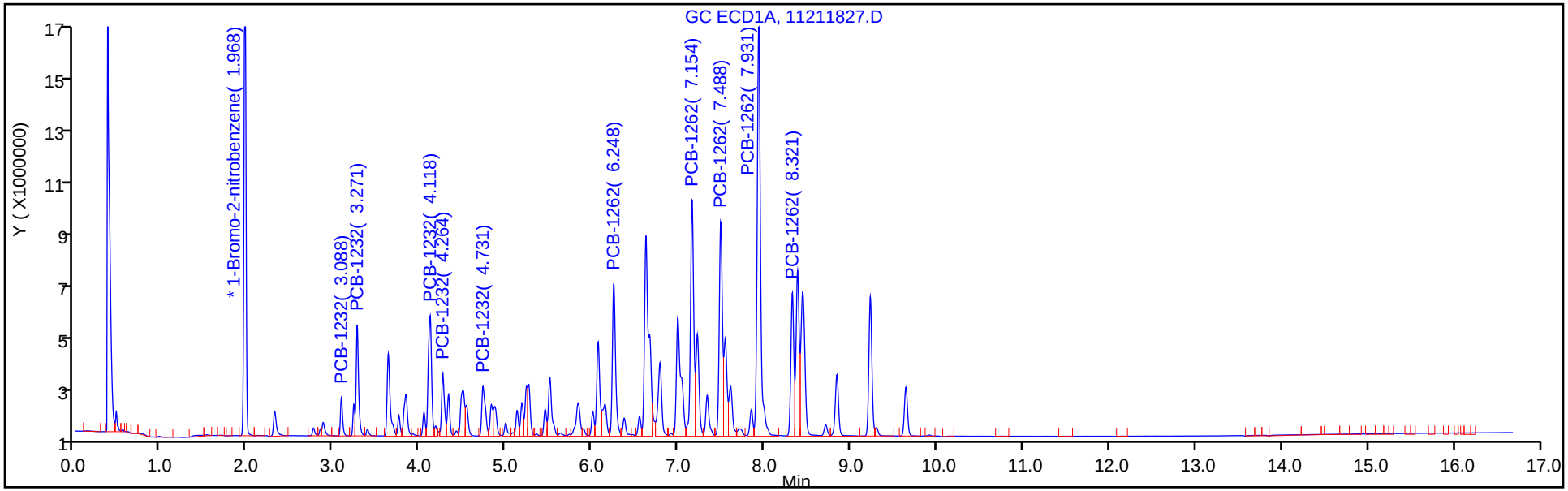
Report Date: 23-Nov-2018 11:02:53 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

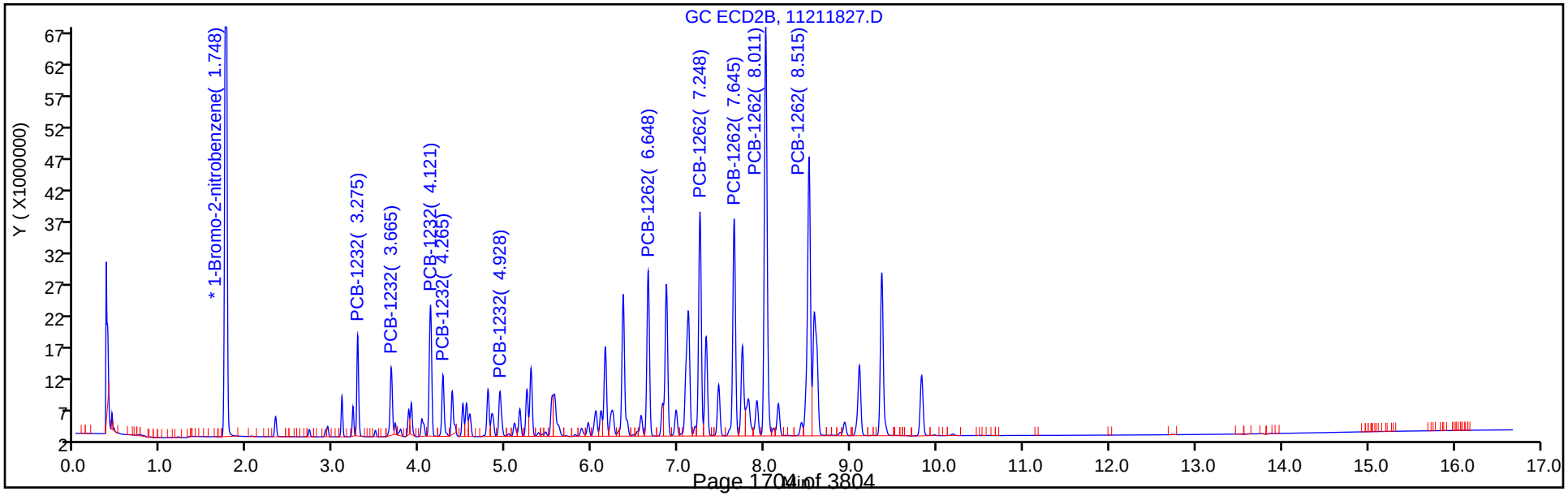
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date:	21-Nov-2018 17:55:27	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL53262			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:53 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date: 21-Nov-2018 17:55:27 Instrument ID: SGC_J

Lims ID: STDL53262

Client ID:

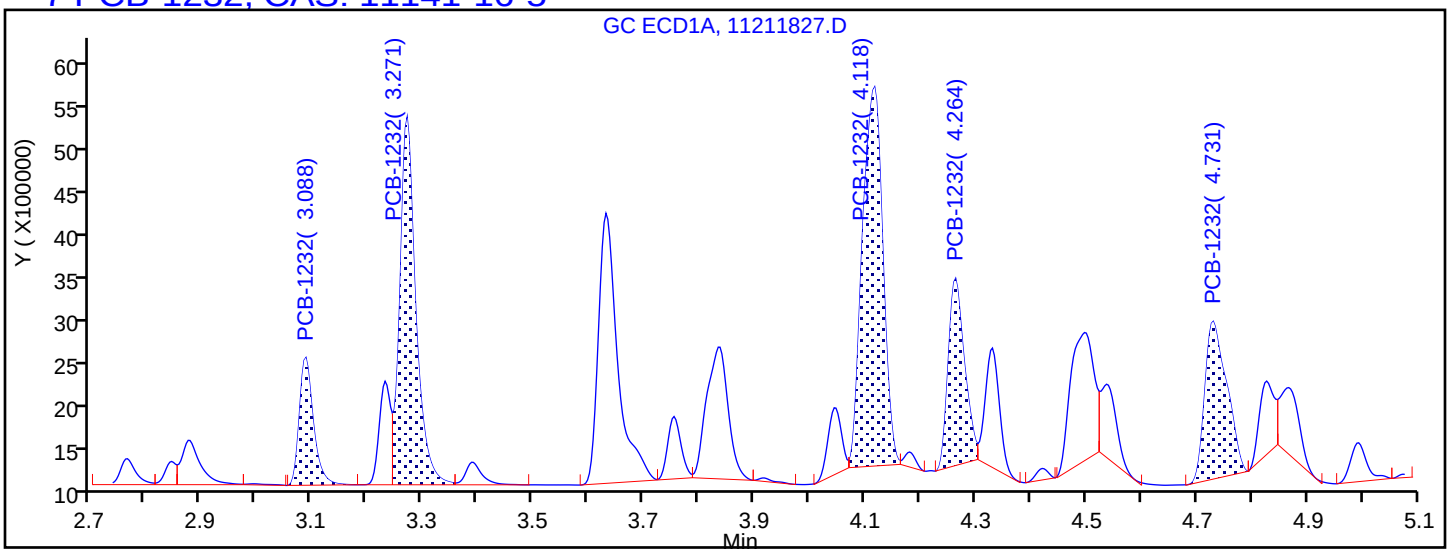
Operator ID: ALS ALS Bottle#: 27 Worklist Smp#: 27

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

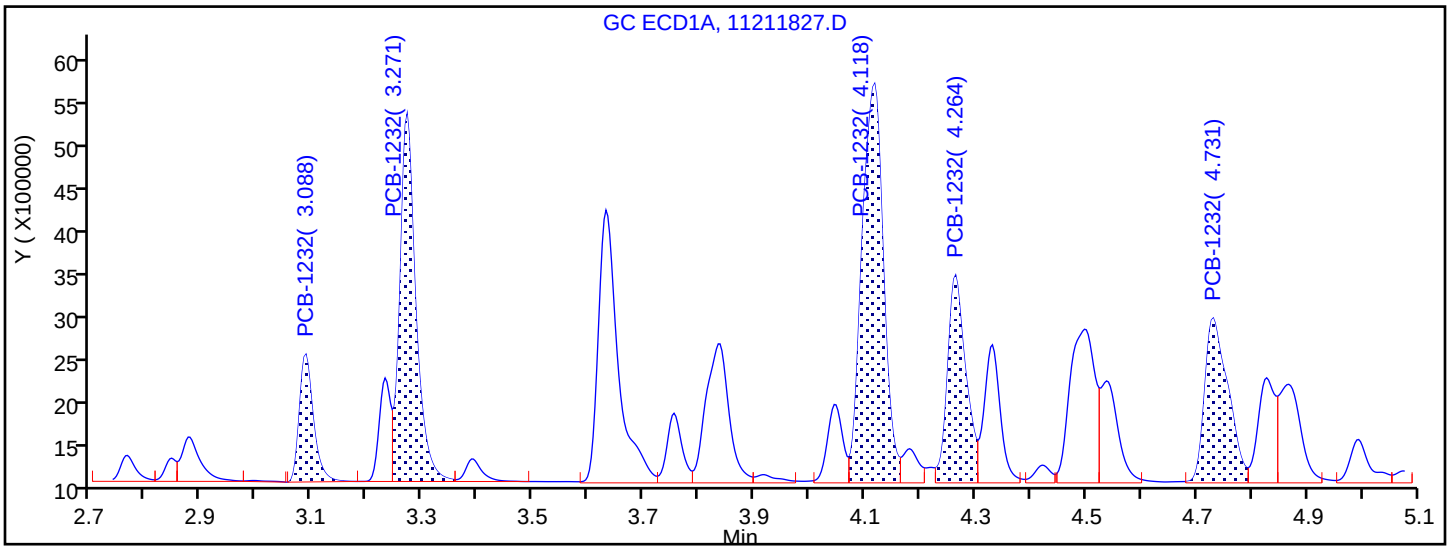
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.088	Response = 2583135
3.271	Response = 8464098
4.118	Response = 11130600
4.264	Response = 4396782
4.731	Response = 4977431



Manual Integration Results

3.088	Response = 2583135	
3.271	Response = 8464098	
4.118	Response = 12426844	M
4.264	Response = 5502198	M
4.731	Response = 5595129	M

Reviewer: patadiab, 23-Nov-2018 10:21:16

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:53 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date: 21-Nov-2018 17:55:27 Instrument ID: SGC_J

Lims ID: STDL53262

Client ID:

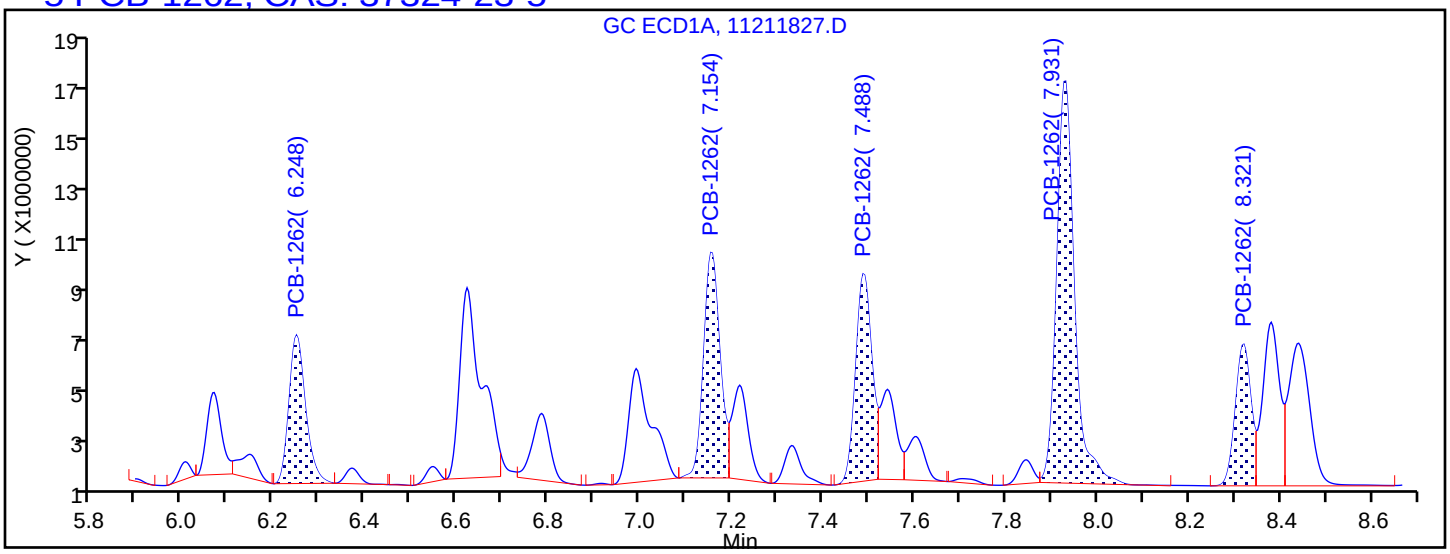
Operator ID: ALS ALS Bottle#: 27 Worklist Smp#: 27

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

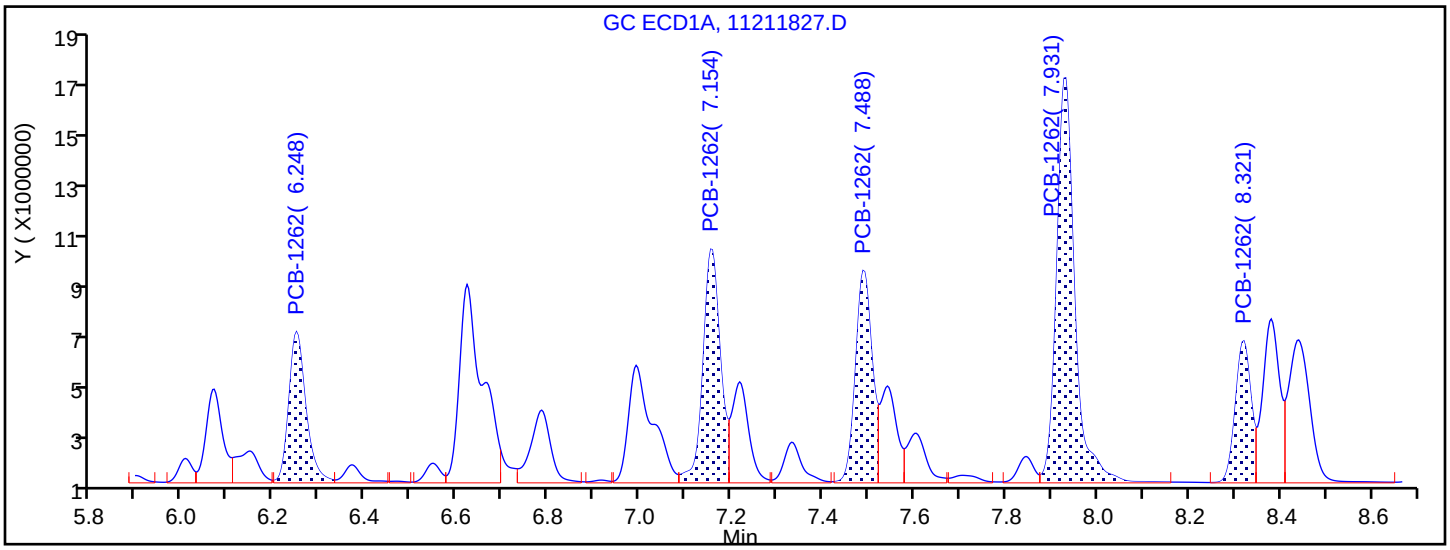
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.248	Response = 14296465
7.154	Response = 21705490
7.488	Response = 19673274
7.931	Response = 41669539
8.321	Response = 12921719



Manual Integration Results

6.248	Response = 15117077	M
7.154	Response = 23792647	M
7.488	Response = 20569577	M
7.931	Response = 43005230	M
8.321	Response = 12995186	M

Reviewer: patadiab, 23-Nov-2018 10:21:16

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D
Lims ID: STDL43262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 18:16:46 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL43262
Misc. Info.: 280-0076428-028
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:56 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:16:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	30965018	1000.0	1000.0	
2	1.747	1.748	-0.001	174717072	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	1392895	250.0	267.2	
1	3.270	3.271	-0.001	4511528	250.0	269.6	
1	4.117	4.118	-0.001	6315260	250.0	254.3	
1	4.263	4.264	-0.001	2916425	250.0	266.4	
1	4.730	4.731	-0.001	2893984	250.0	264.4	
		Average of Peak Amounts =				264.4	
2	3.277	3.275	0.002	12740193	250.0	272.9	
2	3.663	3.665	-0.002	10698875	250.0	269.7	
2	4.120	4.121	-0.001	21982243	250.0	268.7	
2	4.267	4.265	0.002	9641479	250.0	269.4	
2	4.927	4.928	-0.001	8096778	250.0	268.2	
		Average of Peak Amounts =				269.8	
						RPD = 2.02	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.250	6.248	0.002	7964853	250.0	264.1	
1	7.157	7.154	0.003	12307287	250.0	260.7	
1	7.490	7.488	0.002	10904443	250.0	261.3	
1	7.930	7.931	-0.001	21913797	250.0	254.9	
1	8.320	8.321	-0.001	6789639	250.0	257.5	
		Average of Peak Amounts =				259.7	
2	6.647	6.648	-0.001	28900783	250.0	270.2	
2	7.247	7.248	-0.001	40916207	250.0	271.0	
2	7.647	7.645	0.002	40467048	250.0	270.4	
2	8.010	8.011	-0.001	78867004	250.0	270.0	
2	8.513	8.515	-0.002	59822420	250.0	270.9	
		Average of Peak Amounts =				270.5	
						RPD = 4.07	
S 8 Polychlorinated biphenyls, Total							
1						524.1	
2						540.3	
						RPD = 3.04	

Reagents:

AR_3262_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

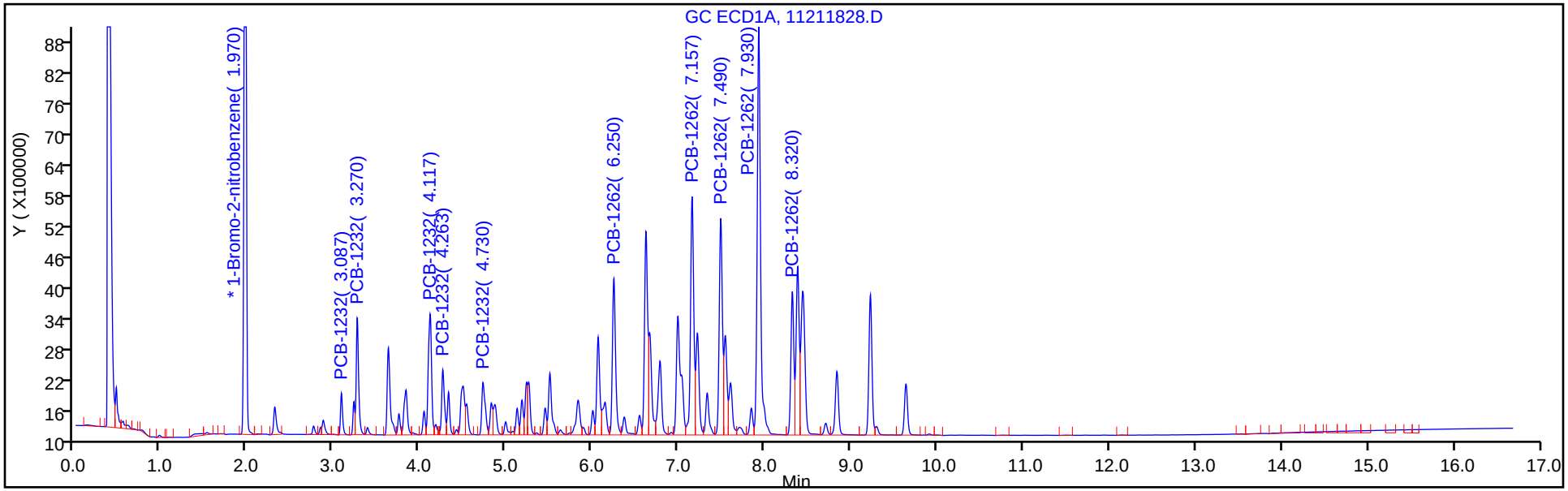
Report Date: 23-Nov-2018 11:02:56 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

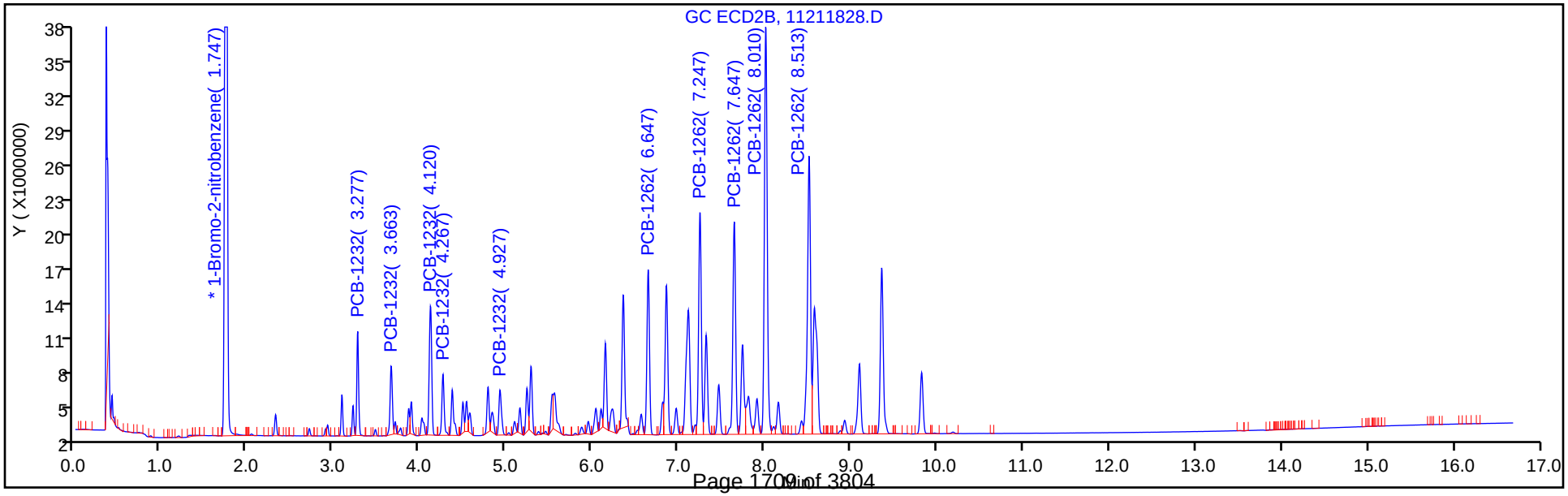
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D

Injection Date:	21-Nov-2018 18:16:46	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL43262			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D
Lims ID: STDL33262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 18:37:56 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL33262
Misc. Info.: 280-0076428-029
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:22

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.968	0.004	31139299	1000.0	1000.0	
2	1.749	1.748	0.001	176067915	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	547298	100.0	99.2	
1	3.272	3.271	0.001	1856728	100.0	102.4	
1	4.116	4.118	-0.002	2458762	100.0	96.9	
1	4.262	4.264	-0.002	1164474	100.0	101.6	
1	4.729	4.731	-0.002	1125602	100.0	98.3	
		Average of Peak Amounts =				99.7	
2	3.276	3.275	0.001	5377655	100.0	104.5	
2	3.666	3.665	0.001	4662843	100.0	106.4	
2	4.122	4.121	0.001	9281019	100.0	103.5	
2	4.266	4.265	0.001	4103159	100.0	104.9	
2	4.926	4.928	-0.002	3526090	100.0	106.4	
		Average of Peak Amounts =				105.2	
						RPD = 5.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	3216578	100.0	100.2	
1	7.156	7.154	0.002	4907514	100.0	98.0	
1	7.489	7.488	0.001	4304645	100.0	97.7	
1	7.929	7.931	-0.002	8325389	100.0	94.0	
1	8.319	8.321	-0.002	2648440	100.0	96.9	
		Average of Peak Amounts =				97.4	
2	6.646	6.648	-0.002	12068360	100.0	102.5	
2	7.249	7.248	0.001	17019760	100.0	102.5	
2	7.646	7.645	0.001	16739062	100.0	102.3	
2	8.012	8.011	0.001	32344111	100.0	101.5	
2	8.512	8.515	-0.003	24623782	100.0	101.9	
		Average of Peak Amounts =				102.2	
						RPD = 4.81	
S 8 Polychlorinated biphenyls, Total							
1						197.1	
2						207.3	
						RPD = 5.07	

Reagents:

AR_3262_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

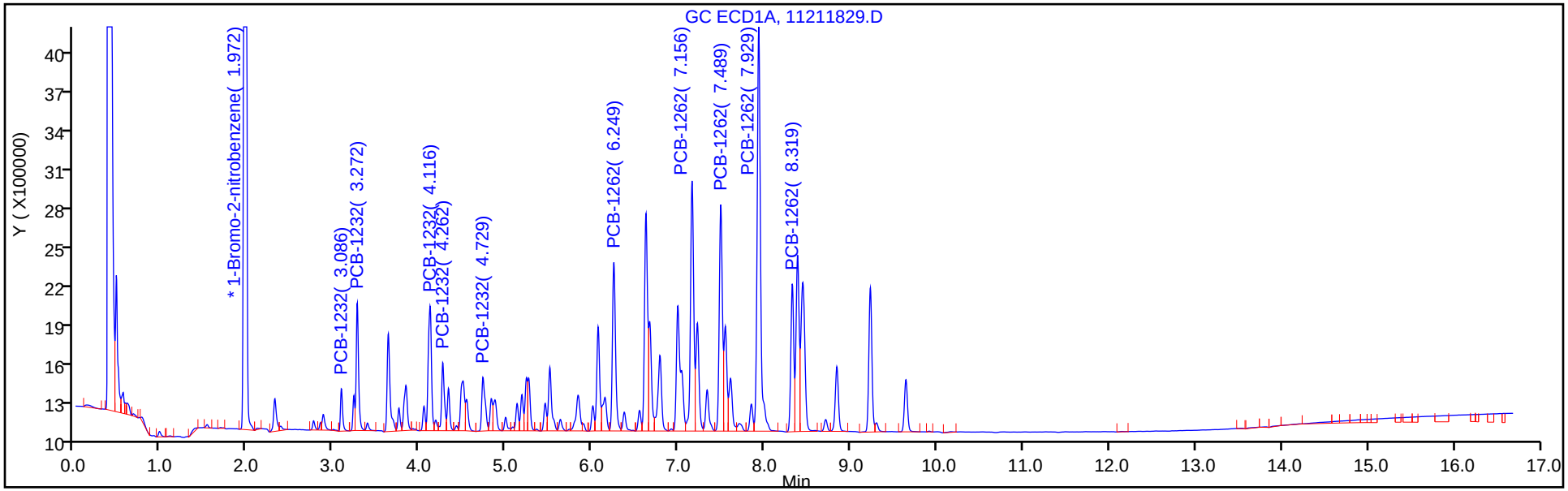
Report Date: 23-Nov-2018 11:02:59 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

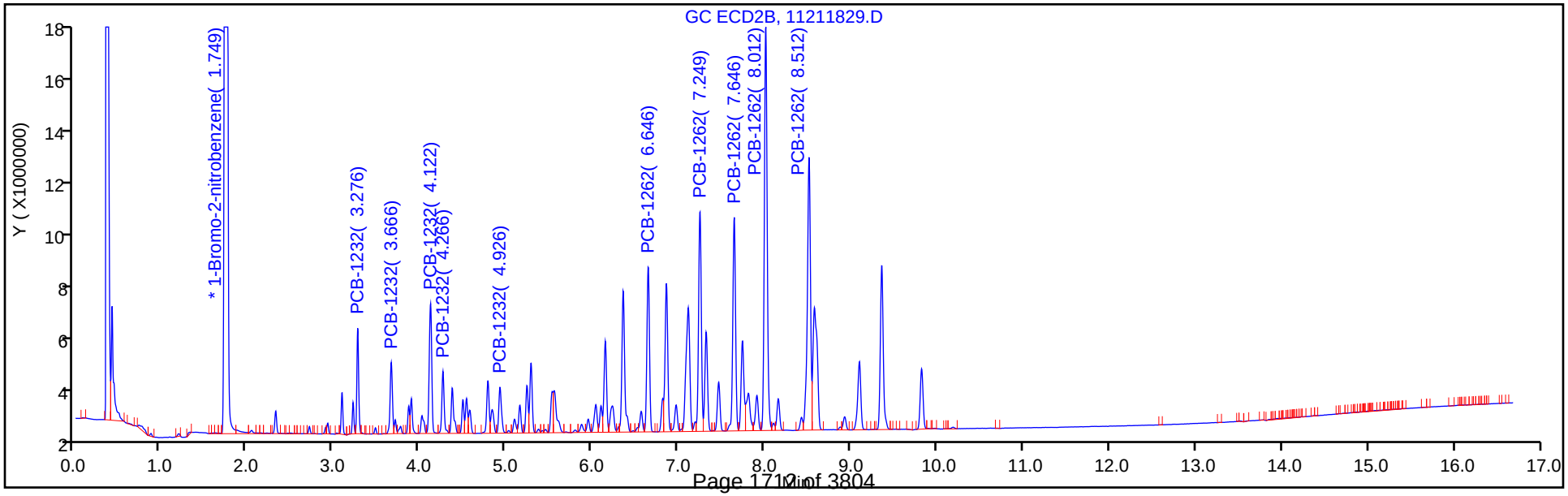
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D

Injection Date:	21-Nov-2018 18:37:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL33262			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D
Lims ID: STDL23262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 18:59:04 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL23262
Misc. Info.: 280-0076428-030
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	30826448	1000.0	1000.0	
2	1.748	1.748	0.000	173971839	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.088	3.088	0.000	308483	50.0	52.8	
1	3.271	3.271	0.000	1020472	50.0	50.9	
1	4.118	4.118	0.000	1273955	50.0	49.6	
1	4.264	4.264	0.000	586726	50.0	48.4	
1	4.731	4.731	0.000	604692	50.0	50.4	
		Average of Peak Amounts =				50.4	
2	3.274	3.275	-0.001	3052064	50.0	52.8	
2	3.664	3.665	-0.001	2666828	50.0	54.0	
2	4.121	4.121	0.000	5327006	50.0	53.6	
2	4.264	4.265	-0.001	2327446	50.0	53.7	
2	4.928	4.928	0.000	1962103	50.0	52.6	
		Average of Peak Amounts =				53.4	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.248	6.248	0.000	1742564	50.0	50.4	
1	7.154	7.154	0.000	2744291	50.0	51.5	
1	7.488	7.488	0.000	2379701	50.0	51.0	
1	7.928	7.931	-0.003	4573994	50.0	50.5	
1	8.318	8.321	-0.003	1421934	50.0	50.3	
		Average of Peak Amounts =				50.7	
2	6.648	6.648	0.000	6882439	50.0	52.4	
2	7.248	7.248	0.000	9662784	50.0	52.1	
2	7.644	7.645	-0.001	9459588	50.0	52.2	
2	8.011	8.011	0.000	18241846	50.0	51.9	
2	8.514	8.515	-0.001	13866078	50.0	51.7	
		Average of Peak Amounts =				52.1	
						RPD = 2.56	
S 8 Polychlorinated biphenyls, Total							
1						101.1	
2						105.4	
						RPD = 4.14	

Reagents:

AR_3262_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

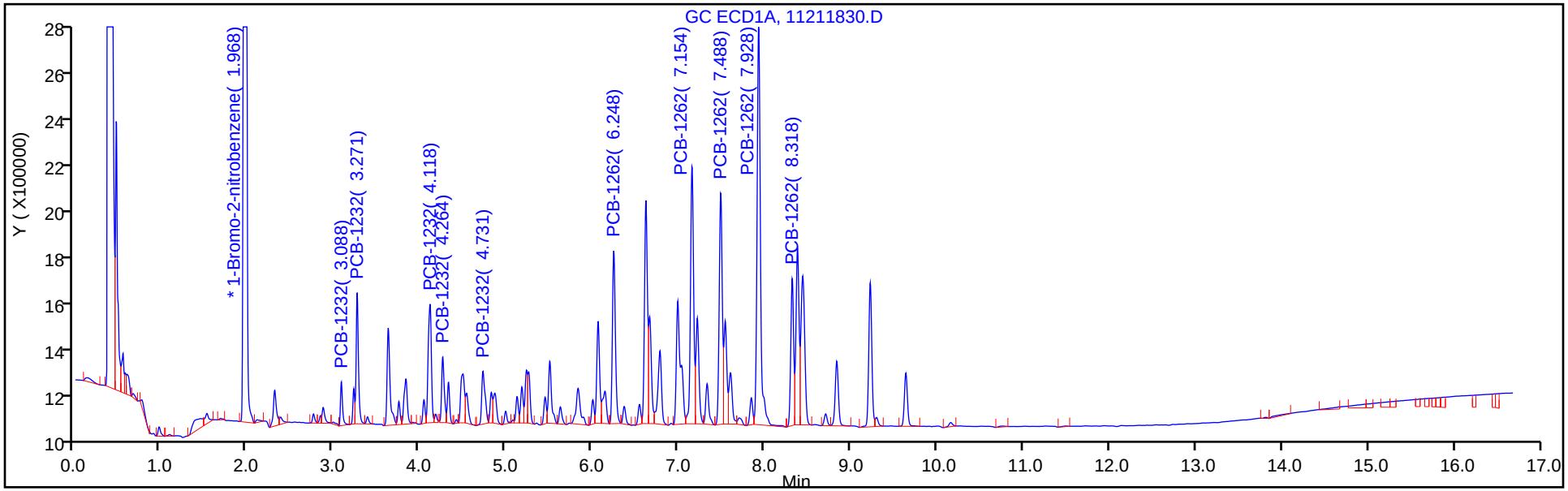
Report Date: 23-Nov-2018 11:03:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

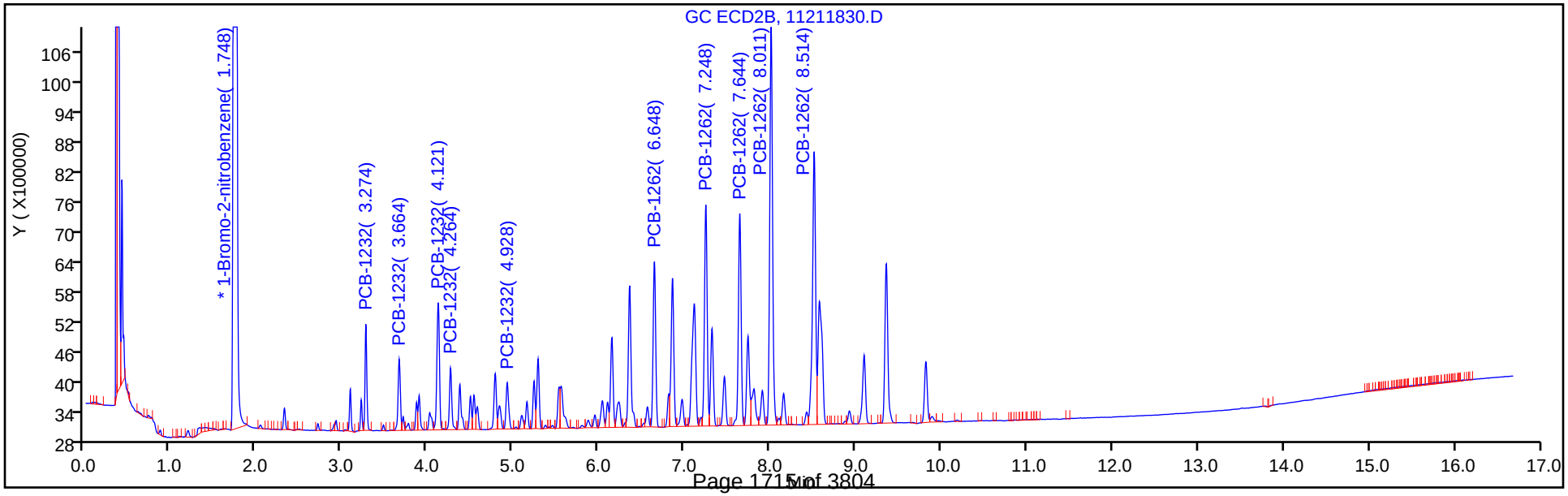
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D

Injection Date:	21-Nov-2018 18:59:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL23262			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D
Lims ID: STDL13262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 19:20:15 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL13262
Misc. Info.: 280-0076428-031
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:05 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:27:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	28837858	1000.0	1000.0	
2	1.747	1.748	-0.001	164029832	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	145633	25.0	22.4	
1	3.270	3.271	-0.001	527466	25.0	22.1	
1	4.117	4.118	-0.001	639419	25.0	25.5	
1	4.263	4.264	-0.001	305449	25.0	23.9	
1	4.730	4.731	-0.001	299569	25.0	23.6	
		Average of Peak Amounts =				23.5	
2	3.277	3.275	0.002	1549784	25.0	20.6	
2	3.667	3.665	0.002	1327362	25.0	20.0	
2	4.120	4.121	-0.001	2630983	25.0	20.7	
2	4.267	4.265	0.002	1136029	25.0	20.4	
2	4.927	4.928	-0.001	991404	25.0	20.5	
		Average of Peak Amounts =				20.4	
						RPD = 13.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.247	6.248	-0.001	898312	25.0	23.4	
1	7.157	7.154	0.003	1380613	25.0	23.6	
1	7.490	7.488	0.002	1209897	25.0	24.1	
1	7.930	7.931	-0.001	2313295	25.0	25.6	
1	8.320	8.321	-0.001	722269	25.0	25.0	
		Average of Peak Amounts =				24.3	
2	6.647	6.648	-0.001	3536624	25.0	21.2	
2	7.250	7.248	0.002	4988537	25.0	21.3	
2	7.647	7.645	0.002	4810570	25.0	21.4	
2	8.010	8.011	-0.001	9332035	25.0	21.7	
2	8.513	8.515	-0.002	7179707	25.0	21.7	
		Average of Peak Amounts =				21.5	
						RPD = 12.52	
S 8 Polychlorinated biphenyls, Total							
1						47.8	
2						41.9	
						RPD = 13.20	

Reagents:

AR_3262_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

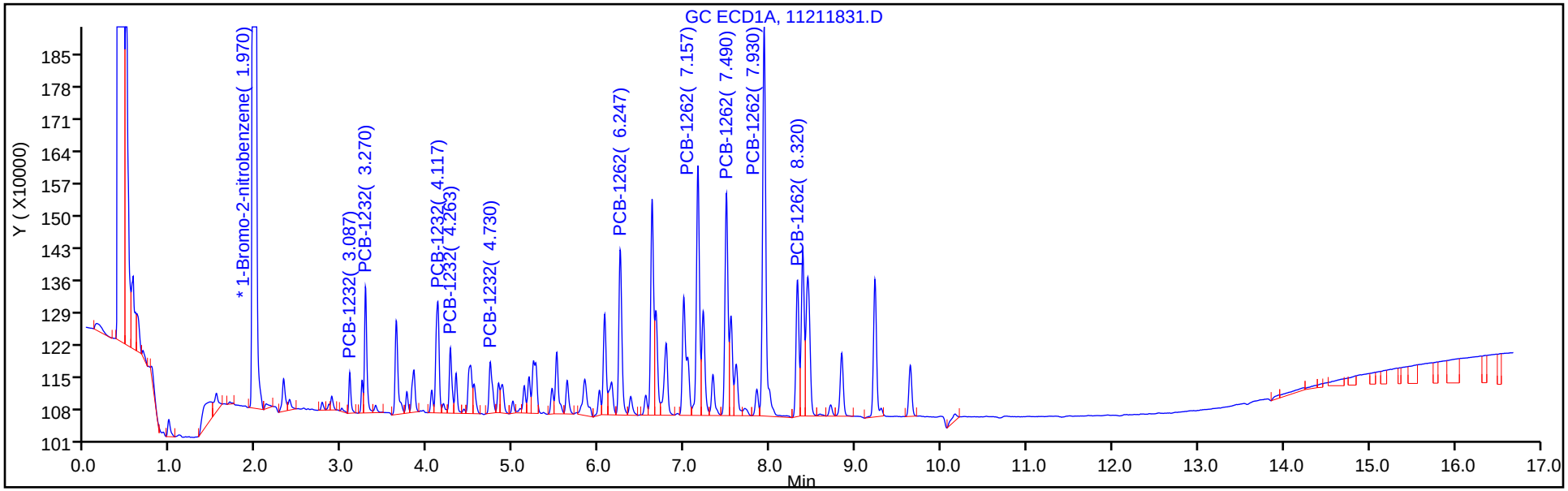
Report Date: 23-Nov-2018 11:03:06 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

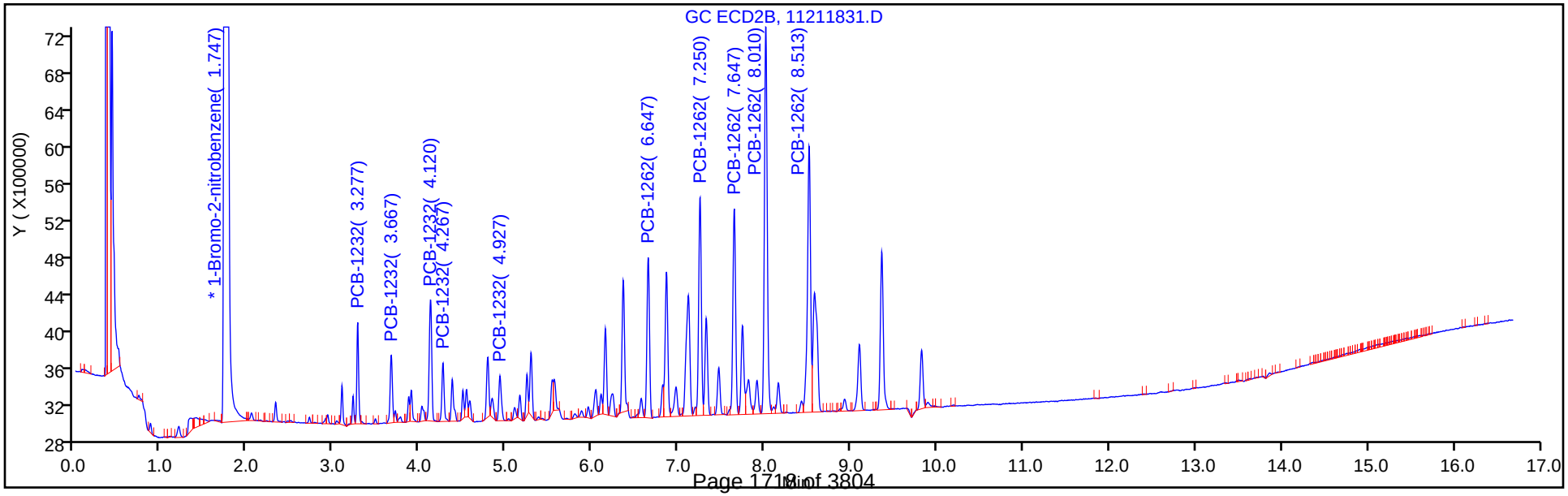
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D

Injection Date:	21-Nov-2018 19:20:15	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL13262			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34391

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1232 Peak 1	0.3779 0.2644	0.3509 0.2436	0.3054	0.2917	0.2608	Lin1	4.2615	0.2516							0.9970		0.9900
PCB-1232 Peak 2	0.3237 0.2208	0.3066 0.2097	0.2648	0.2449	0.2196	Lin1	3.8305	0.2129							0.9980		0.9900
PCB-1232 Peak 3	0.6416 0.4625	0.6124 0.4302	0.5271	0.5033	0.4602	Lin1	6.8713	0.4427							0.9980		0.9900
PCB-1232 Peak 4	0.2770 0.2014	0.2676 0.1887	0.2330	0.2207	0.2012	Lin1	2.9783	0.1938							0.9980		0.9900
PCB-1232 Peak 5	0.2418 0.1681	0.2256 0.1583	0.2003	0.1854	0.1720	Lin1	2.7180	0.1626							0.9980		0.9900
PCB-1262 Peak 1	0.8624 0.6086	0.7912 0.5544	0.6854	0.6617	0.6095	Lin1	9.3030	0.5778							0.9970		0.9900
PCB-1262 Peak 2	1.2165 0.8592	1.1108 0.7837	0.9667	0.9367	0.8586	Lin1	13.012	0.8161							0.9970		0.9900
PCB-1262 Peak 3	1.1731 0.8552	1.0875 0.7788	0.9507	0.9265	0.8525	Lin1	11.971	0.8124							0.9970		0.9900
PCB-1262 Peak 4	2.2757 1.6739	2.0971 1.5243	1.8370	1.8056	1.6616	Lin1	22.359	1.5891							0.9970		0.9900
PCB-1262 Peak 5	1.7508 1.2628	1.5941 1.1532	1.3985	1.3696	1.2488	Lin1	17.706	1.1987							0.9970		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 17:13 Calibration End Date: 11/21/2018 19:20 Calibration ID: 34391

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL13262 280-438388/31	11211831.D
Level 2	STDL23262 280-438388/30	11211830.D
Level 3	STDL33262 280-438388/29	11211829.D
Level 4	STDL43262 280-438388/28	11211828.D
Level 5	STDL53262 280-438388/27	11211827.D
Level 6	STDL63262 280-438388/26	11211826.D
Level 7	STDL73262 280-438388/25	11211825.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1232 Peak 1	BNB	Lin1	1549784 33236999	3052064 43153197	5377655	12740193	23119208	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 2	BNB	Lin1	1327362 27752244	2666828 37154008	4662843	10698875	19468141	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 3	BNB	Lin1	2630983 58138353	5327006 76218445	9281019	21982243	40797414	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 4	BNB	Lin1	1136029 25319272	2327446 33438438	4103159	9641479	17838929	25.0 750	50.0 1000	100	250	500
PCB-1232 Peak 5	BNB	Lin1	991404 21128917	1962103 28051936	3526090	8096778	15244324	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 1	BNB	Lin1	3536624 76501019	6882439 98230933	12068360	28900783	54027511	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 2	BNB	Lin1	4988537 108005184	9662784 138859883	17019760	40916207	76105584	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 3	BNB	Lin1	4810570 107493024	9459588 137990458	16739062	40467048	75571069	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 4	BNB	Lin1	9332035 210407349	18241846 270071150	32344111	78867004	147285972	25.0 750	50.0 1000	100	250	500
PCB-1262 Peak 5	BNB	Lin1	7179707 158732369	13866078 204325846	24623782	59822420	110696168	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D
Lims ID: STDL73262
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 17:13:09 ALS Bottle#: 25 Worklist Smp#: 25
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL73262
Misc. Info.: 280-0076428-025
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:44 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:18:47

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.969	0.001	31630227	1000.0	1000.0	
2	1.747	1.746	0.001	177174681	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.086	3.088	-0.002	4984840	1000.0	957.8	
1	3.270	3.271	-0.001	15689198	1000.0	950.2	
1	4.116	4.118	-0.002	24520289	1000.0	973.4	
1	4.263	4.264	-0.001	10501101	1000.0	956.2	
1	4.730	4.731	-0.001	10446034	1000.0	950.9	M
		Average of Peak Amounts =				957.7	
2	3.277	3.275	0.002	43153197	1000.0	951.3	M
2	3.667	3.665	0.002	37154008	1000.0	967.1	M
2	4.120	4.121	-0.001	76218445	1000.0	956.2	M
2	4.267	4.265	0.002	33438438	1000.0	958.6	M
2	4.927	4.928	-0.001	28051936	1000.0	956.8	M
		Average of Peak Amounts =				958.0	
						RPD = 0.03	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.250	6.248	0.002	28715451	1000.0	957.0	M
1	7.156	7.154	0.002	45278660	1000.0	961.9	M
1	7.490	7.488	0.002	40438292	1000.0	969.7	M
1	7.930	7.931	-0.001	84521517	1000.0	972.7	M
1	8.320	8.321	-0.001	25986514	1000.0	978.4	M
		Average of Peak Amounts =				967.9	
2	6.647	6.648	-0.001	98230933	1000.0	943.5	M
2	7.247	7.248	-0.001	138859883	1000.0	944.4	
2	7.647	7.645	0.002	137990458	1000.0	944.0	
2	8.010	8.011	-0.001	270071150	1000.0	945.2	
2	8.517	8.515	0.002	204325846	1000.0	947.3	
		Average of Peak Amounts =				944.9	
						RPD = 2.41	
S 8 Polychlorinated biphenyls, Total							
1						1925.6	
2						1902.8	
						RPD = 1.19	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L7_00017	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

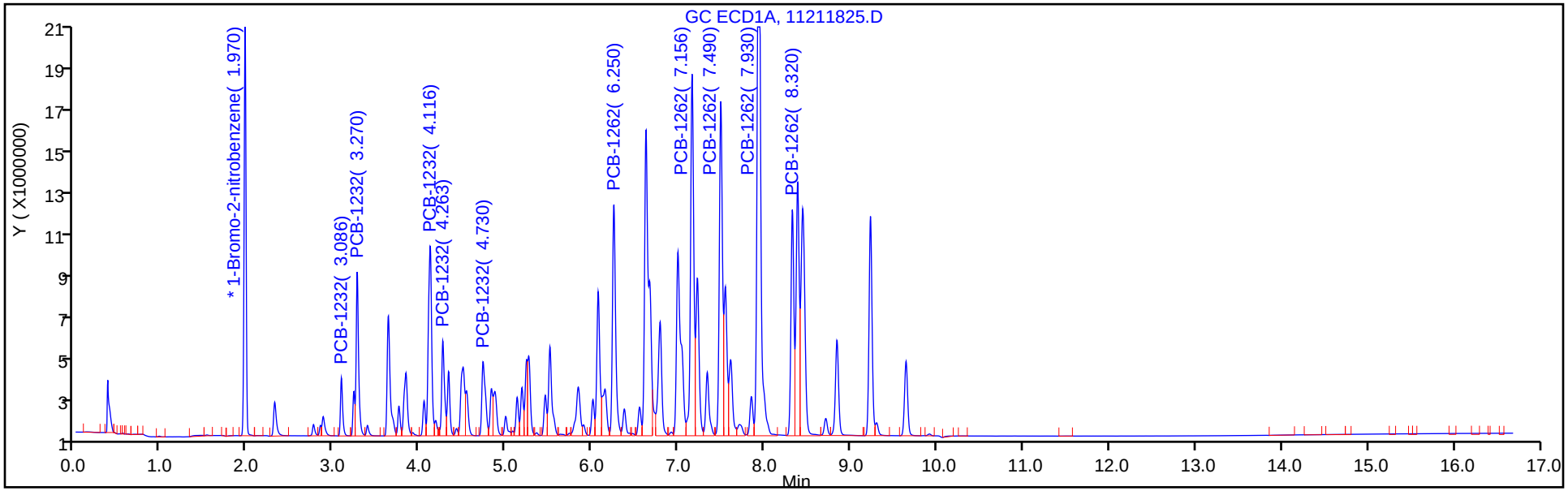
Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

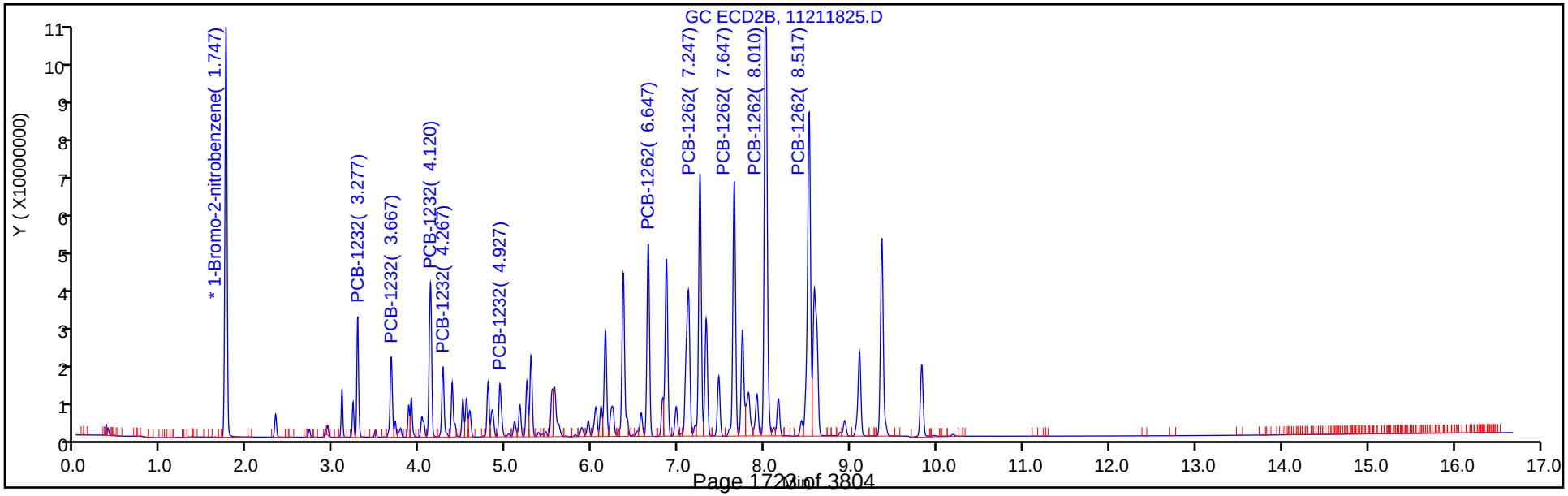
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date:	21-Nov-2018 17:13:09	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL73262			Worklist Smp#:	25
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

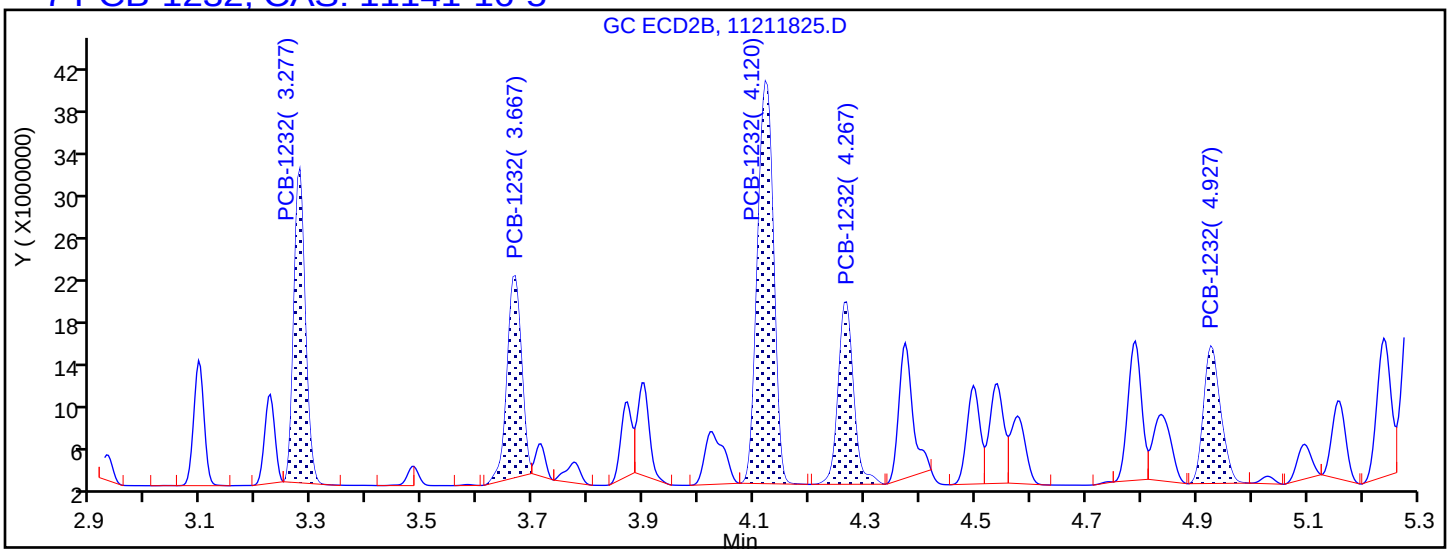
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

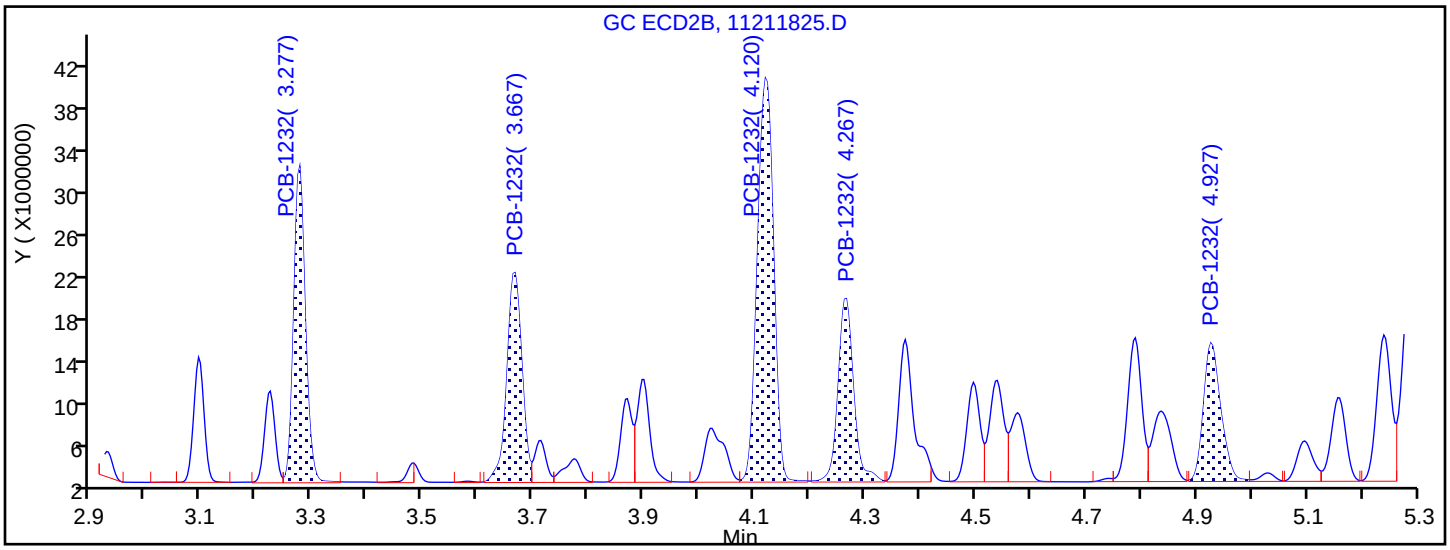
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

7 PCB-1232, CAS: 11141-16-5



Processing Integration Results

3.277	Response = 41723521
3.667	Response = 34071287
4.120	Response = 75089161
4.267	Response = 32655110
4.927	Response = 27191504



Manual Integration Results

3.277	Response = 43153197	M
3.667	Response = 37154008	M
4.120	Response = 76218445	M
4.267	Response = 33438438	M
4.927	Response = 28051936	M

Reviewer: patadiab, 23-Nov-2018 10:18:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

Report Date: 23-Nov-2018 11:02:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211825.D

Injection Date: 21-Nov-2018 17:13:09 Instrument ID: SGC_J

Lims ID: STDL73262

Client ID:

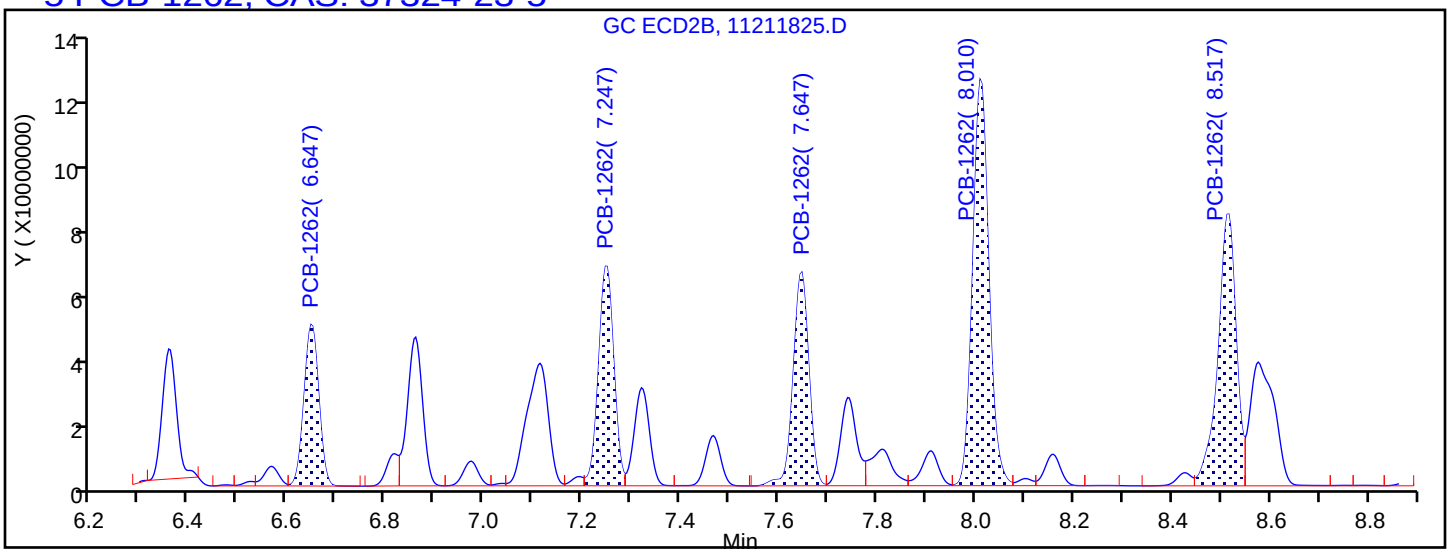
Operator ID: ALS ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

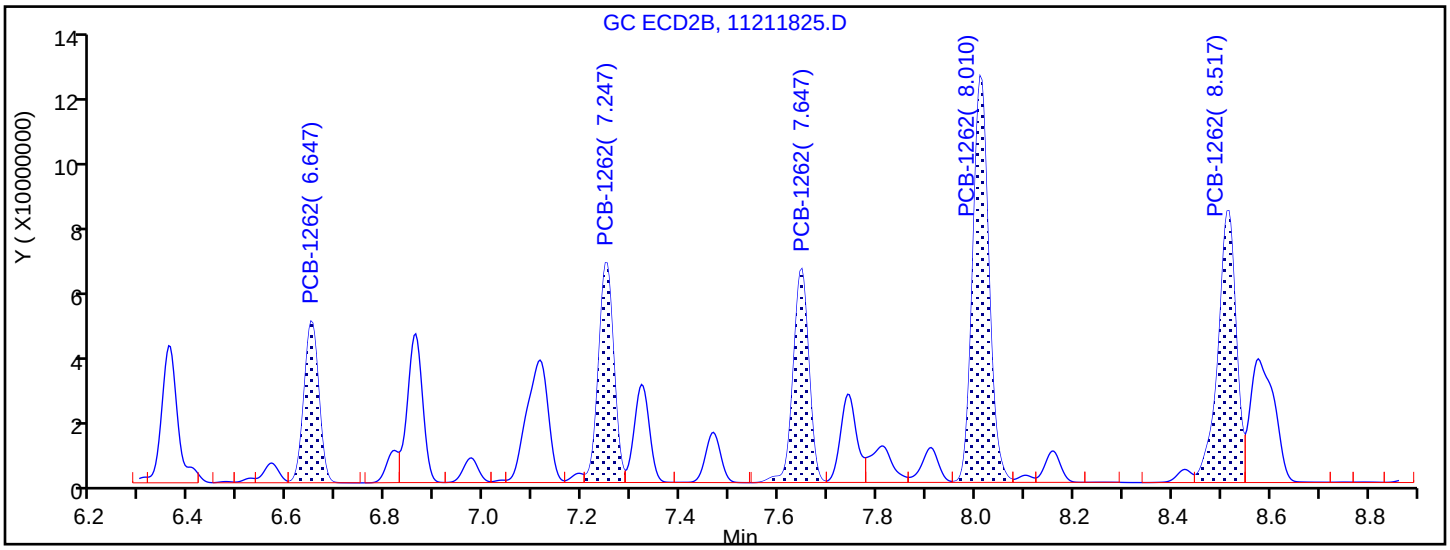
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

5 PCB-1262, CAS: 37324-23-5



Processing Integration Results

6.647	Response = 98275730
7.247	Response = 138859883
7.647	Response = 137990458
8.010	Response = 270071150
8.517	Response = 204325846



Manual Integration Results

6.647	Response = 98230933	M
7.247	Response = 138859883	
7.647	Response = 137990458	
8.010	Response = 270071150	
8.517	Response = 204325846	

Reviewer: patadiab, 23-Nov-2018 10:18:40

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D
Lims ID: STDL63262
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 17:34:18 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL63262
Misc. Info.: 280-0076428-026
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:49 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:20:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.969	0.000	29724345	1000.0	1000.0	
2	1.749	1.746	0.003	167597392	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.086	3.088	-0.002	3825778	750.0	780.6	
1	3.269	3.271	-0.002	11992126	750.0	770.4	
1	4.116	4.118	-0.002	18488855	750.0	780.5	
1	4.263	4.264	-0.001	8040685	750.0	777.9	
1	4.729	4.731	-0.002	8045853	750.0	778.2	M
		Average of Peak Amounts =				777.5	
2	3.276	3.275	0.001	33236999	750.0	771.4	
2	3.666	3.665	0.001	27752244	750.0	759.9	
2	4.123	4.121	0.002	58138353	750.0	768.0	
2	4.266	4.265	0.001	25319272	750.0	764.2	
2	4.929	4.928	0.001	21128917	750.0	758.5	
		Average of Peak Amounts =				764.4	
						RPD = 1.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.249	6.248	0.001	21984609	750.0	777.9	M
1	7.156	7.154	0.002	34368147	750.0	775.2	M
1	7.489	7.488	0.001	30590995	750.0	779.0	M
1	7.929	7.931	-0.002	63873370	750.0	781.5	M
1	8.319	8.321	-0.002	19427531	750.0	777.3	M
		Average of Peak Amounts =				778.2	
2	6.649	6.648	0.001	76501019	750.0	773.9	
2	7.249	7.248	0.001	108005184	750.0	773.7	
2	7.646	7.645	0.001	107493024	750.0	774.8	
2	8.013	8.011	0.002	210407349	750.0	776.0	
2	8.516	8.515	0.001	158732369	750.0	775.3	
		Average of Peak Amounts =				774.7	
						RPD = 0.45	
S 8 Polychlorinated biphenyls, Total							
1						1555.7	
2						1539.1	
						RPD = 1.07	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L6_00019	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

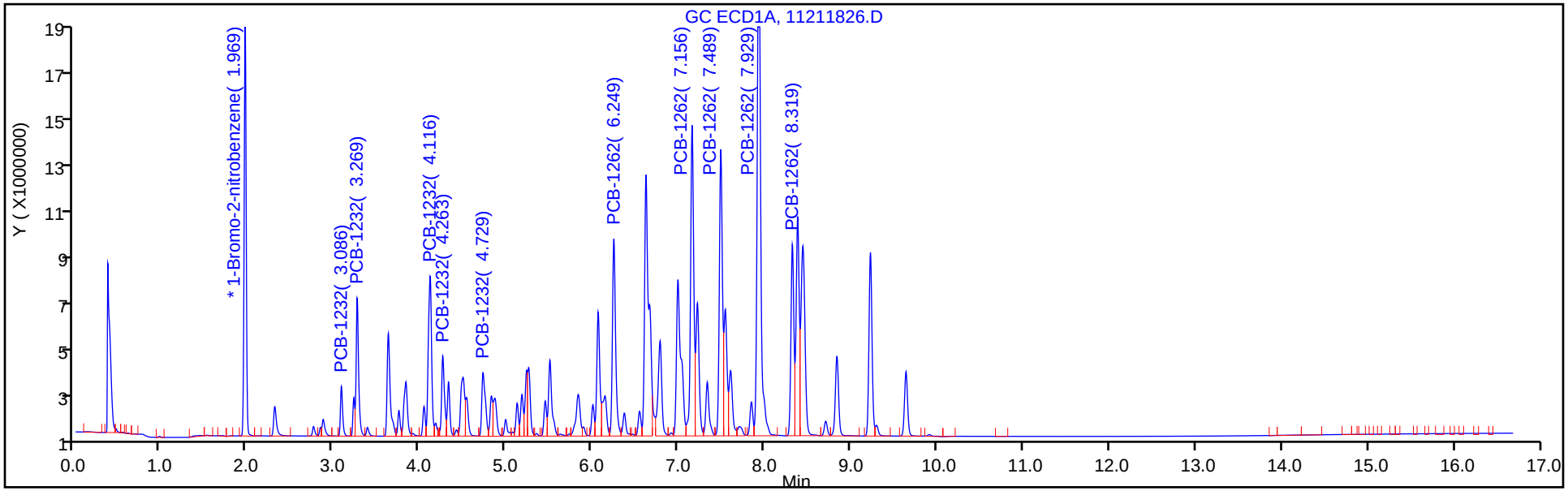
Report Date: 23-Nov-2018 11:02:51 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

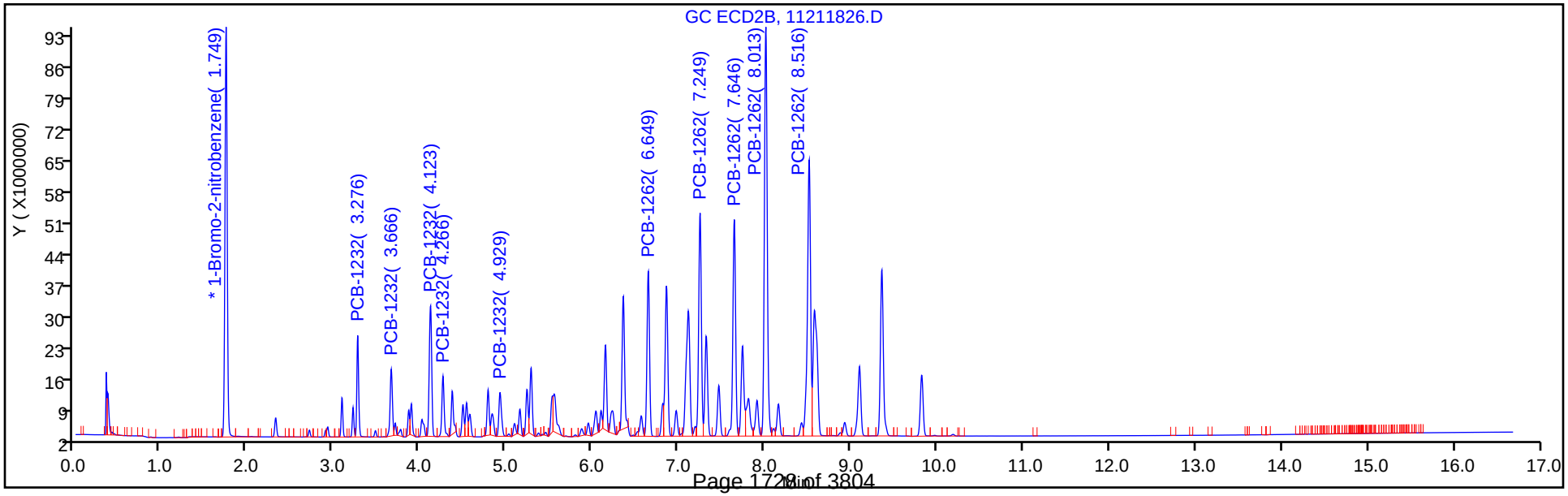
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211826.D

Injection Date:	21-Nov-2018 17:34:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL63262			Worklist Smp#:	26
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D
Lims ID: STDL53262
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 17:55:27 ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL53262
Misc. Info.: 280-0076428-027
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:53 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:14:18

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	31454394	1000.0	1000.0	
2	1.748	1.748	0.000	177287409	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							M
1	3.088	3.088	0.000	2583135	500.0	495.0	
1	3.271	3.271	0.000	8464098	500.0	509.4	
1	4.118	4.118	0.000	12426844	500.0	494.9	M
1	4.264	4.264	0.000	5502198	500.0	500.6	M
1	4.731	4.731	0.000	5595129	500.0	509.2	M
		Average of Peak Amounts =				501.8	
2	3.275	3.275	0.000	23119208	500.0	501.5	
2	3.665	3.665	0.000	19468141	500.0	497.9	
2	4.121	4.121	0.000	40797414	500.0	504.3	
2	4.265	4.265	0.000	17838929	500.0	503.9	
2	4.928	4.928	0.000	15244324	500.0	512.0	
		Average of Peak Amounts =				503.9	
						RPD = 0.42	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							M
1	6.248	6.248	0.000	15117077	500.0	502.0	M
1	7.154	7.154	0.000	23792647	500.0	504.1	M
1	7.488	7.488	0.000	20569577	500.0	492.1	M
1	7.931	7.931	0.000	43005230	500.0	495.9	M
1	8.321	8.321	0.000	12995186	500.0	489.6	M
		Average of Peak Amounts =				496.7	
2	6.648	6.648	0.000	54027511	500.0	511.3	
2	7.248	7.248	0.000	76105584	500.0	510.0	
2	7.645	7.645	0.000	75571069	500.0	510.0	
2	8.011	8.011	0.000	147285972	500.0	508.7	
2	8.515	8.515	0.000	110696168	500.0	506.1	
		Average of Peak Amounts =				509.2	
						RPD = 2.49	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_3262_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

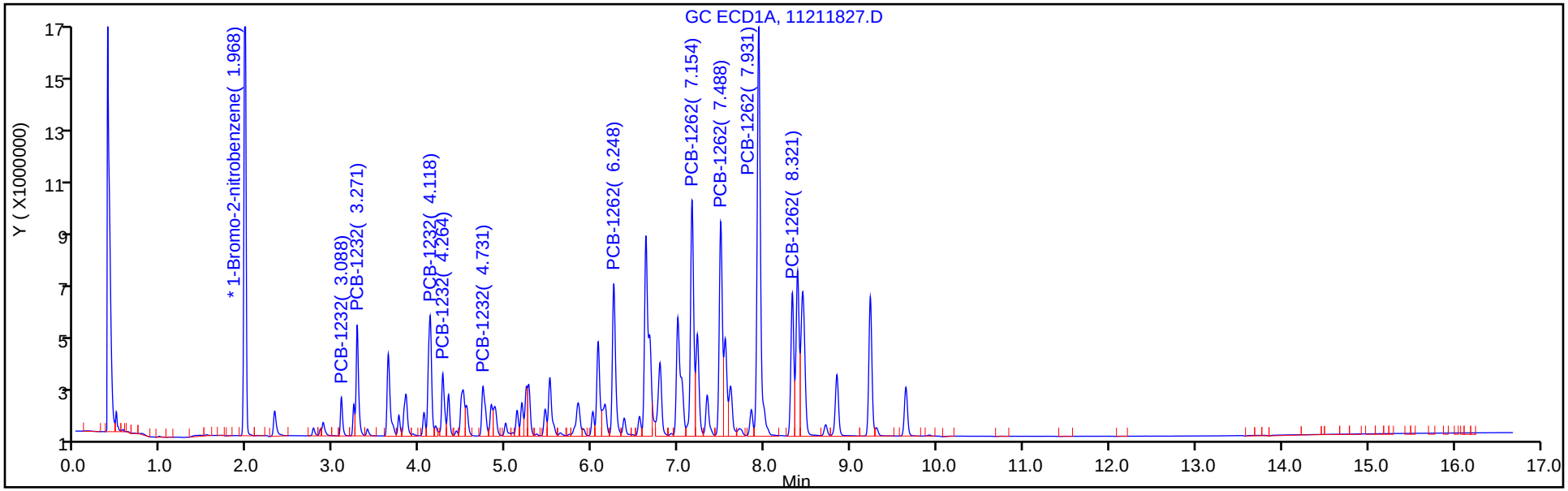
Report Date: 23-Nov-2018 11:02:54 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

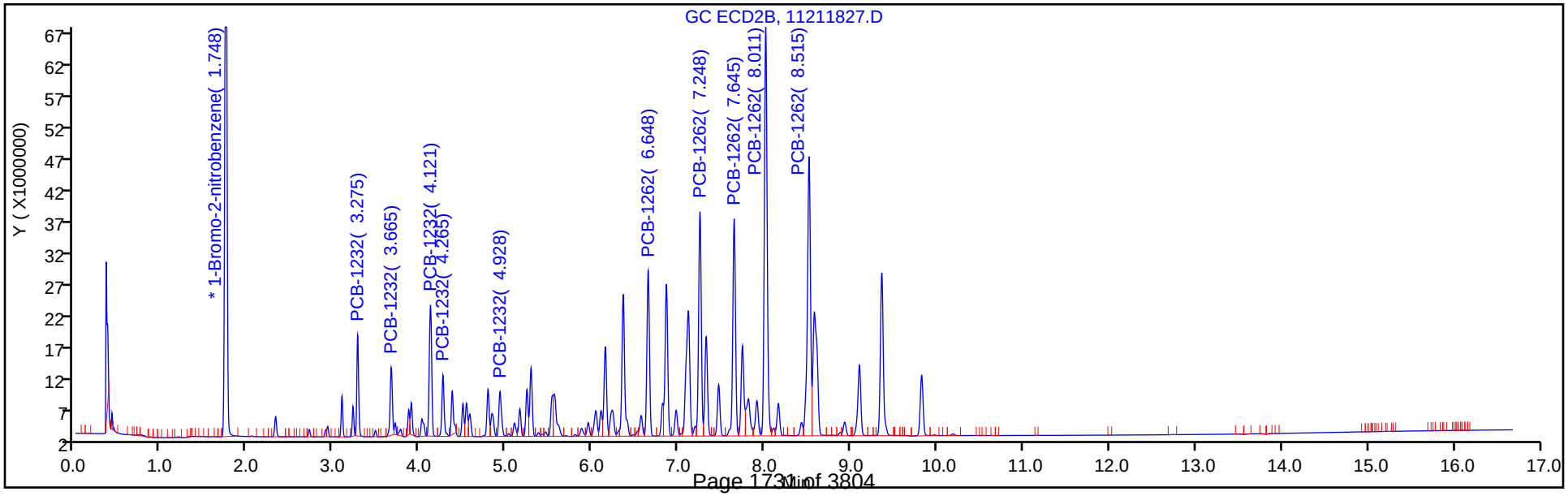
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211827.D

Injection Date:	21-Nov-2018 17:55:27	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL53262			Worklist Smp#:	27
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	27
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D
Lims ID: STDL43262
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 18:16:46 ALS Bottle#: 28 Worklist Smp#: 28
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL43262
Misc. Info.: 280-0076428-028
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:56 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:16:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	30965018	1000.0	1000.0	
2	1.747	1.748	-0.001	174717072	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	1392895	250.0	267.2	
1	3.270	3.271	-0.001	4511528	250.0	269.6	
1	4.117	4.118	-0.001	6315260	250.0	254.3	
1	4.263	4.264	-0.001	2916425	250.0	266.4	
1	4.730	4.731	-0.001	2893984	250.0	264.4	
		Average of Peak Amounts =				264.4	
2	3.277	3.275	0.002	12740193	250.0	272.9	
2	3.663	3.665	-0.002	10698875	250.0	269.7	
2	4.120	4.121	-0.001	21982243	250.0	268.7	
2	4.267	4.265	0.002	9641479	250.0	269.4	
2	4.927	4.928	-0.001	8096778	250.0	268.2	
		Average of Peak Amounts =				269.8	
						RPD = 2.02	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.250	6.248	0.002	7964853	250.0	264.1	
1	7.157	7.154	0.003	12307287	250.0	260.7	
1	7.490	7.488	0.002	10904443	250.0	261.3	
1	7.930	7.931	-0.001	21913797	250.0	254.9	
1	8.320	8.321	-0.001	6789639	250.0	257.5	
		Average of Peak Amounts =				259.7	
2	6.647	6.648	-0.001	28900783	250.0	270.2	
2	7.247	7.248	-0.001	40916207	250.0	271.0	
2	7.647	7.645	0.002	40467048	250.0	270.4	
2	8.010	8.011	-0.001	78867004	250.0	270.0	
2	8.513	8.515	-0.002	59822420	250.0	270.9	
		Average of Peak Amounts =				270.5	
						RPD = 4.07	
S 8 Polychlorinated biphenyls, Total							
1						524.1	
2						540.3	
						RPD = 3.04	

Reagents:

AR_3262_L4_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

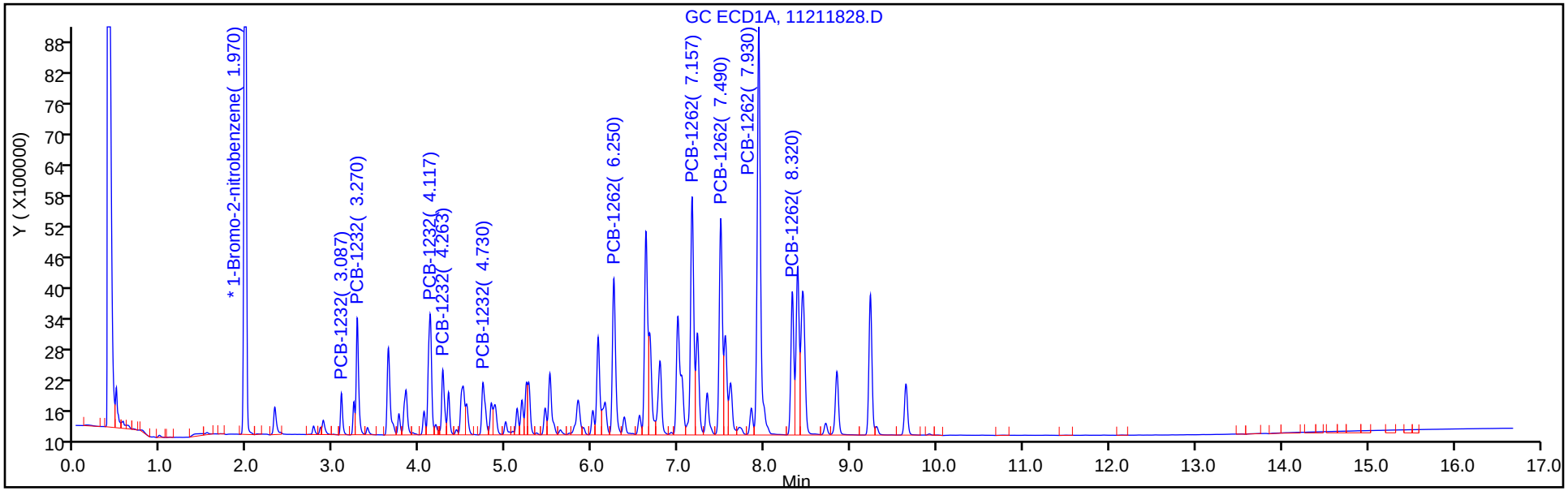
Report Date: 23-Nov-2018 11:02:57 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

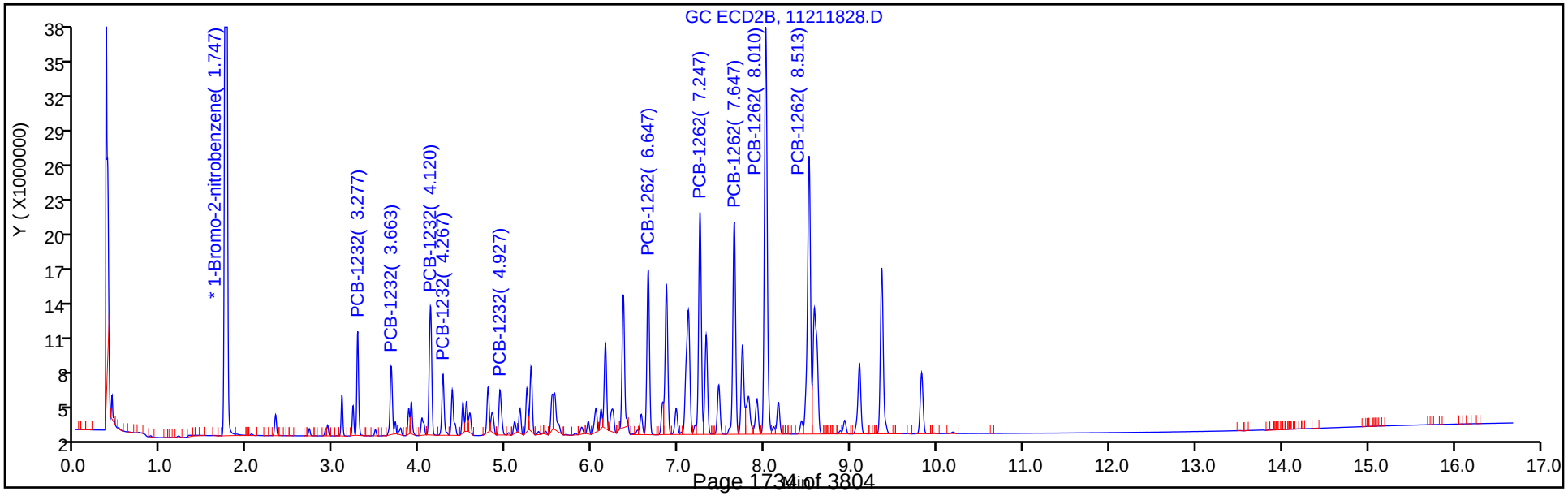
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211828.D

Injection Date:	21-Nov-2018 18:16:46	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL43262			Worklist Smp#:	28
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	28
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D
Lims ID: STDL33262
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 18:37:56 ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL33262
Misc. Info.: 280-0076428-029
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:02:58 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:22

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.968	0.004	31139299	1000.0	1000.0	
2	1.749	1.748	0.001	176067915	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	547298	100.0	99.2	
1	3.272	3.271	0.001	1856728	100.0	102.4	
1	4.116	4.118	-0.002	2458762	100.0	96.9	
1	4.262	4.264	-0.002	1164474	100.0	101.6	
1	4.729	4.731	-0.002	1125602	100.0	98.3	
		Average of Peak Amounts =				99.7	
2	3.276	3.275	0.001	5377655	100.0	104.5	
2	3.666	3.665	0.001	4662843	100.0	106.4	
2	4.122	4.121	0.001	9281019	100.0	103.5	
2	4.266	4.265	0.001	4103159	100.0	104.9	
2	4.926	4.928	-0.002	3526090	100.0	106.4	
		Average of Peak Amounts =				105.2	
						RPD = 5.33	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	3216578	100.0	100.2	
1	7.156	7.154	0.002	4907514	100.0	98.0	
1	7.489	7.488	0.001	4304645	100.0	97.7	
1	7.929	7.931	-0.002	8325389	100.0	94.0	
1	8.319	8.321	-0.002	2648440	100.0	96.9	
		Average of Peak Amounts =				97.4	
2	6.646	6.648	-0.002	12068360	100.0	102.5	
2	7.249	7.248	0.001	17019760	100.0	102.5	
2	7.646	7.645	0.001	16739062	100.0	102.3	
2	8.012	8.011	0.001	32344111	100.0	101.5	
2	8.512	8.515	-0.003	24623782	100.0	101.9	
		Average of Peak Amounts =				102.2	
						RPD = 4.81	
S 8 Polychlorinated biphenyls, Total							
1						197.1	
2						207.3	
						RPD = 5.07	

Reagents:

AR_3262_L3_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

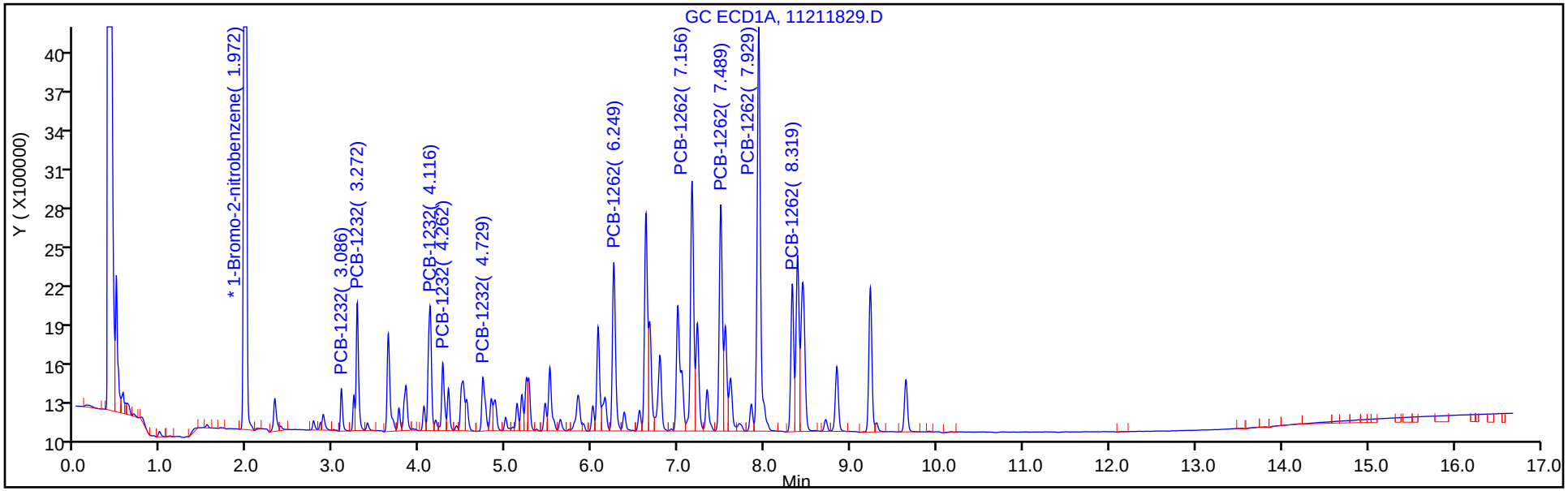
Report Date: 23-Nov-2018 11:03:00 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

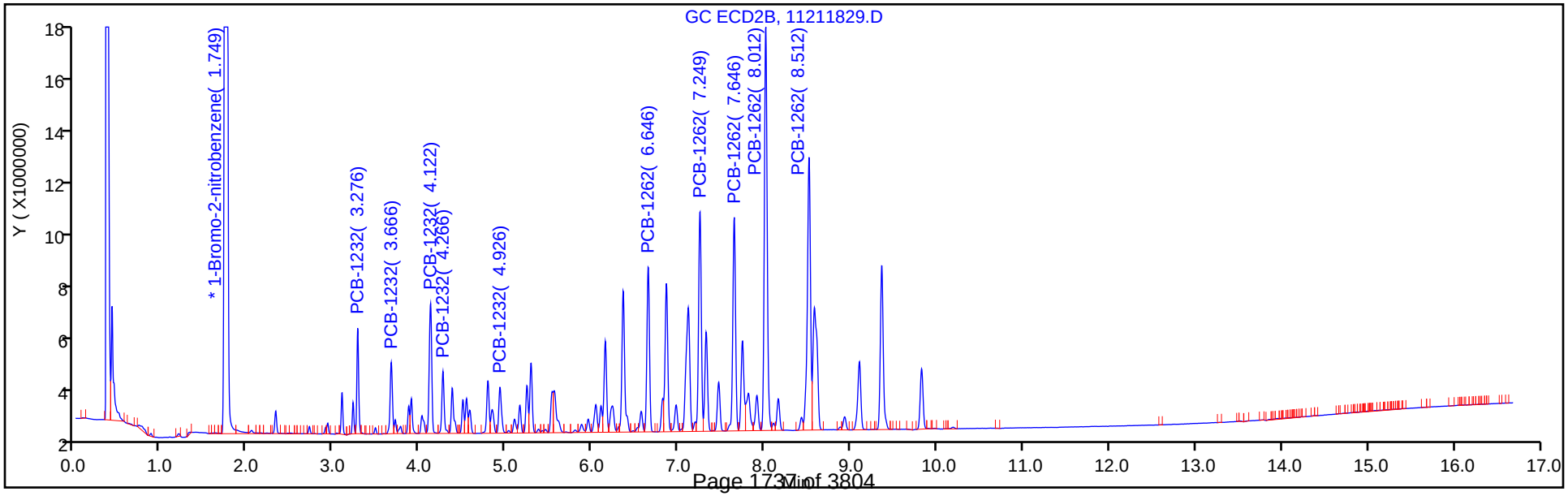
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211829.D

Injection Date:	21-Nov-2018 18:37:56	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL33262			Worklist Smp#:	29
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	29
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D
Lims ID: STDL23262
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 18:59:04 ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL23262
Misc. Info.: 280-0076428-030
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:02 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:25:46

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.968	0.000	30826448	1000.0	1000.0	
2	1.748	1.748	0.000	173971839	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.088	3.088	0.000	308483	50.0	52.8	
1	3.271	3.271	0.000	1020472	50.0	50.9	
1	4.118	4.118	0.000	1273955	50.0	49.6	
1	4.264	4.264	0.000	586726	50.0	48.4	
1	4.731	4.731	0.000	604692	50.0	50.4	
		Average of Peak Amounts =				50.4	
2	3.274	3.275	-0.001	3052064	50.0	52.8	
2	3.664	3.665	-0.001	2666828	50.0	54.0	
2	4.121	4.121	0.000	5327006	50.0	53.6	
2	4.264	4.265	-0.001	2327446	50.0	53.7	
2	4.928	4.928	0.000	1962103	50.0	52.6	
		Average of Peak Amounts =				53.4	
						RPD = 5.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.248	6.248	0.000	1742564	50.0	50.4	
1	7.154	7.154	0.000	2744291	50.0	51.5	
1	7.488	7.488	0.000	2379701	50.0	51.0	
1	7.928	7.931	-0.003	4573994	50.0	50.5	
1	8.318	8.321	-0.003	1421934	50.0	50.3	
		Average of Peak Amounts =				50.7	
2	6.648	6.648	0.000	6882439	50.0	52.4	
2	7.248	7.248	0.000	9662784	50.0	52.1	
2	7.644	7.645	-0.001	9459588	50.0	52.2	
2	8.011	8.011	0.000	18241846	50.0	51.9	
2	8.514	8.515	-0.001	13866078	50.0	51.7	
		Average of Peak Amounts =				52.1	
						RPD = 2.56	
S 8 Polychlorinated biphenyls, Total							
1						101.1	
2						105.4	
						RPD = 4.14	

Reagents:

AR_3262_L2_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

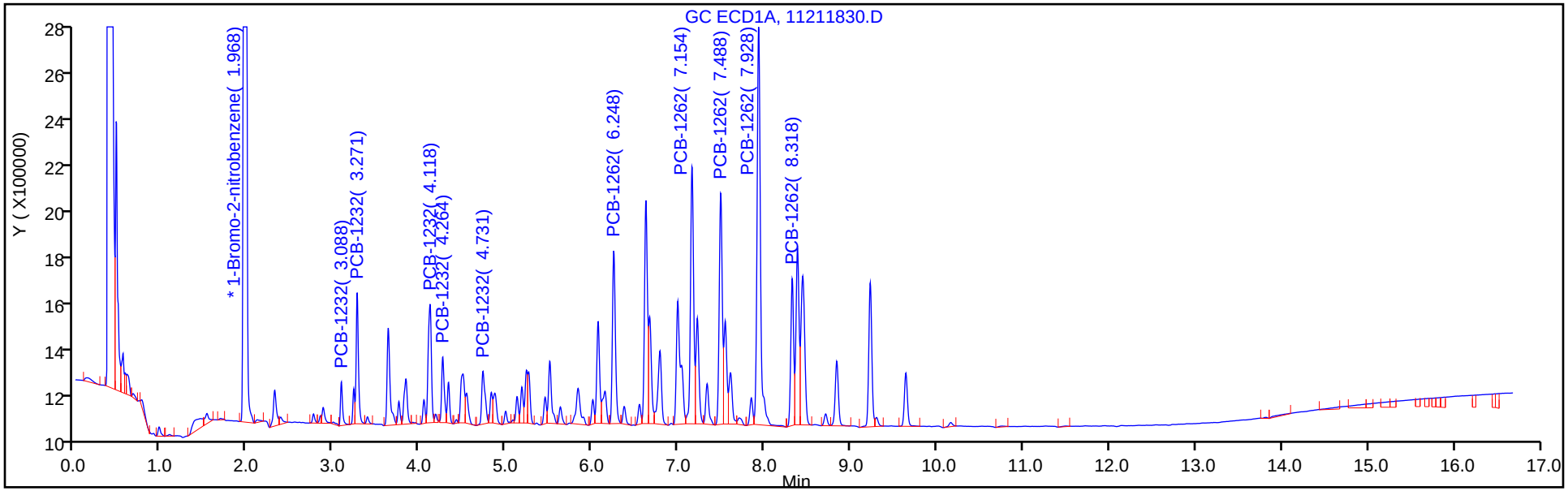
Report Date: 23-Nov-2018 11:03:03 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

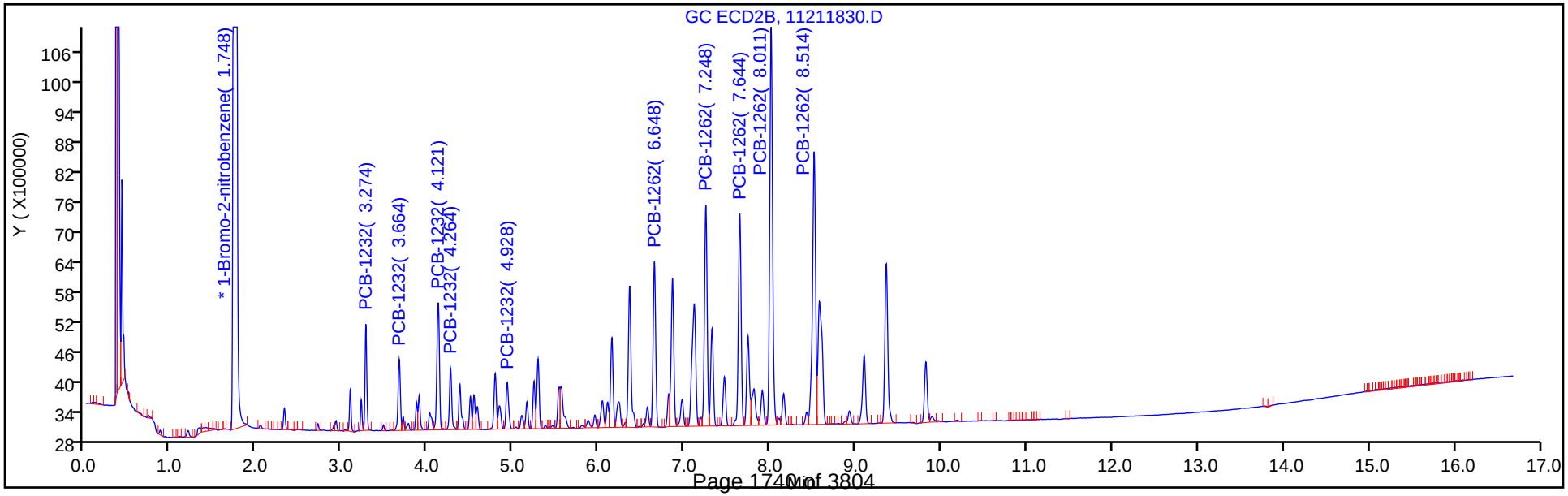
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211830.D

Injection Date:	21-Nov-2018 18:59:04	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL23262			Worklist Smp#:	30
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	30
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D
Lims ID: STDL13262
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 19:20:15 ALS Bottle#: 31 Worklist Smp#: 31
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL13262
Misc. Info.: 280-0076428-031
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub4

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:05 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:27:56

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.968	0.002	28837858	1000.0	1000.0	
2	1.747	1.748	-0.001	164029832	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.087	3.088	-0.001	145633	25.0	22.4	
1	3.270	3.271	-0.001	527466	25.0	22.1	
1	4.117	4.118	-0.001	639419	25.0	25.5	
1	4.263	4.264	-0.001	305449	25.0	23.9	
1	4.730	4.731	-0.001	299569	25.0	23.6	
		Average of Peak Amounts =				23.5	
2	3.277	3.275	0.002	1549784	25.0	20.6	
2	3.667	3.665	0.002	1327362	25.0	20.0	
2	4.120	4.121	-0.001	2630983	25.0	20.7	
2	4.267	4.265	0.002	1136029	25.0	20.4	
2	4.927	4.928	-0.001	991404	25.0	20.5	
		Average of Peak Amounts =				20.4	
						RPD = 13.91	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.247	6.248	-0.001	898312	25.0	23.4	
1	7.157	7.154	0.003	1380613	25.0	23.6	
1	7.490	7.488	0.002	1209897	25.0	24.1	
1	7.930	7.931	-0.001	2313295	25.0	25.6	
1	8.320	8.321	-0.001	722269	25.0	25.0	
		Average of Peak Amounts =				24.3	
2	6.647	6.648	-0.001	3536624	25.0	21.2	
2	7.250	7.248	0.002	4988537	25.0	21.3	
2	7.647	7.645	0.002	4810570	25.0	21.4	
2	8.010	8.011	-0.001	9332035	25.0	21.7	
2	8.513	8.515	-0.002	7179707	25.0	21.7	
		Average of Peak Amounts =				21.5	
						RPD = 12.52	
S 8 Polychlorinated biphenyls, Total							
1						47.8	
2						41.9	
						RPD = 13.20	

Reagents:

AR_3262_L1_00022	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

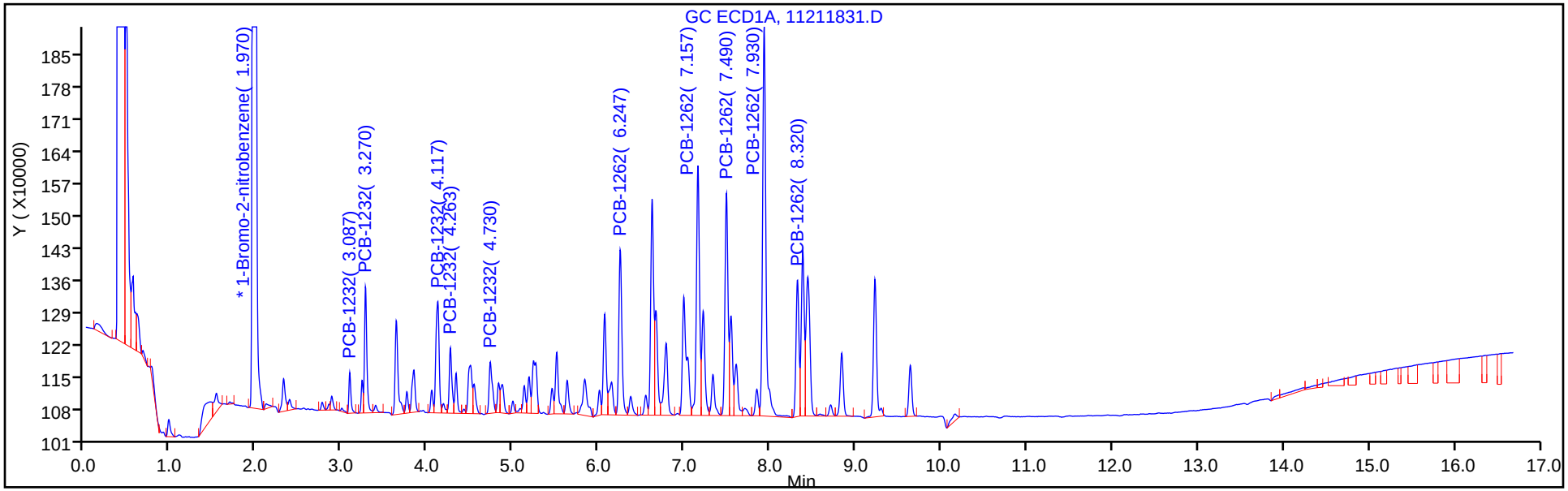
Report Date: 23-Nov-2018 11:03:07 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

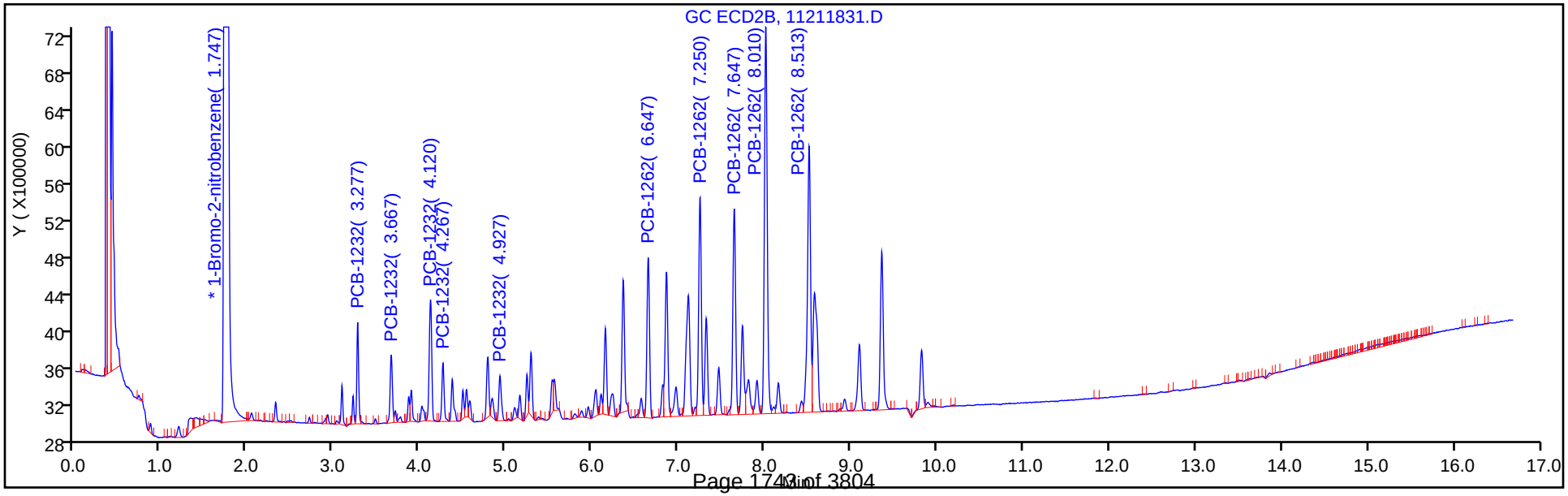
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211831.D

Injection Date:	21-Nov-2018 19:20:15	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL13262			Worklist Smp#:	31
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	31
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	1.1005 0.7826	0.9842 0.7518	0.9316	0.8484	0.7941	Lin1	10.854	0.7633							0.9990		0.9900
PCB-1242 Peak 2	1.5351 1.4359	1.4435 1.3946	1.4192	1.3986	1.3859	Lin1	2.6035	1.4013							1.0000		0.9900
PCB-1242 Peak 3	0.7458 0.6049	0.6733 0.5795	0.6658	0.6259	0.5875	Lin1	4.8264	0.5864							0.9990		0.9900
PCB-1242 Peak 4	0.5373 0.4151	0.4846 0.3856	0.4813	0.4405	0.4151	Lin1	4.6644	0.3992							0.9980		0.9900
PCB-1242 Peak 5	0.6137 0.5483	0.5247 0.5411	0.5407	0.5157	0.5074	Lin1	0.7978	0.5327							0.9990		0.9900
PCB-1268 Peak 1	3.5642 2.9823	3.0682 2.7748	2.9905	2.8187	2.7519	Lin1	16.238	2.8112							0.9980		0.9900
PCB-1268 Peak 2	3.1918 2.9518	3.0270 2.8076	3.0783	2.8955	2.8596	Lin1	10.417	2.8565							0.9990		0.9900
PCB-1268 Peak 3	2.7905 2.3929	2.5131 2.2614	2.5155	2.3054	2.2736	Lin1	13.091	2.2896							0.9990		0.9900
PCB-1268 Peak 4	1.1823 0.9884	1.0224 0.9333	1.2421	0.9577	0.9386	Lin1	8.1973	0.9461							0.9960		0.9900
PCB-1268 Peak 5	8.0817 7.1359	7.2815 6.6759	7.5820	6.9414	6.8481	Lin1	35.077	6.8284							0.9990		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP1 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Lin1	826846 18033958	1591803 23666995	2785673	6934698	12621153	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 2	BNB	Lin1	1153326 33088198	2334811 43906093	4243819	11431468	22028422	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 3	BNB	Lin1	560286 13939481	1089072 18245316	1990794	5115672	9337377	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 4	BNB	Lin1	403656 9565455	783867 12139444	1439135	3600286	6598400	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 5	BNB	Lin1	461108 12635374	848605 17036171	1616814	4215035	8065513	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 1	BNB	Lin1	2677797 68720772	4962556 87356816	8942275	23038908	43739892	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 2	BNB	Lin1	2398046 68019827	4896006 88389199	9204821	23666972	45452498	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 3	BNB	Lin1	2096540 55139677	4064693 71195019	7521874	18843418	36138239	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 4	BNB	Lin1	888286 22774873	1653587 29381338	3714053	7827884	14918235	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 5	BNB	Lin1	6071834 164433426	11777400 210173125	22672079	56736910	108847285	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D
Lims ID: STDL74268
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 19:41:25 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL74268
Misc. Info.: 280-0076428-032
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:08 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.968	0.001	31482365	1000.0	1000.0	
2	1.749	1.748	0.001	176421211	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.632	3.631	0.001	23666995	1000.0	970.7	
1	4.116	4.117	-0.001	43906093	1000.0	993.4	
1	4.262	4.264	-0.002	18245316	1000.0	980.1	
1	5.239	5.237	0.002	12139444	1000.0	954.3	
1	5.259	5.261	-0.002	17036171	1000.0	1014.3	
		Average of Peak Amounts =				982.6	
2	3.666	3.664	0.002	58050740	1000.0	958.5	
2	4.122	4.121	0.001	129222617	1000.0	962.4	
2	4.266	4.264	0.002	55919168	1000.0	961.9	
2	4.789	4.788	0.001	44752744	1000.0	955.6	
2	4.926	4.928	-0.002	54422086	1000.0	963.6	
		Average of Peak Amounts =				960.4	
						RPD = 2.28	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.382	8.381	0.001	87356816	1000.0	981.3	
1	8.432	8.434	-0.002	88389199	1000.0	979.2	
1	8.709	8.707	0.002	71195019	1000.0	982.0	
1	9.226	9.224	0.002	29381338	1000.0	977.8	
1	9.639	9.637	0.002	210173125	1000.0	972.5	
		Average of Peak Amounts =				978.6	
2	8.512	8.511	0.001	304523679	1000.0	954.1	
2	8.576	8.574	0.002	292646780	1000.0	964.9	
2	8.929	8.928	0.001	252817304	1000.0	959.6	
2	9.359	9.358	0.001	119674966	1000.0	955.3	
2	9.819	9.821	-0.002	772165320	1000.0	960.8	
		Average of Peak Amounts =				959.0	
						RPD = 2.02	
S 8 Polychlorinated biphenyls, Total							
1						1961.1	
2						1919.4	
						RPD = 2.15	

Reagents:

AR_4268_L7_00016	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

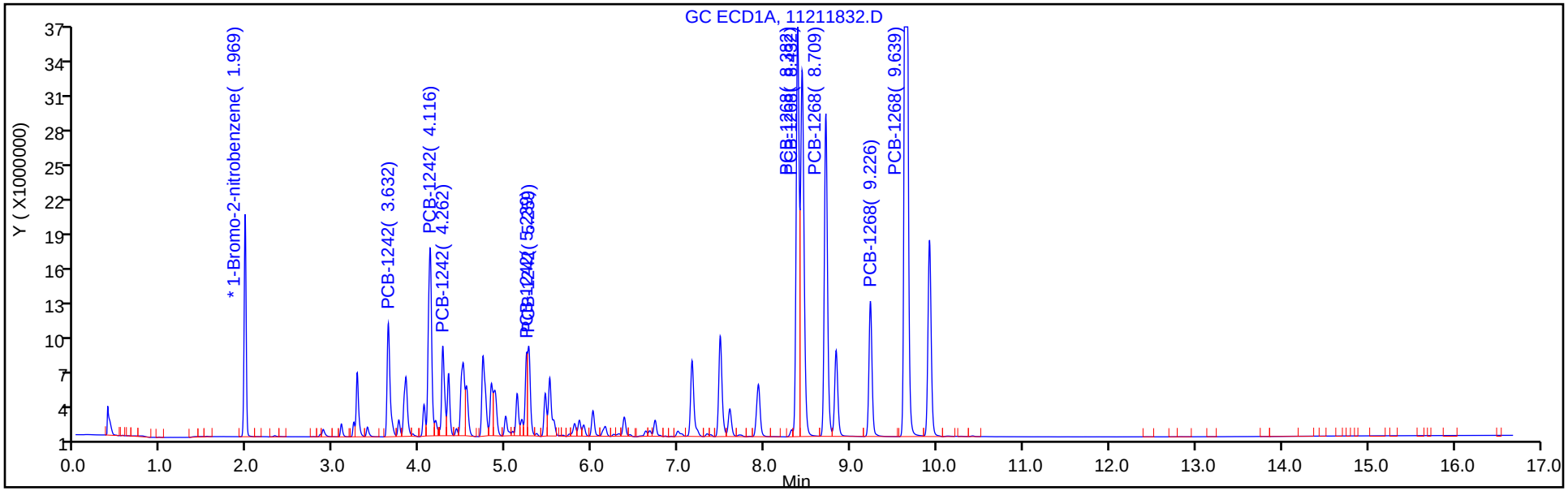
Report Date: 23-Nov-2018 11:03:09 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

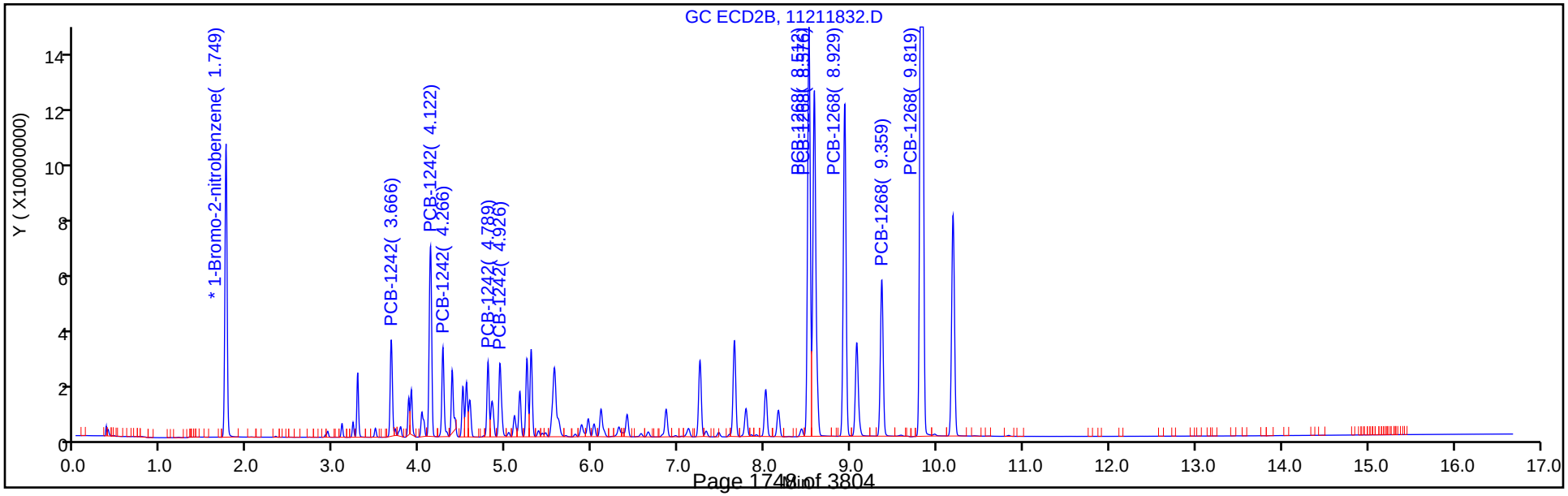
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D

Injection Date:	21-Nov-2018 19:41:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL74268			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D
Lims ID: STDL64268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 20:02:35 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL64268
Misc. Info.: 280-0076428-033
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:11 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:33:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.968	-0.002	30724311	1000.0	1000.0	
2	1.747	1.748	-0.001	172295175	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	18033958	750.0	754.8	
1	4.116	4.117	-0.001	33088198	750.0	766.7	
1	4.263	4.264	-0.001	13939481	750.0	765.5	
1	5.236	5.237	-0.001	9565455	750.0	768.3	
1	5.260	5.261	-0.001	12635374	750.0	770.5	
		Average of Peak Amounts =				765.1	
2	3.663	3.664	-0.001	44959096	750.0	756.3	
2	4.120	4.121	-0.001	100690473	750.0	764.9	
2	4.263	4.264	-0.001	43601831	750.0	764.9	
2	4.790	4.788	0.002	35305208	750.0	766.5	
2	4.927	4.928	-0.001	42582862	750.0	769.0	
		Average of Peak Amounts =				764.3	
						RPD = 0.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	68720772	750.0	789.9	
1	8.433	8.434	-0.001	68019827	750.0	771.4	
1	8.710	8.707	0.003	55139677	750.0	778.1	
1	9.226	9.224	0.002	22774873	750.0	774.9	
1	9.640	9.637	0.003	164433426	750.0	778.6	
		Average of Peak Amounts =				778.6	
2	8.513	8.511	0.002	242643975	750.0	775.8	
2	8.573	8.574	-0.001	229976284	750.0	773.9	
2	8.927	8.928	-0.001	200377742	750.0	776.3	
2	9.357	9.358	-0.001	95407700	750.0	777.4	
2	9.820	9.821	-0.001	610063306	750.0	774.7	
		Average of Peak Amounts =				775.6	
						RPD = 0.38	
S 8 Polychlorinated biphenyls, Total							
1						1543.7	
2						1540.0	
						RPD = 0.24	

Reagents:

AR_4268_L6_00018	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

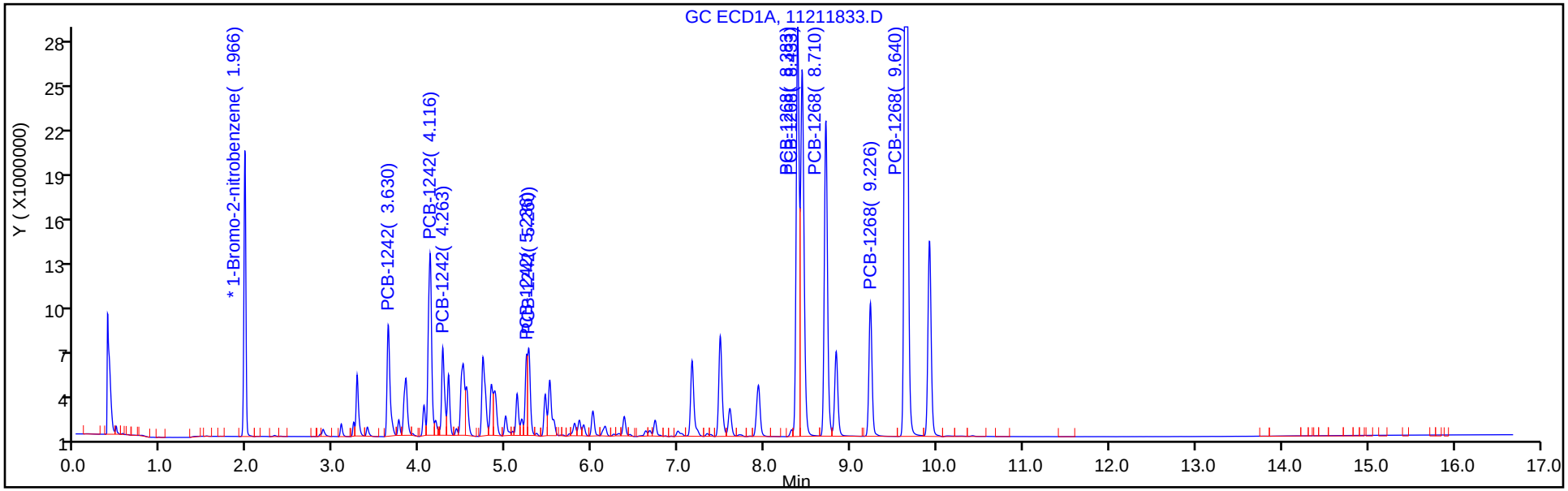
Report Date: 23-Nov-2018 11:03:12 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

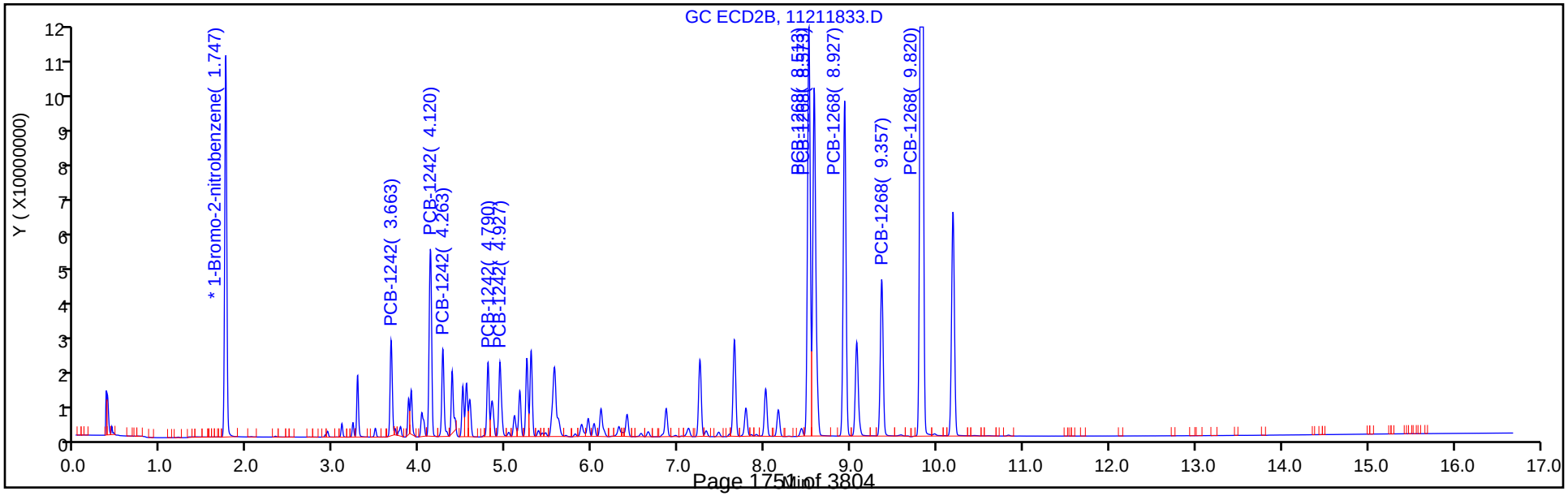
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D

Injection Date:	21-Nov-2018 20:02:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL64268			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D
Lims ID: STDL54268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 20:23:44 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL54268
Misc. Info.: 280-0076428-034
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:31:36

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	31789266	1000.0	1000.0	
2	1.744	1.744	0.000	178179597	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	12621153	500.0	505.9	
1	4.117	4.117	0.000	22028422	500.0	492.7	
1	4.264	4.264	0.000	9337377	500.0	492.7	
1	5.237	5.237	0.000	6598400	500.0	508.3	
1	5.261	5.261	0.000	8065513	500.0	474.8	
		Average of Peak Amounts =				494.9	
2	3.664	3.664	0.000	32047030	500.0	515.5	
2	4.121	4.121	0.000	69892795	500.0	508.6	
2	4.264	4.264	0.000	30223208	500.0	507.7	
2	4.788	4.788	0.000	24589768	500.0	507.1	
2	4.928	4.928	0.000	29090693	500.0	502.9	
		Average of Peak Amounts =				508.4	
						RPD = 2.69	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	43739892	500.0	483.7	
1	8.434	8.434	0.000	45452498	500.0	496.9	
1	8.707	8.707	0.000	36138239	500.0	490.8	
1	9.224	9.224	0.000	14918235	500.0	487.4	
1	9.637	9.637	0.000	108847285	500.0	496.3	
		Average of Peak Amounts =				491.0	
2	8.511	8.511	0.000	164790872	500.0	504.5	
2	8.574	8.574	0.000	154491173	500.0	498.2	
2	8.928	8.928	0.000	134857881	500.0	500.7	
2	9.358	9.358	0.000	64325885	500.0	502.2	
2	9.821	9.821	0.000	410787422	500.0	499.6	
		Average of Peak Amounts =				501.0	
						RPD = 2.02	

Reagents:

AR_4268_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

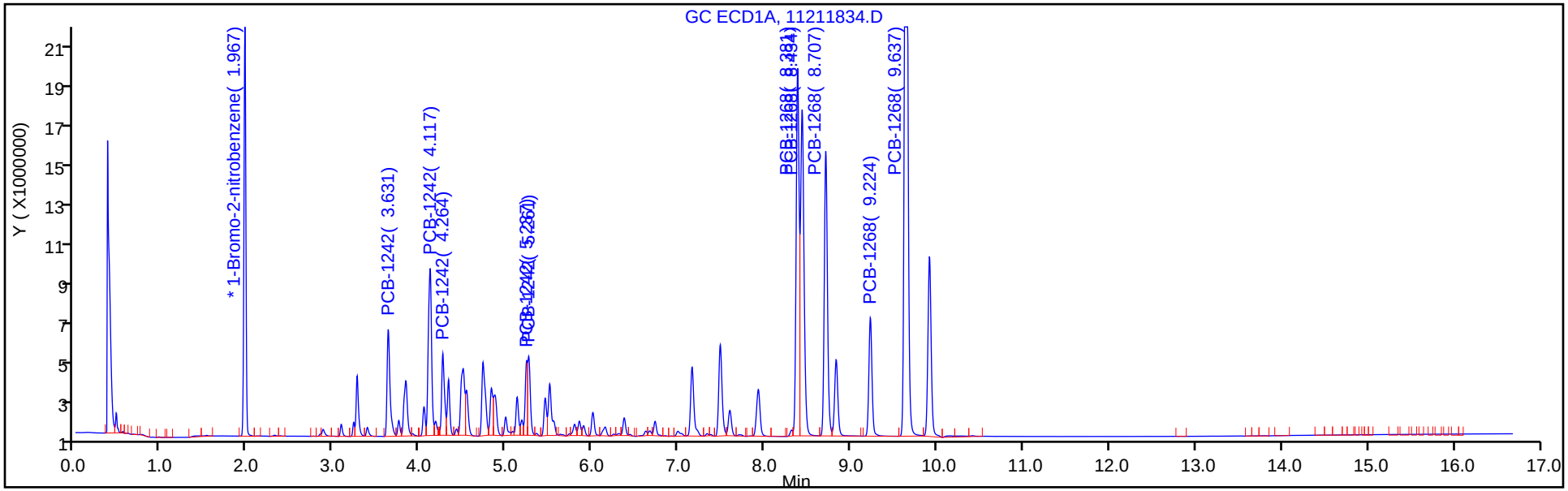
Report Date: 23-Nov-2018 11:03:15 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

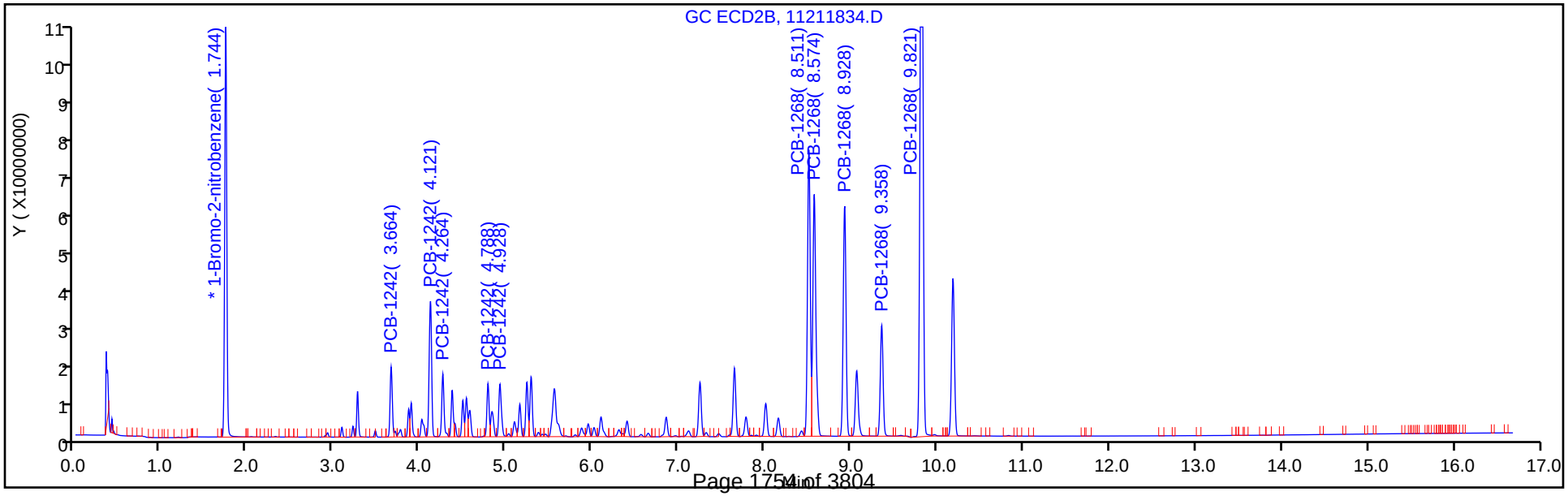
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D

Injection Date:	21-Nov-2018 20:23:44	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL54268			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D
Lims ID: STDL44268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 20:44:55 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL44268
Misc. Info.: 280-0076428-035
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32694800	1000.0	1000.0	
2	1.745	1.744	0.001	183441113	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	6934698	250.0	263.7	
1	4.118	4.117	0.001	11431468	250.0	247.7	
1	4.265	4.264	0.001	5115672	250.0	258.6	
1	5.238	5.237	0.001	3600286	250.0	264.2	
1	5.261	5.261	0.000	4215035	250.0	240.5	
		Average of Peak Amounts =				254.9	
2	3.665	3.664	0.001	17497734	250.0	264.7	
2	4.121	4.121	0.000	37814505	250.0	260.3	
2	4.265	4.264	0.001	16456921	250.0	261.4	
2	4.788	4.788	0.000	13877871	250.0	265.3	
2	4.928	4.928	0.000	15905764	250.0	260.0	
		Average of Peak Amounts =				262.4	
						RPD = 2.87	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	23038908	250.0	244.9	
1	8.434	8.434	0.000	23666972	250.0	249.8	
1	8.708	8.707	0.001	18843418	250.0	246.0	
1	9.224	9.224	0.000	7827884	250.0	244.4	
1	9.638	9.637	0.001	56736910	250.0	249.0	
		Average of Peak Amounts =				246.8	
2	8.511	8.511	0.000	89874672	250.0	260.4	
2	8.575	8.574	0.001	84348061	250.0	258.1	
2	8.928	8.928	0.000	73465781	250.0	258.8	
2	9.358	9.358	0.000	35091487	250.0	259.9	
2	9.821	9.821	0.000	224575190	250.0	258.9	
		Average of Peak Amounts =				259.2	
						RPD = 4.90	
S 8 Polychlorinated biphenyls, Total							
1						501.7	
2						521.6	
						RPD = 3.88	

Reagents:

AR_4268_L4_00023	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

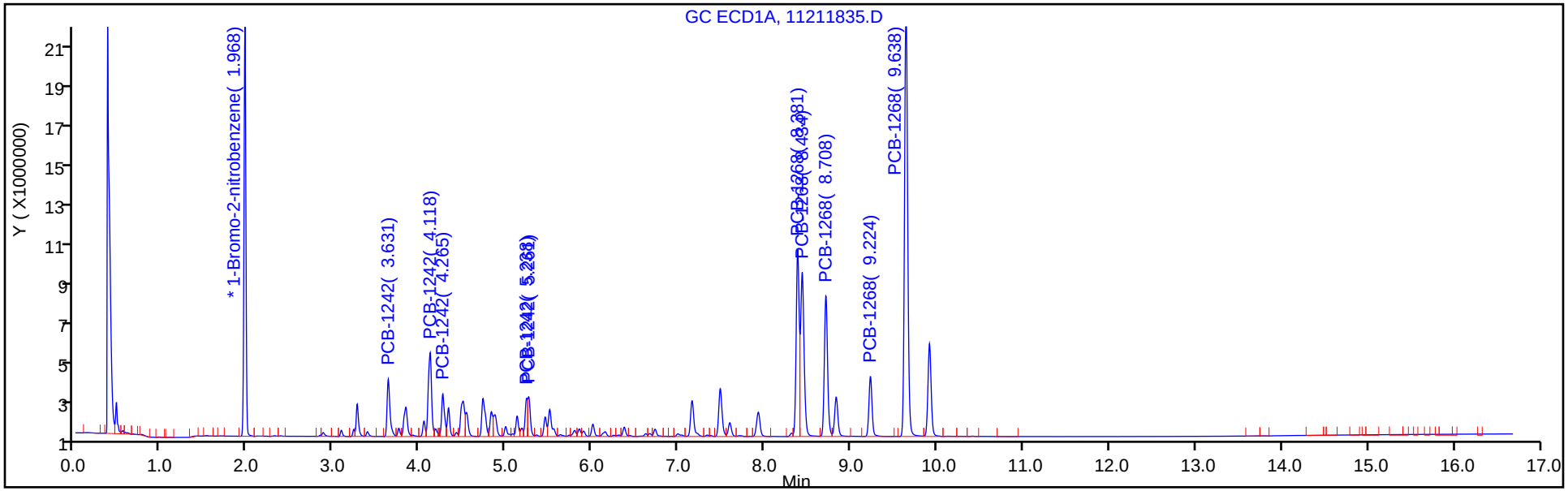
Report Date: 23-Nov-2018 11:03:18 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

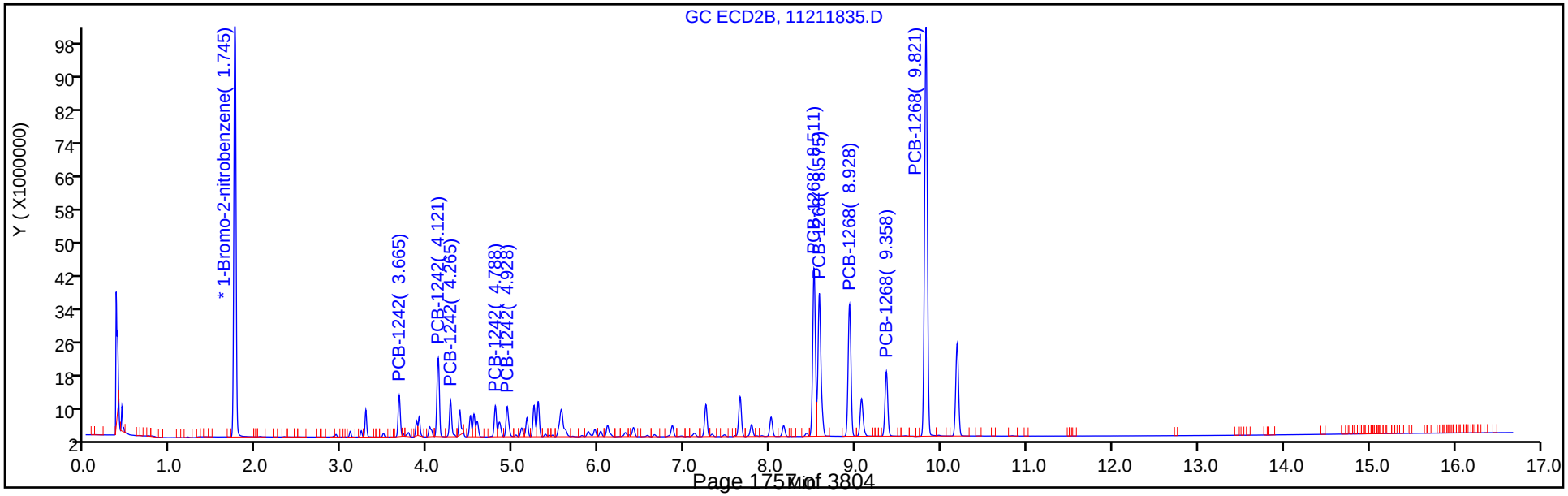
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D

Injection Date:	21-Nov-2018 20:44:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL44268			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D
Lims ID: STDL34268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 21:06:06 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL34268
Misc. Info.: 280-0076428-036
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:21 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	29902517	1000.0	1000.0	
2	1.744	1.744	0.000	169052125	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	2785673	100.0	107.8	
1	4.117	4.117	0.000	4243819	100.0	99.4	
1	4.264	4.264	0.000	1990794	100.0	105.3	
1	5.237	5.237	0.000	1439135	100.0	108.9	
1	5.261	5.261	0.000	1616814	100.0	100.0	
		Average of Peak Amounts =				104.3	
2	3.664	3.664	0.000	7236657	100.0	108.6	
2	4.121	4.121	0.000	15341647	100.0	106.4	
2	4.264	4.264	0.000	6684107	100.0	106.7	
2	4.788	4.788	0.000	5937221	100.0	108.2	
2	4.928	4.928	0.000	6462864	100.0	106.2	
		Average of Peak Amounts =				107.2	
						RPD = 2.78	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	8942275	100.0	100.6	
1	8.434	8.434	0.000	9204821	100.0	104.1	
1	8.707	8.707	0.000	7521874	100.0	104.1	
1	9.224	9.224	0.000	3714053	100.0	122.6	
1	9.641	9.637	0.004	22672079	100.0	105.9	
		Average of Peak Amounts =				107.5	
2	8.511	8.511	0.000	37039039	100.0	108.4	
2	8.574	8.574	0.000	34510186	100.0	107.4	
2	8.928	8.928	0.000	29936037	100.0	107.2	
2	9.358	9.358	0.000	14362338	100.0	108.0	
2	9.821	9.821	0.000	93152179	100.0	109.0	
		Average of Peak Amounts =				108.0	
						RPD = 0.49	
S 8 Polychlorinated biphenyls, Total							
1						211.8	
2						215.2	
						RPD = 1.62	

Reagents:

AR_4268_L3_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

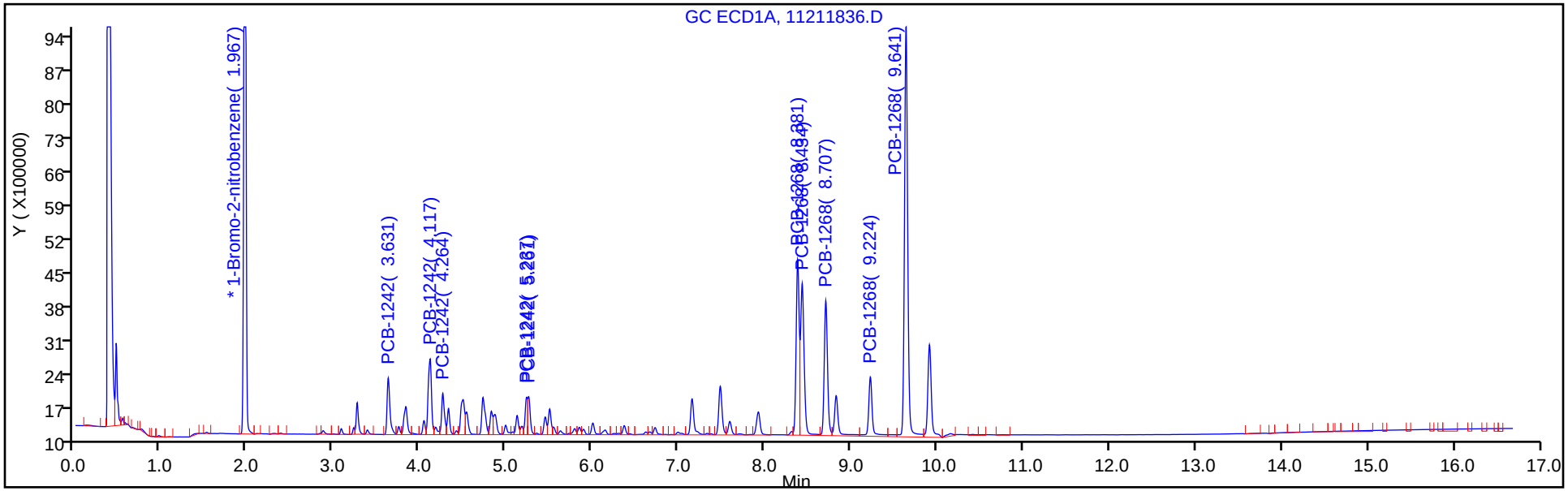
Report Date: 23-Nov-2018 11:03:21 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

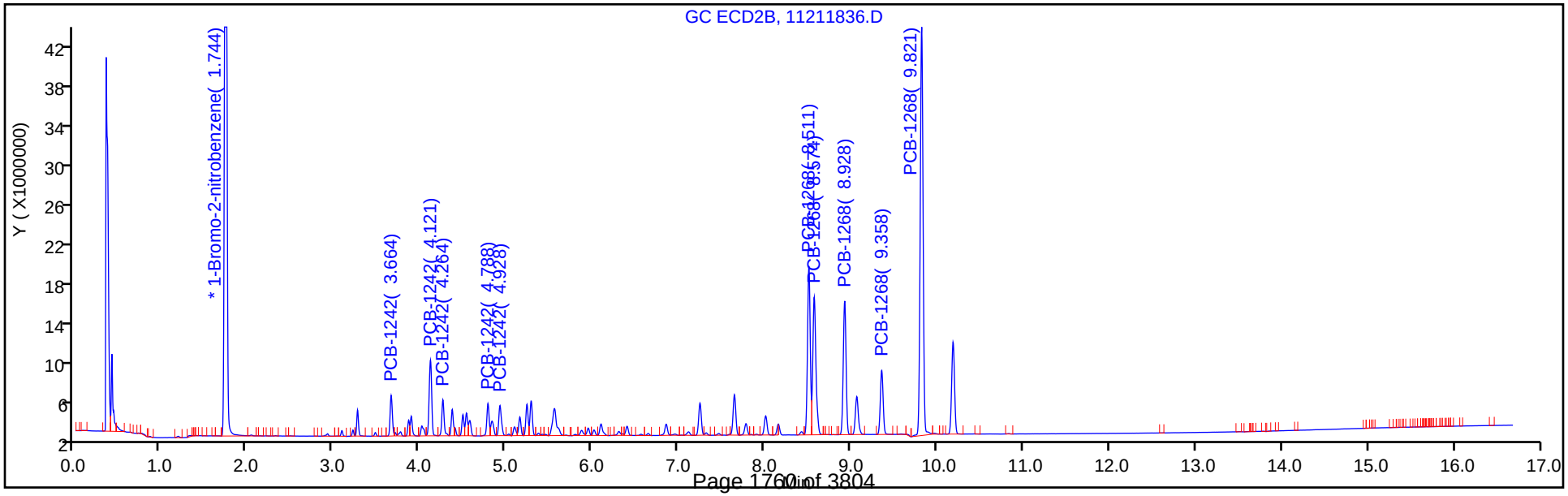
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D

Injection Date:	21-Nov-2018 21:06:06	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL34268			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D
Lims ID: STDL24268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 21:27:18 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL24268
Misc. Info.: 280-0076428-037
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:23 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32348608	1000.0	1000.0	
2	1.745	1.744	0.001	181848580	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	1591803	50.0	50.2	
1	4.118	4.117	0.001	2334811	50.0	49.6	
1	4.264	4.264	0.000	1089072	50.0	49.2	
1	5.234	5.237	-0.003	783867	50.0	49.0	
1	5.261	5.261	0.000	848605	50.0	47.7	
		Average of Peak Amounts =				49.2	
2	3.665	3.664	0.001	4196303	50.0	50.0	
2	4.121	4.121	0.000	8787056	50.0	49.8	
2	4.265	4.264	0.001	3857429	50.0	50.2	
2	4.788	4.788	0.000	3715663	50.0	51.2	
2	4.928	4.928	0.000	3803015	50.0	51.3	
		Average of Peak Amounts =				50.5	
						RPD = 2.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	4962556	50.0	48.8	
1	8.434	8.434	0.000	4896006	50.0	49.3	
1	8.708	8.707	0.001	4064693	50.0	49.2	
1	9.224	9.224	0.000	1653587	50.0	45.4	
1	9.638	9.637	0.001	11777400	50.0	48.2	
		Average of Peak Amounts =				48.2	
2	8.511	8.511	0.000	20840173	50.0	49.8	
2	8.575	8.574	0.001	19449827	50.0	50.1	
2	8.928	8.928	0.000	16824081	50.0	49.8	
2	9.358	9.358	0.000	8076058	50.0	50.1	
2	9.821	9.821	0.000	51994829	50.0	50.0	
		Average of Peak Amounts =				50.0	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						97.3	
2						100.5	
						RPD = 3.17	

Reagents:

AR_4268_L2_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

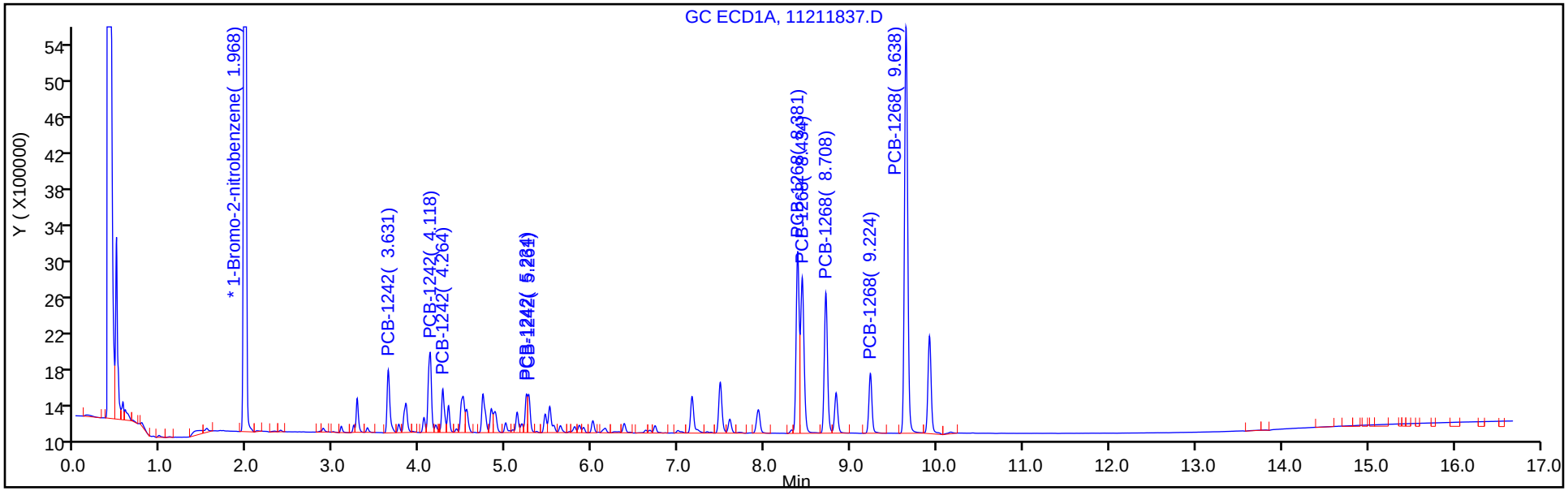
Report Date: 23-Nov-2018 11:03:24 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

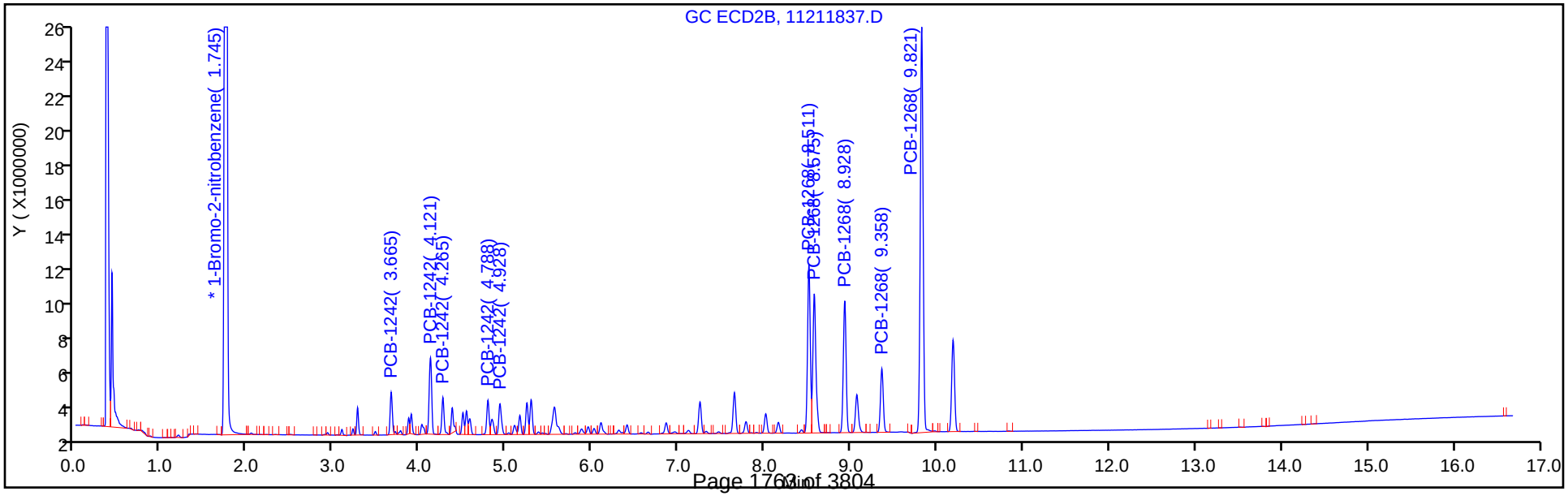
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D

Injection Date:	21-Nov-2018 21:27:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL24268			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D
Lims ID: STDL14268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 21:48:29 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL14268
Misc. Info.: 280-0076428-038
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:28 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:35:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30052215	1000.0	1000.0	
2	1.747	1.744	0.003	169482834	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	826846	25.0	21.8	
1	4.117	4.117	0.000	1153326	25.0	25.5	
1	4.263	4.264	-0.001	560286	25.0	23.6	
1	5.237	5.237	0.000	403656	25.0	22.0	
1	5.260	5.261	-0.001	461108	25.0	27.3	
		Average of Peak Amounts =				24.0	
2	3.663	3.664	-0.001	2277242	25.0	21.4	
2	4.120	4.121	-0.001	4714790	25.0	22.5	
2	4.267	4.264	0.003	2052043	25.0	22.1	
2	4.787	4.788	-0.001	2142202	25.0	21.0	
2	4.927	4.928	-0.001	1976394	25.0	21.9	
		Average of Peak Amounts =				21.8	
						RPD = 9.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.380	8.381	-0.001	2677797	25.0	25.9	
1	8.433	8.434	-0.001	2398046	25.0	24.3	
1	8.707	8.707	0.000	2096540	25.0	24.8	
1	9.223	9.224	-0.001	888286	25.0	22.6	
1	9.640	9.637	0.003	6071834	25.0	24.5	
		Average of Peak Amounts =				24.4	
2	8.510	8.511	-0.001	11047301	25.0	22.0	
2	8.573	8.574	-0.001	10180170	25.0	22.5	
2	8.927	8.928	-0.001	8862587	25.0	22.5	
2	9.357	9.358	-0.001	4193339	25.0	22.0	
2	9.820	9.821	-0.001	27200635	25.0	22.0	
		Average of Peak Amounts =				22.2	
						RPD = 9.35	
S 8 Polychlorinated biphenyls, Total							
1						48.4	
2						44.0	
						RPD = 9.57	

Reagents:

AR_4268_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

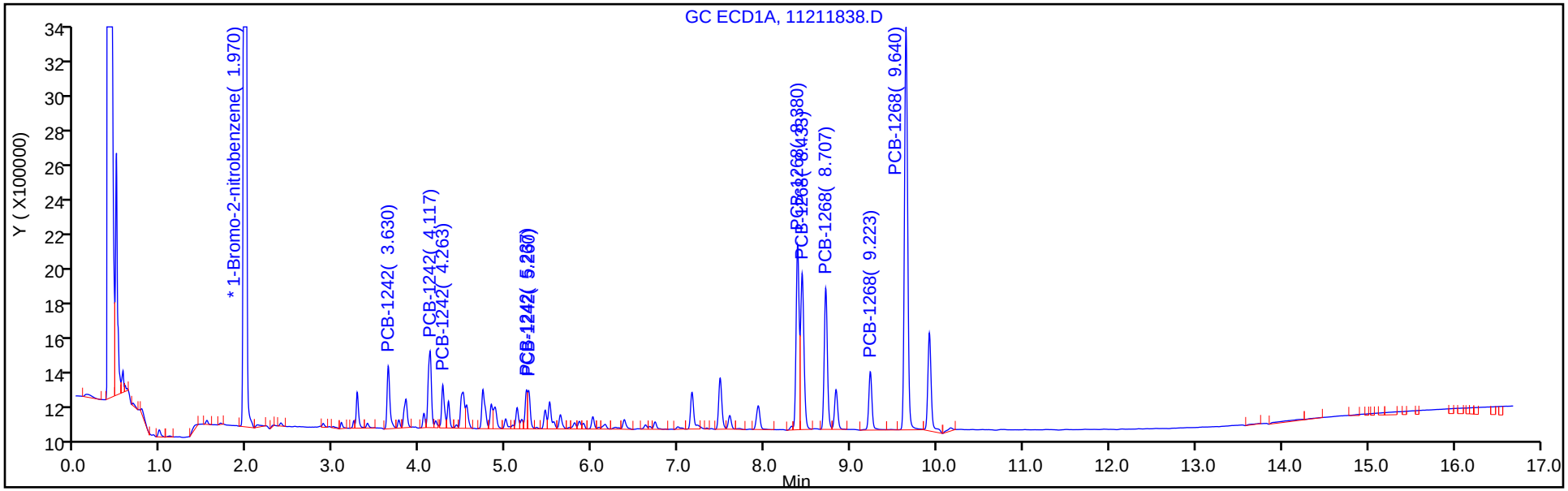
Report Date: 23-Nov-2018 11:03:29 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

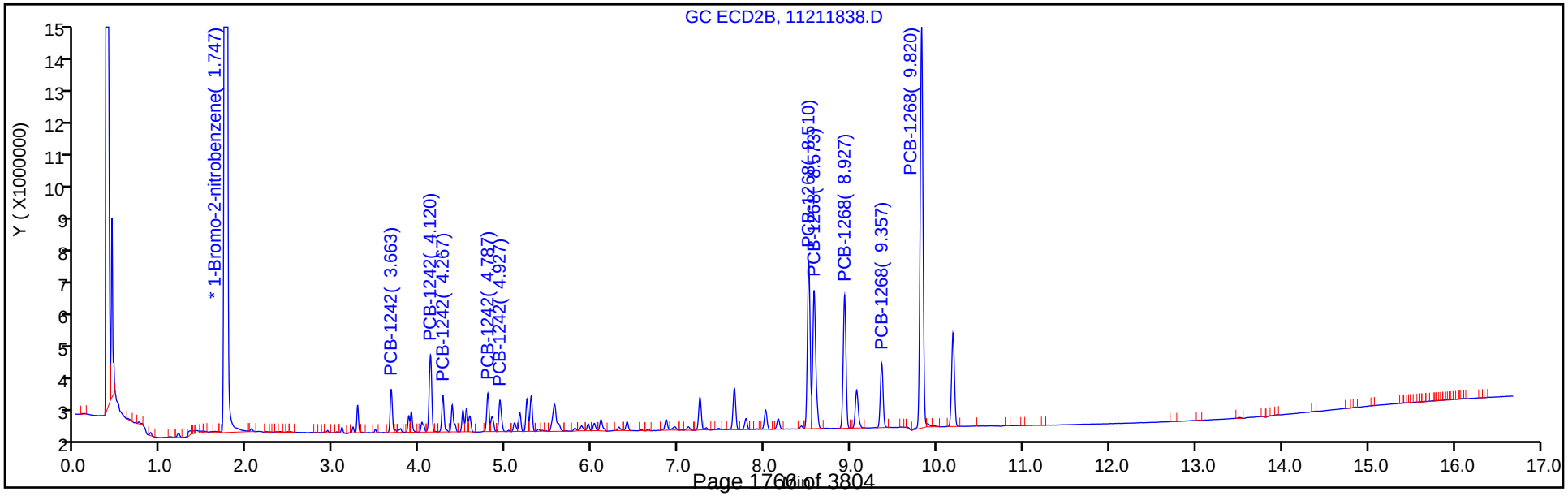
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Injection Date:	21-Nov-2018 21:48:29	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL14268			Worklist Smp#:	38
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34395

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
PCB-1242 Peak 1	0.5375 0.3479	0.4615 0.3290	0.4281	0.3815	0.3597	Lin1	6.2242	0.3368							0.9980		0.9900
PCB-1242 Peak 2	1.1127 0.7792	0.9664 0.7325	0.9075	0.8246	0.7845	Lin1	10.977	0.7497							0.9990		0.9900
PCB-1242 Peak 3	0.4843 0.3374	0.4242 0.3170	0.3954	0.3588	0.3392	Lin1	4.9231	0.3244							0.9980		0.9900
PCB-1242 Peak 4	0.5056 0.2732	0.4087 0.2537	0.3512	0.3026	0.2760	Lin1	7.2210	0.2579							0.9980		0.9900
PCB-1242 Peak 5	0.4665 0.3295	0.4183 0.3085	0.3823	0.3468	0.3265	Lin1	4.7486	0.3152							0.9990		0.9900
PCB-1268 Peak 1	2.6073 1.8777	2.2920 1.7261	2.1910	1.9597	1.8497	Lin1	25.916	1.7819							0.9980		0.9900
PCB-1268 Peak 2	2.4026 1.7797	2.1391 1.6588	2.0414	1.8392	1.7341	Lin1	21.960	1.6964							0.9990		0.9900
PCB-1268 Peak 3	2.0917 1.5507	1.8503 1.4330	1.7708	1.6019	1.5137	Lin1	19.128	1.4734							0.9980		0.9900
PCB-1268 Peak 4	0.9897 0.7383	0.8882 0.6783	0.8496	0.7652	0.7220	Lin1	9.3078	0.7003							0.9980		0.9900
PCB-1268 Peak 5	6.4197 4.7211	5.7185 4.3768	5.5103	4.8969	4.6109	Lin1	61.458	4.4914							0.9980		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
PCBS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 438388

SDG No.:

Instrument ID: SGC_J GC Column: CLP2 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/21/2018 19:41 Calibration End Date: 11/21/2018 21:48 Calibration ID: 34395

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDL14268 280-438388/38	11211838.D
Level 2	STDL24268 280-438388/37	11211837.D
Level 3	STDL34268 280-438388/36	11211836.D
Level 4	STDL44268 280-438388/35	11211835.D
Level 5	STDL54268 280-438388/34	11211834.D
Level 6	STDL64268 280-438388/33	11211833.D
Level 7	STDL74268 280-438388/32	11211832.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
PCB-1242 Peak 1	BNB	Lin1	2277242 44959096	4196303 58050740	7236657	17497734	32047030	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 2	BNB	Lin1	4714790 100690473	8787056 129222617	15341647	37814505	69892795	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 3	BNB	Lin1	2052043 43601831	3857429 55919168	6684107	16456921	30223208	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 4	BNB	Lin1	2142202 35305208	3715663 44752744	5937221	13877871	24589768	25.0 750	50.0 1000	100	250	500
PCB-1242 Peak 5	BNB	Lin1	1976394 42582862	3803015 54422086	6462864	15905764	29090693	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 1	BNB	Lin1	11047301 242643975	20840173 304523679	37039039	89874672	164790872	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 2	BNB	Lin1	10180170 229976284	19449827 292646780	34510186	84348061	154491173	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 3	BNB	Lin1	8862587 200377742	16824081 252817304	29936037	73465781	134857881	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 4	BNB	Lin1	4193339 95407700	8076058 119674966	14362338	35091487	64325885	25.0 750	50.0 1000	100	250	500
PCB-1268 Peak 5	BNB	Lin1	27200635 610063306	51994829 772165320	93152179	224575190	410787422	25.0 750	50.0 1000	100	250	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D
Lims ID: STDL74268
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 21-Nov-2018 19:41:25 ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL74268
Misc. Info.: 280-0076428-032
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:08 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:50

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.968	0.001	31482365	1000.0	1000.0	
2	1.749	1.748	0.001	176421211	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.632	3.631	0.001	23666995	1000.0	970.7	
1	4.116	4.117	-0.001	43906093	1000.0	993.4	
1	4.262	4.264	-0.002	18245316	1000.0	980.1	
1	5.239	5.237	0.002	12139444	1000.0	954.3	
1	5.259	5.261	-0.002	17036171	1000.0	1014.3	
		Average of Peak Amounts =				982.6	
2	3.666	3.664	0.002	58050740	1000.0	958.5	
2	4.122	4.121	0.001	129222617	1000.0	962.4	
2	4.266	4.264	0.002	55919168	1000.0	961.9	
2	4.789	4.788	0.001	44752744	1000.0	955.6	
2	4.926	4.928	-0.002	54422086	1000.0	963.6	
		Average of Peak Amounts =				960.4	
						RPD = 2.28	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.382	8.381	0.001	87356816	1000.0	981.3	
1	8.432	8.434	-0.002	88389199	1000.0	979.2	
1	8.709	8.707	0.002	71195019	1000.0	982.0	
1	9.226	9.224	0.002	29381338	1000.0	977.8	
1	9.639	9.637	0.002	210173125	1000.0	972.5	
		Average of Peak Amounts =				978.6	
2	8.512	8.511	0.001	304523679	1000.0	954.1	
2	8.576	8.574	0.002	292646780	1000.0	964.9	
2	8.929	8.928	0.001	252817304	1000.0	959.6	
2	9.359	9.358	0.001	119674966	1000.0	955.3	
2	9.819	9.821	-0.002	772165320	1000.0	960.8	
		Average of Peak Amounts =				959.0	
						RPD = 2.02	
S 8 Polychlorinated biphenyls, Total							
1						1961.1	
2						1919.4	
						RPD = 2.15	

Reagents:

AR_4268_L7_00016	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

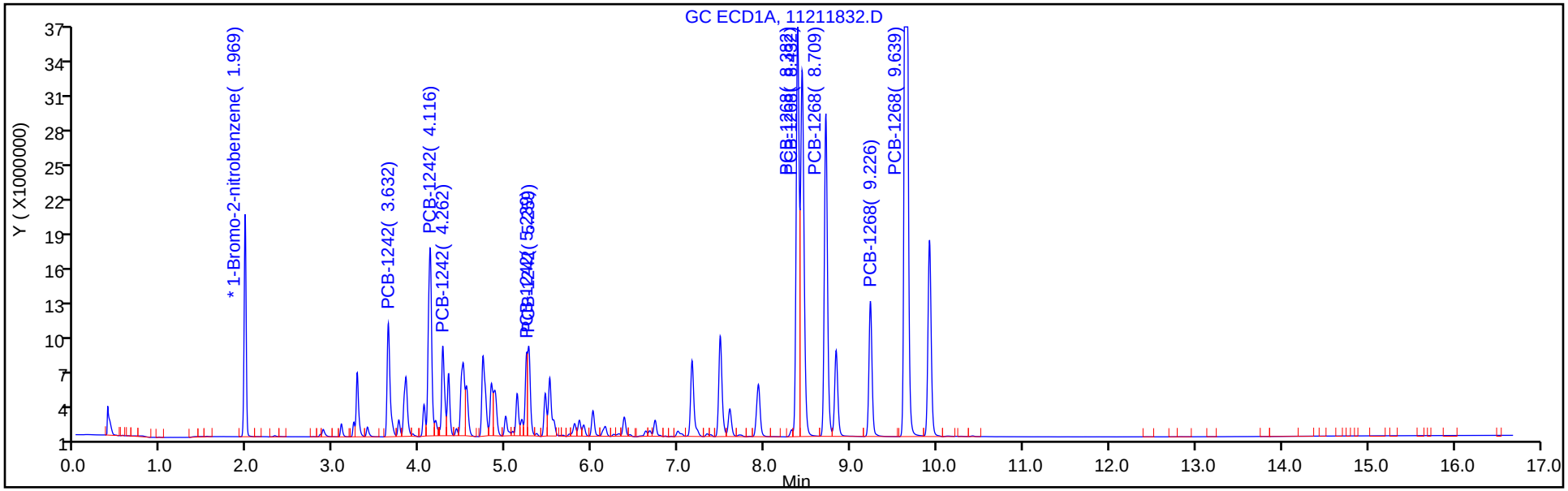
Report Date: 23-Nov-2018 11:03:09 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

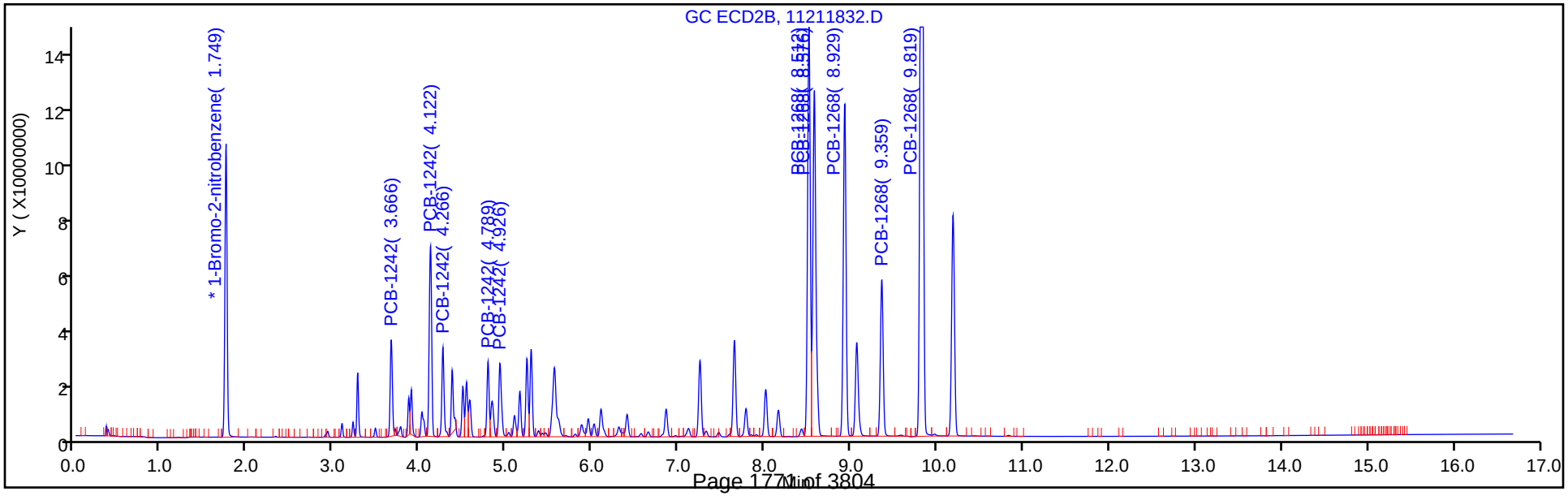
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211832.D

Injection Date:	21-Nov-2018 19:41:25	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL74268			Worklist Smp#:	32
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	32
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D
Lims ID: STDL64268
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 21-Nov-2018 20:02:35 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL64268
Misc. Info.: 280-0076428-033
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:11 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:33:21

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.968	-0.002	30724311	1000.0	1000.0	
2	1.747	1.748	-0.001	172295175	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	18033958	750.0	754.8	
1	4.116	4.117	-0.001	33088198	750.0	766.7	
1	4.263	4.264	-0.001	13939481	750.0	765.5	
1	5.236	5.237	-0.001	9565455	750.0	768.3	
1	5.260	5.261	-0.001	12635374	750.0	770.5	
		Average of Peak Amounts =				765.1	
2	3.663	3.664	-0.001	44959096	750.0	756.3	
2	4.120	4.121	-0.001	100690473	750.0	764.9	
2	4.263	4.264	-0.001	43601831	750.0	764.9	
2	4.790	4.788	0.002	35305208	750.0	766.5	
2	4.927	4.928	-0.001	42582862	750.0	769.0	
		Average of Peak Amounts =				764.3	
						RPD = 0.11	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	68720772	750.0	789.9	
1	8.433	8.434	-0.001	68019827	750.0	771.4	
1	8.710	8.707	0.003	55139677	750.0	778.1	
1	9.226	9.224	0.002	22774873	750.0	774.9	
1	9.640	9.637	0.003	164433426	750.0	778.6	
		Average of Peak Amounts =				778.6	
2	8.513	8.511	0.002	242643975	750.0	775.8	
2	8.573	8.574	-0.001	229976284	750.0	773.9	
2	8.927	8.928	-0.001	200377742	750.0	776.3	
2	9.357	9.358	-0.001	95407700	750.0	777.4	
2	9.820	9.821	-0.001	610063306	750.0	774.7	
		Average of Peak Amounts =				775.6	
						RPD = 0.38	
S 8 Polychlorinated biphenyls, Total							
1						1543.7	
2						1540.0	
						RPD = 0.24	

Reagents:

AR_4268_L6_00018	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

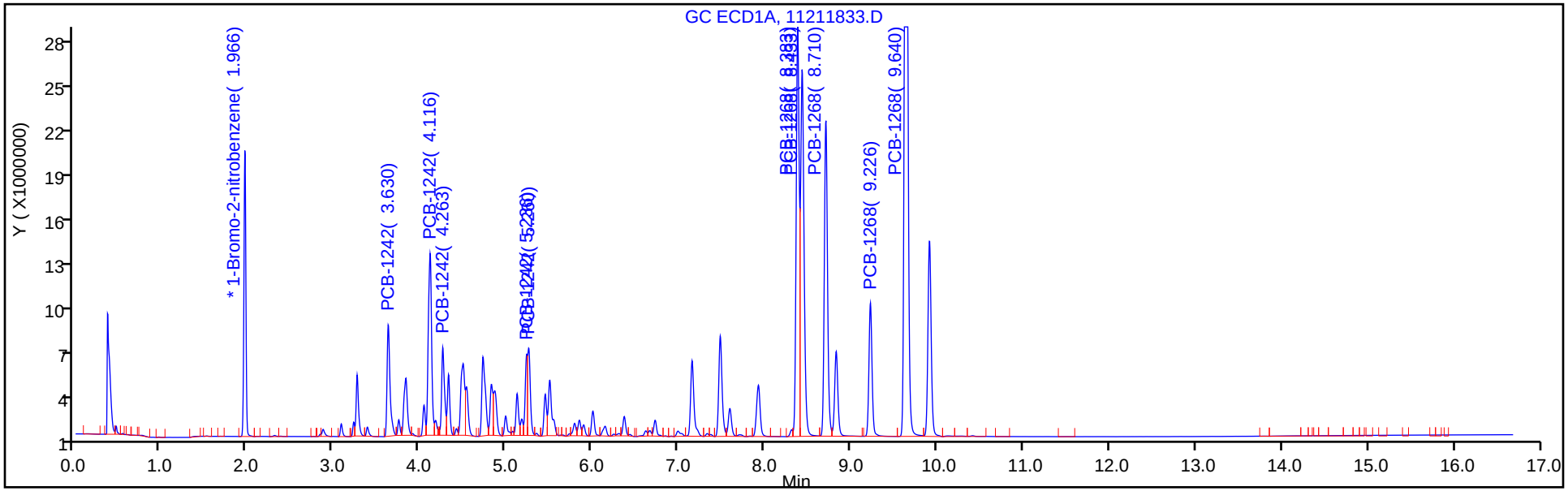
Report Date: 23-Nov-2018 11:03:12 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

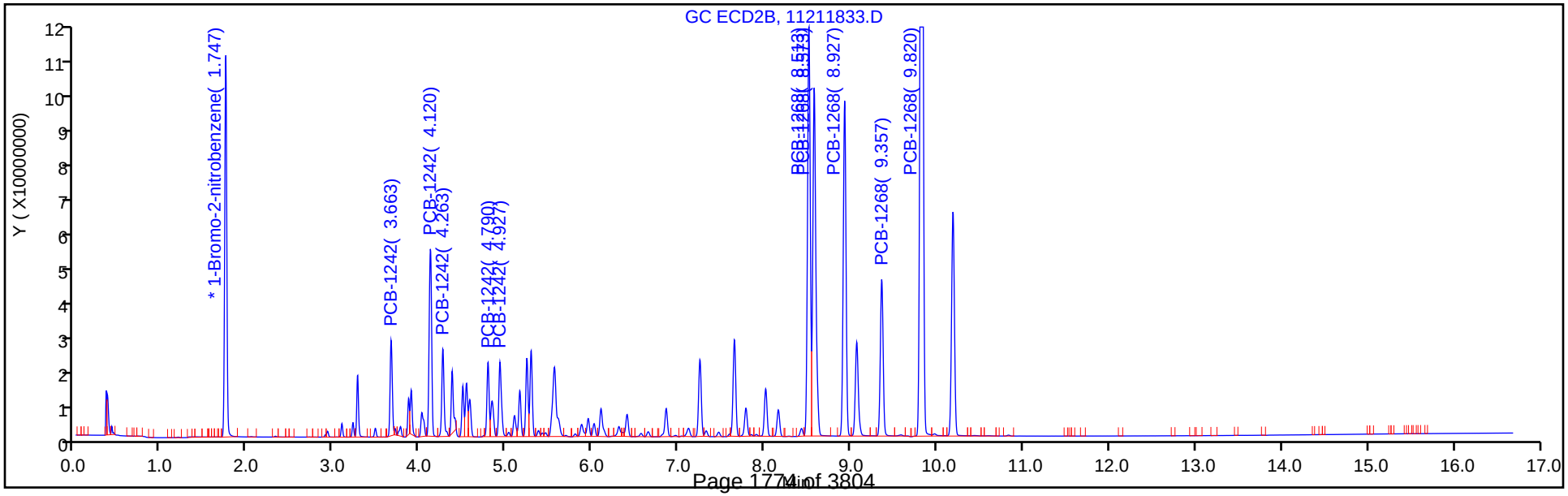
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211833.D

Injection Date:	21-Nov-2018 20:02:35	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL64268			Worklist Smp#:	33
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D
Lims ID: STDL54268
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 21-Nov-2018 20:23:44 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL54268
Misc. Info.: 280-0076428-034
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:15 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:31:36

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	31789266	1000.0	1000.0	
2	1.744	1.744	0.000	178179597	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	12621153	500.0	505.9	
1	4.117	4.117	0.000	22028422	500.0	492.7	
1	4.264	4.264	0.000	9337377	500.0	492.7	
1	5.237	5.237	0.000	6598400	500.0	508.3	
1	5.261	5.261	0.000	8065513	500.0	474.8	
		Average of Peak Amounts =				494.9	
2	3.664	3.664	0.000	32047030	500.0	515.5	
2	4.121	4.121	0.000	69892795	500.0	508.6	
2	4.264	4.264	0.000	30223208	500.0	507.7	
2	4.788	4.788	0.000	24589768	500.0	507.1	
2	4.928	4.928	0.000	29090693	500.0	502.9	
		Average of Peak Amounts =				508.4	
						RPD = 2.69	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	43739892	500.0	483.7	
1	8.434	8.434	0.000	45452498	500.0	496.9	
1	8.707	8.707	0.000	36138239	500.0	490.8	
1	9.224	9.224	0.000	14918235	500.0	487.4	
1	9.637	9.637	0.000	108847285	500.0	496.3	
		Average of Peak Amounts =				491.0	
2	8.511	8.511	0.000	164790872	500.0	504.5	
2	8.574	8.574	0.000	154491173	500.0	498.2	
2	8.928	8.928	0.000	134857881	500.0	500.7	
2	9.358	9.358	0.000	64325885	500.0	502.2	
2	9.821	9.821	0.000	410787422	500.0	499.6	
		Average of Peak Amounts =				501.0	
						RPD = 2.02	

Reagents:

AR_4268_L5_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

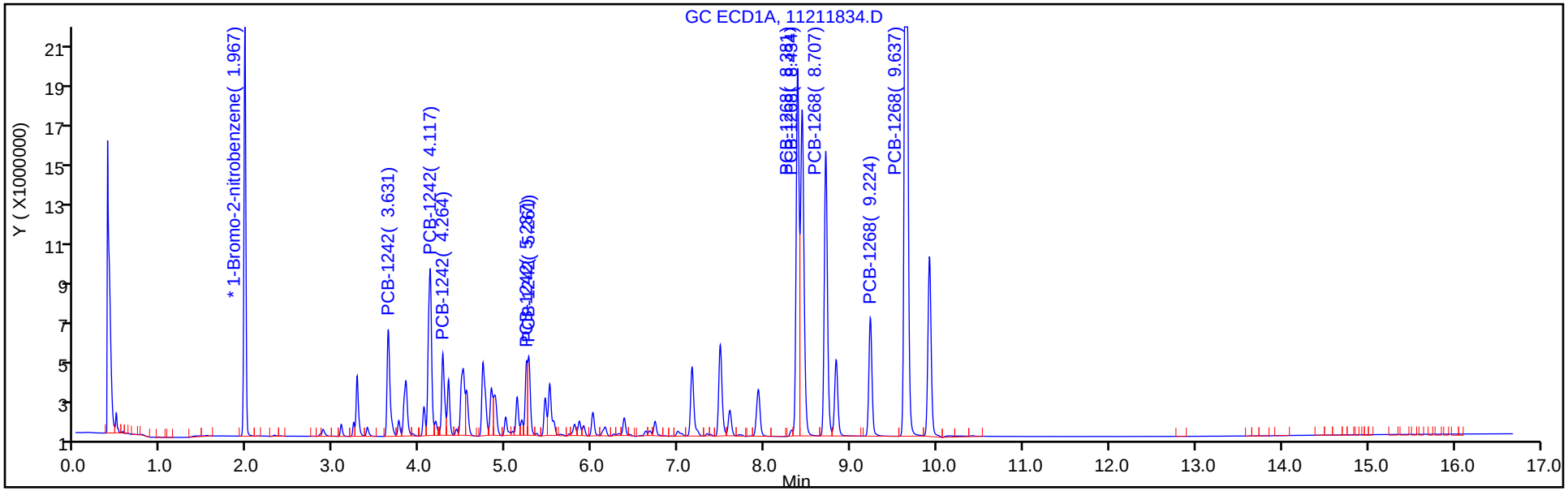
Report Date: 23-Nov-2018 11:03:16 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

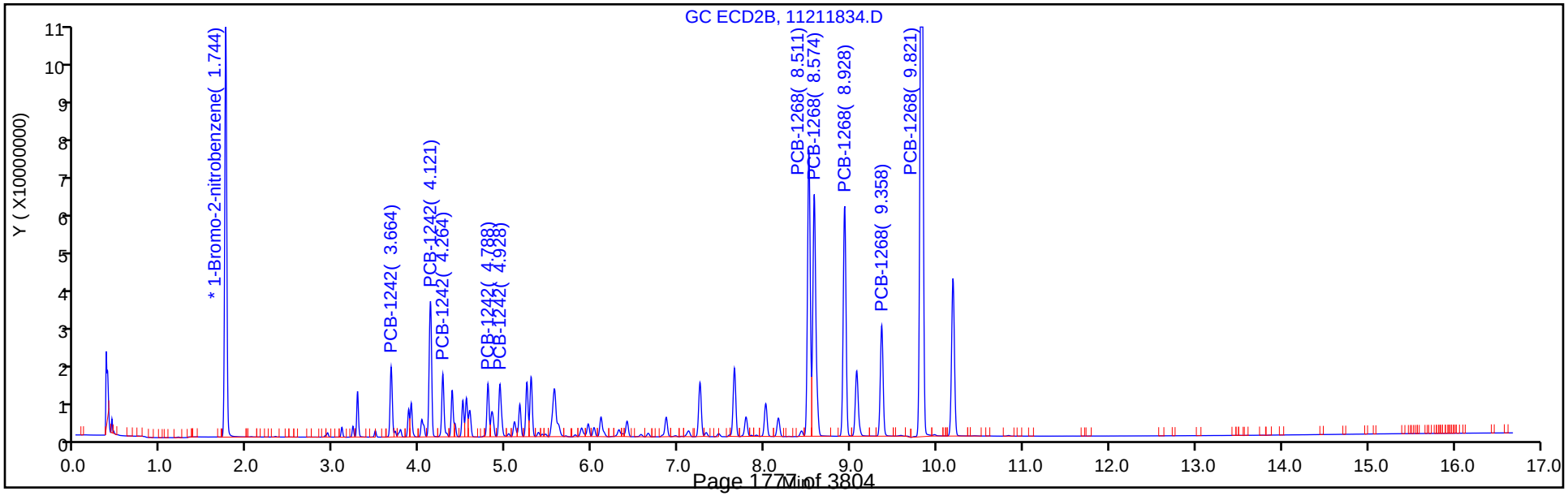
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211834.D

Injection Date:	21-Nov-2018 20:23:44	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL54268			Worklist Smp#:	34
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D
Lims ID: STDL44268
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 21-Nov-2018 20:44:55 ALS Bottle#: 35 Worklist Smp#: 35
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL44268
Misc. Info.: 280-0076428-035
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:18 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:32:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32694800	1000.0	1000.0	
2	1.745	1.744	0.001	183441113	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	6934698	250.0	263.7	
1	4.118	4.117	0.001	11431468	250.0	247.7	
1	4.265	4.264	0.001	5115672	250.0	258.6	
1	5.238	5.237	0.001	3600286	250.0	264.2	
1	5.261	5.261	0.000	4215035	250.0	240.5	
		Average of Peak Amounts =				254.9	
2	3.665	3.664	0.001	17497734	250.0	264.7	
2	4.121	4.121	0.000	37814505	250.0	260.3	
2	4.265	4.264	0.001	16456921	250.0	261.4	
2	4.788	4.788	0.000	13877871	250.0	265.3	
2	4.928	4.928	0.000	15905764	250.0	260.0	
		Average of Peak Amounts =				262.4	
						RPD = 2.87	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	23038908	250.0	244.9	
1	8.434	8.434	0.000	23666972	250.0	249.8	
1	8.708	8.707	0.001	18843418	250.0	246.0	
1	9.224	9.224	0.000	7827884	250.0	244.4	
1	9.638	9.637	0.001	56736910	250.0	249.0	
		Average of Peak Amounts =				246.8	
2	8.511	8.511	0.000	89874672	250.0	260.4	
2	8.575	8.574	0.001	84348061	250.0	258.1	
2	8.928	8.928	0.000	73465781	250.0	258.8	
2	9.358	9.358	0.000	35091487	250.0	259.9	
2	9.821	9.821	0.000	224575190	250.0	258.9	
		Average of Peak Amounts =				259.2	
						RPD = 4.90	
S 8 Polychlorinated biphenyls, Total							
1						501.7	
2						521.6	
						RPD = 3.88	

Reagents:

AR_4268_L4_00023	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

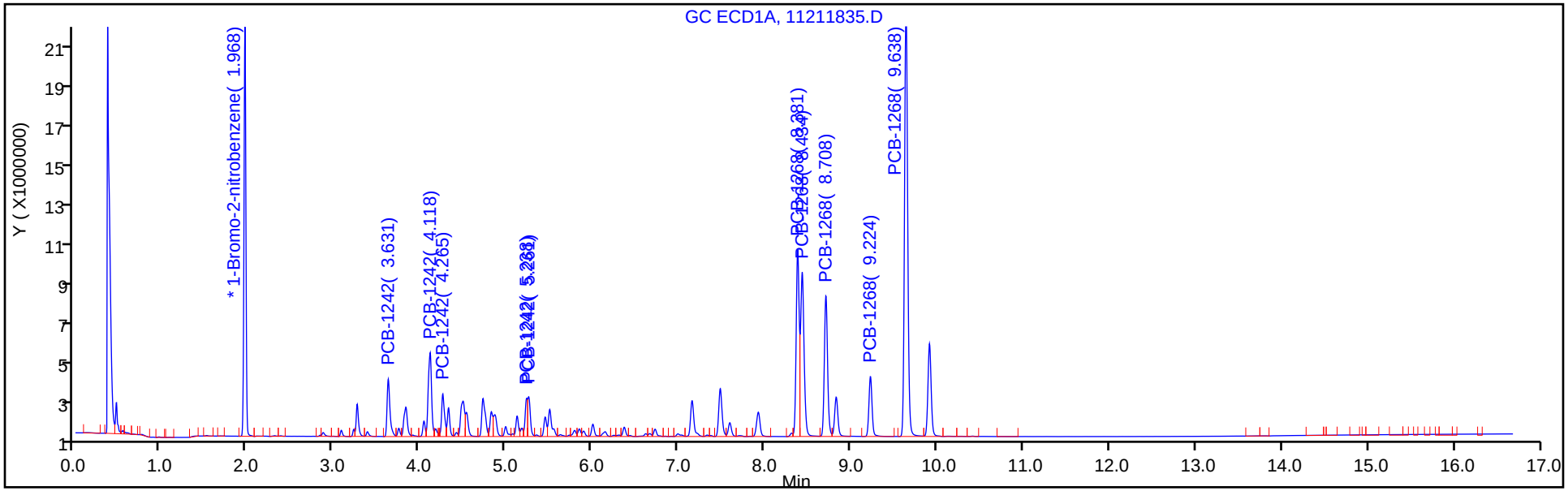
Report Date: 23-Nov-2018 11:03:19 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

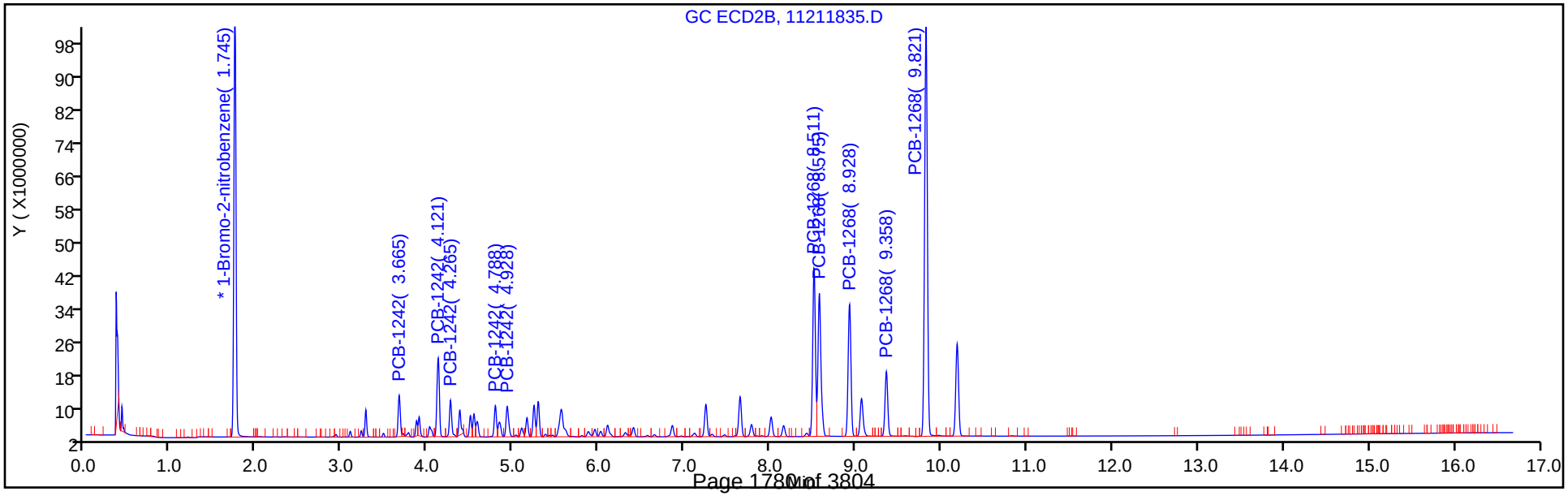
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211835.D

Injection Date:	21-Nov-2018 20:44:55	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL44268			Worklist Smp#:	35
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	35
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D
Lims ID: STDL34268
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 21-Nov-2018 21:06:06 ALS Bottle#: 36 Worklist Smp#: 36
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL34268
Misc. Info.: 280-0076428-036
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:21 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.967	0.000	29902517	1000.0	1000.0	
2	1.744	1.744	0.000	169052125	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	2785673	100.0	107.8	
1	4.117	4.117	0.000	4243819	100.0	99.4	
1	4.264	4.264	0.000	1990794	100.0	105.3	
1	5.237	5.237	0.000	1439135	100.0	108.9	
1	5.261	5.261	0.000	1616814	100.0	100.0	
		Average of Peak Amounts =				104.3	
2	3.664	3.664	0.000	7236657	100.0	108.6	
2	4.121	4.121	0.000	15341647	100.0	106.4	
2	4.264	4.264	0.000	6684107	100.0	106.7	
2	4.788	4.788	0.000	5937221	100.0	108.2	
2	4.928	4.928	0.000	6462864	100.0	106.2	
		Average of Peak Amounts =				107.2	
						RPD = 2.78	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	8942275	100.0	100.6	
1	8.434	8.434	0.000	9204821	100.0	104.1	
1	8.707	8.707	0.000	7521874	100.0	104.1	
1	9.224	9.224	0.000	3714053	100.0	122.6	
1	9.641	9.637	0.004	22672079	100.0	105.9	
		Average of Peak Amounts =				107.5	
2	8.511	8.511	0.000	37039039	100.0	108.4	
2	8.574	8.574	0.000	34510186	100.0	107.4	
2	8.928	8.928	0.000	29936037	100.0	107.2	
2	9.358	9.358	0.000	14362338	100.0	108.0	
2	9.821	9.821	0.000	93152179	100.0	109.0	
		Average of Peak Amounts =				108.0	
						RPD = 0.49	
S 8 Polychlorinated biphenyls, Total							
1						211.8	
2						215.2	
						RPD = 1.62	

Reagents:

AR_4268_L3_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

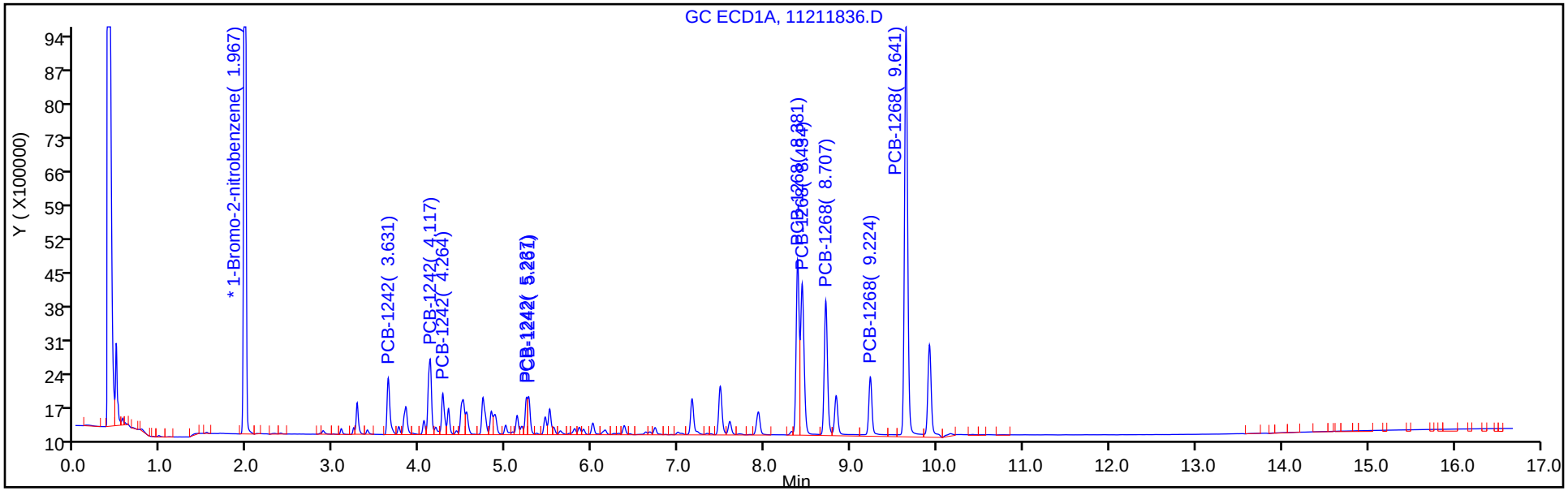
Report Date: 23-Nov-2018 11:03:22 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

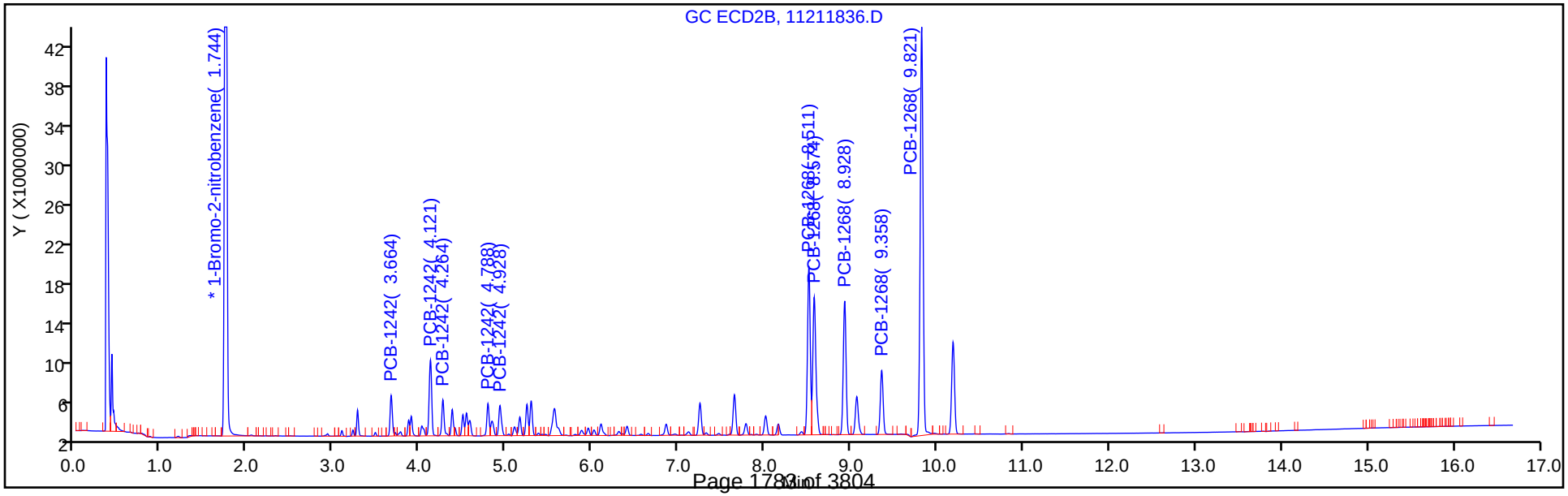
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211836.D

Injection Date:	21-Nov-2018 21:06:06	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL34268			Worklist Smp#:	36
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	36
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D
Lims ID: STDL24268
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 21-Nov-2018 21:27:18 ALS Bottle#: 37 Worklist Smp#: 37
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL24268
Misc. Info.: 280-0076428-037
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:23 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:34:55

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.967	0.001	32348608	1000.0	1000.0	
2	1.745	1.744	0.001	181848580	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.631	3.631	0.000	1591803	50.0	50.2	
1	4.118	4.117	0.001	2334811	50.0	49.6	
1	4.264	4.264	0.000	1089072	50.0	49.2	
1	5.234	5.237	-0.003	783867	50.0	49.0	
1	5.261	5.261	0.000	848605	50.0	47.7	
		Average of Peak Amounts =				49.2	
2	3.665	3.664	0.001	4196303	50.0	50.0	
2	4.121	4.121	0.000	8787056	50.0	49.8	
2	4.265	4.264	0.001	3857429	50.0	50.2	
2	4.788	4.788	0.000	3715663	50.0	51.2	
2	4.928	4.928	0.000	3803015	50.0	51.3	
		Average of Peak Amounts =				50.5	
						RPD = 2.70	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.381	8.381	0.000	4962556	50.0	48.8	
1	8.434	8.434	0.000	4896006	50.0	49.3	
1	8.708	8.707	0.001	4064693	50.0	49.2	
1	9.224	9.224	0.000	1653587	50.0	45.4	
1	9.638	9.637	0.001	11777400	50.0	48.2	
		Average of Peak Amounts =				48.2	
2	8.511	8.511	0.000	20840173	50.0	49.8	
2	8.575	8.574	0.001	19449827	50.0	50.1	
2	8.928	8.928	0.000	16824081	50.0	49.8	
2	9.358	9.358	0.000	8076058	50.0	50.1	
2	9.821	9.821	0.000	51994829	50.0	50.0	
		Average of Peak Amounts =				50.0	
						RPD = 3.64	
S 8 Polychlorinated biphenyls, Total							
1						97.3	
2						100.5	
						RPD = 3.17	

Reagents:

AR_4268_L2_00020	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

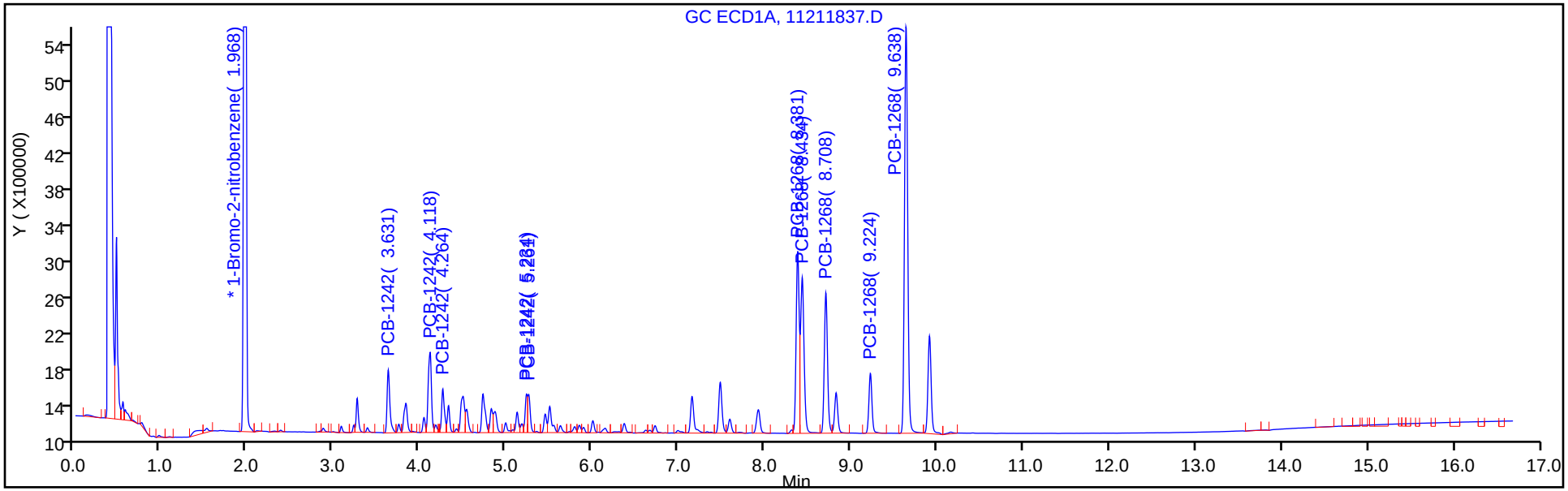
Report Date: 23-Nov-2018 11:03:25 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

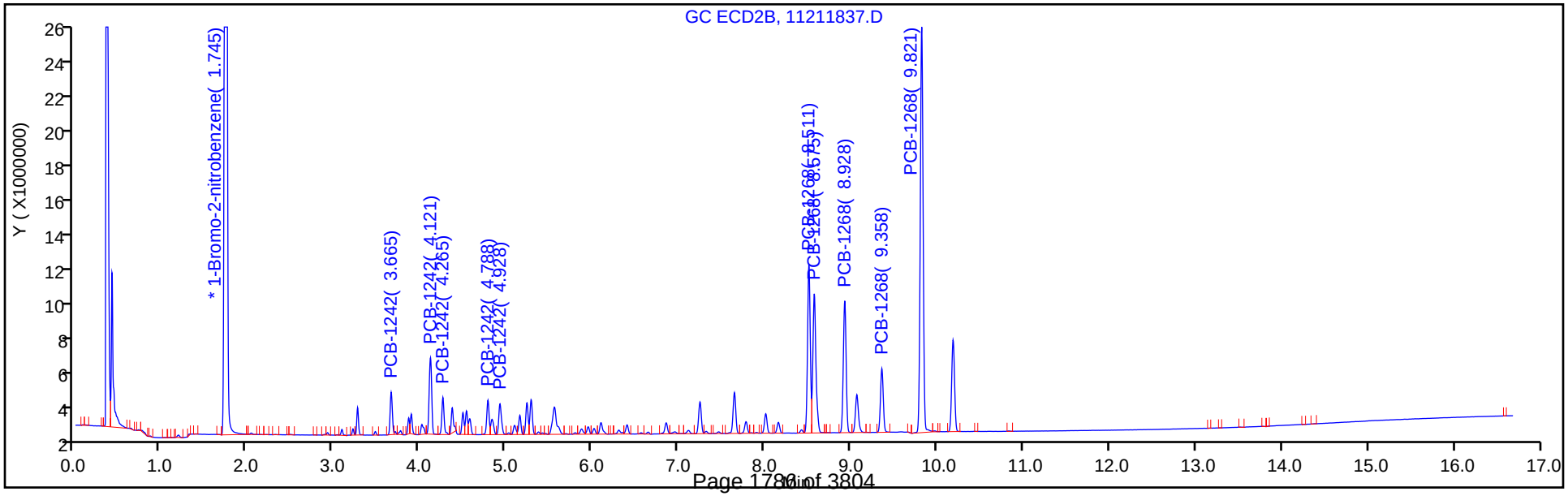
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211837.D

Injection Date:	21-Nov-2018 21:27:18	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL24268			Worklist Smp#:	37
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	37
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D
Lims ID: STDL14268
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 21-Nov-2018 21:48:29 ALS Bottle#: 38 Worklist Smp#: 38
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: STDL14268
Misc. Info.: 280-0076428-038
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub5

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:03:28 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:35:40

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30052215	1000.0	1000.0	
2	1.747	1.744	0.003	169482834	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							
1	3.630	3.631	-0.001	826846	25.0	21.8	
1	4.117	4.117	0.000	1153326	25.0	25.5	
1	4.263	4.264	-0.001	560286	25.0	23.6	
1	5.237	5.237	0.000	403656	25.0	22.0	
1	5.260	5.261	-0.001	461108	25.0	27.3	
		Average of Peak Amounts =				24.0	
2	3.663	3.664	-0.001	2277242	25.0	21.4	
2	4.120	4.121	-0.001	4714790	25.0	22.5	
2	4.267	4.264	0.003	2052043	25.0	22.1	
2	4.787	4.788	-0.001	2142202	25.0	21.0	
2	4.927	4.928	-0.001	1976394	25.0	21.9	
		Average of Peak Amounts =				21.8	
						RPD = 9.79	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.380	8.381	-0.001	2677797	25.0	25.9	
1	8.433	8.434	-0.001	2398046	25.0	24.3	
1	8.707	8.707	0.000	2096540	25.0	24.8	
1	9.223	9.224	-0.001	888286	25.0	22.6	
1	9.640	9.637	0.003	6071834	25.0	24.5	
		Average of Peak Amounts =				24.4	
2	8.510	8.511	-0.001	11047301	25.0	22.0	
2	8.573	8.574	-0.001	10180170	25.0	22.5	
2	8.927	8.928	-0.001	8862587	25.0	22.5	
2	9.357	9.358	-0.001	4193339	25.0	22.0	
2	9.820	9.821	-0.001	27200635	25.0	22.0	
		Average of Peak Amounts =				22.2	
						RPD = 9.35	
S 8 Polychlorinated biphenyls, Total							
1						48.4	
2						44.0	
						RPD = 9.57	

Reagents:

AR_4268_L1_00021	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

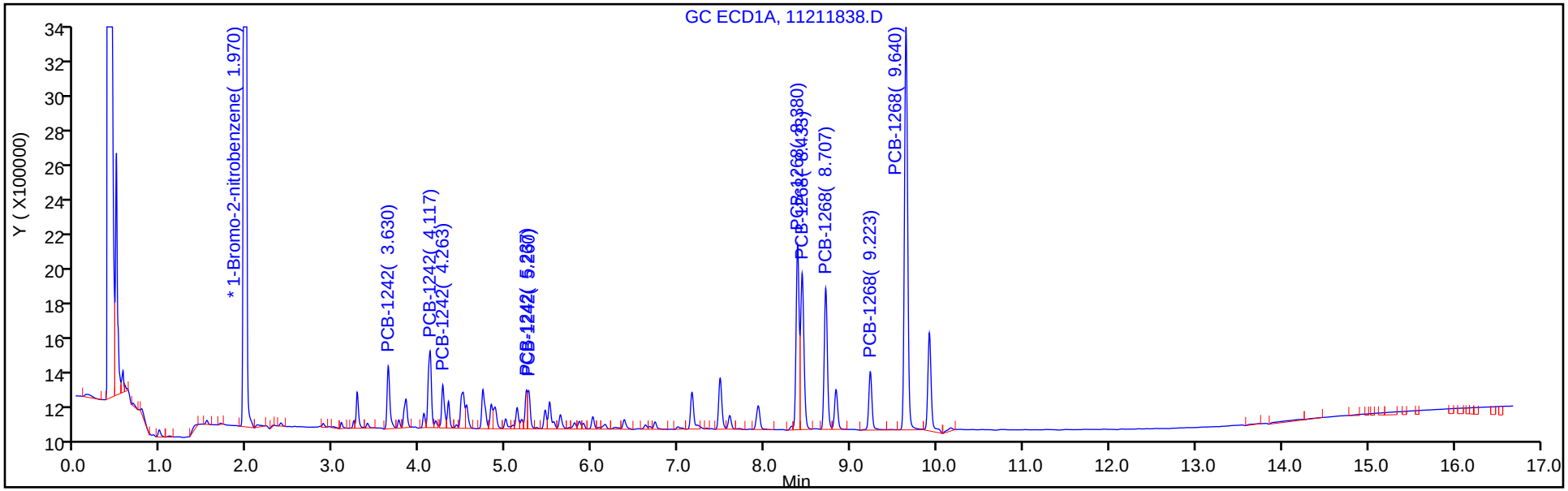
Report Date: 23-Nov-2018 11:03:29 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

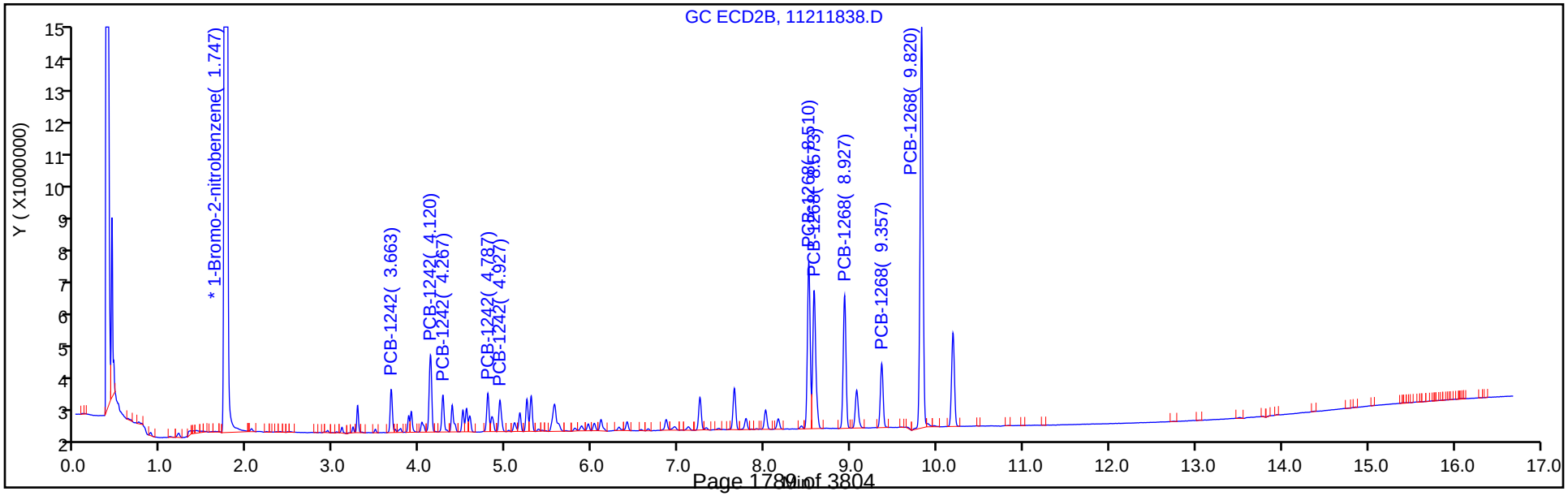
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Injection Date:	21-Nov-2018 21:48:29	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	STDL14268			Worklist Smp#:	38
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	38
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Lin1		0.4808		271	250	8.3	20.0
PCB-1248 Peak 2	Lin1		1.136		313	250	25.2*	20.0
PCB-1248 Peak 3	Lin1		1.211		291	250	16.4	20.0
PCB-1248 Peak 4	Lin1		0.8706		299	250	19.6	20.0
PCB-1248 Peak 5	Lin1		0.5227		274	250	9.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	3.63	3.38	3.88
PCB-1248 Peak 2	4.12	3.87	4.37
PCB-1248 Peak 3	4.73	4.48	4.98
PCB-1248 Peak 4	5.51	5.26	5.76
PCB-1248 Peak 5	6.01	5.76	6.26

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:09:37 ALS Bottle#: 39 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-039
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 29-Nov-2018 16:31:48 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0330

First Level Reviewer: patadiab Date: 23-Nov-2018 10:36:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.967	0.005	27962663	1000.0	1000.0	
2	1.749	1.744	0.005	158680424	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.629	3.629	0.000	3361129	250.0	270.7	
1	4.116	4.115	0.001	7939440	250.0	313.1	
1	4.729	4.729	0.000	8467096	250.0	291.0	
1	5.506	5.505	0.001	6086245	250.0	298.9	
1	6.006	6.005	0.001	3653650	250.0	274.3	
		Average of Peak Amounts =				289.6	
2	4.119	4.119	0.000	27239499	250.0	322.7	
2	4.499	4.499	0.000	14508774	250.0	290.5	
2	4.789	4.789	0.000	20289286	250.0	294.8	
2	4.926	4.929	-0.003	23450109	250.0	310.7	
2	6.099	6.102	-0.003	14715297	250.0	283.0	
		Average of Peak Amounts =				300.3	
						RPD = 3.64	

Reagents:

AR_1248_ICV_00013 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

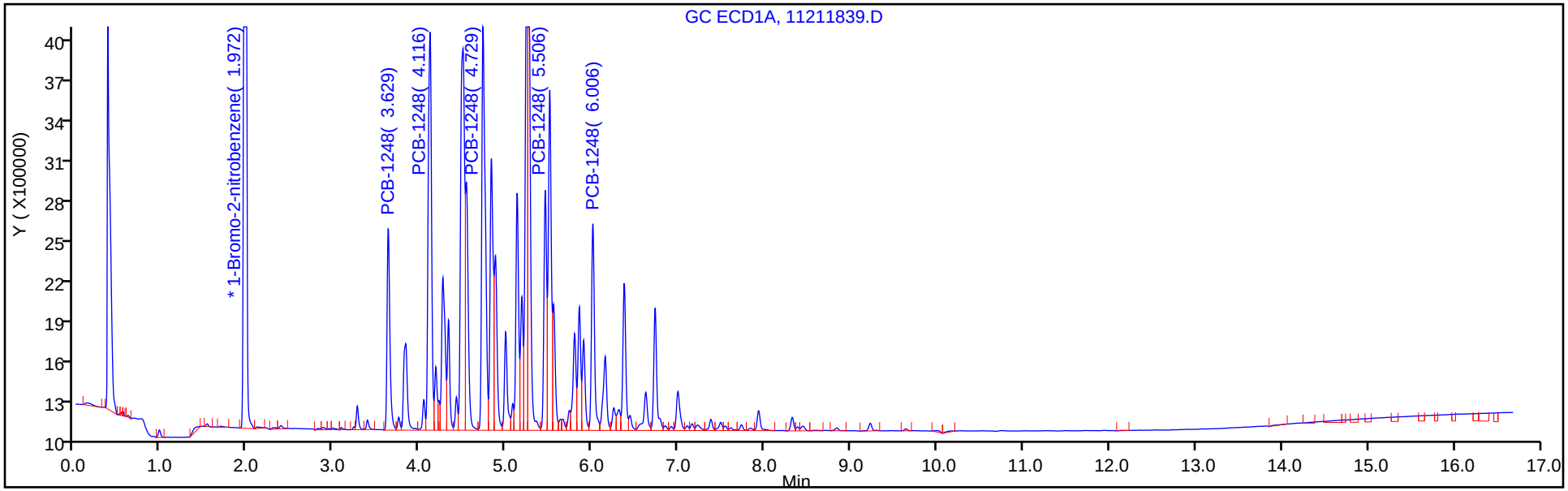
Report Date: 29-Nov-2018 16:31:48 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

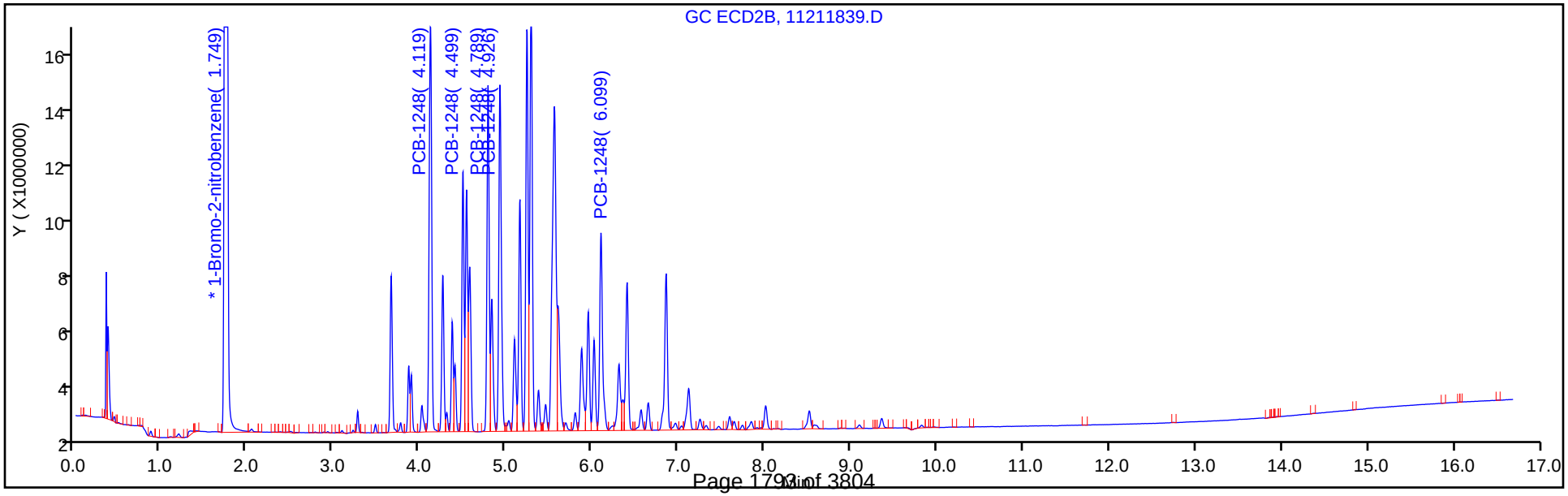
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D

Injection Date:	21-Nov-2018 22:09:37	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	39
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	39
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1248 Peak 1	Lin1		0.6867		323	250	29.1*	20.0
PCB-1248 Peak 2	Lin1		0.3657		290	250	16.2	20.0
PCB-1248 Peak 3	Lin1		0.5115		295	250	17.9	20.0
PCB-1248 Peak 4	Lin1		0.5911		311	250	24.3*	20.0
PCB-1248 Peak 5	Lin1		0.3709		283	250	13.2	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/39 Calibration Date: 11/21/2018 22:09

Instrument ID: SGC_J Calib Start Date: 11/21/2018 09:48

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 11:55

Lab File ID: 11211839.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1248 Peak 1	4.12	3.87	4.37
PCB-1248 Peak 2	4.50	4.25	4.75
PCB-1248 Peak 3	4.79	4.54	5.04
PCB-1248 Peak 4	4.93	4.68	5.18
PCB-1248 Peak 5	6.10	5.85	6.35

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:09:37 ALS Bottle#: 39 Worklist Smp#: 39
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-039
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 29-Nov-2018 16:31:48 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0330

First Level Reviewer: patadiab Date: 23-Nov-2018 10:36:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.972	1.967	0.005	27962663	1000.0	1000.0	
2	1.749	1.744	0.005	158680424	1000.0	1000.0	
						RPD = 0.00	
4 PCB-1248							
1	3.629	3.629	0.000	3361129	250.0	270.7	
1	4.116	4.115	0.001	7939440	250.0	313.1	
1	4.729	4.729	0.000	8467096	250.0	291.0	
1	5.506	5.505	0.001	6086245	250.0	298.9	
1	6.006	6.005	0.001	3653650	250.0	274.3	
		Average of Peak Amounts =				289.6	
2	4.119	4.119	0.000	27239499	250.0	322.7	
2	4.499	4.499	0.000	14508774	250.0	290.5	
2	4.789	4.789	0.000	20289286	250.0	294.8	
2	4.926	4.929	-0.003	23450109	250.0	310.7	
2	6.099	6.102	-0.003	14715297	250.0	283.0	
		Average of Peak Amounts =				300.3	
						RPD = 3.64	

Reagents:

AR_1248_ICV_00013 Amount Added: 1.00 Units: mL
BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

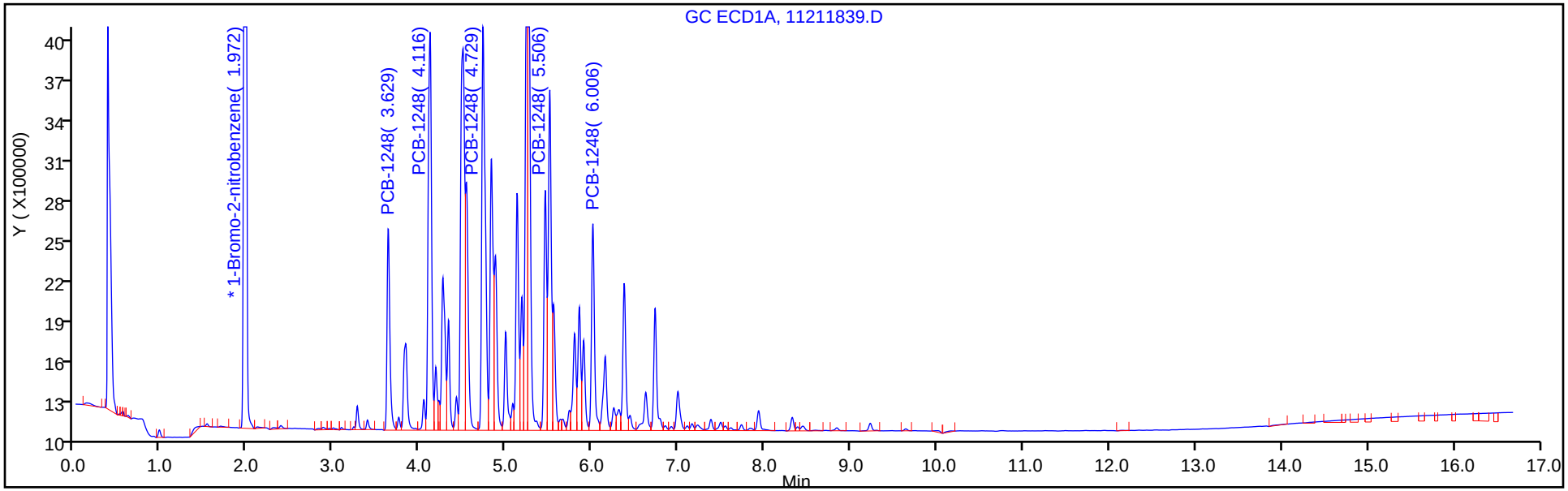
Report Date: 29-Nov-2018 16:31:49 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

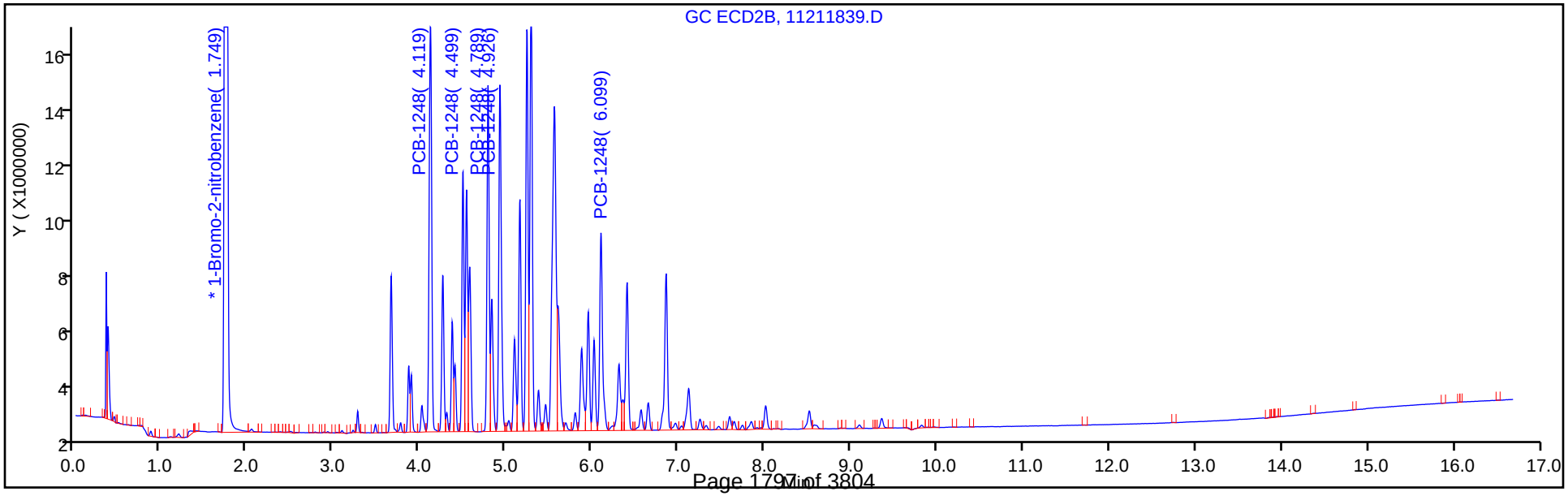
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211839.D

Injection Date:	21-Nov-2018 22:09:37	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	39
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	39
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Lin1		0.2728		265	250	6.0	20.0
PCB-1221 Peak 2	Lin1		0.1654		276	250	10.5	20.0
PCB-1221 Peak 3	Lin1		0.7152		278	250	11.4	20.0
PCB-1254 Peak 1	Lin1		0.9104		288	250	15.3	20.0
PCB-1254 Peak 2	Lin1		1.319		288	250	15.2	20.0
PCB-1254 Peak 3	Lin1		0.9352		275	250	10.0	20.0
PCB-1254 Peak 4	Lin1		1.226		293	250	17.0	20.0
PCB-1254 Peak 5	Lin1		1.628		284	250	13.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.09	2.84	3.34
PCB-1221 Peak 2	3.23	2.98	3.48
PCB-1221 Peak 3	3.27	3.02	3.52
PCB-1254 Peak 1	5.18	4.93	5.43
PCB-1254 Peak 2	5.51	5.26	5.76
PCB-1254 Peak 3	5.85	5.60	6.10
PCB-1254 Peak 4	6.62	6.37	6.87
PCB-1254 Peak 5	6.99	6.75	7.25

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:30:47 ALS Bottle#: 40 Worklist Smp#: 40
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-040
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:39:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	29773128	1000.0	1000.0	
2	1.750	1.744	0.006	167287659	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2030793	250.0	264.9	
1	3.233	3.232	0.001	1231106	250.0	276.2	
1	3.270	3.269	0.001	5323184	250.0	278.4	
		Average of Peak Amounts =				273.2	
2	3.093	3.092	0.001	6568563	250.0	271.6	
2	3.223	3.222	0.001	4336984	250.0	278.2	
2	3.276	3.276	0.000	15187978	250.0	275.8	
		Average of Peak Amounts =				275.2	
						RPD = 0.75	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6776240	250.0	288.3	M
1	5.510	5.509	0.001	9816035	250.0	287.9	M
1	5.850	5.849	0.001	6960594	250.0	275.0	M
1	6.620	6.622	-0.002	9128323	250.0	292.6	M
1	6.993	6.995	-0.002	12116804	250.0	284.4	M
		Average of Peak Amounts =				285.6	
2	5.530	5.529	0.001	28299329	250.0	280.6	
2	5.950	5.952	-0.002	22018407	250.0	278.8	
2	6.403	6.402	0.001	29793523	250.0	276.3	
2	6.646	6.649	-0.003	18699912	250.0	293.3	
2	7.116	7.119	-0.003	45648192	250.0	294.6	
		Average of Peak Amounts =				284.7	
						RPD = 0.31	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

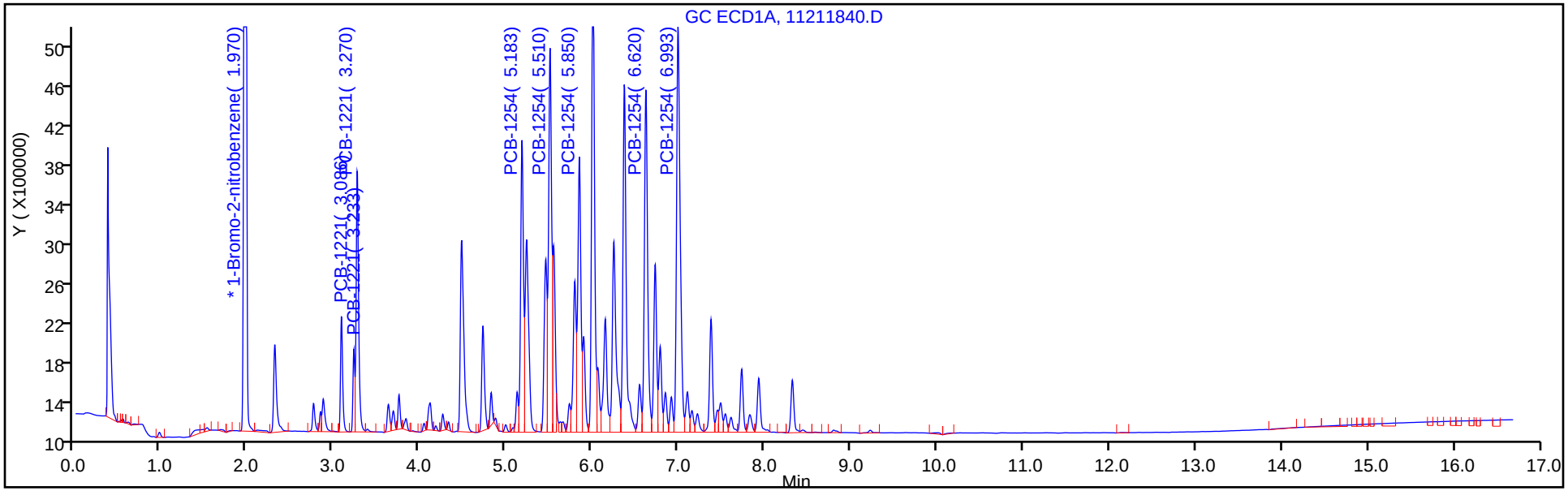
Report Date: 23-Nov-2018 10:58:42 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

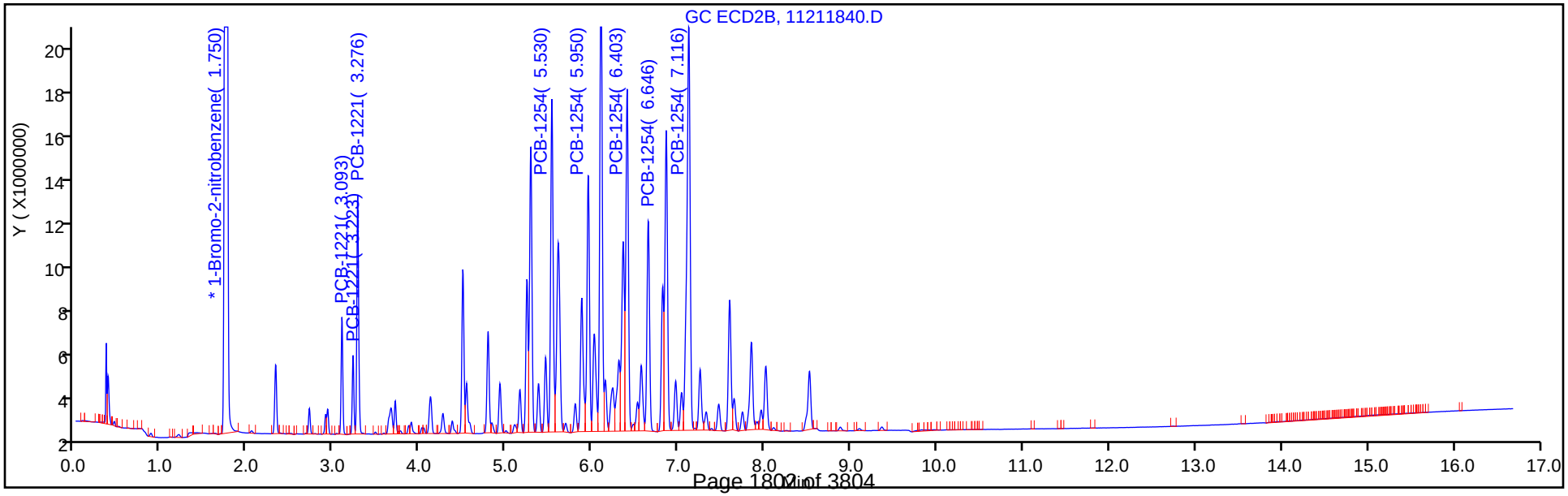
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D

Injection Date:	21-Nov-2018 22:30:47	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	40
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 10:58:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D

Injection Date: 21-Nov-2018 22:30:47 Instrument ID: SGC_J

Lims ID: ICV

Client ID:

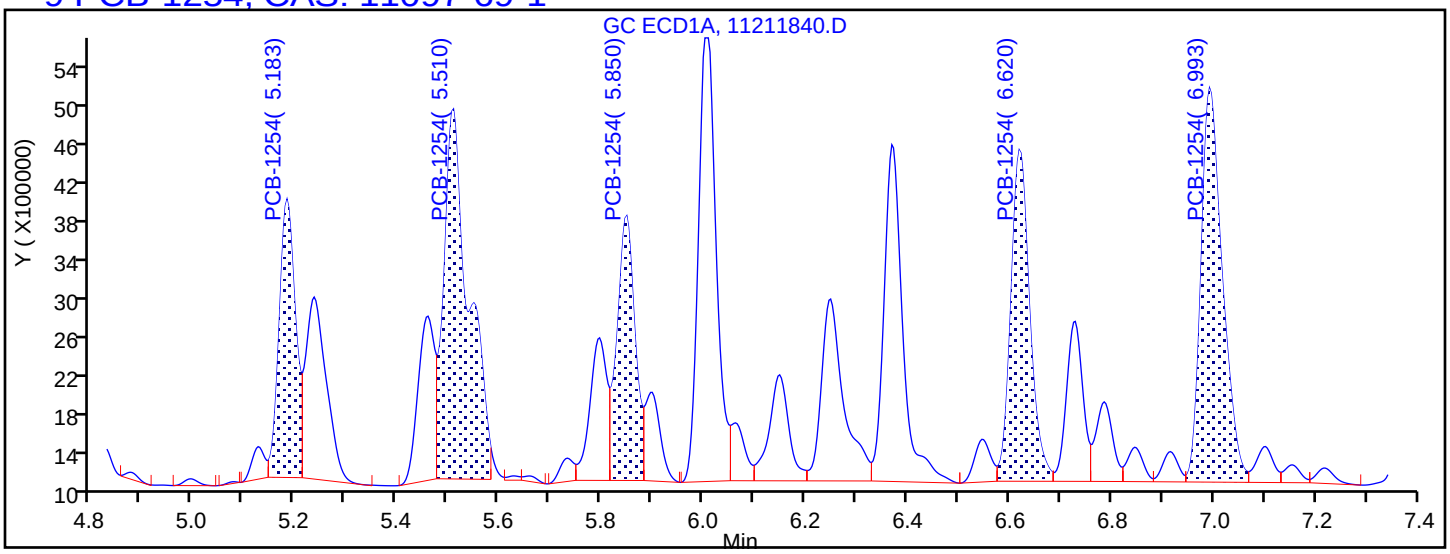
Operator ID: ALS ALS Bottle#: 40 Worklist Smp#: 40

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

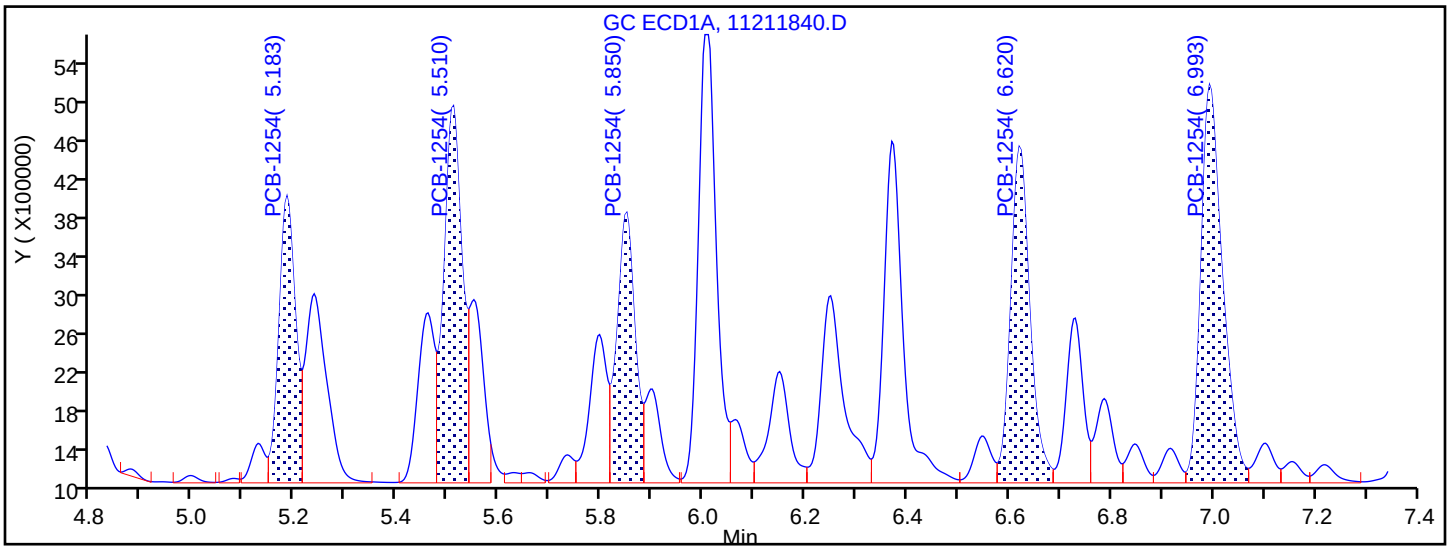
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

9 PCB-1254, CAS: 11097-69-1



Processing Integration Results

5.183	Response = 6417706
5.510	Response = 12898723
5.850	Response = 6726142
6.620	Response = 8795667
6.993	Response = 11812043



Manual Integration Results

5.183	Response = 6776240	M
5.510	Response = 9816035	M
5.850	Response = 6960594	M
6.620	Response = 9128323	M
6.993	Response = 12116804	M

Reviewer: patadiab, 23-Nov-2018 10:39:30

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1221 Peak 1	Lin1		0.1571		272	250	8.6	20.0
PCB-1221 Peak 2	Lin1		0.1037		278	250	11.3	20.0
PCB-1221 Peak 3	Lin1		0.3632		276	250	10.3	20.0
PCB-1254 Peak 1	Lin1		0.6767		281	250	12.2	20.0
PCB-1254 Peak 2	Lin1		0.5265		279	250	11.5	20.0
PCB-1254 Peak 3	Lin1		0.7124		276	250	10.5	20.0
PCB-1254 Peak 4	Lin1		0.4471		293	250	17.3	20.0
PCB-1254 Peak 5	Lin1		1.091		295	250	17.8	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/40 Calibration Date: 11/21/2018 22:30

Instrument ID: SGC_J Calib Start Date: 11/21/2018 12:16

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 14:23

Lab File ID: 11211840.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1221 Peak 1	3.09	2.84	3.34
PCB-1221 Peak 2	3.22	2.97	3.47
PCB-1221 Peak 3	3.28	3.03	3.53
PCB-1254 Peak 1	5.53	5.28	5.78
PCB-1254 Peak 2	5.95	5.70	6.20
PCB-1254 Peak 3	6.40	6.15	6.65
PCB-1254 Peak 4	6.65	6.40	6.90
PCB-1254 Peak 5	7.12	6.87	7.37

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:30:47 ALS Bottle#: 40 Worklist Smp#: 40
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-040
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:39:37

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	29773128	1000.0	1000.0	
2	1.750	1.744	0.006	167287659	1000.0	1000.0	
						RPD = 0.00	
3 PCB-1221							
1	3.086	3.085	0.001	2030793	250.0	264.9	
1	3.233	3.232	0.001	1231106	250.0	276.2	
1	3.270	3.269	0.001	5323184	250.0	278.4	
		Average of Peak Amounts =				273.2	
2	3.093	3.092	0.001	6568563	250.0	271.6	
2	3.223	3.222	0.001	4336984	250.0	278.2	
2	3.276	3.276	0.000	15187978	250.0	275.8	
		Average of Peak Amounts =				275.2	
						RPD = 0.75	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							M
1	5.183	5.182	0.001	6776240	250.0	288.3	M
1	5.510	5.509	0.001	9816035	250.0	287.9	M
1	5.850	5.849	0.001	6960594	250.0	275.0	M
1	6.620	6.622	-0.002	9128323	250.0	292.6	M
1	6.993	6.995	-0.002	12116804	250.0	284.4	M
		Average of Peak Amounts =				285.6	
2	5.530	5.529	0.001	28299329	250.0	280.6	
2	5.950	5.952	-0.002	22018407	250.0	278.8	
2	6.403	6.402	0.001	29793523	250.0	276.3	
2	6.646	6.649	-0.003	18699912	250.0	293.3	
2	7.116	7.119	-0.003	45648192	250.0	294.6	
		Average of Peak Amounts =				284.7	
						RPD = 0.31	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_2154_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

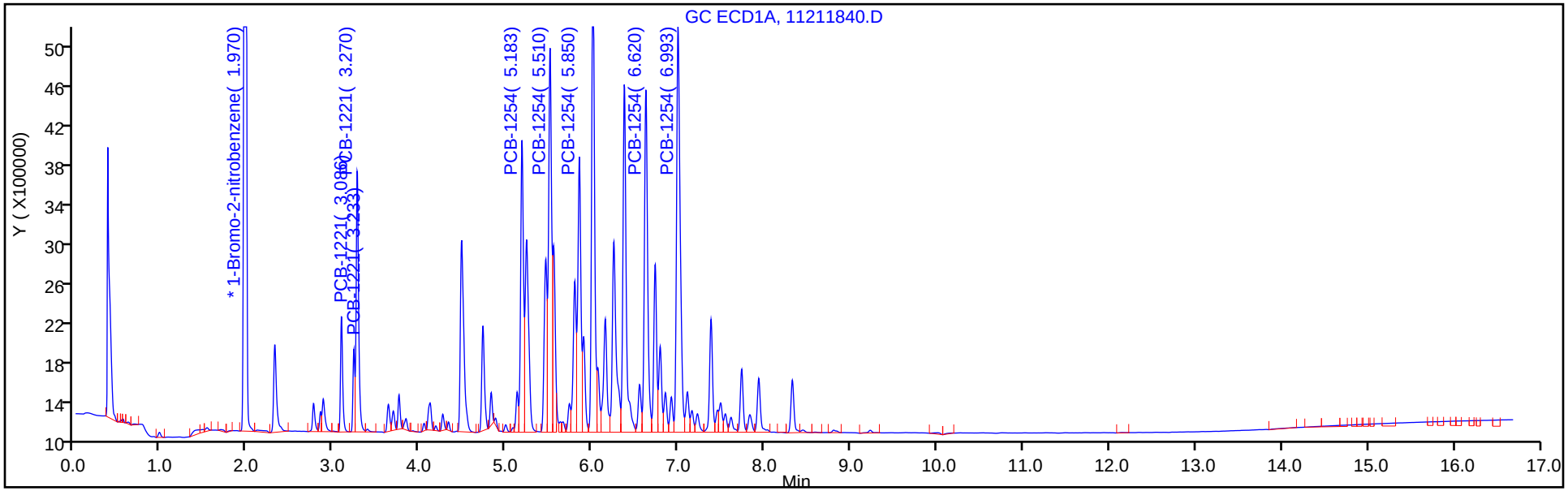
Report Date: 23-Nov-2018 10:58:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

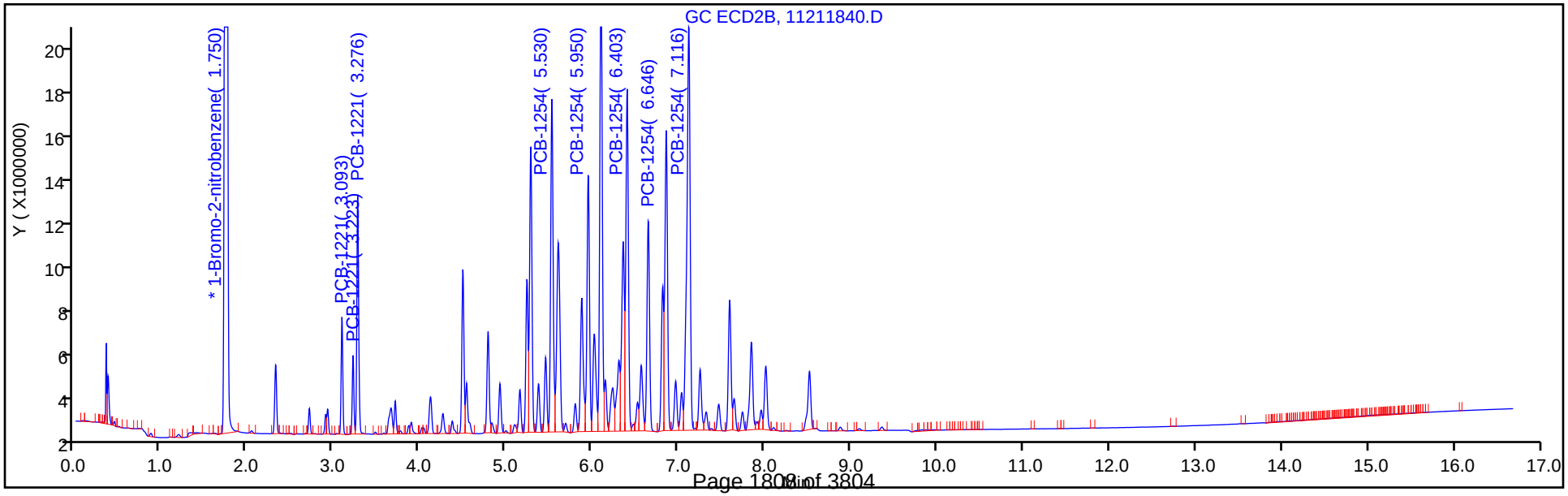
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211840.D

Injection Date:	21-Nov-2018 22:30:47	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	40
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	40
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.5269		299	250	19.4	20.0
PCB-1016 Peak 2	Lin1		1.179		286	250	14.5	20.0
PCB-1016 Peak 3	Lin1		1.998		267	250	7.0	20.0
PCB-1016 Peak 4	Lin1		0.8836		279	250	11.5	20.0
PCB-1016 Peak 5	Lin1		0.9456		276	250	10.6	20.0
PCB-1260 Peak 1	Lin1		1.407		299	250	19.6	20.0
PCB-1260 Peak 2	Lin1		1.987		275	250	10.1	20.0
PCB-1260 Peak 3	Lin1		1.244		289	250	15.7	20.0
PCB-1260 Peak 4	Lin1		2.774		286	250	14.5	20.0
PCB-1260 Peak 5	Lin1		1.255		284	250	13.8	20.0
Tetrachloro-m-xylene	Lin1		26.07		12.5	12.5	-0.2	20.0
DCB Decachlorobiphenyl	Lin1		25.43		15.5	12.5	24.0*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.27	4.01	4.51
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	6.99	6.74	7.24
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.91	9.66	10.16

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:51:54 ALS Bottle#: 41 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-041
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:41:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26927485	1000.0	1000.0	
2	1.749	1.744	0.005	153501296	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	8774677	12.5	12.5	
2	2.779	2.780	-0.001	27009747	12.5	13.4	
						RPD = 7.29	
1 PCB-1016							M
1	3.272	3.269	0.003	3547242	250.0	298.5	
1	3.632	3.633	-0.001	7938090	250.0	286.1	
1	4.119	4.116	0.003	13448891	250.0	267.4	
1	4.265	4.263	0.002	5948063	250.0	278.7	
1	4.732	4.729	0.003	6365519	250.0	276.4	
		Average of Peak Amounts =				281.4	
2	3.275	3.276	-0.001	9601034	250.0	278.3	
2	3.665	3.666	-0.001	20402534	250.0	286.8	M
2	4.122	4.123	-0.001	44757622	250.0	284.8	M
2	4.265	4.266	-0.001	19470165	250.0	287.3	M
2	4.495	4.496	-0.001	9779283	250.0	266.3	M
		Average of Peak Amounts =				280.7	
						RPD = 0.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9472536	250.0	299.0	
1	6.992	6.993	-0.001	13373866	250.0	275.2	
1	7.492	7.489	0.003	8372131	250.0	289.3	
1	7.932	7.929	0.003	18676866	250.0	286.2	
1	8.322	8.319	0.003	8448030	250.0	284.4	
		Average of Peak Amounts =				286.8	
2	6.649	6.646	0.003	34912578	250.0	301.4	
2	7.115	7.116	-0.001	49684454	250.0	289.1	
2	7.645	7.646	-0.001	31194035	250.0	303.3	
2	8.012	8.013	-0.001	69380727	250.0	301.4	
2	8.515	8.516	-0.001	51465391	250.0	291.5	
		Average of Peak Amounts =				297.3	
						RPD = 3.60	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8559166	12.5	15.5	
2	10.185	10.186	-0.001	34784121	12.5	15.1	
						RPD = 2.59	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

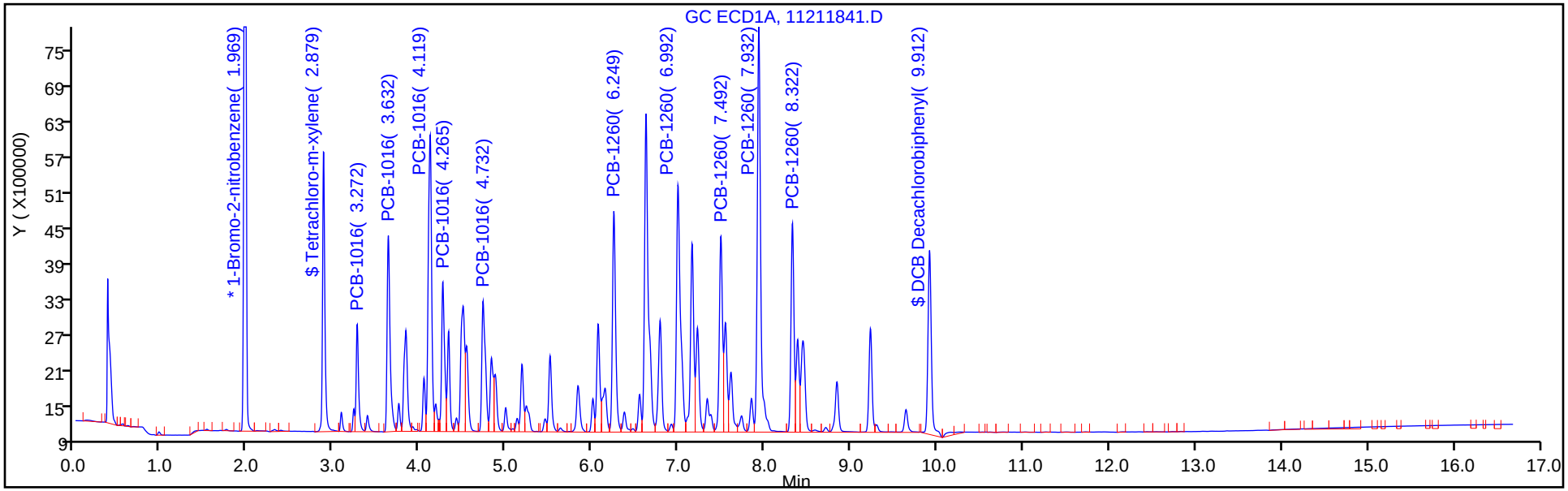
Report Date: 23-Nov-2018 10:58:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

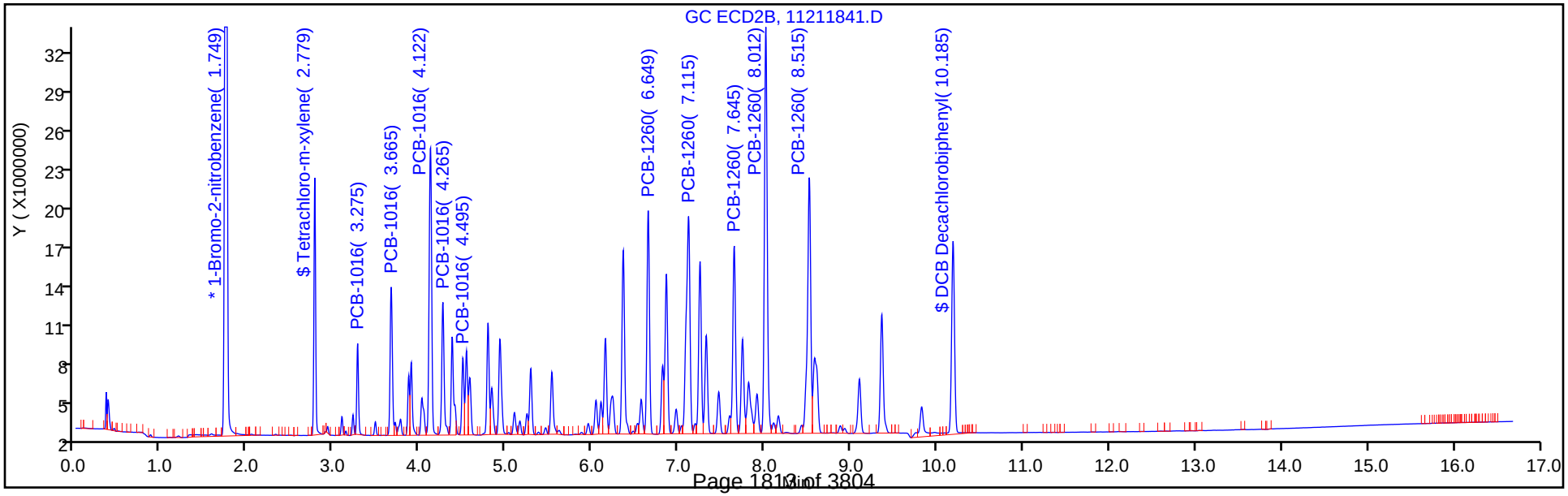
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D

Injection Date:	21-Nov-2018 22:51:54	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	41
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2502		278	250	11.3	20.0
PCB-1016 Peak 2	Lin1		0.5317		287	250	14.7	20.0
PCB-1016 Peak 3	Lin1		1.166		285	250	13.9	20.0
PCB-1016 Peak 4	Lin1		0.5074		287	250	14.9	20.0
PCB-1016 Peak 5	Lin1		0.2548		266	250	6.5	20.0
PCB-1260 Peak 1	Lin1		0.9098		301	250	20.6*	20.0
PCB-1260 Peak 2	Lin1		1.295		289	250	15.6	20.0
PCB-1260 Peak 3	Lin1		0.8129		303	250	21.3*	20.0
PCB-1260 Peak 4	Lin1		1.808		301	250	20.5*	20.0
PCB-1260 Peak 5	Lin1		1.341		292	250	16.6	20.0
Tetrachloro-m-xylene	Lin1		14.08		13.4	12.5	7.3	20.0
DCB Decachlorobiphenyl	Lin1		18.13		15.1	12.5	20.8*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/41 Calibration Date: 11/21/2018 22:51

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11211841.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.28	3.03	3.53
PCB-1016 Peak 2	3.67	3.42	3.92
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.27	4.02	4.52
PCB-1016 Peak 5	4.50	4.25	4.75
PCB-1260 Peak 1	6.65	6.40	6.90
PCB-1260 Peak 2	7.12	6.87	7.37
PCB-1260 Peak 3	7.65	7.40	7.90
PCB-1260 Peak 4	8.01	7.76	8.26
PCB-1260 Peak 5	8.52	8.27	8.77
Tetrachloro-m-xylene	2.78	2.53	3.03
DCB Decachlorobiphenyl	10.19	9.94	10.44

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 22:51:54 ALS Bottle#: 41 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-041
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:41:58

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26927485	1000.0	1000.0	
2	1.749	1.744	0.005	153501296	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.879	2.879	0.000	8774677	12.5	12.5	
2	2.779	2.780	-0.001	27009747	12.5	13.4	
						RPD = 7.29	
1 PCB-1016							M
1	3.272	3.269	0.003	3547242	250.0	298.5	
1	3.632	3.633	-0.001	7938090	250.0	286.1	
1	4.119	4.116	0.003	13448891	250.0	267.4	
1	4.265	4.263	0.002	5948063	250.0	278.7	
1	4.732	4.729	0.003	6365519	250.0	276.4	
		Average of Peak Amounts =				281.4	
2	3.275	3.276	-0.001	9601034	250.0	278.3	
2	3.665	3.666	-0.001	20402534	250.0	286.8	M
2	4.122	4.123	-0.001	44757622	250.0	284.8	M
2	4.265	4.266	-0.001	19470165	250.0	287.3	M
2	4.495	4.496	-0.001	9779283	250.0	266.3	M
		Average of Peak Amounts =				280.7	
						RPD = 0.26	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.249	6.249	0.000	9472536	250.0	299.0	
1	6.992	6.993	-0.001	13373866	250.0	275.2	
1	7.492	7.489	0.003	8372131	250.0	289.3	
1	7.932	7.929	0.003	18676866	250.0	286.2	
1	8.322	8.319	0.003	8448030	250.0	284.4	
		Average of Peak Amounts =				286.8	
2	6.649	6.646	0.003	34912578	250.0	301.4	
2	7.115	7.116	-0.001	49684454	250.0	289.1	
2	7.645	7.646	-0.001	31194035	250.0	303.3	
2	8.012	8.013	-0.001	69380727	250.0	301.4	
2	8.515	8.516	-0.001	51465391	250.0	291.5	
		Average of Peak Amounts =				297.3	
						RPD = 3.60	
$ 15 DCB Decachlorobiphenyl							
1	9.912	9.913	-0.001	8559166	12.5	15.5	
2	10.185	10.186	-0.001	34784121	12.5	15.1	
						RPD = 2.59	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

AR_1660_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

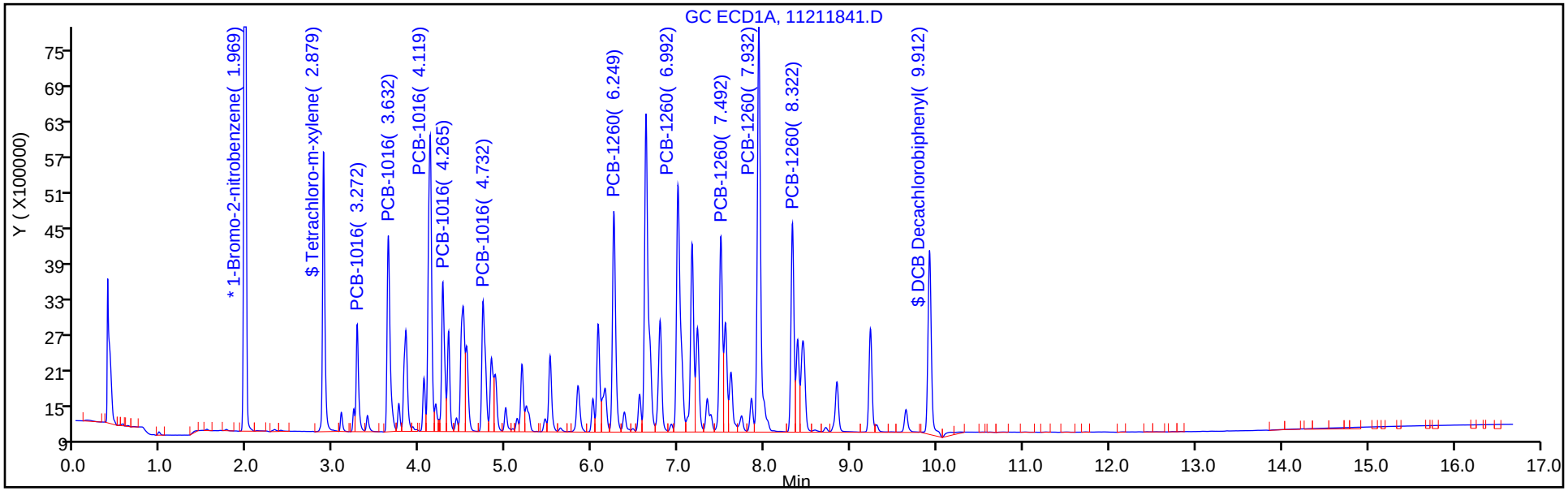
Report Date: 23-Nov-2018 10:58:45 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

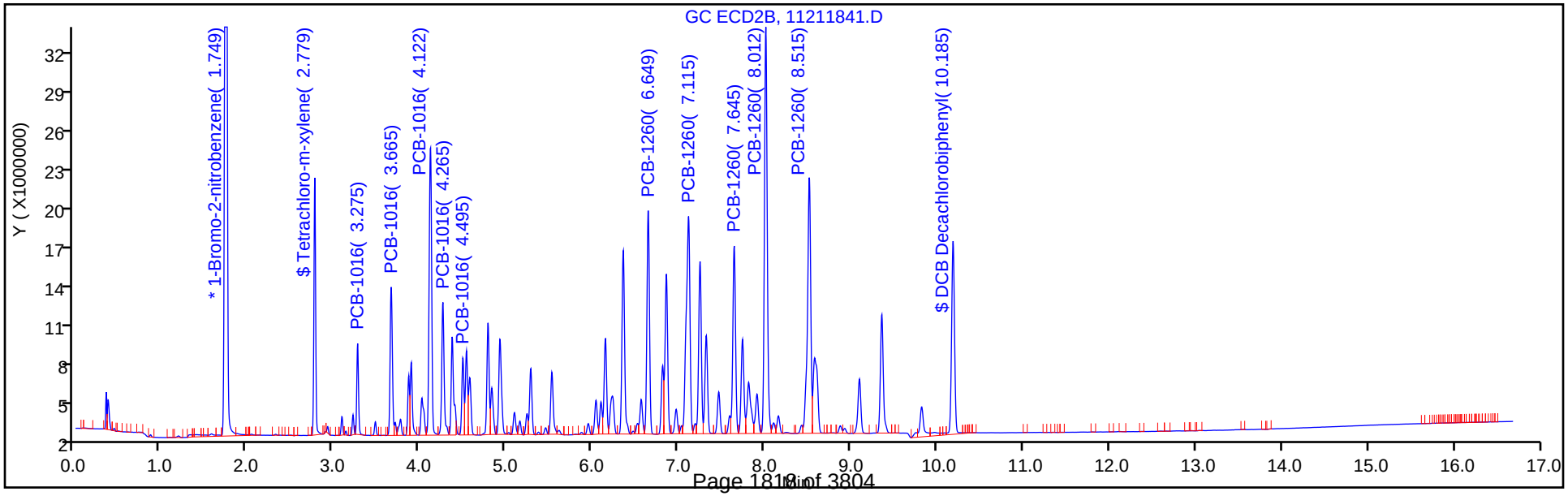
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D

Injection Date:	21-Nov-2018 22:51:54	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	41
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	41
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 10:58:46 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211841.D

Injection Date: 21-Nov-2018 22:51:54 Instrument ID: SGC_J

Lims ID: ICV

Client ID:

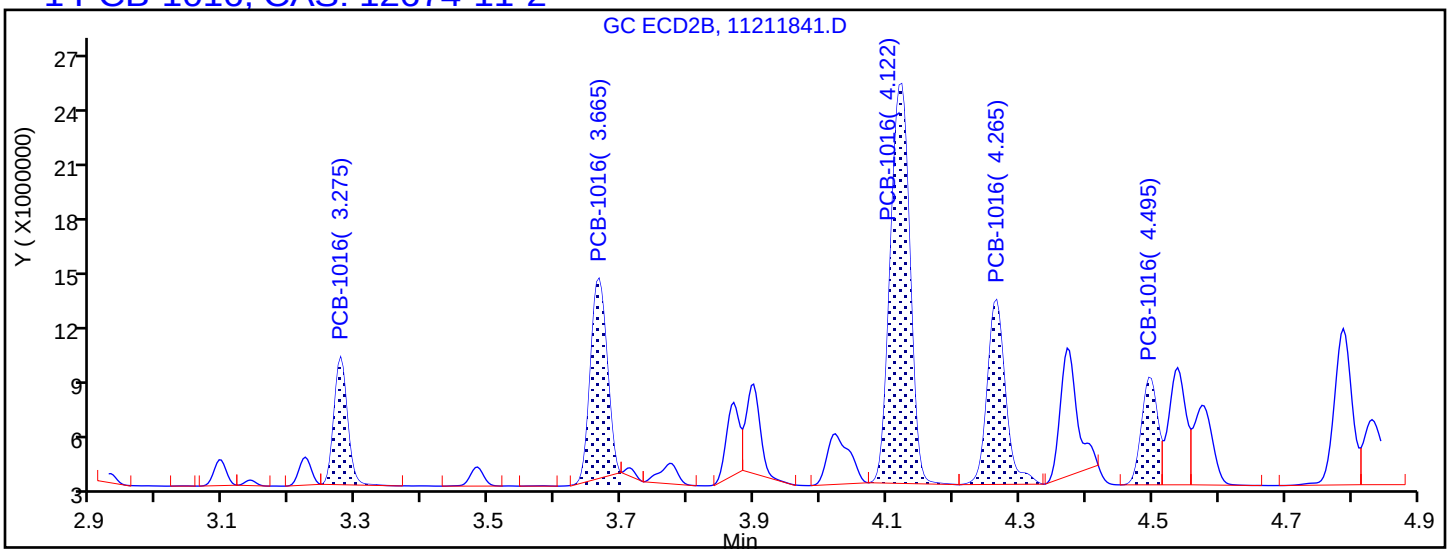
Operator ID: ALS ALS Bottle#: 41 Worklist Smp#: 41

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

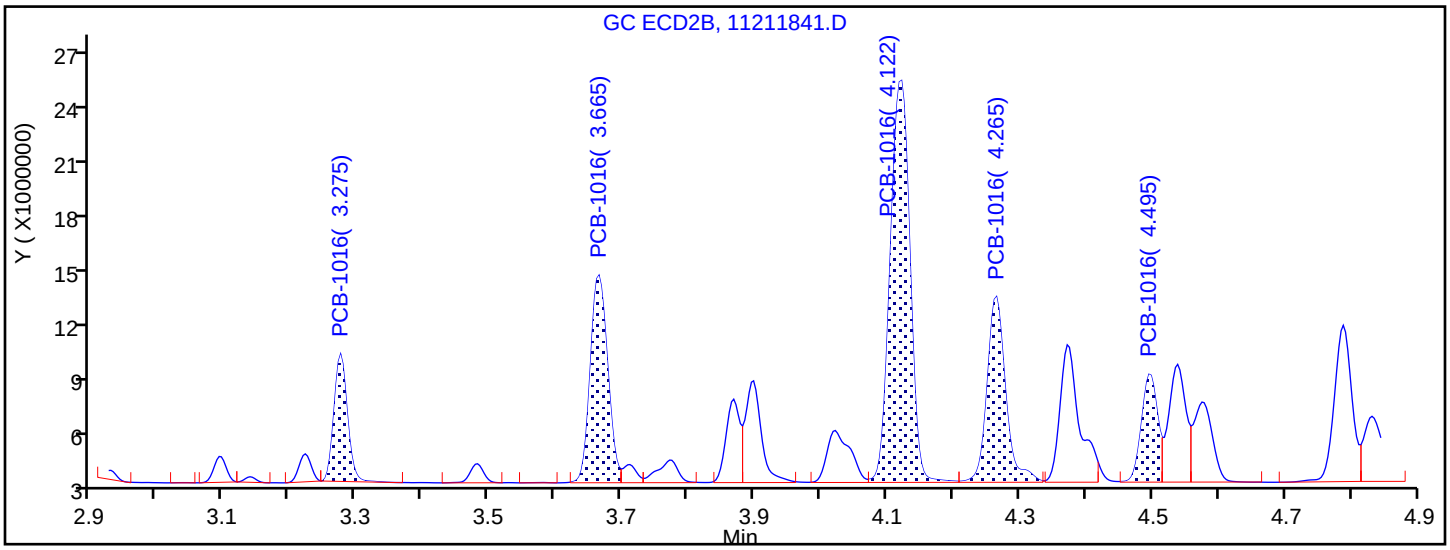
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

1 PCB-1016, CAS: 12674-11-2



Processing Integration Results

3.275	Response = 9601034
3.665	Response = 18727987
4.122	Response = 43874781
4.265	Response = 18984635
4.495	Response = 9655763



Manual Integration Results

3.275	Response = 9601034	
3.665	Response = 20402534	M
4.122	Response = 44757622	M
4.265	Response = 19470165	M
4.495	Response = 9779283	M

Reviewer: patadiab, 23-Nov-2018 10:41:22

Audit Action: Assigned New Baseline Audit Reason: Baseline Smoothing

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Lin1		0.1706		253	250	1.2	20.0
PCB-1232 Peak 2	Lin1		0.5805		269	250	7.4	20.0
PCB-1232 Peak 3	Lin1		0.8455		264	250	5.4	20.0
PCB-1232 Peak 4	Lin1		0.3874		274	250	9.6	20.0
PCB-1232 Peak 5	Lin1		0.4202		298	250	19.2	20.0
PCB-1262 Peak 1	Lin1		1.153		297	250	18.8	20.0
PCB-1262 Peak 2	Lin1		1.659		272	250	9.0	20.0
PCB-1262 Peak 3	Lin1		1.483		276	250	10.2	20.0
PCB-1262 Peak 4	Lin1		3.241		292	250	17.0	20.0
PCB-1262 Peak 5	Lin1		1.059		312	250	24.8*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	3.09	2.84	3.34
PCB-1232 Peak 2	3.27	3.02	3.52
PCB-1232 Peak 3	4.12	3.87	4.37
PCB-1232 Peak 4	4.26	4.01	4.51
PCB-1232 Peak 5	4.73	4.48	4.98
PCB-1262 Peak 1	6.25	6.00	6.50
PCB-1262 Peak 2	7.16	6.90	7.40
PCB-1262 Peak 3	7.49	7.24	7.74
PCB-1262 Peak 4	7.93	7.68	8.18
PCB-1262 Peak 5	8.32	8.07	8.57

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:13:05 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-042
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:43:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26954302	1000.0	1000.0	
2	1.746	1.744	0.002	152978208	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	1149502	250.0	252.9	
1	3.269	3.271	-0.002	3911724	250.0	268.5	
1	4.116	4.118	-0.002	5697150	250.0	263.6	
1	4.262	4.264	-0.002	2610317	250.0	274.1	
1	4.729	4.731	-0.002	2831763	250.0	298.1	
		Average of Peak Amounts =				271.4	
2	3.276	3.275	0.001	11159015	250.0	273.0	
2	3.666	3.665	0.001	9939804	250.0	287.2	
2	4.123	4.121	0.002	20391815	250.0	285.6	
2	4.266	4.265	0.001	9058511	250.0	290.2	
2	4.926	4.928	-0.002	8279557	250.0	316.1	
		Average of Peak Amounts =				290.4	
						RPD = 6.76	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	7767201	250.0	297.1	
1	7.156	7.154	0.002	11179510	250.0	272.4	
1	7.489	7.488	0.001	9995072	250.0	275.6	
1	7.929	7.931	-0.002	21842740	250.0	292.4	
1	8.322	8.321	0.001	7135112	250.0	311.9	
		Average of Peak Amounts =				289.9	
2	6.646	6.648	-0.002	29328487	250.0	315.7	
2	7.249	7.248	0.001	37737006	250.0	286.3	
2	7.646	7.645	0.001	38058721	250.0	291.5	
2	8.009	8.011	-0.002	78979247	250.0	310.8	
2	8.516	8.515	0.001	60581655	250.0	315.6	
		Average of Peak Amounts =				304.0	
						RPD = 4.75	

Reagents:

AR_3262_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

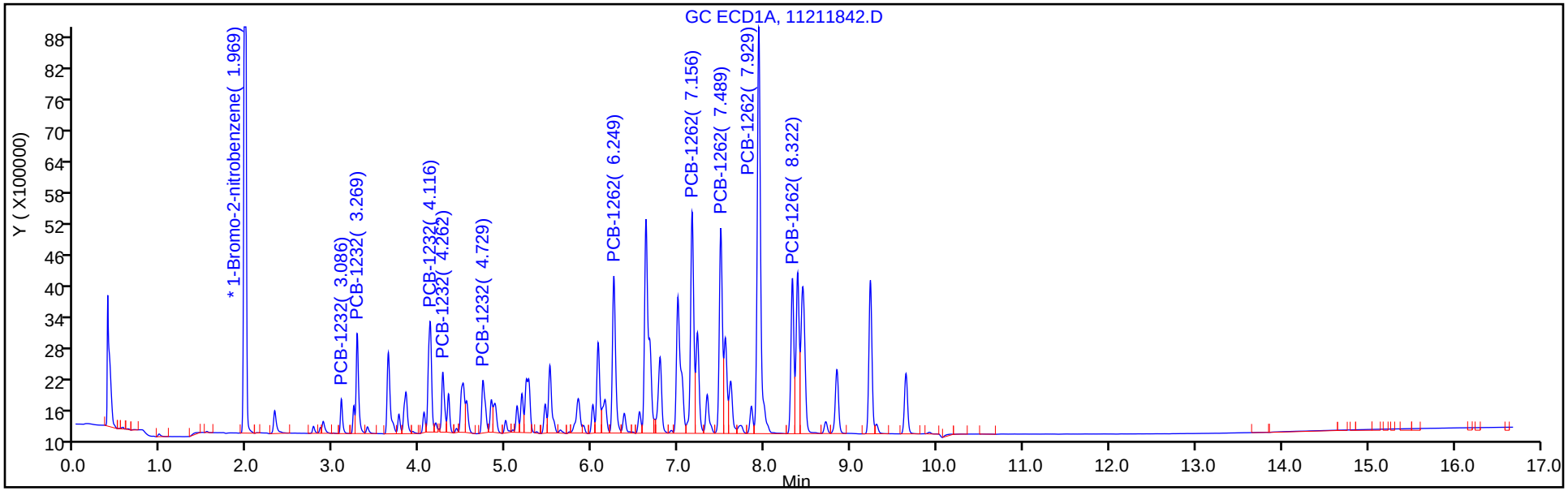
Report Date: 23-Nov-2018 10:58:48 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

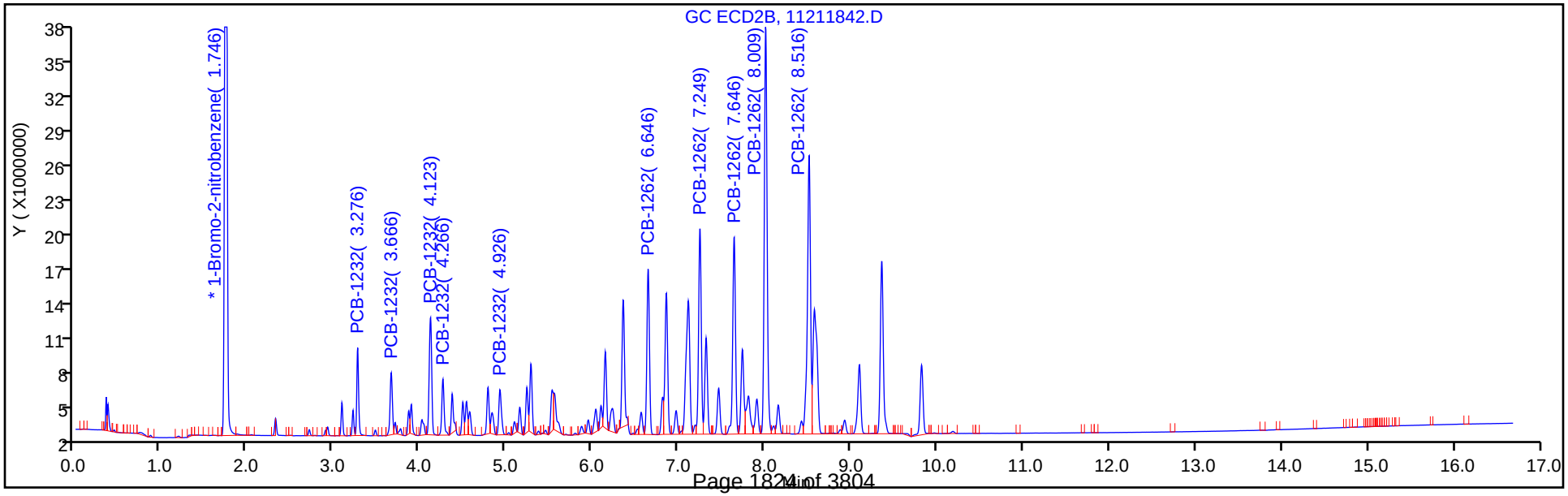
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D

Injection Date:	21-Nov-2018 23:13:05	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	42
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1232 Peak 1	Lin1		0.2918		273	250	9.2	20.0
PCB-1232 Peak 2	Lin1		0.2599		287	250	14.9	20.0
PCB-1232 Peak 3	Lin1		0.5332		286	250	14.2	20.0
PCB-1232 Peak 4	Lin1		0.2369		290	250	16.1	20.0
PCB-1232 Peak 5	Lin1		0.2165		316	250	26.4*	20.0
PCB-1262 Peak 1	Lin1		0.7669		316	250	26.3*	20.0
PCB-1262 Peak 2	Lin1		0.9867		286	250	14.5	20.0
PCB-1262 Peak 3	Lin1		0.995		292	250	16.6	20.0
PCB-1262 Peak 4	Lin1		2.065		311	250	24.3*	20.0
PCB-1262 Peak 5	Lin1		1.584		316	250	26.2*	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/42 Calibration Date: 11/21/2018 23:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 17:13

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 19:20

Lab File ID: 11211842.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1232 Peak 1	3.28	3.03	3.53
PCB-1232 Peak 2	3.67	3.42	3.92
PCB-1232 Peak 3	4.12	3.87	4.37
PCB-1232 Peak 4	4.27	4.02	4.52
PCB-1232 Peak 5	4.93	4.68	5.18
PCB-1262 Peak 1	6.65	6.40	6.90
PCB-1262 Peak 2	7.25	7.00	7.50
PCB-1262 Peak 3	7.65	7.40	7.90
PCB-1262 Peak 4	8.01	7.76	8.26
PCB-1262 Peak 5	8.52	8.27	8.77

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:13:05 ALS Bottle#: 42 Worklist Smp#: 42
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-042
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 10:58:38 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:43:26

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.969	1.967	0.002	26954302	1000.0	1000.0	
2	1.746	1.744	0.002	152978208	1000.0	1000.0	
						RPD = 0.00	
7 PCB-1232							
1	3.086	3.088	-0.002	1149502	250.0	252.9	
1	3.269	3.271	-0.002	3911724	250.0	268.5	
1	4.116	4.118	-0.002	5697150	250.0	263.6	
1	4.262	4.264	-0.002	2610317	250.0	274.1	
1	4.729	4.731	-0.002	2831763	250.0	298.1	
		Average of Peak Amounts =				271.4	
2	3.276	3.275	0.001	11159015	250.0	273.0	
2	3.666	3.665	0.001	9939804	250.0	287.2	
2	4.123	4.121	0.002	20391815	250.0	285.6	
2	4.266	4.265	0.001	9058511	250.0	290.2	
2	4.926	4.928	-0.002	8279557	250.0	316.1	
		Average of Peak Amounts =				290.4	
						RPD = 6.76	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
5 PCB-1262							
1	6.249	6.248	0.001	7767201	250.0	297.1	
1	7.156	7.154	0.002	11179510	250.0	272.4	
1	7.489	7.488	0.001	9995072	250.0	275.6	
1	7.929	7.931	-0.002	21842740	250.0	292.4	
1	8.322	8.321	0.001	7135112	250.0	311.9	
		Average of Peak Amounts =				289.9	
2	6.646	6.648	-0.002	29328487	250.0	315.7	
2	7.249	7.248	0.001	37737006	250.0	286.3	
2	7.646	7.645	0.001	38058721	250.0	291.5	
2	8.009	8.011	-0.002	78979247	250.0	310.8	
2	8.516	8.515	0.001	60581655	250.0	315.6	
		Average of Peak Amounts =				304.0	
						RPD = 4.75	

Reagents:

AR_3262_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

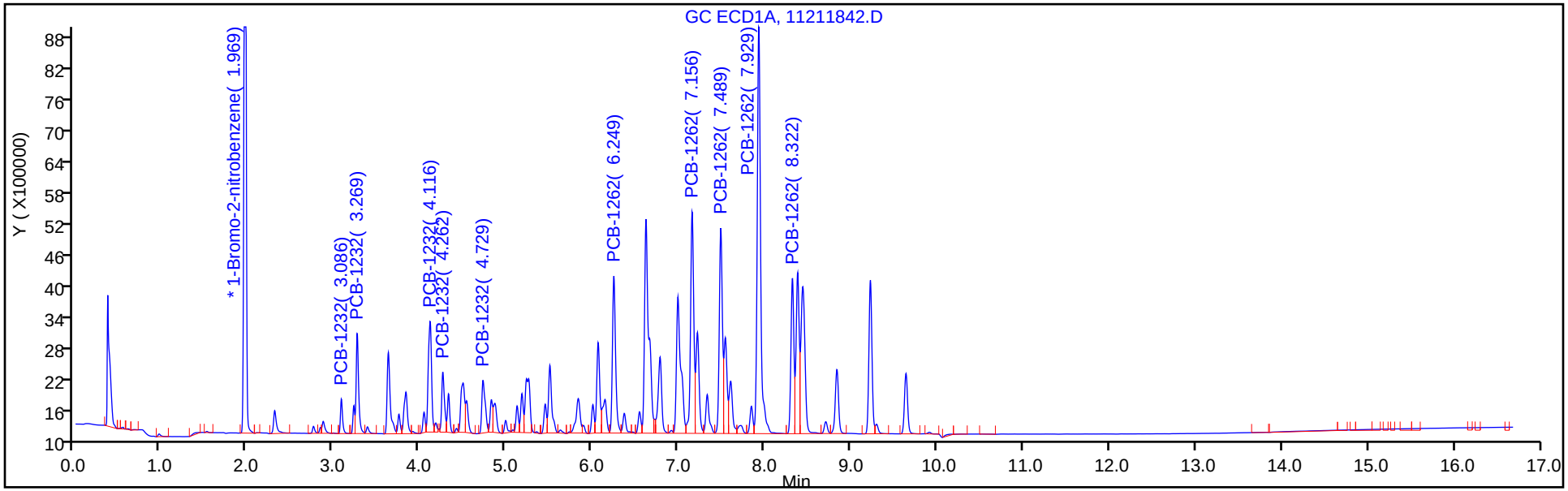
Report Date: 23-Nov-2018 10:58:48 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

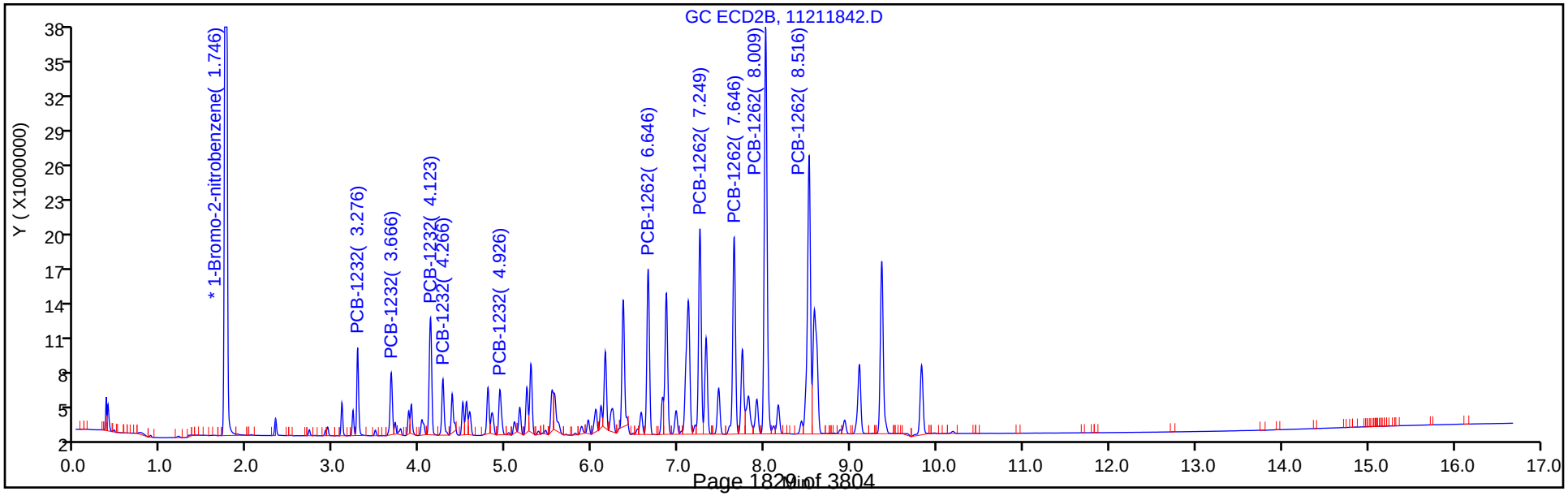
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211842.D

Injection Date:	21-Nov-2018 23:13:05	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	42
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	42
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Lin1		0.8653		269	250	7.7	20.0
PCB-1242 Peak 2	Lin1		1.375		243	250	-2.6	20.0
PCB-1242 Peak 3	Lin1		0.6023		249	250	-0.6	20.0
PCB-1242 Peak 4	Lin1		0.4112		246	250	-1.7	20.0
PCB-1242 Peak 5	Lin1		0.4807		224	250	-10.4	20.0
PCB-1268 Peak 1	Lin1		3.171		276	250	10.5	20.0
PCB-1268 Peak 2	Lin1		3.065		265	250	5.8	20.0
PCB-1268 Peak 3	Lin1		2.752		295	250	17.9	20.0
PCB-1268 Peak 4	Lin1		0.7383		186	250	-25.4*	20.0
PCB-1268 Peak 5	Lin1		6.803		244	250	-2.4	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	3.63	3.38	3.88
PCB-1242 Peak 2	4.12	3.87	4.37
PCB-1242 Peak 3	4.26	4.01	4.51
PCB-1242 Peak 4	5.24	4.99	5.49
PCB-1242 Peak 5	5.26	5.01	5.51
PCB-1268 Peak 1	8.38	8.13	8.63
PCB-1268 Peak 2	8.43	8.18	8.68
PCB-1268 Peak 3	8.71	8.46	8.96
PCB-1268 Peak 4	9.23	8.97	9.47
PCB-1268 Peak 5	9.64	9.39	9.89

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:34:12 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-043
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:09:03 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:44:17

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30567576	1000.0	1000.0	
2	1.747	1.744	0.003	172646811	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							Ma
1	3.630	3.631	-0.001	6612174	250.0	269.2	
1	4.117	4.117	0.000	10505144	250.0	243.4	
1	4.263	4.264	-0.001	4602961	250.0	248.6	
1	5.237	5.237	0.000	3142547	250.0	245.9	M
1	5.260	5.261	-0.001	3673495	250.0	224.1	M
		Average of Peak Amounts =				246.2	
2	3.664	3.664	0.000	16978060	250.0	273.5	
2	4.120	4.121	-0.001	36272110	250.0	265.6	
2	4.264	4.264	0.000	15836385	250.0	267.6	
2	4.787	4.788	-0.001	13494422	250.0	275.1	
2	4.927	4.928	-0.001	15331263	250.0	266.7	
		Average of Peak Amounts =				269.7	
						RPD = 9.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	24235953	250.0	276.3	
1	8.433	8.434	-0.001	23424284	250.0	264.6	
1	8.710	8.707	0.003	21027004	250.0	294.7	
1	9.227	9.224	0.003	5641852	250.0	186.4	
1	9.640	9.637	0.003	51985946	250.0	243.9	
		Average of Peak Amounts =				253.2	
2	8.510	8.511	-0.001	92658099	250.0	286.6	
2	8.574	8.574	0.000	85134666	250.0	277.7	
2	8.927	8.928	-0.001	81954946	250.0	309.2	
2	9.357	9.358	-0.001	25443183	250.0	197.1	
2	9.820	9.821	-0.001	205859923	250.0	251.8	
		Average of Peak Amounts =				264.5	
						RPD = 4.37	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

AR_4268_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

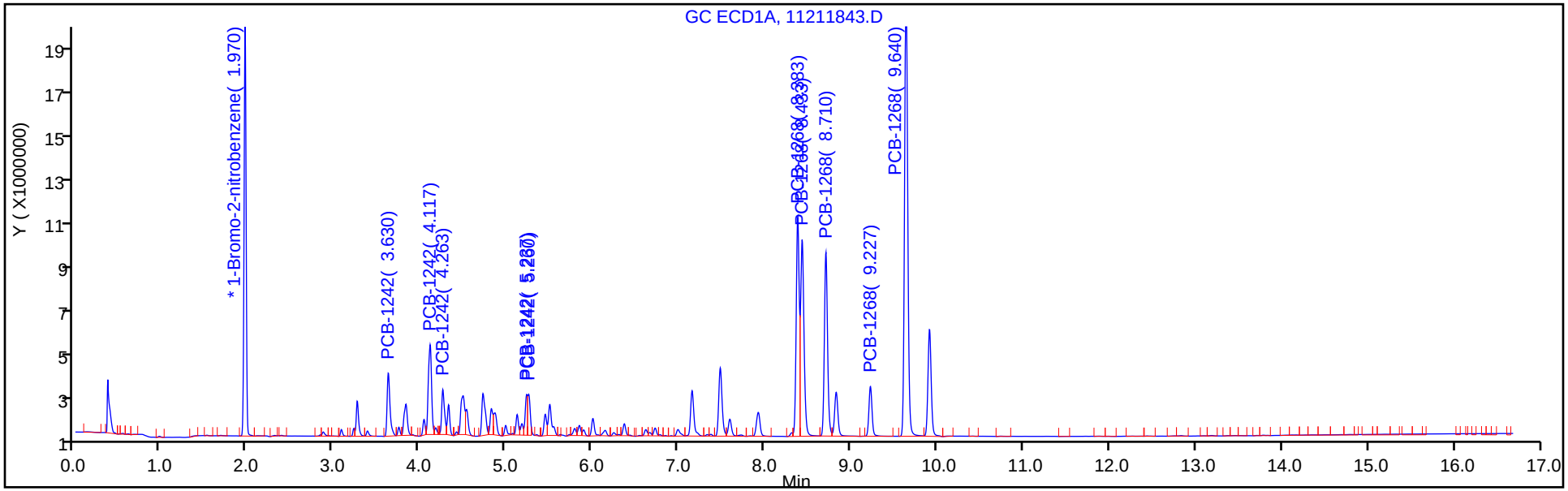
Report Date: 23-Nov-2018 11:09:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

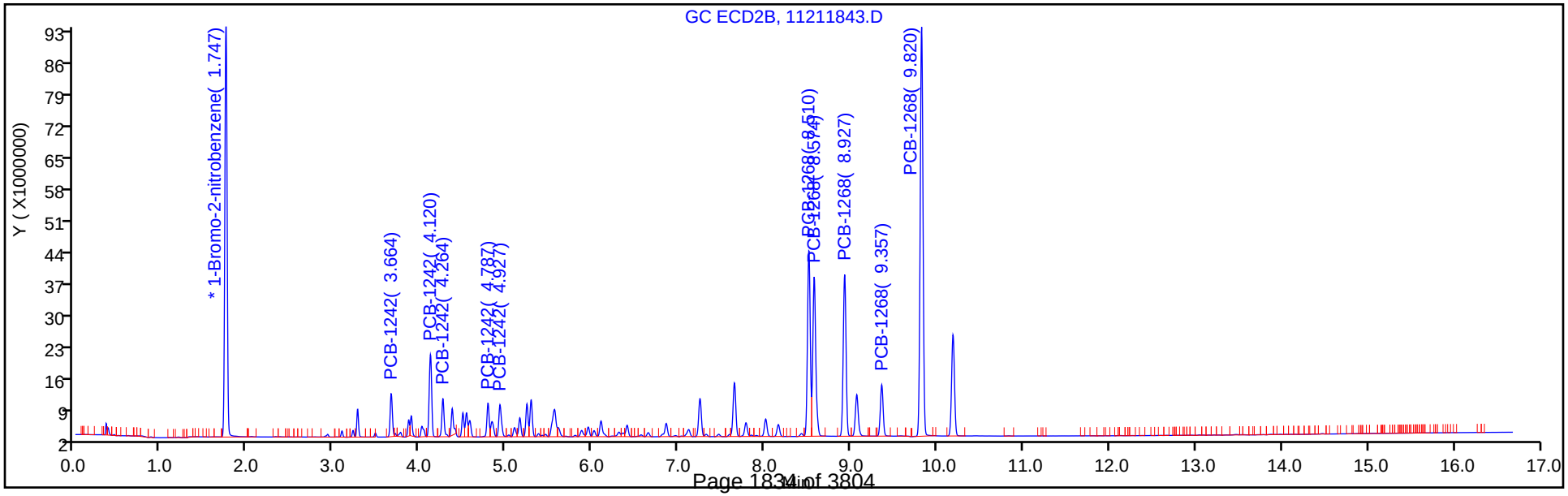
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D

Injection Date:	21-Nov-2018 23:34:12	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Report Date: 23-Nov-2018 11:09:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D

Injection Date: 21-Nov-2018 23:34:12 Instrument ID: SGC_J

Lims ID: ICV

Client ID:

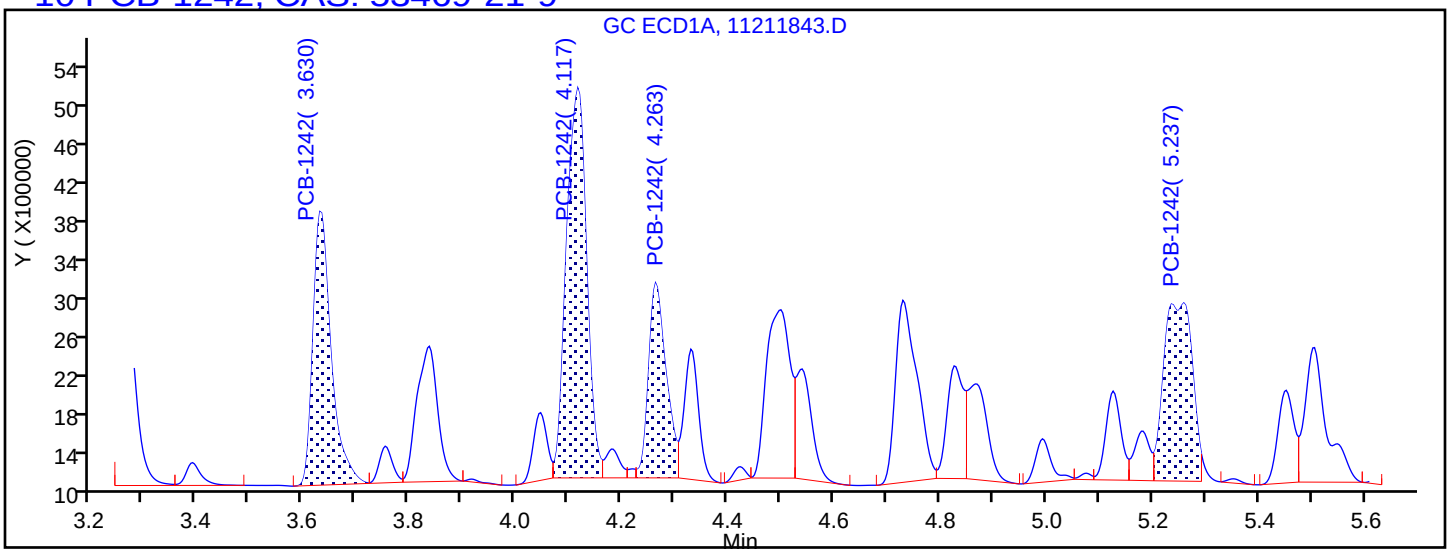
Operator ID: ALS ALS Bottle#: 43 Worklist Smp#: 43

Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

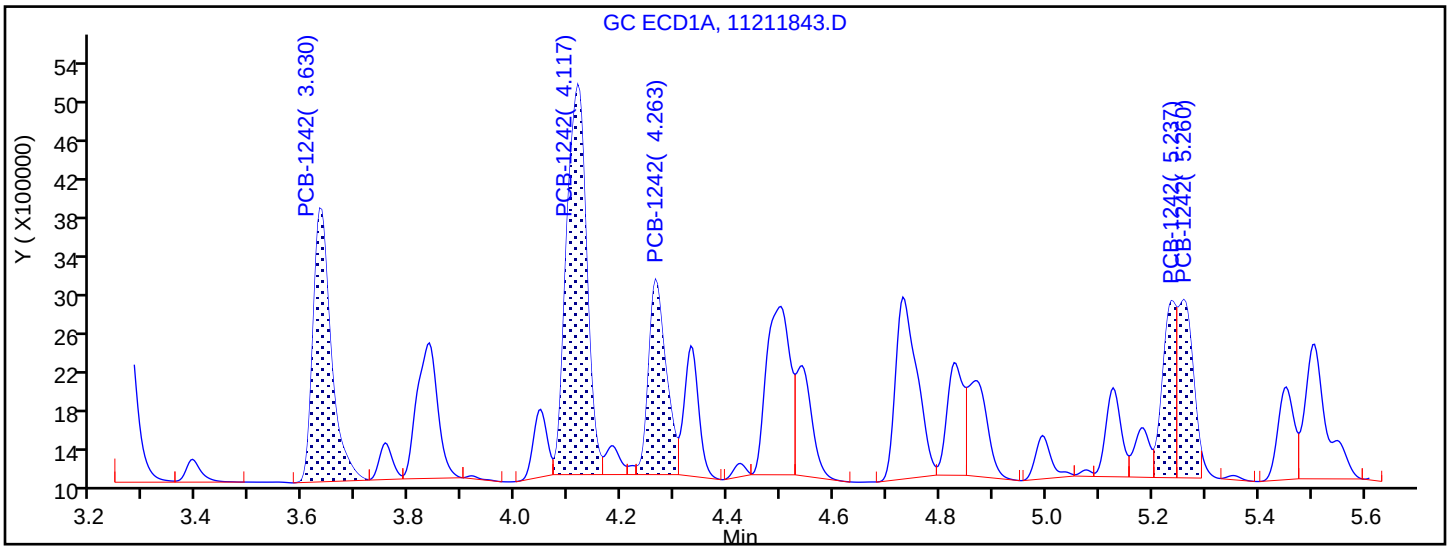
Column: CLP1 Pesticides Column 1 (0.32 mm) Detector GC ECD1A

10 PCB-1242, CAS: 53469-21-9



Processing Integration Results

3.630	Response = 6612174
4.117	Response = 10505144
4.263	Response = 4602961
5.237	Response = 6815903
5.261	Response = 0



Manual Integration Results

3.630	Response = 6612174	
4.117	Response = 10505144	
4.263	Response = 4602961	
5.237	Response = 3142547	M
5.260	Response = 3673495	M

Reviewer: patadiab, 23-Nov-2018 11:08:36

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Peak not integrated

FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1242 Peak 1	Lin1		0.3934		273	250	9.4	20.0
PCB-1242 Peak 2	Lin1		0.8404		266	250	6.2	20.0
PCB-1242 Peak 3	Lin1		0.3669		268	250	7.0	20.0
PCB-1242 Peak 4	Lin1		0.3127		275	250	10.0	20.0
PCB-1242 Peak 5	Lin1		0.3552		267	250	6.7	20.0
PCB-1268 Peak 1	Lin1		2.147		287	250	14.7	20.0
PCB-1268 Peak 2	Lin1		1.972		278	250	11.1	20.0
PCB-1268 Peak 3	Lin1		1.899		309	250	23.7*	20.0
PCB-1268 Peak 4	Lin1		0.5895		197	250	-21.1*	20.0
PCB-1268 Peak 5	Lin1		4.770		252	250	0.7	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-438388/43 Calibration Date: 11/21/2018 23:34

Instrument ID: SGC_J Calib Start Date: 11/21/2018 19:41

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 21:48

Lab File ID: 11211843.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1242 Peak 1	3.66	3.41	3.91
PCB-1242 Peak 2	4.12	3.87	4.37
PCB-1242 Peak 3	4.26	4.01	4.51
PCB-1242 Peak 4	4.79	4.54	5.04
PCB-1242 Peak 5	4.93	4.68	5.18
PCB-1268 Peak 1	8.51	8.26	8.76
PCB-1268 Peak 2	8.57	8.32	8.82
PCB-1268 Peak 3	8.93	8.68	9.18
PCB-1268 Peak 4	9.36	9.11	9.61
PCB-1268 Peak 5	9.82	9.57	10.07

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 21-Nov-2018 23:34:12 ALS Bottle#: 43 Worklist Smp#: 43
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 280-0076428-043
Operator ID: ALS Instrument ID: SGC_J
Sublist:

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 23-Nov-2018 11:09:03 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0304

First Level Reviewer: patadiab Date: 23-Nov-2018 10:44:17

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.970	1.967	0.003	30567576	1000.0	1000.0	
2	1.747	1.744	0.003	172646811	1000.0	1000.0	
						RPD = 0.00	
10 PCB-1242							Ma
1	3.630	3.631	-0.001	6612174	250.0	269.2	
1	4.117	4.117	0.000	10505144	250.0	243.4	
1	4.263	4.264	-0.001	4602961	250.0	248.6	
1	5.237	5.237	0.000	3142547	250.0	245.9	M
1	5.260	5.261	-0.001	3673495	250.0	224.1	M
		Average of Peak Amounts =				246.2	
2	3.664	3.664	0.000	16978060	250.0	273.5	
2	4.120	4.121	-0.001	36272110	250.0	265.6	
2	4.264	4.264	0.000	15836385	250.0	267.6	
2	4.787	4.788	-0.001	13494422	250.0	275.1	
2	4.927	4.928	-0.001	15331263	250.0	266.7	
		Average of Peak Amounts =				269.7	
						RPD = 9.10	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
13 PCB-1268							
1	8.383	8.381	0.002	24235953	250.0	276.3	
1	8.433	8.434	-0.001	23424284	250.0	264.6	
1	8.710	8.707	0.003	21027004	250.0	294.7	
1	9.227	9.224	0.003	5641852	250.0	186.4	
1	9.640	9.637	0.003	51985946	250.0	243.9	
		Average of Peak Amounts =				253.2	
2	8.510	8.511	-0.001	92658099	250.0	286.6	
2	8.574	8.574	0.000	85134666	250.0	277.7	
2	8.927	8.928	-0.001	81954946	250.0	309.2	
2	9.357	9.358	-0.001	25443183	250.0	197.1	
2	9.820	9.821	-0.001	205859923	250.0	251.8	
		Average of Peak Amounts =				264.5	
						RPD = 4.37	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

AR_4268_ICV_00013	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

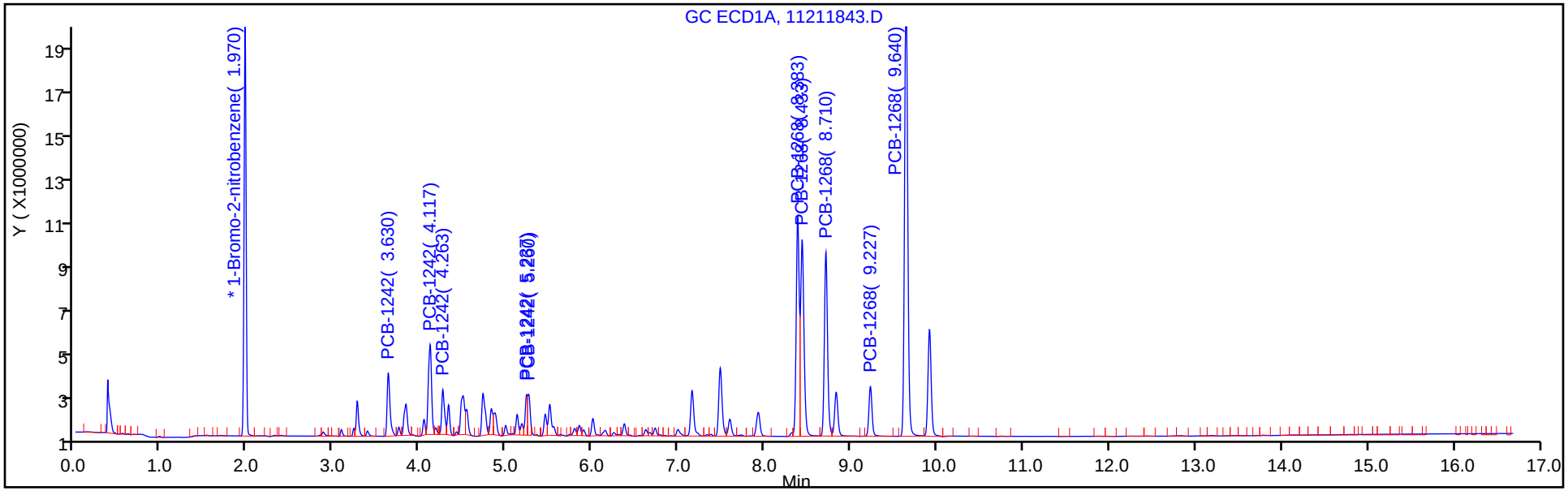
Report Date: 23-Nov-2018 11:09:04 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

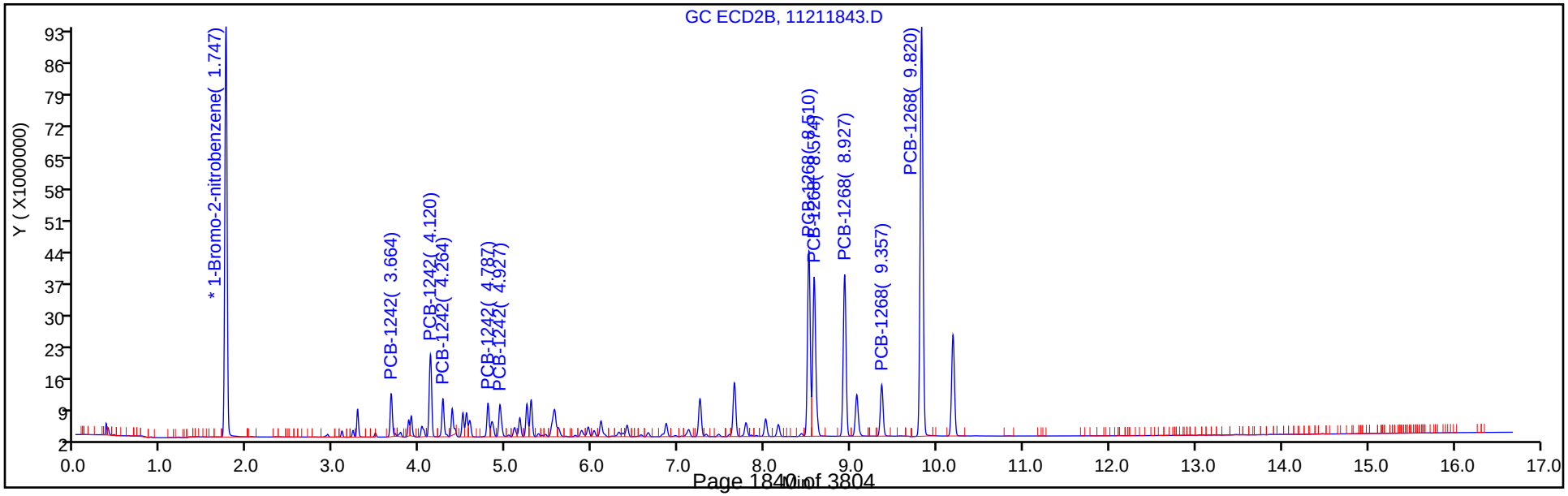
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211843.D

Injection Date:	21-Nov-2018 23:34:12	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	ICV			Worklist Smp#:	43
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	43
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVIS 280-438897/4 Calibration Date: 11/27/2018 15:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11271804.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.4197		484	500	-3.1	20.0
PCB-1016 Peak 2	Lin1		0.997		494	500	-1.2	20.0
PCB-1016 Peak 3	Lin1		1.840		495	500	-1.1	20.0
PCB-1016 Peak 4	Lin1		0.7625		487	500	-2.6	20.0
PCB-1016 Peak 5	Lin1		0.8461		500	500	0.0	20.0
PCB-1260 Peak 1	Lin1		1.212		521	500	4.2	20.0
PCB-1260 Peak 2	Lin1		1.905		530	500	6.1	20.0
PCB-1260 Peak 3	Lin1		1.123		527	500	5.4	20.0
PCB-1260 Peak 4	Lin1		2.615		542	500	8.3	20.0
PCB-1260 Peak 5	Lin1		1.176		535	500	7.0	20.0
Tetrachloro-m-xylene	Lin1		25.18		24.0	25.0	-4.1	20.0
DCB Decachlorobiphenyl	Lin1		19.83		24.5	25.0	-2.0	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVIS 280-438897/4 Calibration Date: 11/27/2018 15:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11271804.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.01	4.51
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	7.00	6.75	7.25
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.91	9.66	10.16

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271804.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 27-Nov-2018 15:13:48 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 280-0076564-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Nov-2018 08:50:17 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0318

First Level Reviewer: patadiab Date: 27-Nov-2018 16:01:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.966	0.000	36068276	1000.0	1000.0	
2	1.743	1.743	0.000	178826630	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.880	0.000	22703116	25.0	24.0	
2	2.773	2.773	0.000	62631152	25.0	27.3	
						RPD = 12.93	
1 PCB-1016							
1	3.270	3.270	0.000	7568657	500.0	484.5	
1	3.633	3.633	0.000	17987682	500.0	493.8	
1	4.116	4.116	0.000	33182812	500.0	494.7	
1	4.263	4.263	0.000	13750764	500.0	487.0	
1	4.733	4.733	0.000	15258360	500.0	500.0	
		Average of Peak Amounts =				492.0	
2	3.273	3.273	0.000	21201378	500.0	542.4	
2	3.663	3.663	0.000	41600884	500.0	514.4	
2	4.116	4.116	0.000	97914831	500.0	547.0	
2	4.263	4.263	0.000	42248001	500.0	548.7	
2	4.493	4.493	0.000	22444354	500.0	541.4	
		Average of Peak Amounts =				538.8	
						RPD = 9.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.250	0.000	21856126	500.0	521.2	
1	6.996	6.996	0.000	34350630	500.0	530.4	
1	7.493	7.493	0.000	20244394	500.0	527.2	
1	7.933	7.933	0.000	47162269	500.0	541.5	
1	8.323	8.323	0.000	21212626	500.0	534.8	
		Average of Peak Amounts =				531.0	
2	6.643	6.643	0.000	75446781	500.0	570.8	
2	7.113	7.113	0.000	112204496	500.0	572.2	
2	7.643	7.643	0.000	67943043	500.0	577.9	
2	8.010	8.010	0.000	152866665	500.0	580.4	
2	8.513	8.513	0.000	118067409	500.0	585.8	
		Average of Peak Amounts =				577.5	
						RPD = 8.38	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	17883543	25.0	24.5	
2	10.180	10.180	0.000	77299560	25.0	29.5	
						RPD = 18.35	
19 1260 Res 1							
1	8.323	8.323	0.000	21212626	NR	NR	
16 1260 Res 2							
1	8.383	8.383	0.000	10545775	NR	NR	
18 1260 Res 3							
1	8.446	8.446	0.000	14063611	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

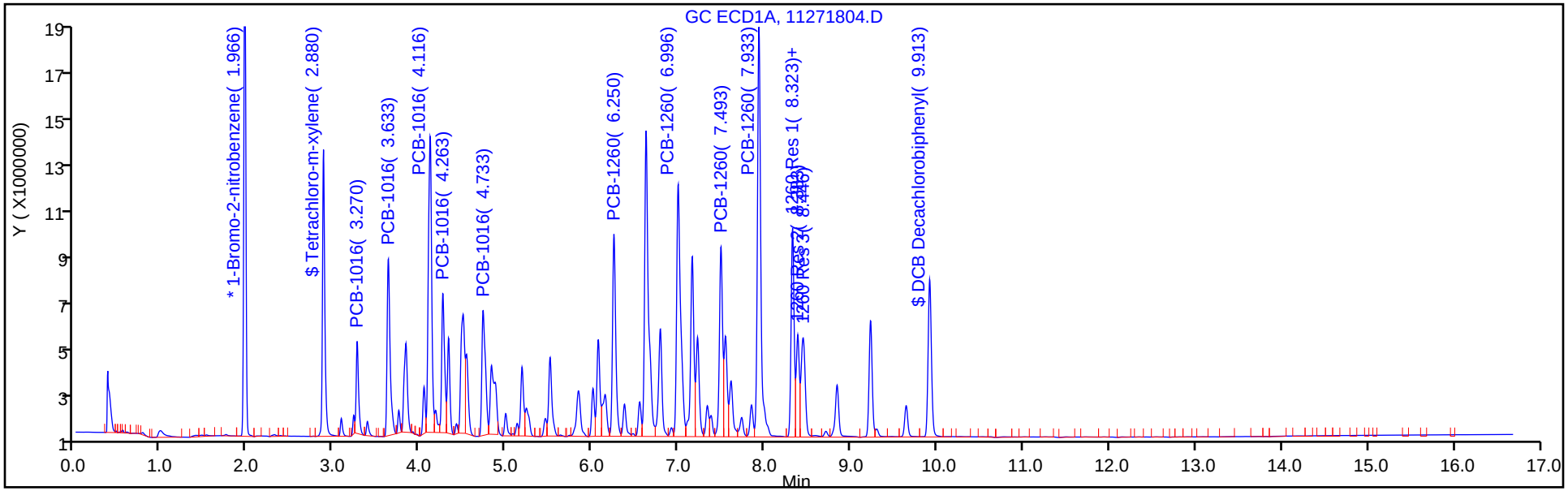
Report Date: 30-Nov-2018 08:50:19 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

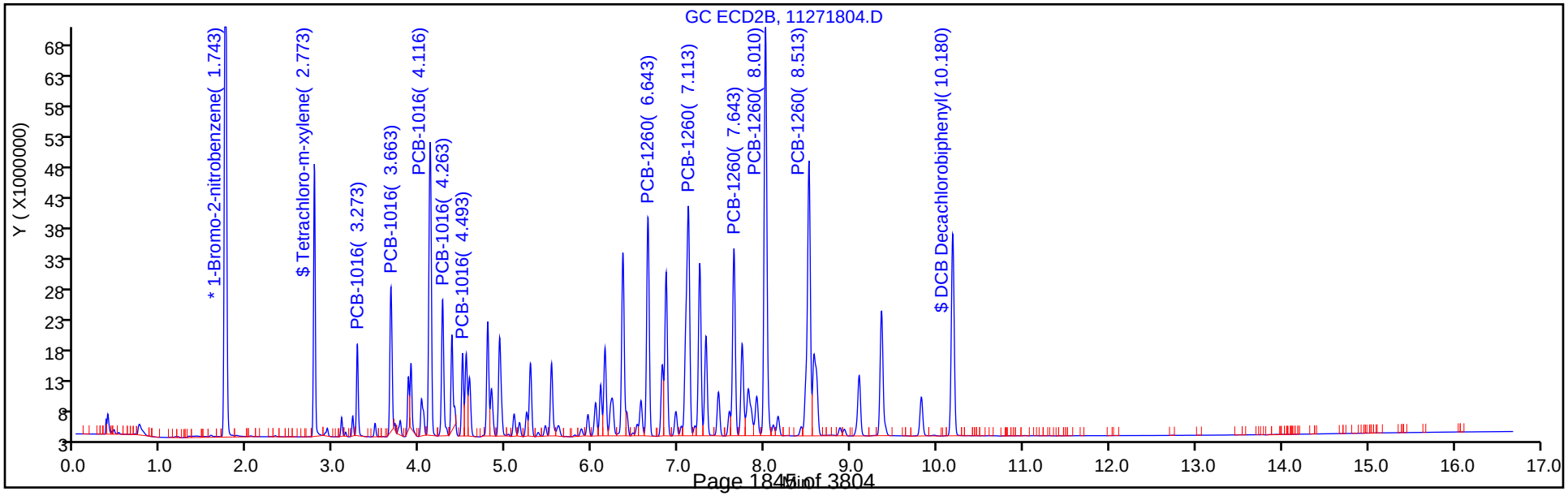
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271804.D

Injection Date:	27-Nov-2018 15:13:48	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCVIS			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVIS 280-438897/4 Calibration Date: 11/27/2018 15:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11271804.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2371		542	500	8.5	20.0
PCB-1016 Peak 2	Lin1		0.4653		514	500	2.9	20.0
PCB-1016 Peak 3	Lin1		1.095		547	500	9.4	20.0
PCB-1016 Peak 4	Lin1		0.4725		549	500	9.7	20.0
PCB-1016 Peak 5	Lin1		0.2510		541	500	8.3	20.0
PCB-1260 Peak 1	Lin1		0.8438		571	500	14.2	20.0
PCB-1260 Peak 2	Lin1		1.255		572	500	14.4	20.0
PCB-1260 Peak 3	Lin1		0.7599		578	500	15.6	20.0
PCB-1260 Peak 4	Lin1		1.710		580	500	16.1	20.0
PCB-1260 Peak 5	Lin1		1.320		586	500	17.2	20.0
Tetrachloro-m-xylene	Lin1		14.01		27.3	25.0	9.2	20.0
DCB Decachlorobiphenyl	Lin1		17.29		29.5	25.0	17.8	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVIS 280-438897/4 Calibration Date: 11/27/2018 15:13

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11271804.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.66	3.41	3.91
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.01	4.51
PCB-1016 Peak 5	4.49	4.24	4.74
PCB-1260 Peak 1	6.64	6.39	6.89
PCB-1260 Peak 2	7.11	6.86	7.36
PCB-1260 Peak 3	7.64	7.39	7.89
PCB-1260 Peak 4	8.01	7.76	8.26
PCB-1260 Peak 5	8.51	8.26	8.76
Tetrachloro-m-xylene	2.77	2.52	3.02
DCB Decachlorobiphenyl	10.18	9.93	10.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271804.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 27-Nov-2018 15:13:48 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 280-0076564-004
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Nov-2018 08:50:17 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0318

First Level Reviewer: patadiab Date: 27-Nov-2018 16:01:09

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.966	1.966	0.000	36068276	1000.0	1000.0	
2	1.743	1.743	0.000	178826630	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.880	0.000	22703116	25.0	24.0	
2	2.773	2.773	0.000	62631152	25.0	27.3	
						RPD = 12.93	
1 PCB-1016							
1	3.270	3.270	0.000	7568657	500.0	484.5	
1	3.633	3.633	0.000	17987682	500.0	493.8	
1	4.116	4.116	0.000	33182812	500.0	494.7	
1	4.263	4.263	0.000	13750764	500.0	487.0	
1	4.733	4.733	0.000	15258360	500.0	500.0	
		Average of Peak Amounts =				492.0	
2	3.273	3.273	0.000	21201378	500.0	542.4	
2	3.663	3.663	0.000	41600884	500.0	514.4	
2	4.116	4.116	0.000	97914831	500.0	547.0	
2	4.263	4.263	0.000	42248001	500.0	548.7	
2	4.493	4.493	0.000	22444354	500.0	541.4	
		Average of Peak Amounts =				538.8	
						RPD = 9.08	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.250	0.000	21856126	500.0	521.2	
1	6.996	6.996	0.000	34350630	500.0	530.4	
1	7.493	7.493	0.000	20244394	500.0	527.2	
1	7.933	7.933	0.000	47162269	500.0	541.5	
1	8.323	8.323	0.000	21212626	500.0	534.8	
		Average of Peak Amounts =				531.0	
2	6.643	6.643	0.000	75446781	500.0	570.8	
2	7.113	7.113	0.000	112204496	500.0	572.2	
2	7.643	7.643	0.000	67943043	500.0	577.9	
2	8.010	8.010	0.000	152866665	500.0	580.4	
2	8.513	8.513	0.000	118067409	500.0	585.8	
		Average of Peak Amounts =				577.5	
						RPD = 8.38	
$ 15 DCB Decachlorobiphenyl							
1	9.913	9.913	0.000	17883543	25.0	24.5	
2	10.180	10.180	0.000	77299560	25.0	29.5	
						RPD = 18.35	
19 1260 Res 1							
1	8.323	8.323	0.000	21212626	NR	NR	
16 1260 Res 2							
1	8.383	8.383	0.000	10545775	NR	NR	
18 1260 Res 3							
1	8.446	8.446	0.000	14063611	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

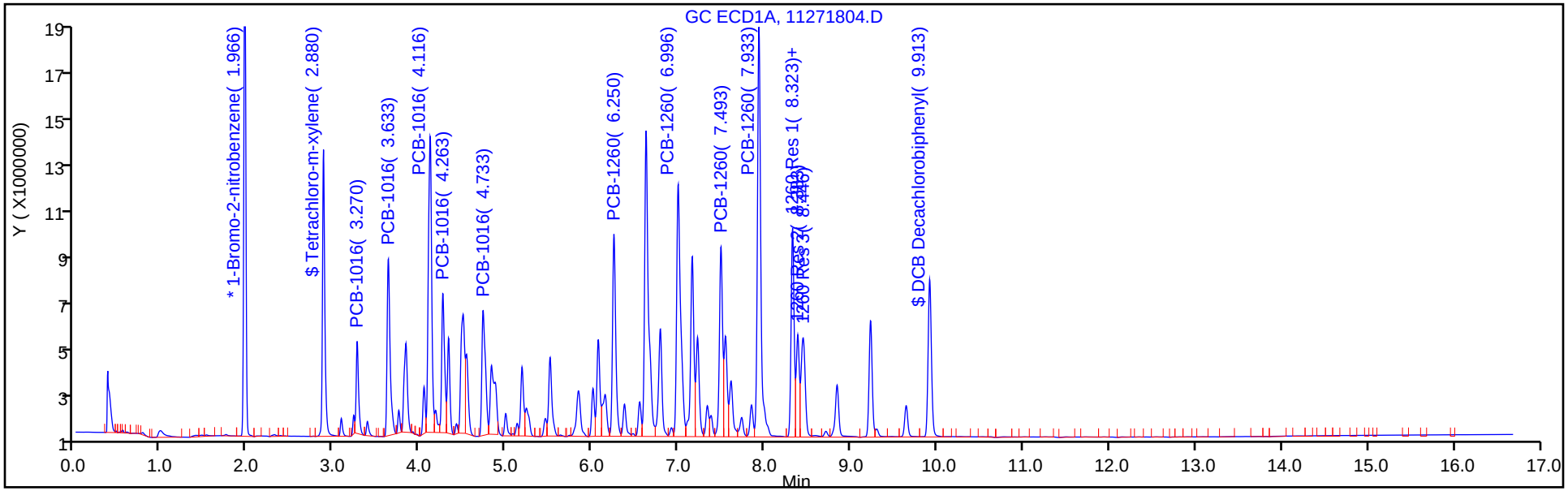
Report Date: 30-Nov-2018 08:50:19 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

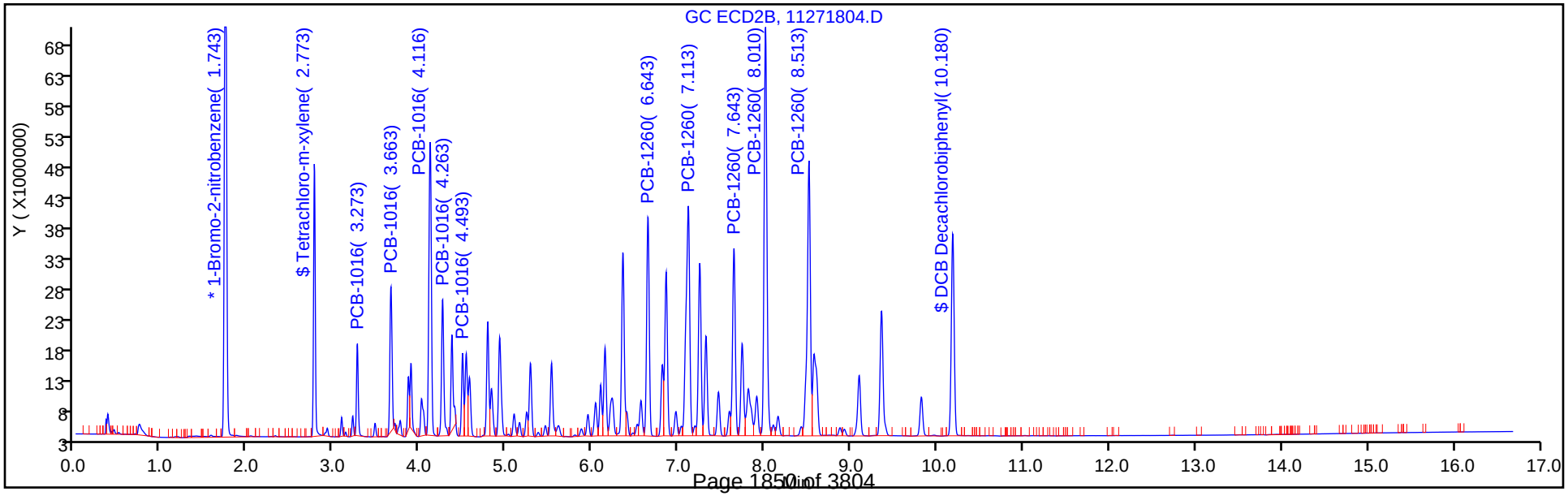
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271804.D

Injection Date:	27-Nov-2018 15:13:48	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCVIS			Worklist Smp#:	4
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438897/19 Calibration Date: 11/27/2018 20:31

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11271819.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.4450		515	500	2.9	20.0
PCB-1016 Peak 2	Lin1		0.996		493	500	-1.4	20.0
PCB-1016 Peak 3	Lin1		1.859		500	500	-0.0	20.0
PCB-1016 Peak 4	Lin1		0.7891		504	500	0.8	20.0
PCB-1016 Peak 5	Lin1		0.8420		498	500	-0.5	20.0
PCB-1260 Peak 1	Lin1		1.172		504	500	0.7	20.0
PCB-1260 Peak 2	Lin1		1.834		511	500	2.1	20.0
PCB-1260 Peak 3	Lin1		1.081		507	500	1.5	20.0
PCB-1260 Peak 4	Lin1		2.485		514	500	2.9	20.0
PCB-1260 Peak 5	Lin1		1.128		513	500	2.6	20.0
Tetrachloro-m-xylene	Lin1		25.05		23.9	25.0	-4.6	20.0
DCB Decachlorobiphenyl	Lin1		18.53		22.9	25.0	-8.6	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438897/19 Calibration Date: 11/27/2018 20:31

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP1 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11271819.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.63	3.38	3.88
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.01	4.51
PCB-1016 Peak 5	4.73	4.48	4.98
PCB-1260 Peak 1	6.25	6.00	6.50
PCB-1260 Peak 2	6.99	6.75	7.25
PCB-1260 Peak 3	7.49	7.24	7.74
PCB-1260 Peak 4	7.93	7.68	8.18
PCB-1260 Peak 5	8.32	8.07	8.57
Tetrachloro-m-xylene	2.88	2.63	3.13
DCB Decachlorobiphenyl	9.91	9.66	10.16

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271819.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Nov-2018 20:31:49 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076564-019
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Nov-2018 08:50:42 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0318

First Level Reviewer: patadiab Date: 29-Nov-2018 17:43:04

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.966	0.001	38939893	1000.0	1000.0	
2	1.741	1.743	-0.002	191402215	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.880	0.000	24387359	25.0	23.9	
2	2.774	2.773	0.001	67289828	25.0	27.4	
						RPD = 13.82	
1 PCB-1016							
1	3.270	3.270	0.000	8664280	500.0	514.6	
1	3.630	3.633	-0.003	19389611	500.0	493.0	
1	4.117	4.116	0.001	36201061	500.0	499.9	
1	4.264	4.263	0.001	15363480	500.0	504.2	
1	4.730	4.733	-0.003	16393050	500.0	497.6	
		Average of Peak Amounts =				501.9	
2	3.271	3.273	-0.002	23378485	500.0	559.3	
2	3.661	3.663	-0.002	47977361	500.0	555.5	
2	4.117	4.116	0.001	106160356	500.0	554.3	
2	4.261	4.263	-0.002	46256179	500.0	561.7	
2	4.494	4.493	0.001	24888681	500.0	561.5	
		Average of Peak Amounts =				558.5	
						RPD = 10.67	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.250	0.000	22813027	500.0	503.6	
1	6.994	6.996	-0.002	35706020	500.0	510.6	
1	7.490	7.493	-0.003	21044578	500.0	507.4	
1	7.934	7.933	0.001	48383755	500.0	514.5	
1	8.324	8.323	0.001	21969669	500.0	512.9	
		Average of Peak Amounts =				509.8	
2	6.644	6.643	0.001	79136100	500.0	559.1	
2	7.111	7.113	-0.002	118073489	500.0	562.4	
2	7.641	7.643	-0.002	70857279	500.0	562.8	
2	8.007	8.010	-0.003	159464539	500.0	565.4	
2	8.511	8.513	-0.002	121882900	500.0	564.6	
		Average of Peak Amounts =				562.9	
						RPD = 9.90	
$ 15 DCB Decachlorobiphenyl							
1	9.914	9.913	0.001	18035396	25.0	22.9	
2	10.181	10.180	0.001	79996442	25.0	28.5	
						RPD = 21.84	
S 8 Polychlorinated biphenyls, Total							
1						1011.7	
2						1121.3	
						RPD = 10.28	
19 1260 Res 1							
1	8.324	8.323	0.001	21969669	NR	NR	
16 1260 Res 2							
1	8.384	8.383	0.001	10852200	NR	NR	
18 1260 Res 3							
1	8.444	8.446	-0.002	14344556	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

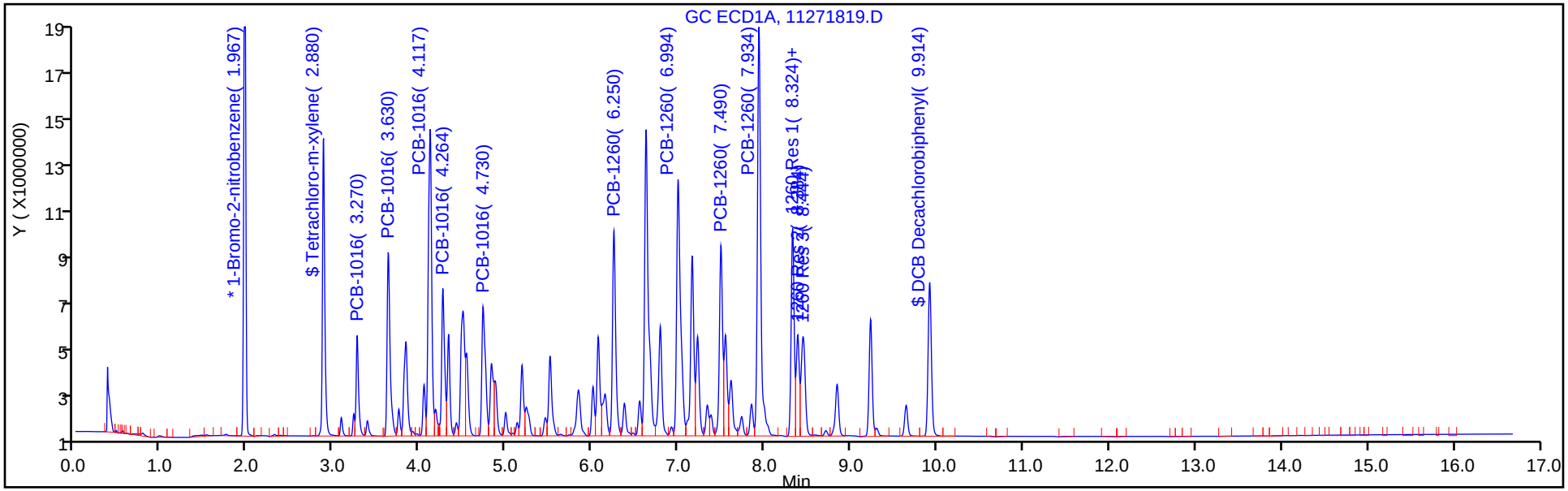
Report Date: 30-Nov-2018 08:50:42 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

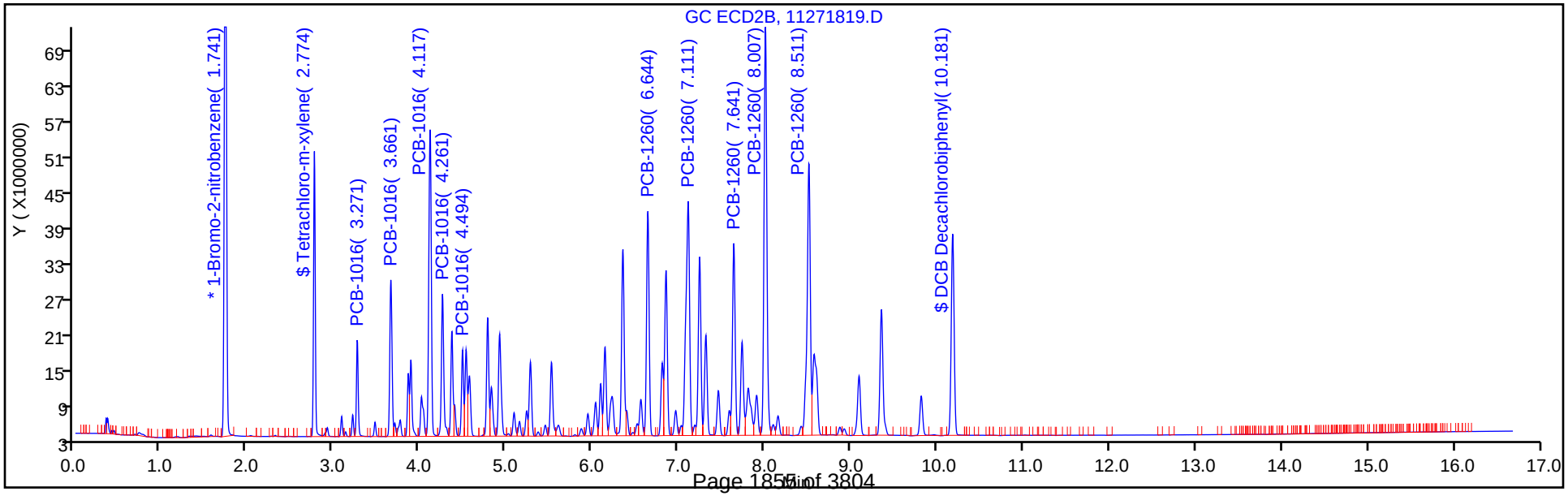
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271819.D

Injection Date:	27-Nov-2018 20:31:49	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM VII
PCBS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438897/19 Calibration Date: 11/27/2018 20:31

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11271819.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
PCB-1016 Peak 1	Lin1		0.2443		559	500	11.9	20.0
PCB-1016 Peak 2	Lin1		0.5013		556	500	11.1	20.0
PCB-1016 Peak 3	Lin1		1.109		554	500	10.9	20.0
PCB-1016 Peak 4	Lin1		0.4833		562	500	12.3	20.0
PCB-1016 Peak 5	Lin1		0.2601		562	500	12.3	20.0
PCB-1260 Peak 1	Lin1		0.8269		559	500	11.8	20.0
PCB-1260 Peak 2	Lin1		1.234		562	500	12.5	20.0
PCB-1260 Peak 3	Lin1		0.7404		563	500	12.6	20.0
PCB-1260 Peak 4	Lin1		1.666		565	500	13.1	20.0
PCB-1260 Peak 5	Lin1		1.274		565	500	12.9	20.0
Tetrachloro-m-xylene	Lin1		14.06		27.4	25.0	9.6	20.0
DCB Decachlorobiphenyl	Lin1		16.72		28.5	25.0	13.8	20.0

FORM VII
PCBS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-438897/19 Calibration Date: 11/27/2018 20:31

Instrument ID: SGC_J Calib Start Date: 11/21/2018 14:44

GC Column: CLP2 ID: 0.32(mm) Calib End Date: 11/21/2018 16:51

Lab File ID: 11271819.D

Analyte	RT	RT WINDOW	
		FROM	TO
PCB-1016 Peak 1	3.27	3.02	3.52
PCB-1016 Peak 2	3.66	3.41	3.91
PCB-1016 Peak 3	4.12	3.87	4.37
PCB-1016 Peak 4	4.26	4.01	4.51
PCB-1016 Peak 5	4.49	4.24	4.74
PCB-1260 Peak 1	6.64	6.39	6.89
PCB-1260 Peak 2	7.11	6.86	7.36
PCB-1260 Peak 3	7.64	7.39	7.89
PCB-1260 Peak 4	8.01	7.76	8.26
PCB-1260 Peak 5	8.51	8.26	8.76
Tetrachloro-m-xylene	2.77	2.52	3.02
DCB Decachlorobiphenyl	10.18	9.93	10.43

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271819.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 27-Nov-2018 20:31:49 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: CCV
Misc. Info.: 280-0076564-019
Operator ID: ALS Instrument ID: SGC_J
Sublist: chrom-8082_J*sub1

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Nov-2018 08:50:42 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0318

First Level Reviewer: patadiab Date: 29-Nov-2018 17:43:04

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.966	0.001	38939893	1000.0	1000.0	
2	1.741	1.743	-0.002	191402215	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.880	0.000	24387359	25.0	23.9	
2	2.774	2.773	0.001	67289828	25.0	27.4	
						RPD = 13.82	
1 PCB-1016							
1	3.270	3.270	0.000	8664280	500.0	514.6	
1	3.630	3.633	-0.003	19389611	500.0	493.0	
1	4.117	4.116	0.001	36201061	500.0	499.9	
1	4.264	4.263	0.001	15363480	500.0	504.2	
1	4.730	4.733	-0.003	16393050	500.0	497.6	
		Average of Peak Amounts =				501.9	
2	3.271	3.273	-0.002	23378485	500.0	559.3	
2	3.661	3.663	-0.002	47977361	500.0	555.5	
2	4.117	4.116	0.001	106160356	500.0	554.3	
2	4.261	4.263	-0.002	46256179	500.0	561.7	
2	4.494	4.493	0.001	24888681	500.0	561.5	
		Average of Peak Amounts =				558.5	
						RPD = 10.67	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.250	0.000	22813027	500.0	503.6	
1	6.994	6.996	-0.002	35706020	500.0	510.6	
1	7.490	7.493	-0.003	21044578	500.0	507.4	
1	7.934	7.933	0.001	48383755	500.0	514.5	
1	8.324	8.323	0.001	21969669	500.0	512.9	
		Average of Peak Amounts =				509.8	
2	6.644	6.643	0.001	79136100	500.0	559.1	
2	7.111	7.113	-0.002	118073489	500.0	562.4	
2	7.641	7.643	-0.002	70857279	500.0	562.8	
2	8.007	8.010	-0.003	159464539	500.0	565.4	
2	8.511	8.513	-0.002	121882900	500.0	564.6	
		Average of Peak Amounts =				562.9	
						RPD = 9.90	
$ 15 DCB Decachlorobiphenyl							
1	9.914	9.913	0.001	18035396	25.0	22.9	
2	10.181	10.180	0.001	79996442	25.0	28.5	
						RPD = 21.84	
S 8 Polychlorinated biphenyls, Total							
1						1011.7	
2						1121.3	
						RPD = 10.28	
19 1260 Res 1							
1	8.324	8.323	0.001	21969669	NR	NR	
16 1260 Res 2							
1	8.384	8.383	0.001	10852200	NR	NR	
18 1260 Res 3							
1	8.444	8.446	-0.002	14344556	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

AR_1660_L5_00066	Amount Added:	1.00	Units: mL	
BNB IS_00012	Amount Added:	1.00	Units: mL	Run Reagent

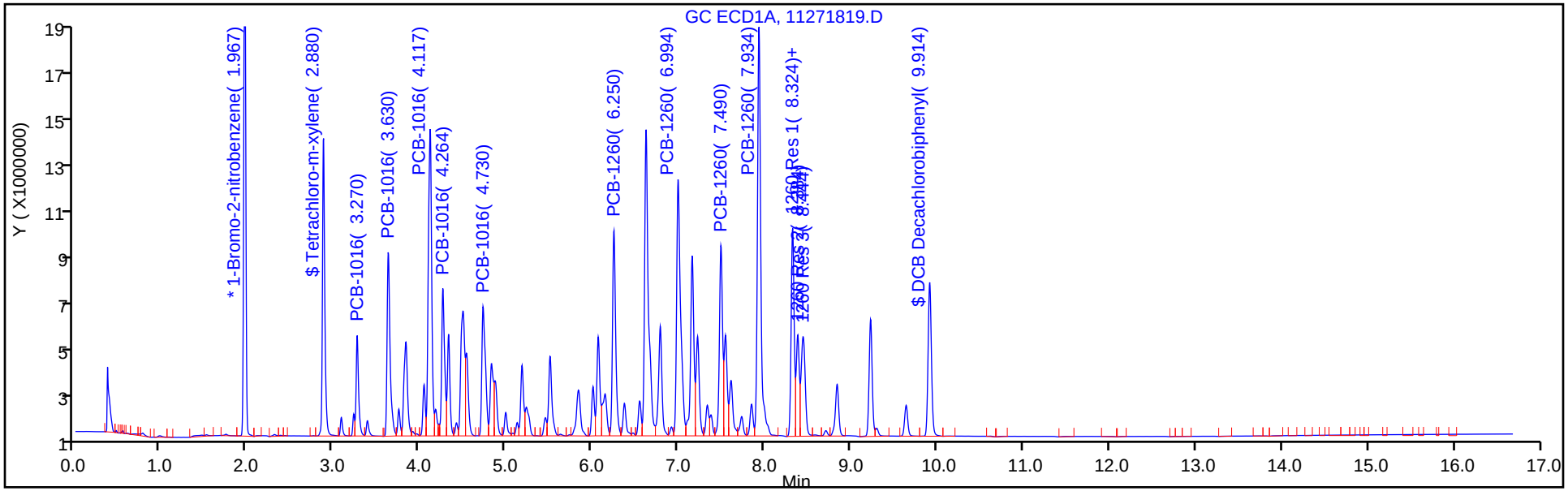
Report Date: 30-Nov-2018 08:50:43 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

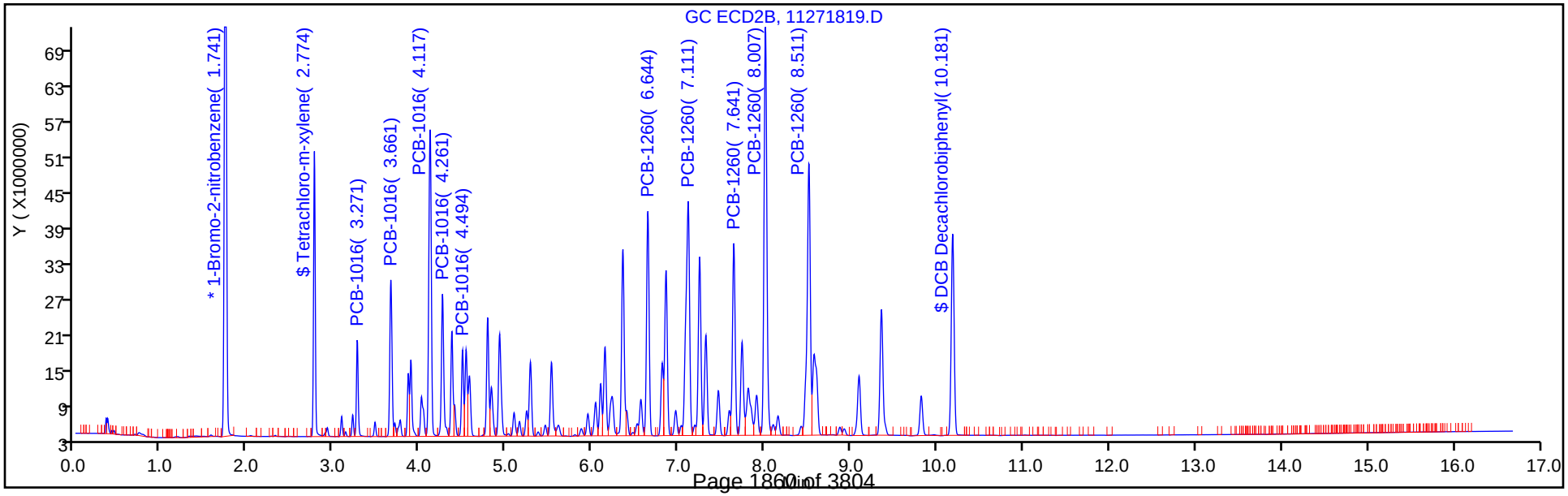
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271819.D

Injection Date:	27-Nov-2018 20:31:49	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	CCV			Worklist Smp#:	19
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436649/1-A

Matrix: Water | Lab File ID: 11271810.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/07/2018 10:54

Sample wt/vol: 1000(mL) | Date Analyzed: 11/27/2018 17:21

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438897 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	0.40	U M	1.0	0.40	0.12
11104-28-2	PCB-1221	0.25	U M	1.0	0.25	0.21
11141-16-5	PCB-1232	0.60	U M	1.0	0.60	0.17
53469-21-9	PCB-1242	0.30	U M	1.0	0.30	0.10
12672-29-6	PCB-1248	0.30	U M	1.0	0.30	0.092
11097-69-1	PCB-1254	0.25	U M	1.0	0.25	0.11
11096-82-5	PCB-1260	0.40	U M	1.0	0.40	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	90		25-120
2051-24-3	DCB Decachlorobiphenyl	88		30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271810.D
Lims ID: MB 280-436649/1-A
Client ID:
Sample Type: MB
Inject. Date: 27-Nov-2018 17:21:02 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-436649/1-
Misc. Info.: 280-0076564-010
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Nov-2018 08:50:17 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0318

First Level Reviewer: patadiab Date: 29-Nov-2018 17:39:52

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.966	0.001	35397323	1000.0	1000.0	
2	1.741	1.743	-0.002	176458774	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.880	0.000	13374420	20.0	14.4	
2	2.774	2.773	0.001	41369000	20.0	18.1	
						RPD = 22.33	
3 PCB-1221							U
1		3.085				ND	
1		3.232					
1		3.269					
2		3.092					
2		3.222					
2		3.276					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
7	PCB-1232						U
1		3.088				ND	
1		3.271					
1		4.118					
1		4.264					
1		4.731					
2		3.275					
2		3.665					
2		4.121					
2		4.265					
2		4.928					
1	PCB-1016						U
1		3.270				ND	
1		3.633					
1		4.116					
1		4.263					
1		4.733					
2		3.273					
2		3.663					
2		4.116					
2		4.263					
2		4.493					
4	PCB-1248						U
1		3.629				ND	
1		4.115					
1		4.729					
1		5.505					
1		6.005					
2		4.119					
2		4.499					
2		4.789					
2		4.929					
2		6.102					
10	PCB-1242						U
1		3.631				ND	
1		4.117					
1		4.264					
1		5.237					
1		5.261					
2		3.664					
2		4.121					
2		4.264					
2		4.788					
2		4.928					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
9 PCB-1254							U
1		5.182				ND	
1		5.509					
1		5.849					
1		6.622					
1		6.995					
2		5.529					
2		5.952					
2		6.402					
2		6.649					
2		7.119					
5 PCB-1262							U
1		6.248				ND	
1		7.154					
1		7.488					
1		7.931					
1		8.321					
2		6.648					
2		7.248					
2		7.645					
2		8.011					
2		8.515					
12 PCB-1260							U
1		6.250				ND	
1		6.996					
1		7.493					
1		7.933					
1		8.323					
2		6.643					
2		7.113					
2		7.643					
2		8.010					
2		8.513					
13 PCB-1268							U
1		8.381				ND	
1		8.434					
1		8.707					
1		9.224					
1		9.637					
2		8.511					
2		8.574					
2		8.928					
2		9.358					
2		9.821					
$ 15 DCB Decachlorobiphenyl							
1	9.914	9.913	0.001	11315364	20.0	15.6	
2	10.181	10.180	0.001	46126132	20.0	17.5	
						RPD = 11.71	
S 8 Polychlorinated biphenyls, Total							
1		0.000				ND	
2		0.000					

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
2 PCB-5460							
1		0.000				ND	
1		12.739					
1		0.000					
1		13.802					
1		14.259					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
6 PCB-5432							
1		7.063				ND	
1		7.693					
1		8.203					
1		9.029					
1		9.459					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
11 PCB-5442							
1		9.459				ND	
1		9.923					
1		10.079					
1		10.289					
1		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					
2		0.000					

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

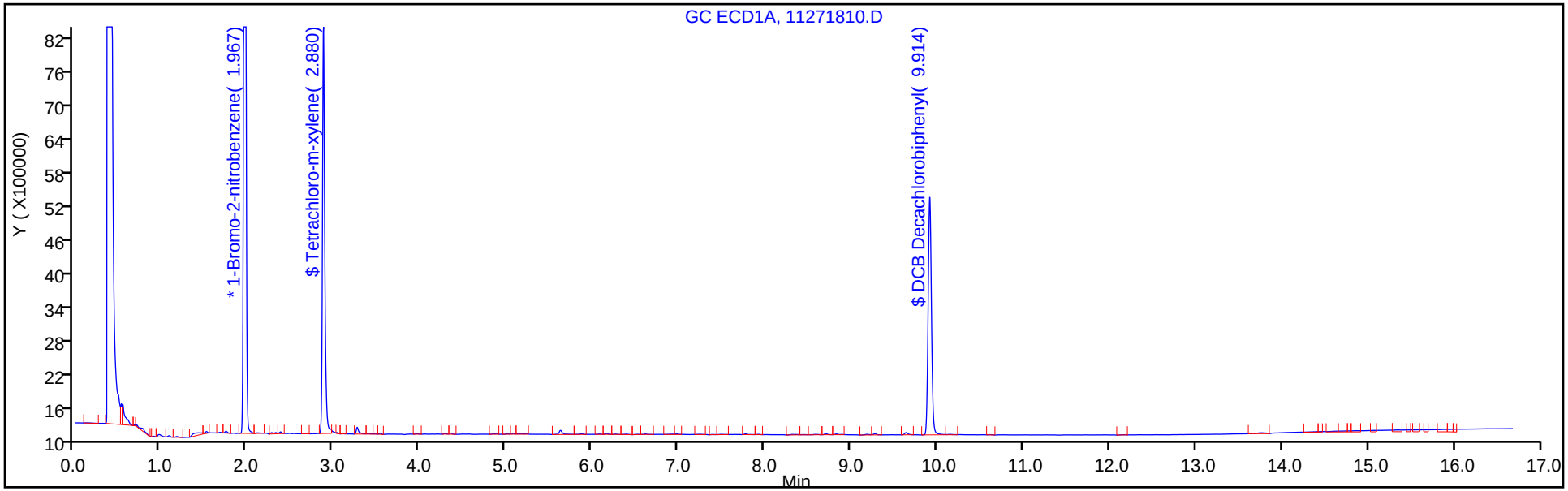
Report Date: 30-Nov-2018 08:50:29 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

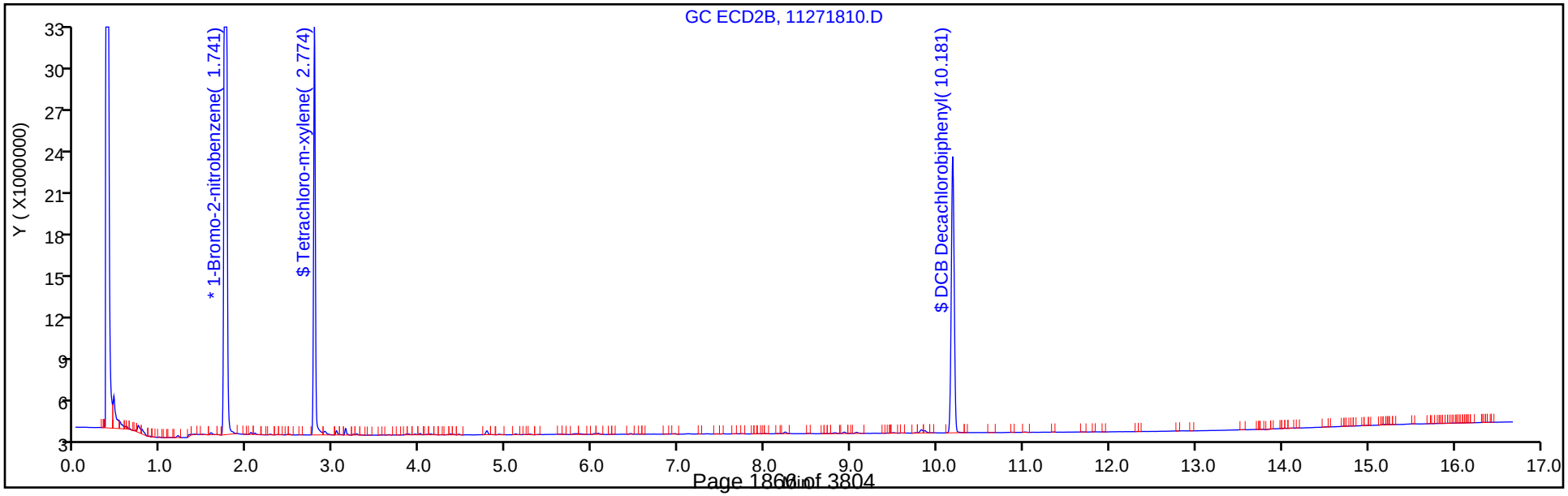
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271810.D

Injection Date:	27-Nov-2018 17:21:02	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	MB 280-436649/1-A			Worklist Smp#:	10
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271810.D				
Lims ID:	MB 280-436649/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	27-Nov-2018 17:21:02	ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	MB 280-436649/1-				
Misc. Info.:	280-0076564-010				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	30-Nov-2018 08:50:17	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0318				
First Level Reviewer: patadiab		Date:	29-Nov-2018 17:39:52		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	14.4	72.22
$ 15 DCB Decachlorobiphenyl	20.0	15.6	77.96

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	18.1	90.37
$ 15 DCB Decachlorobiphenyl	20.0	17.5	87.66

FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436649/4-A

Matrix: Water | Lab File ID: 11271811.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/07/2018 10:54

Sample wt/vol: 1000(mL) | Date Analyzed: 11/27/2018 17:42

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438897 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	1.82		1.0	0.40	0.12
11096-82-5	PCB-1260	1.99		1.0	0.40	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	82		25-120
2051-24-3	DCB Decachlorobiphenyl	100		30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271811.D
Lims ID: LCS 280-436649/4-A
Client ID:
Sample Type: LCS
Inject. Date: 27-Nov-2018 17:42:13 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436649/4
Misc. Info.: 280-0076564-011
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Nov-2018 08:50:17 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0318

First Level Reviewer: patadiab Date: 29-Nov-2018 17:40:14

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.968	1.966	0.002	35385370	1000.0	1000.0	
2	1.741	1.743	-0.002	176482503	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.878	2.880	-0.002	12392773	20.0	13.4	
2	2.775	2.773	0.002	37569510	20.0	16.4	
						RPD = 19.90	
1 PCB-1016							
1	3.271	3.270	0.001	2992230	200.0	186.2	
1	3.631	3.633	-0.002	6256414	200.0	166.0	
1	4.118	4.116	0.002	10310142	200.0	155.0	
1	4.265	4.263	0.002	4685055	200.0	163.7	
1	4.731	4.733	-0.002	5141090	200.0	167.2	
		Average of Peak Amounts =				167.6	
2	3.271	3.273	-0.002	7826395	200.0	192.5	
2	3.661	3.663	-0.002	14315185	200.0	168.6	
2	4.118	4.116	0.002	33599368	200.0	181.1	
2	4.261	4.263	-0.002	14692345	200.0	183.2	
2	4.495	4.493	0.002	7990315	200.0	184.3	
		Average of Peak Amounts =				181.9	
						RPD = 8.18	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.248	6.250	-0.002	8012116	200.0	189.4	
1	6.995	6.996	-0.001	13046928	200.0	203.6	
1	7.491	7.493	-0.002	5942567	200.0	153.5	
1	7.931	7.933	-0.002	13225089	200.0	153.2	
1	8.325	8.323	0.002	6784546	200.0	173.1	
		Average of Peak Amounts =				174.5	
2	6.645	6.643	0.002	29335166	200.0	216.6	
2	7.111	7.113	-0.002	46962646	200.0	235.4	
2	7.641	7.643	-0.002	21681622	200.0	178.4	
2	8.008	8.010	-0.002	48916197	200.0	180.2	
2	8.511	8.513	-0.002	38188107	200.0	183.8	
		Average of Peak Amounts =				198.9	
						RPD = 13.05	
$ 15 DCB Decachlorobiphenyl							
1	9.915	9.913	0.002	12721433	20.0	17.6	
2	10.181	10.180	0.001	52157643	20.0	19.9	
						RPD = 12.29	

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

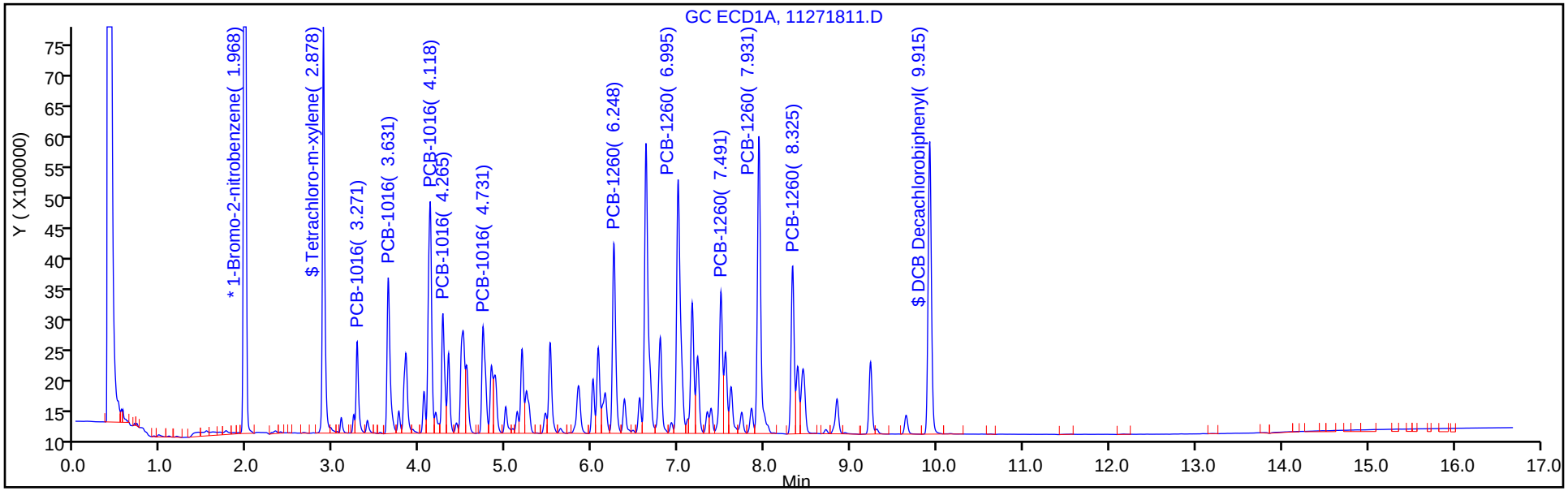
Report Date: 30-Nov-2018 08:50:31 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

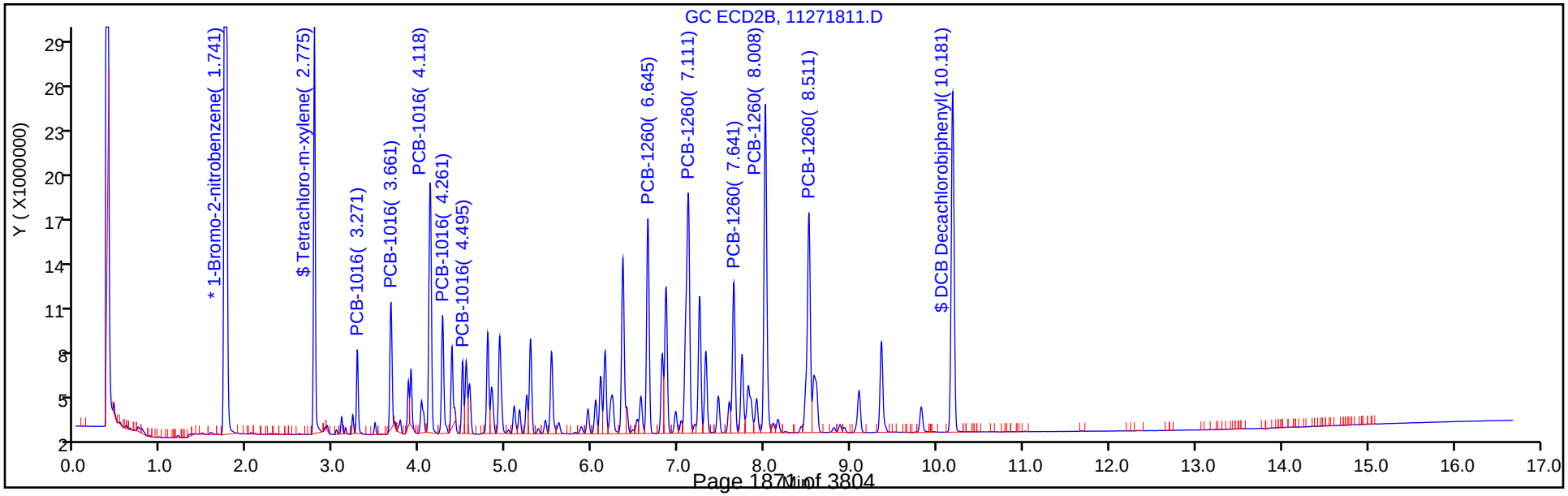
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271811.D

Injection Date:	27-Nov-2018 17:42:13	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	LCS 280-436649/4-A			Worklist Smp#:	11
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271811.D				
Lims ID:	LCS 280-436649/4-A				
Client ID:					
Sample Type:	LCS				
Inject. Date:	27-Nov-2018 17:42:13	ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCS 280-436649/4				
Misc. Info.:	280-0076564-011				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	30-Nov-2018 08:50:17	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0318				
First Level Reviewer: patadiab		Date:	29-Nov-2018 17:40:14		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	13.4	66.98
$ 15 DCB Decachlorobiphenyl	20.0	17.6	88.04

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	16.4	81.79
$ 15 DCB Decachlorobiphenyl	20.0	19.9	99.58

Report Date: 30-Nov-2018 08:50:32 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271811.D

Injection Date: 27-Nov-2018 17:42:13 Instrument ID: SGC_J

Lims ID: LCS 280-436649/4-A

Client ID:

Operator ID: ALS ALS Bottle#: 11 Worklist Smp#: 11

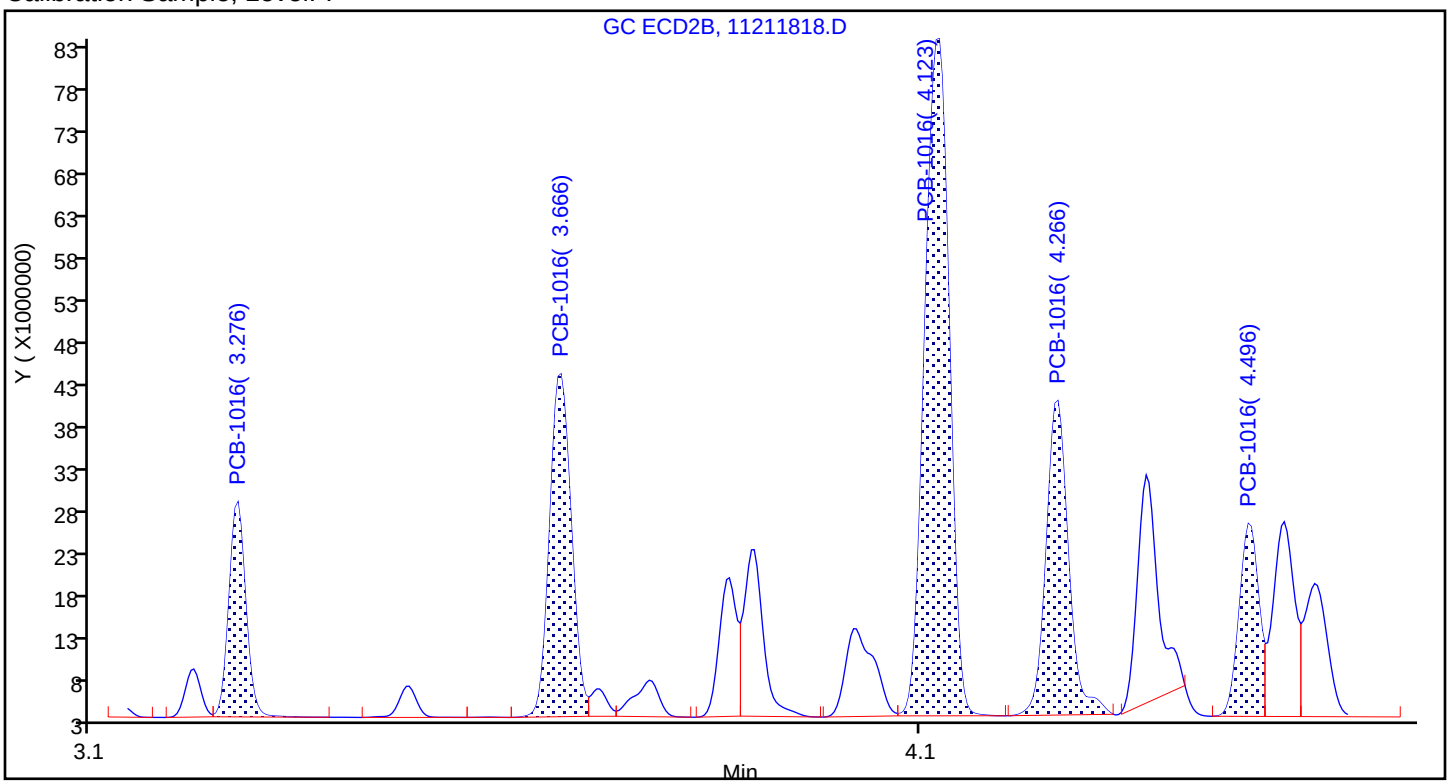
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

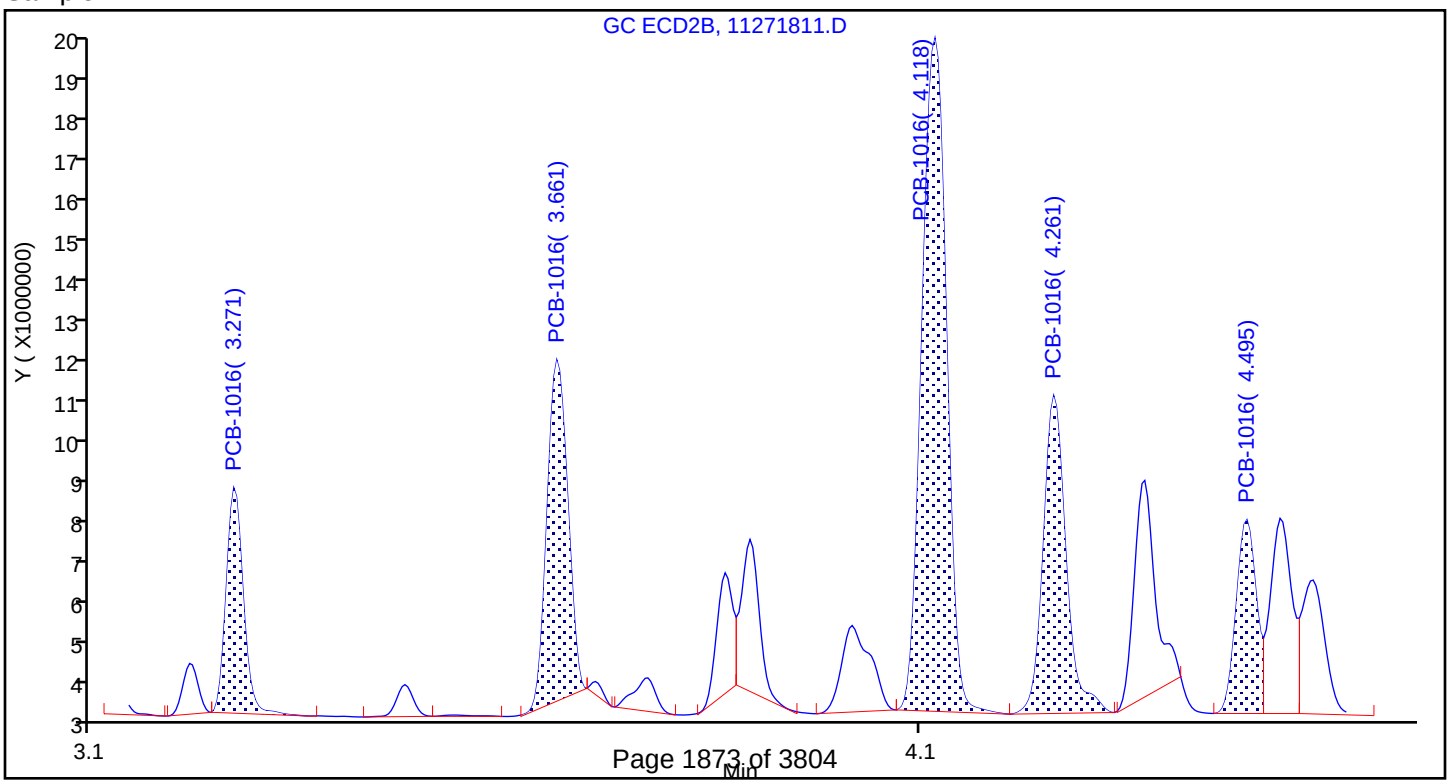
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

1 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 7



Sample



Report Date: 30-Nov-2018 08:50:32 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271811.D

Injection Date: 27-Nov-2018 17:42:13 Instrument ID: SGC_J

Lims ID: LCS 280-436649/4-A

Client ID:

Operator ID: ALS ALS Bottle#: 11 Worklist Smp#: 11

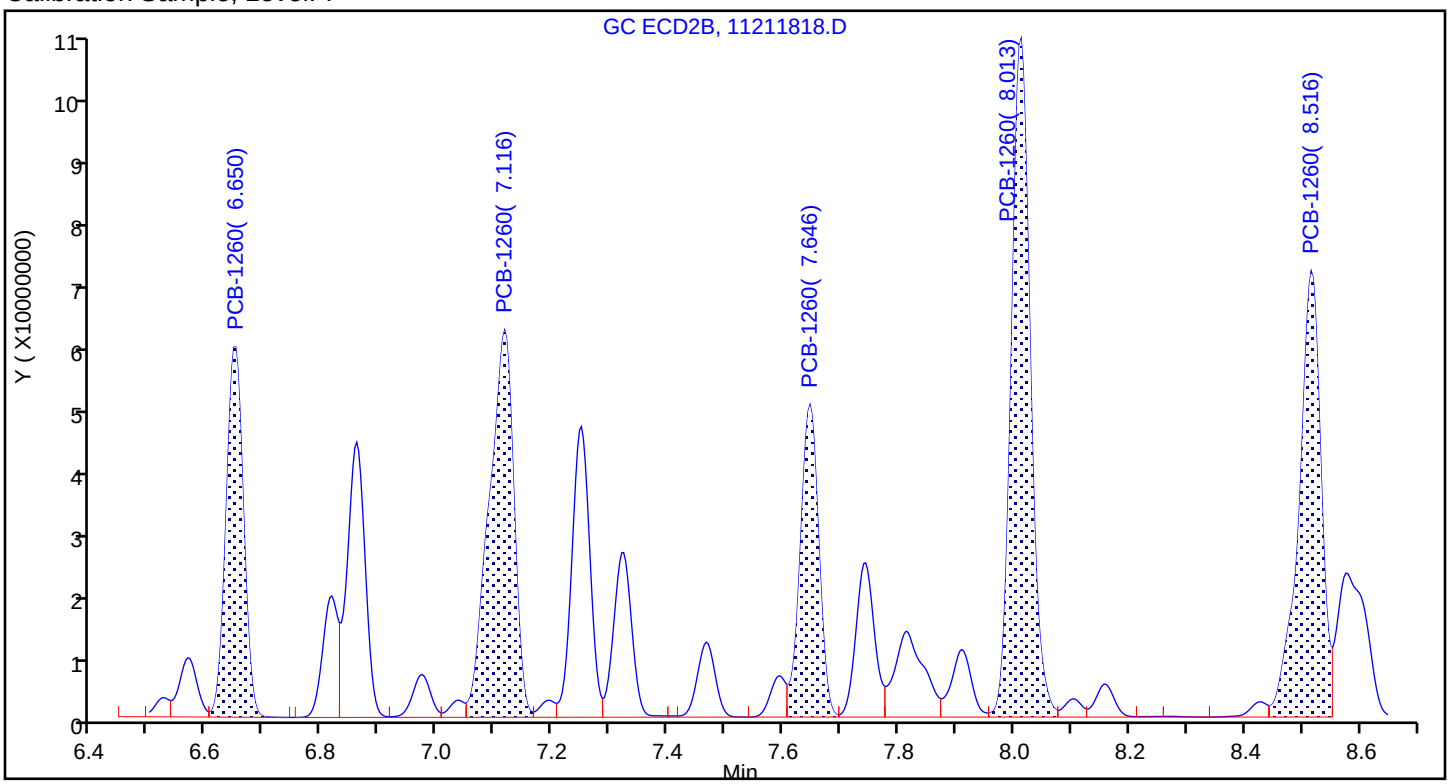
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

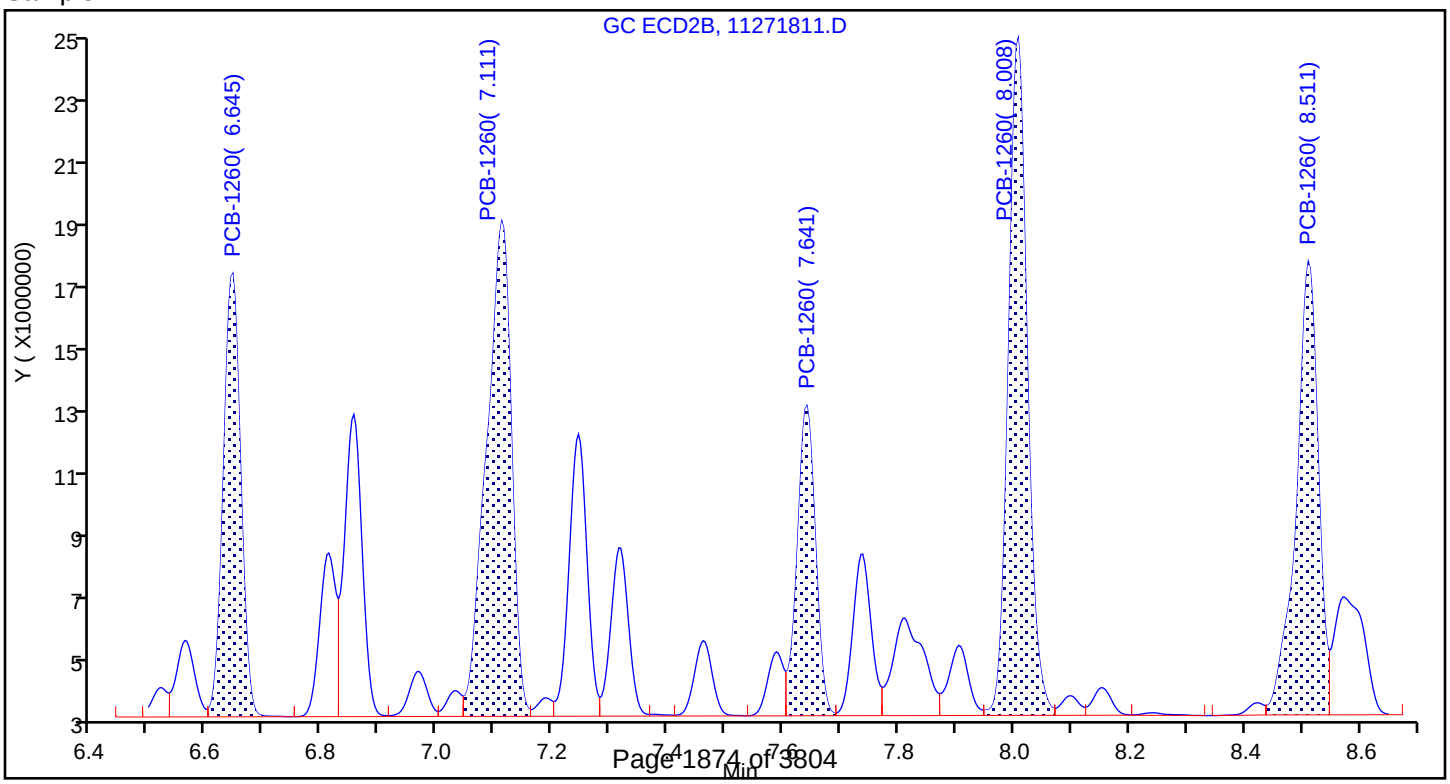
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

12 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 7



Sample



FORM I
PCBS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCSD 280-436649/5-A

Matrix: Water | Lab File ID: 11271812.D

Analysis Method: 8082A | Date Collected:

Extraction Method: 3510C | Date Extracted: 11/07/2018 10:54

Sample wt/vol: 1000(mL) | Date Analyzed: 11/27/2018 18:03

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP2 ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 438897 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
12674-11-2	PCB-1016	1.89		1.0	0.40	0.12
11096-82-5	PCB-1260	2.10		1.0	0.40	0.16

CAS NO.	SURROGATE	%REC	Q	LIMITS
877-09-8	Tetrachloro-m-xylene	87		25-120
2051-24-3	DCB Decachlorobiphenyl	106		30-136

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271812.D
Lims ID: LCSD 280-436649/5-A
Client ID:
Sample Type: LCSD
Inject. Date: 27-Nov-2018 18:03:24 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Sample Info: LCSD 280-436649/
Misc. Info.: 280-0076564-012
Operator ID: ALS Instrument ID: SGC_J

Method: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m
Limit Group: GCSV - 8082 - IS
Last Update: 30-Nov-2018 08:50:17 Calib Date: 21-Nov-2018 21:48:29
Integrator: Falcon
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D

Column 1 : CLP1 Pesticides Column 1 (0.32 mm) Det: GC ECD1A
Column 2 : CLP2 Pesticides Column 2 (0.32 mm) Det: GC ECD2B
Process Host: CTX0318

First Level Reviewer: patadiab Date: 29-Nov-2018 17:40:38

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
* 17 1-Bromo-2-nitrobenzene							
1	1.967	1.966	0.001	34343421	1000.0	1000.0	
2	1.740	1.743	-0.003	172764652	1000.0	1000.0	
						RPD = 0.00	
$ 14 Tetrachloro-m-xylene							
1	2.880	2.880	0.000	13069673	20.0	14.5	
2	2.774	2.773	0.001	38968463	20.0	17.4	
						RPD = 17.68	
1 PCB-1016							
1	3.270	3.270	0.000	3190222	200.0	206.1	
1	3.630	3.633	-0.003	6408884	200.0	176.0	
1	4.117	4.116	0.001	10538334	200.0	163.3	
1	4.264	4.263	0.001	4783976	200.0	172.7	
1	4.730	4.733	-0.003	5268624	200.0	177.0	
		Average of Peak Amounts =				179.0	
2	3.270	3.273	-0.003	7898932	200.0	199.0	
2	3.660	3.663	-0.003	14549624	200.0	175.7	
2	4.117	4.116	0.001	34112648	200.0	188.4	
2	4.260	4.263	-0.003	14875651	200.0	190.0	
2	4.494	4.493	0.001	8137681	200.0	192.4	
		Average of Peak Amounts =				189.1	
						RPD = 5.47	

Col	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
12 PCB-1260							
1	6.250	6.250	0.000	8272052	200.0	202.0	
1	6.994	6.996	-0.002	13463169	200.0	216.6	
1	7.490	7.493	-0.003	6343637	200.0	169.4	
1	7.930	7.933	-0.003	13773550	200.0	164.6	
1	8.324	8.323	0.001	7019609	200.0	184.6	
		Average of Peak Amounts =				187.4	
2	6.644	6.643	0.001	30031286	200.0	227.2	
2	7.114	7.113	0.001	48284543	200.0	247.9	
2	7.640	7.643	-0.003	22202820	200.0	187.2	
2	8.007	8.010	-0.003	50647230	200.0	191.3	
2	8.514	8.513	0.001	39631077	200.0	195.6	
		Average of Peak Amounts =				209.8	
						RPD = 11.27	
$ 15 DCB Decachlorobiphenyl							
1	9.914	9.913	0.001	13188189	20.0	18.8	
2	10.180	10.180	0.000	54137824	20.0	21.2	
						RPD = 11.55	

Reagents:

BNB IS_00012 Amount Added: 1.00 Units: mL Run Reagent

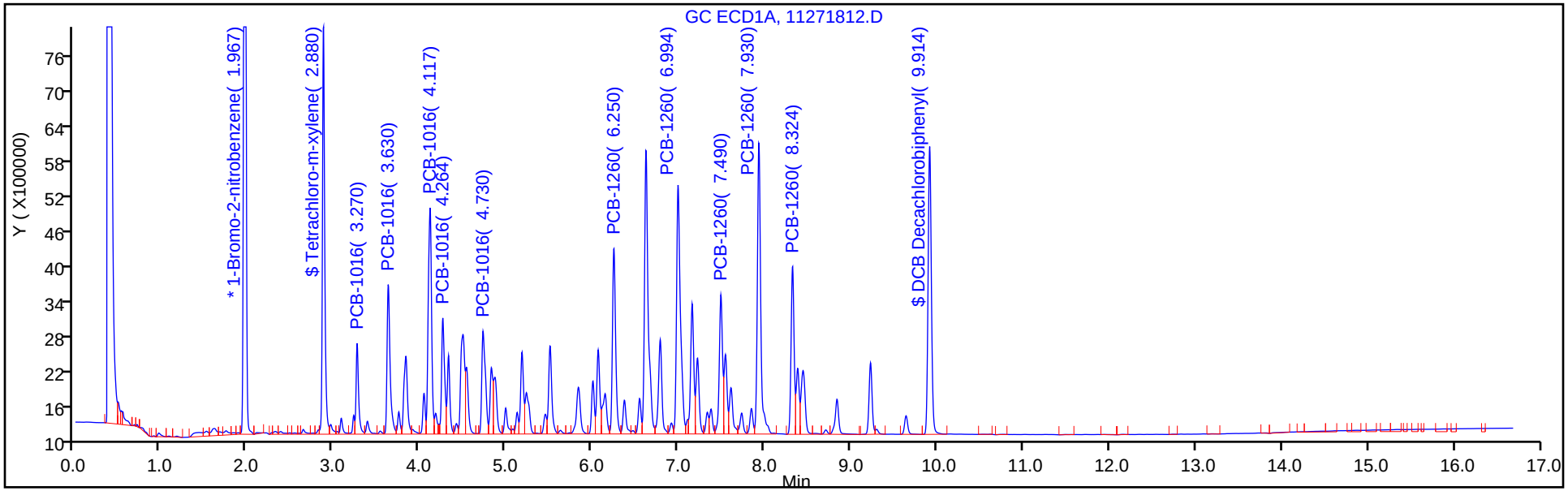
Report Date: 30-Nov-2018 08:50:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

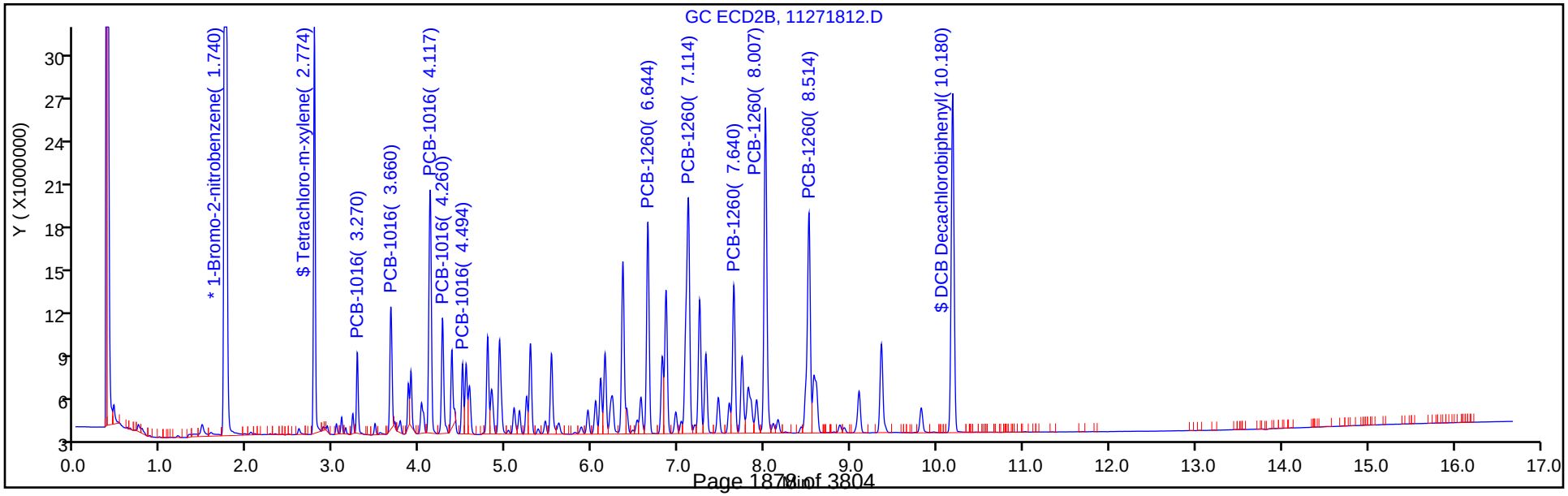
Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271812.D

Injection Date:	27-Nov-2018 18:03:24	Instrument ID:	SGC_J	Operator ID:	ALS
Lims ID:	LCSD 280-436649/5-A			Worklist Smp#:	12
Client ID:					
Injection Vol:	1.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8082_J	Limit Group:	GCSV - 8082 - IS		

Column: CLP1 Pesticides Column 1 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Column: CLP2 Pesticides Column 2 (0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



TestAmerica Denver
Recovery Report

Data File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271812.D				
Lims ID:	LCSD 280-436649/5-A				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	27-Nov-2018 18:03:24	ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	1.0 ul	Dil. Factor:	1.0000		
Sample Info:	LCSD 280-436649/				
Misc. Info.:	280-0076564-012				
Operator ID:	ALS	Instrument ID:	SGC_J		
Method:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\8082_J.m				
Limit Group:	GCSV - 8082 - IS				
Last Update:	30-Nov-2018 08:50:17	Calib Date:	21-Nov-2018 21:48:29		
Integrator:	Falcon				
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromdocs2018\q3\Denver\ChromData\SGC_J\20181121-76428.b\11211838.D				
Column 1 :	CLP1 Pesticides Column 1 (0.32 mm)		Det: GC ECD1A		
Column 2 :	CLP2 Pesticides Column 2 (0.32 mm)		Det: GC ECD2B		
Process Host:	CTX0318				
First Level Reviewer: patadiab		Date:	29-Nov-2018 17:40:38		

Surrogate Recovery, Detector: GC ECD1A

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	14.5	72.73
$ 15 DCB Decachlorobiphenyl	20.0	18.8	94.24

Surrogate Recovery, Detector: GC ECD2B

Compound	Amount Added	Amount Recovered	% Rec.
$ 14 Tetrachloro-m-xylene	20.0	17.4	86.84
$ 15 DCB Decachlorobiphenyl	20.0	21.2	105.80

Report Date: 30-Nov-2018 08:50:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271812.D

Injection Date: 27-Nov-2018 18:03:24 Instrument ID: SGC_J

Lims ID: LCSD 280-436649/5-A

Client ID:

Operator ID: ALS ALS Bottle#: 12 Worklist Smp#: 12

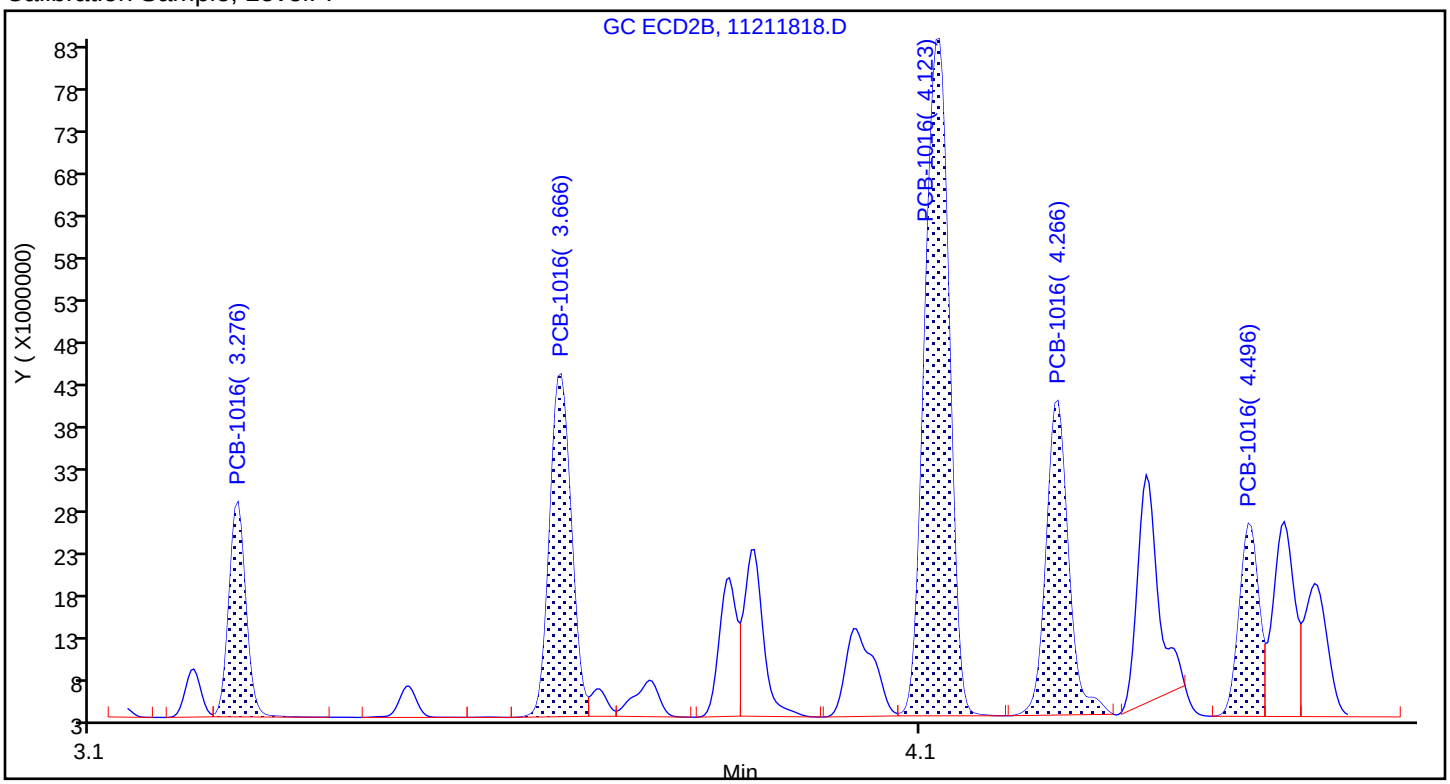
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

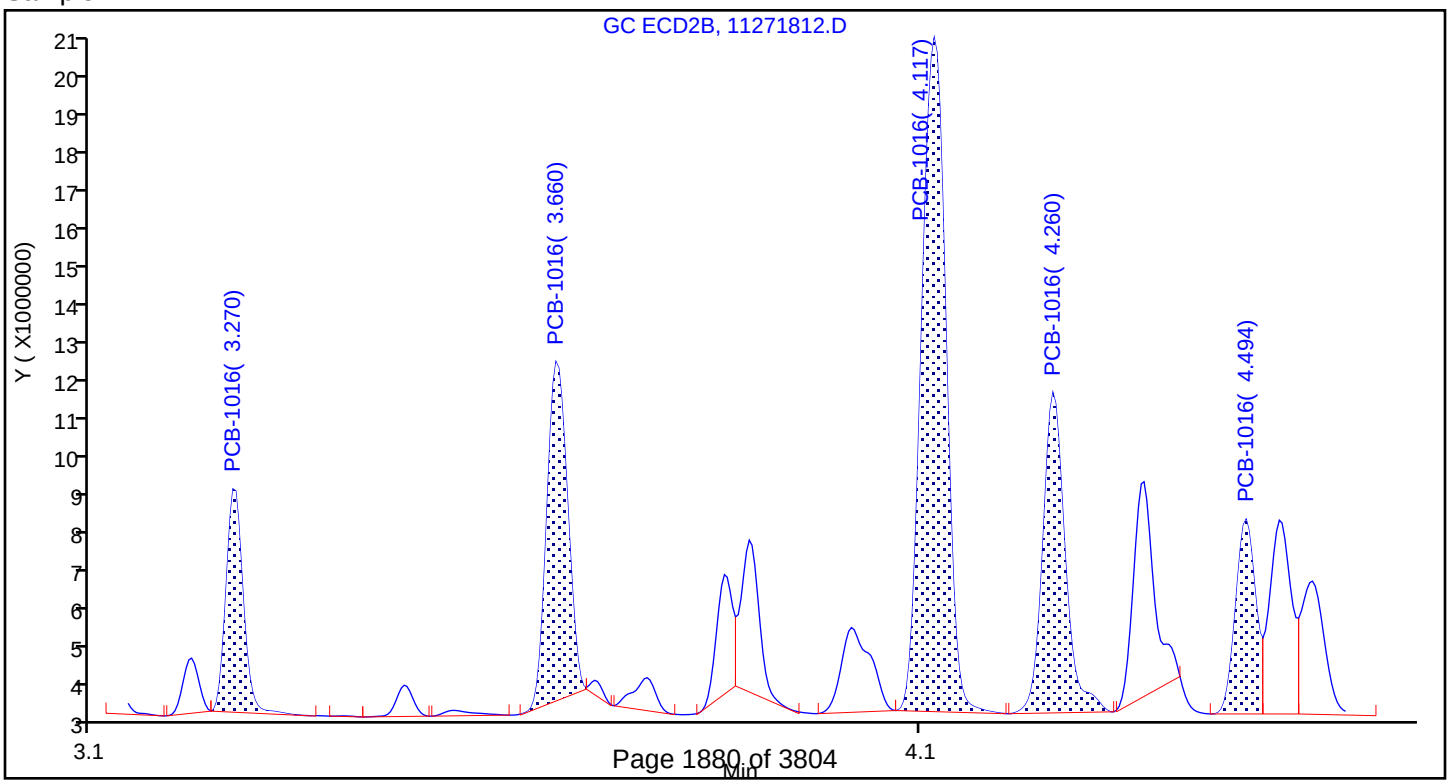
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

1 PCB-1016, CAS: 12674-11-2

Calibration Sample, Level: 7



Sample



Report Date: 30-Nov-2018 08:50:34 Chrom Revision: 2.3 21-Nov-2018 13:56:44

TestAmerica Denver

Data File: \\chromdocs2018\q3\Denver\ChromData\SGC_J\20181127-76564.b\11271812.D

Injection Date: 27-Nov-2018 18:03:24 Instrument ID: SGC_J

Lims ID: LCSD 280-436649/5-A

Client ID:

Operator ID: ALS ALS Bottle#: 12 Worklist Smp#: 12

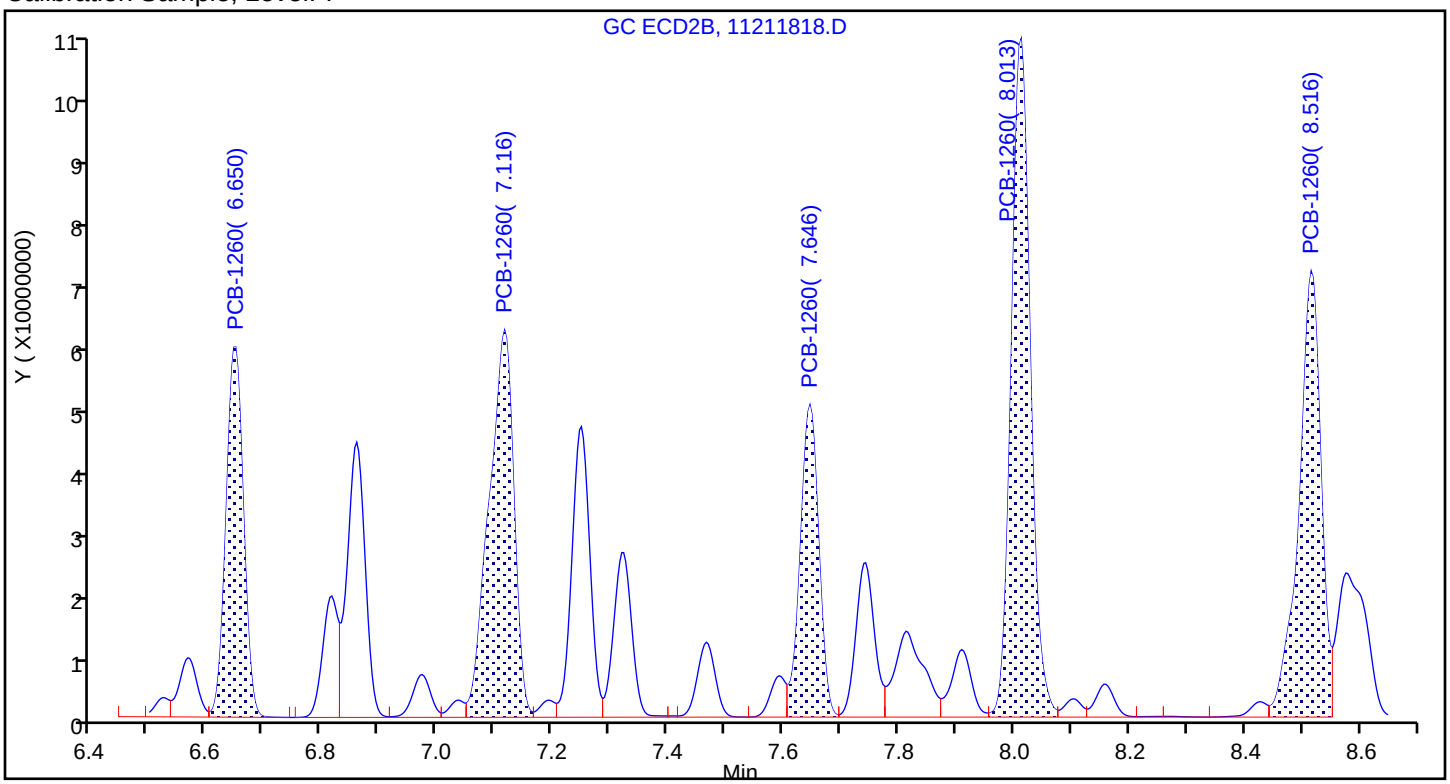
Injection Vol: 1.0 ul Dil. Factor: 1.0000

Method: 8082_J Limit Group: GCSV - 8082 - IS

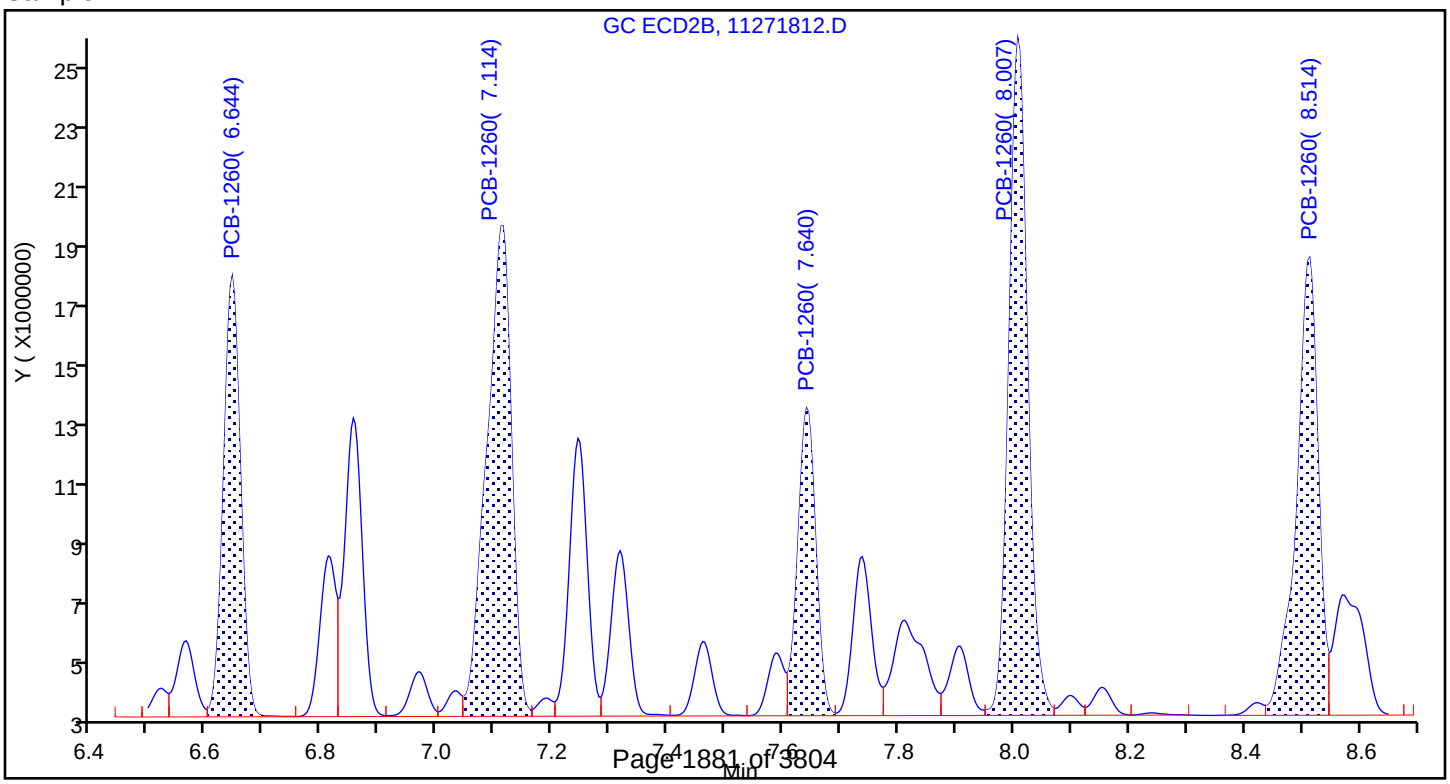
Column: CLP2 Pesticides Column 2 (0.32 mm) Detector GC ECD2B

12 PCB-1260, CAS: 11096-82-5

Calibration Sample, Level: 7



Sample



PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Start Date: 11/21/2018 09:48

Analysis Batch Number: 438388 End Date: 11/21/2018 23:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STDL71248 280-438388/4 IC		11/21/2018 09:48	1	11211804.D	CLP1 0.32(mm)
STDL71248 280-438388/4 IC		11/21/2018 09:48	1	11211804.D	CLP2 0.32(mm)
STDL61248 280-438388/5 IC		11/21/2018 10:09	1	11211805.D	CLP1 0.32(mm)
STDL61248 280-438388/5 IC		11/21/2018 10:09	1	11211805.D	CLP2 0.32(mm)
STDL51248 280-438388/6 IC		11/21/2018 10:30	1	11211806.D	CLP1 0.32(mm)
STDL51248 280-438388/6 IC		11/21/2018 10:30	1	11211806.D	CLP2 0.32(mm)
STDL41248 280-438388/7 IC		11/21/2018 10:51	1	11211807.D	CLP1 0.32(mm)
STDL41248 280-438388/7 IC		11/21/2018 10:51	1	11211807.D	CLP2 0.32(mm)
STDL31248 280-438388/8 IC		11/21/2018 11:12	1	11211808.D	CLP1 0.32(mm)
STDL31248 280-438388/8 IC		11/21/2018 11:12	1	11211808.D	CLP2 0.32(mm)
STDL21248 280-438388/9 IC		11/21/2018 11:33	1	11211809.D	CLP1 0.32(mm)
STDL21248 280-438388/9 IC		11/21/2018 11:33	1	11211809.D	CLP2 0.32(mm)
STDL11248 280-438388/10 IC		11/21/2018 11:55	1	11211810.D	CLP1 0.32(mm)
STDL11248 280-438388/10 IC		11/21/2018 11:55	1	11211810.D	CLP2 0.32(mm)
STDL72154 280-438388/11 IC		11/21/2018 12:16	1	11211811.D	CLP1 0.32(mm)
STDL72154 280-438388/11 IC		11/21/2018 12:16	1	11211811.D	CLP2 0.32(mm)
STDL62154 280-438388/12 IC		11/21/2018 12:37	1	11211812.D	CLP1 0.32(mm)
STDL62154 280-438388/12 IC		11/21/2018 12:37	1	11211812.D	CLP2 0.32(mm)
STDL52154 280-438388/13 IC		11/21/2018 12:58	1	11211813.D	CLP1 0.32(mm)
STDL52154 280-438388/13 IC		11/21/2018 12:58	1	11211813.D	CLP2 0.32(mm)
STDL42154 280-438388/14 IC		11/21/2018 13:19	1	11211814.D	CLP1 0.32(mm)
STDL42154 280-438388/14 IC		11/21/2018 13:19	1	11211814.D	CLP2 0.32(mm)
STDL32154 280-438388/15 IC		11/21/2018 13:41	1	11211815.D	CLP1 0.32(mm)
STDL32154 280-438388/15 IC		11/21/2018 13:41	1	11211815.D	CLP2 0.32(mm)
STDL22154 280-438388/16 IC		11/21/2018 14:02	1	11211816.D	CLP1 0.32(mm)
STDL22154 280-438388/16 IC		11/21/2018 14:02	1	11211816.D	CLP2 0.32(mm)
STDL12154 280-438388/17 IC		11/21/2018 14:23	1	11211817.D	CLP1 0.32(mm)
STDL12154 280-438388/17 IC		11/21/2018 14:23	1	11211817.D	CLP2 0.32(mm)
STDL71660 280-438388/18 IC		11/21/2018 14:44	1	11211818.D	CLP1 0.32(mm)
STDL71660 280-438388/18 IC		11/21/2018 14:44	1	11211818.D	CLP2 0.32(mm)
STDL61660 280-438388/19 IC		11/21/2018 15:05	1	11211819.D	CLP1 0.32(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Start Date: 11/21/2018 09:48

Analysis Batch Number: 438388 End Date: 11/21/2018 23:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STDL61660 280-438388/19 IC		11/21/2018 15:05	1	11211819.D	CLP2 0.32(mm)
STDL51660 280-438388/20 ICIS		11/21/2018 15:27	1	11211820.D	CLP1 0.32(mm)
STDL51660 280-438388/20 ICIS		11/21/2018 15:27	1	11211820.D	CLP2 0.32(mm)
STDL41660 280-438388/21 IC		11/21/2018 15:48	1	11211821.D	CLP1 0.32(mm)
STDL41660 280-438388/21 IC		11/21/2018 15:48	1	11211821.D	CLP2 0.32(mm)
STDL31660 280-438388/22 IC		11/21/2018 16:09	1	11211822.D	CLP1 0.32(mm)
STDL31660 280-438388/22 IC		11/21/2018 16:09	1	11211822.D	CLP2 0.32(mm)
STDL21660 280-438388/23 IC		11/21/2018 16:30	1	11211823.D	CLP1 0.32(mm)
STDL21660 280-438388/23 IC		11/21/2018 16:30	1	11211823.D	CLP2 0.32(mm)
STDL11660 280-438388/24 IC		11/21/2018 16:51	1	11211824.D	CLP1 0.32(mm)
STDL11660 280-438388/24 IC		11/21/2018 16:51	1	11211824.D	CLP2 0.32(mm)
STDL73262 280-438388/25 IC		11/21/2018 17:13	1	11211825.D	CLP1 0.32(mm)
STDL73262 280-438388/25 IC		11/21/2018 17:13	1	11211825.D	CLP2 0.32(mm)
STDL63262 280-438388/26 IC		11/21/2018 17:34	1	11211826.D	CLP1 0.32(mm)
STDL63262 280-438388/26 IC		11/21/2018 17:34	1	11211826.D	CLP2 0.32(mm)
STDL53262 280-438388/27 IC		11/21/2018 17:55	1	11211827.D	CLP1 0.32(mm)
STDL53262 280-438388/27 IC		11/21/2018 17:55	1	11211827.D	CLP2 0.32(mm)
STDL43262 280-438388/28 IC		11/21/2018 18:16	1	11211828.D	CLP1 0.32(mm)
STDL43262 280-438388/28 IC		11/21/2018 18:16	1	11211828.D	CLP2 0.32(mm)
STDL33262 280-438388/29 IC		11/21/2018 18:37	1	11211829.D	CLP1 0.32(mm)
STDL33262 280-438388/29 IC		11/21/2018 18:37	1	11211829.D	CLP2 0.32(mm)
STDL23262 280-438388/30 IC		11/21/2018 18:59	1	11211830.D	CLP1 0.32(mm)
STDL23262 280-438388/30 IC		11/21/2018 18:59	1	11211830.D	CLP2 0.32(mm)
STDL13262 280-438388/31 IC		11/21/2018 19:20	1	11211831.D	CLP1 0.32(mm)
STDL13262 280-438388/31 IC		11/21/2018 19:20	1	11211831.D	CLP2 0.32(mm)
STDL74268 280-438388/32 IC		11/21/2018 19:41	1	11211832.D	CLP1 0.32(mm)
STDL74268 280-438388/32 IC		11/21/2018 19:41	1	11211832.D	CLP2 0.32(mm)
STDL64268 280-438388/33 IC		11/21/2018 20:02	1	11211833.D	CLP1 0.32(mm)
STDL64268 280-438388/33 IC		11/21/2018 20:02	1	11211833.D	CLP2 0.32(mm)
STDL54268 280-438388/34 IC		11/21/2018 20:23	1	11211834.D	CLP1 0.32(mm)
STDL54268 280-438388/34 IC		11/21/2018 20:23	1	11211834.D	CLP2 0.32(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Start Date: 11/21/2018 09:48

Analysis Batch Number: 438388 End Date: 11/21/2018 23:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STDL44268 280-438388/35 IC		11/21/2018 20:44	1	11211835.D	CLP1 0.32(mm)
STDL44268 280-438388/35 IC		11/21/2018 20:44	1	11211835.D	CLP2 0.32(mm)
STDL34268 280-438388/36 IC		11/21/2018 21:06	1	11211836.D	CLP1 0.32(mm)
STDL34268 280-438388/36 IC		11/21/2018 21:06	1	11211836.D	CLP2 0.32(mm)
STDL24268 280-438388/37 IC		11/21/2018 21:27	1	11211837.D	CLP1 0.32(mm)
STDL24268 280-438388/37 IC		11/21/2018 21:27	1	11211837.D	CLP2 0.32(mm)
STDL14268 280-438388/38 IC		11/21/2018 21:48	1	11211838.D	CLP1 0.32(mm)
STDL14268 280-438388/38 IC		11/21/2018 21:48	1	11211838.D	CLP2 0.32(mm)
ICV 280-438388/39		11/21/2018 22:09	1	11211839.D	CLP1 0.32(mm)
ICV 280-438388/39		11/21/2018 22:09	1	11211839.D	CLP2 0.32(mm)
ICV 280-438388/40		11/21/2018 22:30	1	11211840.D	CLP1 0.32(mm)
ICV 280-438388/40		11/21/2018 22:30	1	11211840.D	CLP2 0.32(mm)
ICV 280-438388/41		11/21/2018 22:51	1	11211841.D	CLP1 0.32(mm)
ICV 280-438388/41		11/21/2018 22:51	1	11211841.D	CLP2 0.32(mm)
ICV 280-438388/42		11/21/2018 23:13	1	11211842.D	CLP1 0.32(mm)
ICV 280-438388/42		11/21/2018 23:13	1	11211842.D	CLP2 0.32(mm)
ICV 280-438388/43		11/21/2018 23:34	1	11211843.D	CLP1 0.32(mm)
ICV 280-438388/43		11/21/2018 23:34	1	11211843.D	CLP2 0.32(mm)

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Start Date: 11/27/2018 15:13

Analysis Batch Number: 438897 End Date: 11/28/2018 03:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 280-438897/4		11/27/2018 15:13	1	11271804.D	CLP1 0.32(mm)
CCVIS 280-438897/4		11/27/2018 15:13	1	11271804.D	CLP2 0.32(mm)
ZZZZZ		11/27/2018 15:35	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 15:35	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 15:56	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 15:56	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 16:17	10		CLP1 0.32(mm)
ZZZZZ		11/27/2018 16:17	10		CLP2 0.32(mm)
ZZZZZ		11/27/2018 16:38	10		CLP1 0.32(mm)
ZZZZZ		11/27/2018 16:38	10		CLP2 0.32(mm)
ZZZZZ		11/27/2018 16:59	10		CLP1 0.32(mm)
ZZZZZ		11/27/2018 16:59	10		CLP2 0.32(mm)
MB 280-436649/1-A		11/27/2018 17:21	1	11271810.D	CLP1 0.32(mm)
MB 280-436649/1-A		11/27/2018 17:21	1	11271810.D	CLP2 0.32(mm)
LCS 280-436649/4-A		11/27/2018 17:42	1	11271811.D	CLP1 0.32(mm)
LCS 280-436649/4-A		11/27/2018 17:42	1	11271811.D	CLP2 0.32(mm)
LCSD 280-436649/5-A		11/27/2018 18:03	1	11271812.D	CLP1 0.32(mm)
LCSD 280-436649/5-A		11/27/2018 18:03	1	11271812.D	CLP2 0.32(mm)
280-116538-1		11/27/2018 18:24	1	11271813.D	CLP1 0.32(mm)
280-116538-1		11/27/2018 18:24	1	11271813.D	CLP2 0.32(mm)
280-116538-2		11/27/2018 18:45	1	11271814.D	CLP1 0.32(mm)
280-116538-2		11/27/2018 18:45	1	11271814.D	CLP2 0.32(mm)
ZZZZZ		11/27/2018 19:07	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 19:07	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 19:28	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 19:28	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 19:49	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 19:49	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 20:10	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 20:10	1		CLP2 0.32(mm)
CCV 280-438897/19		11/27/2018 20:31	1	11271819.D	CLP1 0.32(mm)
CCV 280-438897/19		11/27/2018 20:31	1	11271819.D	CLP2 0.32(mm)
ZZZZZ		11/27/2018 21:14	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 21:14	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 21:35	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 21:35	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 21:56	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 21:56	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 22:18	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 22:18	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 22:39	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 22:39	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 23:00	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 23:00	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 23:21	1		CLP1 0.32(mm)

8082A

PCBS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: SGC_J Start Date: 11/27/2018 15:13

Analysis Batch Number: 438897 End Date: 11/28/2018 03:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		11/27/2018 23:21	1		CLP2 0.32(mm)
ZZZZZ		11/27/2018 23:42	1		CLP1 0.32(mm)
ZZZZZ		11/27/2018 23:42	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 00:25	10		CLP1 0.32(mm)
ZZZZZ		11/28/2018 00:25	10		CLP2 0.32(mm)
ZZZZZ		11/28/2018 00:46	10		CLP1 0.32(mm)
ZZZZZ		11/28/2018 00:46	10		CLP2 0.32(mm)
ZZZZZ		11/28/2018 01:49	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 01:49	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 02:11	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 02:11	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 02:32	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 02:32	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 02:53	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 02:53	1		CLP2 0.32(mm)
ZZZZZ		11/28/2018 03:14	1		CLP1 0.32(mm)
ZZZZZ		11/28/2018 03:14	1		CLP2 0.32(mm)
CCV 280-438897/39		11/28/2018 03:35	1		CLP1 0.32(mm)
CCV 280-438897/39		11/28/2018 03:35	1		CLP2 0.32(mm)

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436649 Batch Start Date: 11/07/18 10:54 Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C Batch End Date: 11/08/18 21:49

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	ReceivedpH	8081/82 Surr 00105
MB 280-436649/1		3510C, 8082A				1000 mL	10 mL	7 SU	1 mL
LCS 280-436649/4		3510C, 8082A				1000 mL	10 mL	7 SU	1 mL
LCSD 280-436649/5		3510C, 8082A				1000 mL	10 mL	7 SU	1 mL
280-116538-D-1	SCLmw-001-181001-GW	3510C, 8082A	T	1405.3 g	501.5 g	903.8 mL	10 mL	7 SU	1 mL
280-116538-D-2	SCLmw-003-181001-GW	3510C, 8082A	T	1423.8 g	500.1 g	923.7 mL	10 mL	7 SU	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	8082 LCS 00049	AnalysisComment				
MB 280-436649/1		3510C, 8082A							
LCS 280-436649/4		3510C, 8082A		1 mL	8082				
LCSD 280-436649/5		3510C, 8082A		1 mL	8082				
280-116538-D-1	SCLmw-001-181001-GW	3510C, 8082A	T						
280-116538-D-2	SCLmw-003-181001-GW	3510C, 8082A	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PCBS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436649 Batch Start Date: 11/07/18 10:54 Batch Analyst: Stewart, Klaudia J

Batch Method: 3510C Batch End Date: 11/08/18 21:49

Batch Notes	
Balance ID	B439B3239
Batch Comment	DV-OP-0006/0007; BB8 @10.00 mL
Analyst ID - Concentration	CR(Trainer)/KA(Trainee)
Concentration 1 Corrected Temperature	88 Degrees C
Equipment ID - Concentration 1	B
Exchange Solvent ID	Hexane_cycl_00053
Analyst ID - Extraction	KS(trainee)+AAG(trainer)
Florisil ID	phenomenex prod lot #S18-003670/phenomenex prod lot #S18-002991
Florisil Solution Reagent ID	FlorisilSol_00155
Method/Fraction	3510C/608/8081DOD5/8082DOD5
Na2SO4 ID	0000205461_00008
NaCl ID	173831
Pipette/Syringe/Dispenser ID	1n2s
Prep Solvent ID	MeCl2_Cycl_00412
Prep Solvent Volume Used	180 mL
Analyst ID - Spike Analyst	KS
Analyst ID - Spike Witness Analyst	Reviewer: JZ
Sufficient Volume for Batch QC	Yes
Concentration 1 Uncorrected Temperature	87 Degrees C
Reagent Water ID	S. ELGA

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8330B_DOD5

Nitroaromatics and Nitramines (HPLC)

FORM II
HPLC/IC SURROGATE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): UltraCarb5u ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	12DNB1 #
SCLmw-001-181001-GW	280-116538-1	101
SCLmw-003-181001-GW	280-116538-2	102
DA1tw-001-181001-GW	280-116538-6	99
	MB 280-436459/1-A	103
	LCS 280-436459/2-A	102

	QC LIMITS
12DNB = 1,2-Dinitrobenzene	83-119

Column to be used to flag recovery values

FORM II 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 11080034.D

Lab ID: LCS 280-436459/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	2.00	2.09	105	73-125	
1,3-Dinitrobenzene	2.00	2.03	101	78-120	
2,4,6-Trinitrotoluene	2.00	1.91	96	71-123	
2,4-Dinitrotoluene	2.00	1.93	96	78-120	
2,6-Dinitrotoluene	2.00	1.92	96	77-127	
2-Amino-4,6-dinitrotoluene	2.00	1.87	93	79-120	
2-Nitrotoluene	2.00	1.75	87	70-127	
3-Nitrotoluene	2.00	1.85	92	73-125	
4-Amino-2,6-dinitrotoluene	2.00	1.73	86	76-125	
4-Nitrotoluene	2.00	1.87	93	71-127	
HMX	2.00	2.02	101	65-135	
Nitrobenzene	2.00	1.93	96	65-134	
Nitroglycerin	20.0	20.0	100	74-127	
PETN	20.0	19.4	97	73-127	
RDX	2.00	2.03	101	68-130	
Tetryl	2.00	2.05	102	64-128	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: MB 280-436459/1-A

Matrix: Water Date Extracted: 11/06/2018 12:18

Lab File ID:(1) 11080033.D Lab File ID:(2)

Date Analyzed:(1) 11/08/2018 23:29 Date Analyzed:(2)

Instrument ID:(1) CHHPLC_X3 Instrument ID:(2)

GC Column:(1) UltraCarb5uO ID: 4.6(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 280-436459/2-A	11/08/2018 23:52	
SCLmw-001-181001-GW	280-116538-1	11/09/2018 05:14	
SCLmw-003-181001-GW	280-116538-2	11/09/2018 05:36	
DA1tw-001-181001-GW	280-116538-6	11/09/2018 05:59	

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW | Lab Sample ID: 280-116538-1

Matrix: Water | Lab File ID: 11080049.D

Analysis Method: 8330B | Date Collected: 11/02/2018 10:45

Extraction Method: 3535 | Date Extracted: 11/06/2018 12:18

Sample wt/vol: 409.7(mL) | Date Analyzed: 11/09/2018 05:14

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436836 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.49	U	1.2	0.49	0.24
99-65-0	1,3-Dinitrobenzene	0.24	U	0.49	0.24	0.11
118-96-7	2,4,6-Trinitrotoluene	0.24	U	0.49	0.24	0.088
121-14-2	2,4-Dinitrotoluene	0.24	U	0.49	0.24	0.10
606-20-2	2,6-Dinitrotoluene	0.24	U	0.24	0.24	0.079
35572-78-2	2-Amino-4,6-dinitrotoluene	0.15	U	0.24	0.15	0.062
88-72-2	2-Nitrotoluene	0.24	U	0.49	0.24	0.10
99-08-1	3-Nitrotoluene	0.24	U	0.49	0.24	0.10
19406-51-0	4-Amino-2,6-dinitrotoluene	0.15	U	0.24	0.15	0.070
99-99-0	4-Nitrotoluene	0.49	U	1.2	0.49	0.24
2691-41-0	HMX	0.24	U	0.49	0.24	0.11
98-95-3	Nitrobenzene	0.24	U	0.49	0.24	0.11
55-63-0	Nitroglycerin	2.4	U	3.7	2.4	1.1
78-11-5	PETN	1.5	U	2.4	1.5	0.51
121-82-4	RDX	0.15	U	0.24	0.15	0.064
479-45-8	Tetryl	0.24	U Q	0.29	0.24	0.097

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	101		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080049.D
Lims ID: 280-116538-F-1-A
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 09-Nov-2018 05:14:01 ALS Bottle#: 48 Worklist Smp#: 49
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-F-1-A
Misc. Info.: 280-0075968-049
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Nov-2018 12:06:13 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0319

First Level Reviewer: fiedlerh Date: 09-Nov-2018 12:04:28

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1		6.653			ND	
	5 RDX	1		7.759			ND	
$	7 1,2-Dinitrobenzene	1	8.750	8.746	0.004	26106	0.2028	
	8 1,3,5-Trinitrobenzene	1		8.906			ND	
	9 1,3-Dinitrobenzene	1		9.566			ND	
	11 Nitrobenzene	1		9.953			ND	
	12 Tetryl	1		10.286			ND	
	13 Nitroglycerin	2		10.793			ND	
	14 2,4,6-Trinitrotoluene	1		11.246			ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.426			ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.713			ND	
	17 2,6-Dinitrotoluene	1		11.859			ND	
	18 2,4-Dinitrotoluene	1		12.059			ND	
	19 o-Nitrotoluene	1		12.906			ND	
	20 p-Nitrotoluene	1		13.346			ND	
	21 m-Nitrotoluene	1		13.946			ND	
	22 PETN	2		15.073			ND	

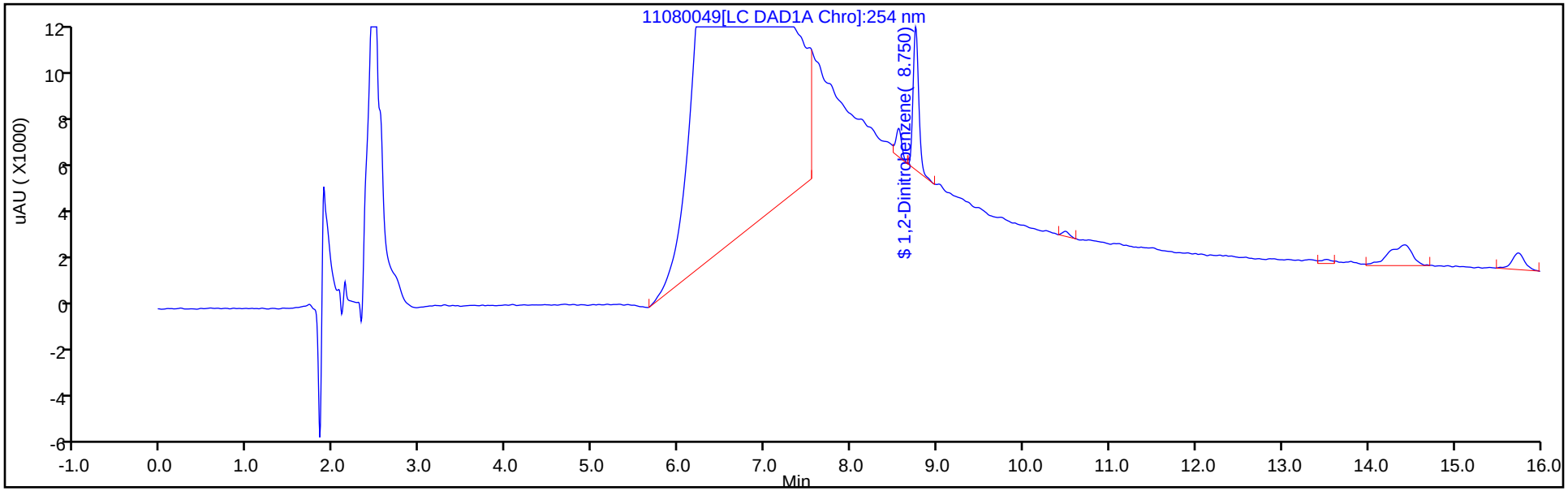
Report Date: 09-Nov-2018 12:06:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

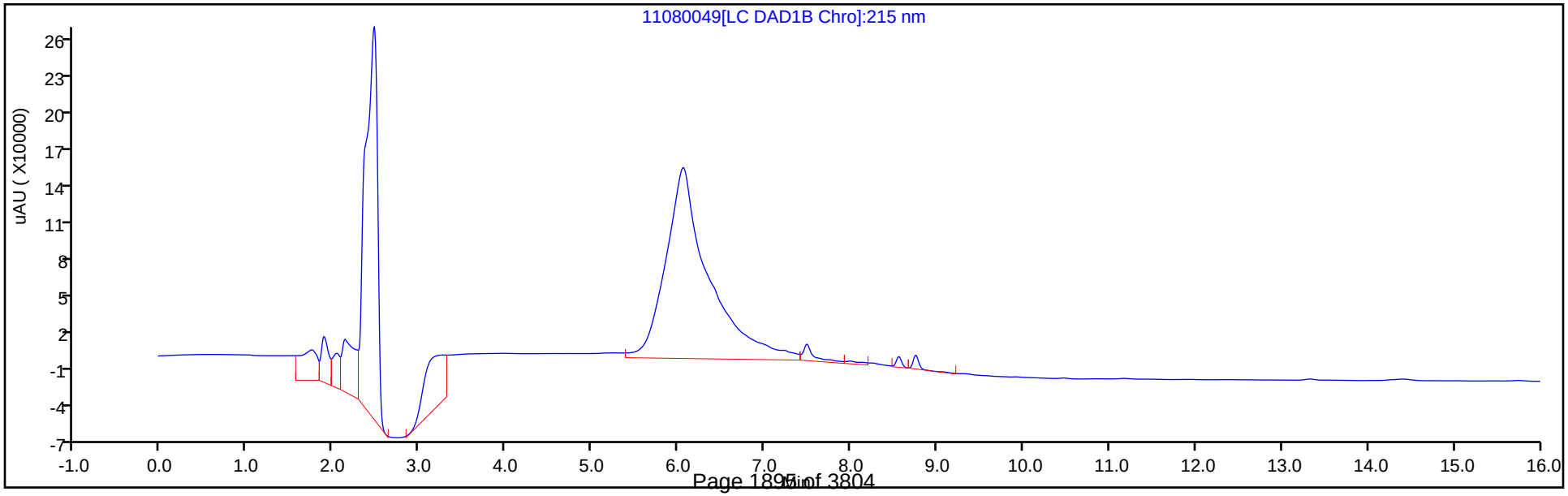
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080049.D

Injection Date:	09-Nov-2018 05:14:01	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	280-116538-F-1-A	Lab Sample ID:	280-116538-1	Worklist Smp#:	49
Client ID:	SCLmw-001-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	48
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080049.D				
Lims ID:	280-116538-F-1-A				
Client ID:	SCLmw-001-181001-GW				
Sample Type:	Client				
Inject. Date:	09-Nov-2018 05:14:01	ALS Bottle#:	48	Worklist Smp#:	49
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-F-1-A				
Misc. Info.:	280-0075968-049				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	09-Nov-2018 12:06:13	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0319				
First Level Reviewer: fiedlerh		Date:	09-Nov-2018 12:04:28		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2028	101.40

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-003-181001-GW | Lab Sample ID: 280-116538-2

Matrix: Water | Lab File ID: 11080050.D

Analysis Method: 8330B | Date Collected: 11/02/2018 11:10

Extraction Method: 3535 | Date Extracted: 11/06/2018 12:18

Sample wt/vol: 466(mL) | Date Analyzed: 11/09/2018 05:36

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436836 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.43	U	1.1	0.43	0.21
99-65-0	1,3-Dinitrobenzene	0.21	U	0.43	0.21	0.095
118-96-7	2,4,6-Trinitrotoluene	0.21	U	0.43	0.21	0.078
121-14-2	2,4-Dinitrotoluene	0.21	U	0.43	0.21	0.090
606-20-2	2,6-Dinitrotoluene	0.21	U	0.21	0.21	0.069
35572-78-2	2-Amino-4,6-dinitrotoluene	0.13	U	0.21	0.13	0.054
88-72-2	2-Nitrotoluene	0.21	U	0.43	0.21	0.092
99-08-1	3-Nitrotoluene	0.21	U	0.43	0.21	0.089
19406-51-0	4-Amino-2,6-dinitrotoluene	0.13	U	0.21	0.13	0.062
99-99-0	4-Nitrotoluene	0.43	U	1.1	0.43	0.21
2691-41-0	HMX	0.21	U	0.43	0.21	0.094
98-95-3	Nitrobenzene	0.21	U	0.43	0.21	0.098
55-63-0	Nitroglycerin	2.1	U	3.2	2.1	0.99
78-11-5	PETN	1.3	U	2.1	1.3	0.45
121-82-4	RDX	0.13	U	0.21	0.13	0.056
479-45-8	Tetryl	0.21	U Q	0.26	0.21	0.085

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	102		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080050.D
Lims ID: 280-116538-F-2-A
Client ID: SCLmw-003-181001-GW
Sample Type: Client
Inject. Date: 09-Nov-2018 05:36:59 ALS Bottle#: 49 Worklist Smp#: 50
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-F-2-A
Misc. Info.: 280-0075968-050
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Nov-2018 12:06:13 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0319

First Level Reviewer: fiedlerh Date: 09-Nov-2018 12:04:35

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1		6.653			ND	
	5 RDX	1		7.759			ND	
$	7 1,2-Dinitrobenzene	1	8.754	8.746	0.008	26181	0.2034	
	8 1,3,5-Trinitrobenzene	1		8.906			ND	
	9 1,3-Dinitrobenzene	1		9.566			ND	
	11 Nitrobenzene	1		9.953			ND	
	12 Tetryl	1		10.286			ND	
	13 Nitroglycerin	2		10.793			ND	
	14 2,4,6-Trinitrotoluene	1		11.246			ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.426			ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.713			ND	
	17 2,6-Dinitrotoluene	1		11.859			ND	
	18 2,4-Dinitrotoluene	1		12.059			ND	
	19 o-Nitrotoluene	1		12.906			ND	
	20 p-Nitrotoluene	1		13.346			ND	
	21 m-Nitrotoluene	1		13.946			ND	
	22 PETN	2		15.073			ND	

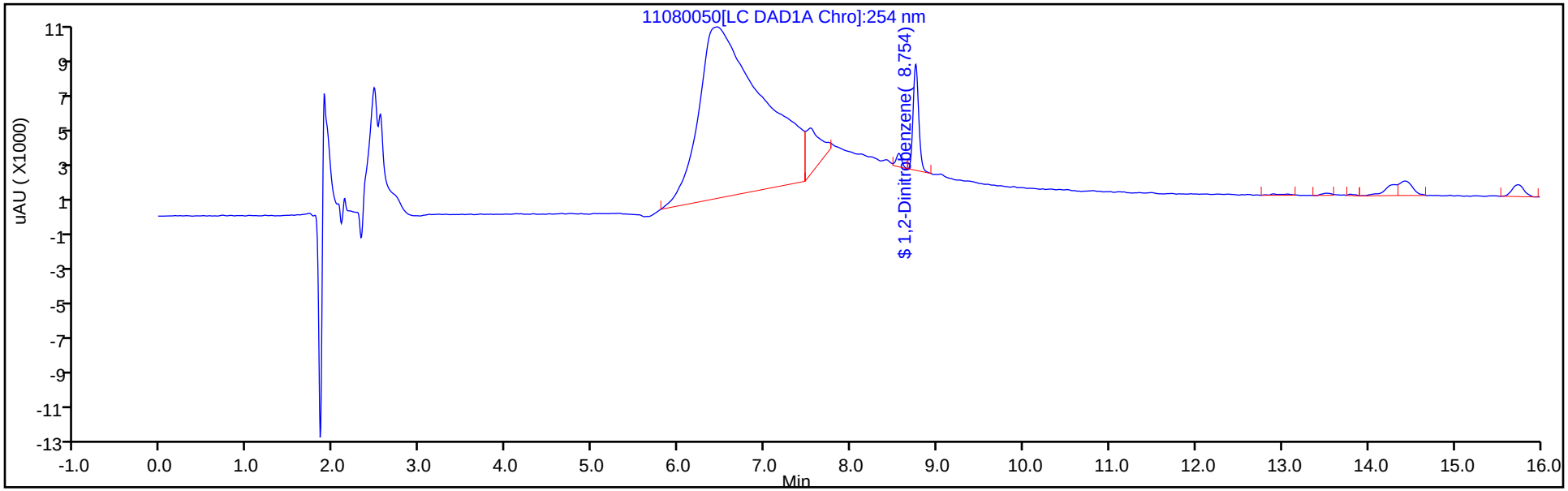
Report Date: 09-Nov-2018 12:06:18 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

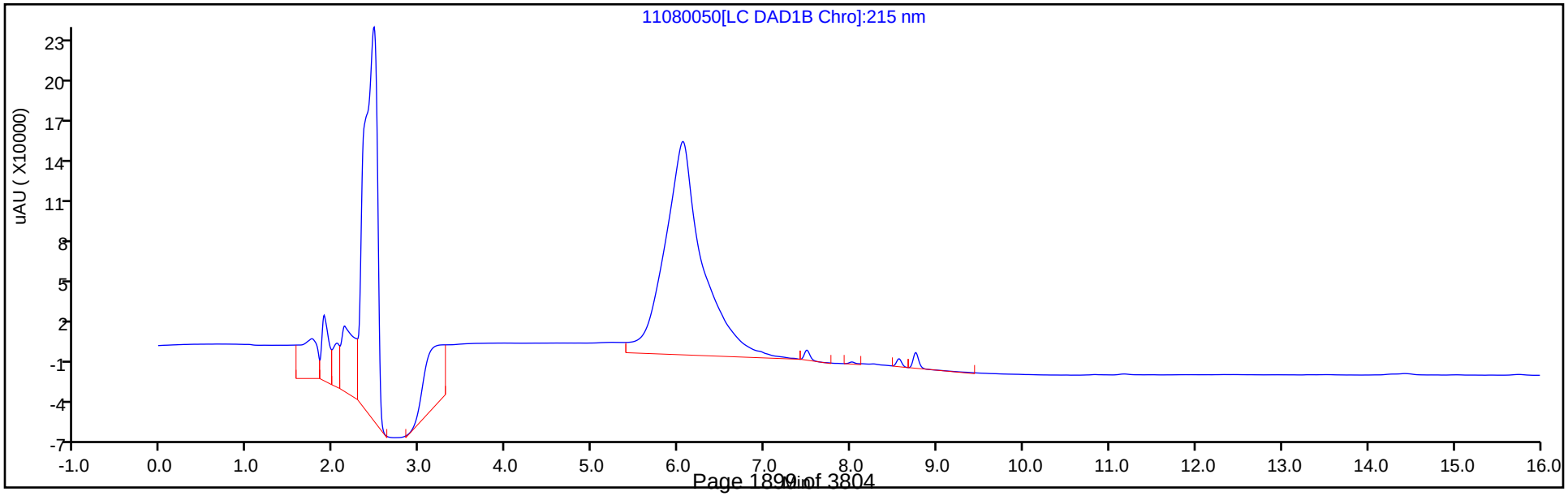
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080050.D

Injection Date:	09-Nov-2018 05:36:59	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	280-116538-F-2-A	Lab Sample ID:	280-116538-2	Worklist Smp#:	50
Client ID:	SCLmw-003-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	49
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080050.D				
Lims ID:	280-116538-F-2-A				
Client ID:	SCLmw-003-181001-GW				
Sample Type:	Client				
Inject. Date:	09-Nov-2018 05:36:59	ALS Bottle#:	49	Worklist Smp#:	50
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-F-2-A				
Misc. Info.:	280-0075968-050				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	09-Nov-2018 12:06:13	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0319				
First Level Reviewer: fiedlerh		Date:	09-Nov-2018 12:04:35		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2034	101.69

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: DA1tw-001-181001-GW | Lab Sample ID: 280-116538-6

Matrix: Water | Lab File ID: 11080051.D

Analysis Method: 8330B | Date Collected: 11/01/2018 15:50

Extraction Method: 3535 | Date Extracted: 11/06/2018 12:18

Sample wt/vol: 460.3(mL) | Date Analyzed: 11/09/2018 05:59

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436836 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.43	U M	1.1	0.43	0.22
99-65-0	1,3-Dinitrobenzene	0.22	U	0.43	0.22	0.096
118-96-7	2,4,6-Trinitrotoluene	0.22	U M	0.43	0.22	0.079
121-14-2	2,4-Dinitrotoluene	0.22	U	0.43	0.22	0.091
606-20-2	2,6-Dinitrotoluene	0.22	U	0.22	0.22	0.070
35572-78-2	2-Amino-4,6-dinitrotoluene	0.13	U	0.22	0.13	0.055
88-72-2	2-Nitrotoluene	0.22	U	0.43	0.22	0.093
99-08-1	3-Nitrotoluene	0.22	U	0.43	0.22	0.091
19406-51-0	4-Amino-2,6-dinitrotoluene	0.13	U	0.22	0.13	0.063
99-99-0	4-Nitrotoluene	0.43	U	1.1	0.43	0.22
2691-41-0	HMX	0.22	U	0.43	0.22	0.095
98-95-3	Nitrobenzene	0.22	U	0.43	0.22	0.099
55-63-0	Nitroglycerin	2.2	U	3.3	2.2	1.0
78-11-5	PETN	1.3	U	2.2	1.3	0.45
121-82-4	RDX	0.13	U	0.22	0.13	0.057
479-45-8	Tetryl	0.22	U Q	0.26	0.22	0.086

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	99		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080051.D
Lims ID: 280-116538-A-6-A
Client ID: DA1tw-001-181001-GW
Sample Type: Client
Inject. Date: 09-Nov-2018 05:59:59 ALS Bottle#: 50 Worklist Smp#: 51
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-A-6-A
Misc. Info.: 280-0075968-051
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Nov-2018 12:06:13 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0319

First Level Reviewer: fiedlerh Date: 09-Nov-2018 12:04:45

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/mL	Flags
	2 HMX	1		6.653			ND	
	5 RDX	1		7.759			ND	
$	7 1,2-Dinitrobenzene	1	8.755	8.746	0.009	25451	0.1977	
	8 1,3,5-Trinitrobenzene	1		8.906			ND	U
	9 1,3-Dinitrobenzene	1		9.566			ND	
	11 Nitrobenzene	1		9.953			ND	
	12 Tetryl	1		10.286			ND	
	13 Nitroglycerin	2		10.793			ND	
	14 2,4,6-Trinitrotoluene	1		11.246			ND	U
	15 4-Amino-2,6-dinitrotoluene	1		11.426			ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.713			ND	
	17 2,6-Dinitrotoluene	1		11.859			ND	
	18 2,4-Dinitrotoluene	1		12.059			ND	
	19 o-Nitrotoluene	1		12.906			ND	
	20 p-Nitrotoluene	1		13.346			ND	
	21 m-Nitrotoluene	1		13.946			ND	
	22 PETN	2		15.073			ND	

QC Flag Legend

Review Flags
U - Marked Undetected

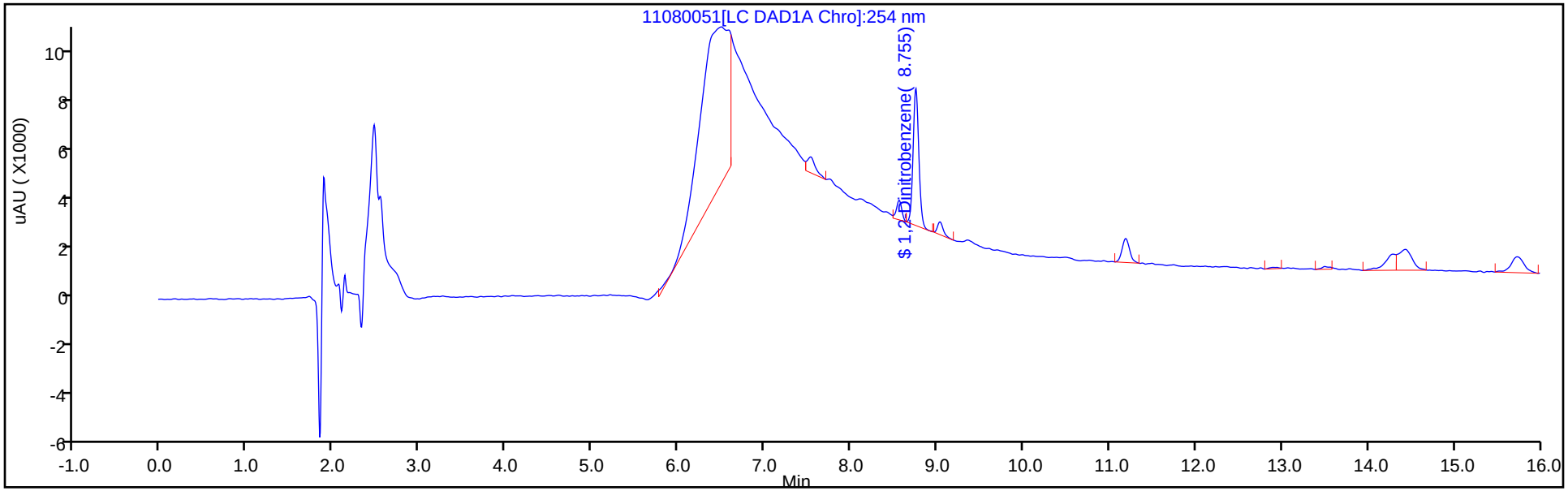
Report Date: 09-Nov-2018 12:06:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

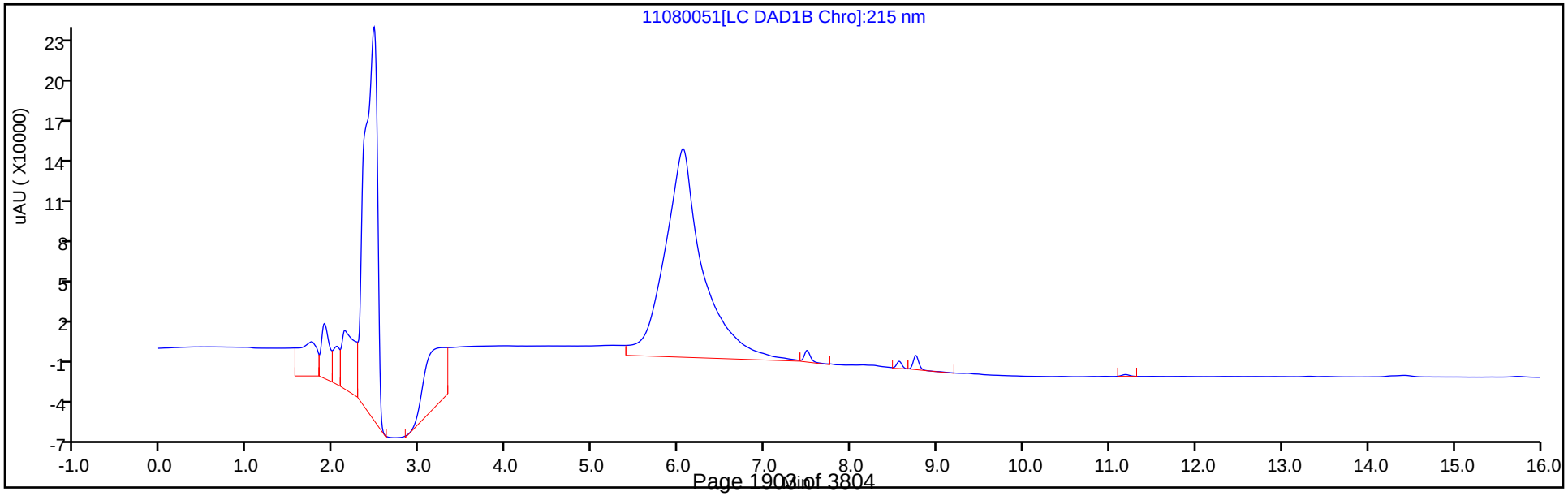
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080051.D

Injection Date:	09-Nov-2018 05:59:59	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	280-116538-A-6-A	Lab Sample ID:	280-116538-6	Worklist Smp#:	51
Client ID:	DA1tw-001-181001-GW				
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	50
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080051.D				
Lims ID:	280-116538-A-6-A				
Client ID:	DA1tw-001-181001-GW				
Sample Type:	Client				
Inject. Date:	09-Nov-2018 05:59:59	ALS Bottle#:	50	Worklist Smp#:	51
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-116538-A-6-A				
Misc. Info.:	280-0075968-051				
Operator ID:	hkf	Instrument ID:	CHHPLC_X3		
Method:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m				
Limit Group:	GCSV - 8330				
Last Update:	09-Nov-2018 12:06:13	Calib Date:	21-Aug-2018 19:41:12		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D				
Column 1 :	UltraCarb5uODS (20) (4.60 mm)		Det: LC DAD1B, 254 nm		
Process Host:	CTX0319				
First Level Reviewer: fiedlerh		Date:	09-Nov-2018 12:04:45		

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.1977	98.86

User Disabled Compound Report

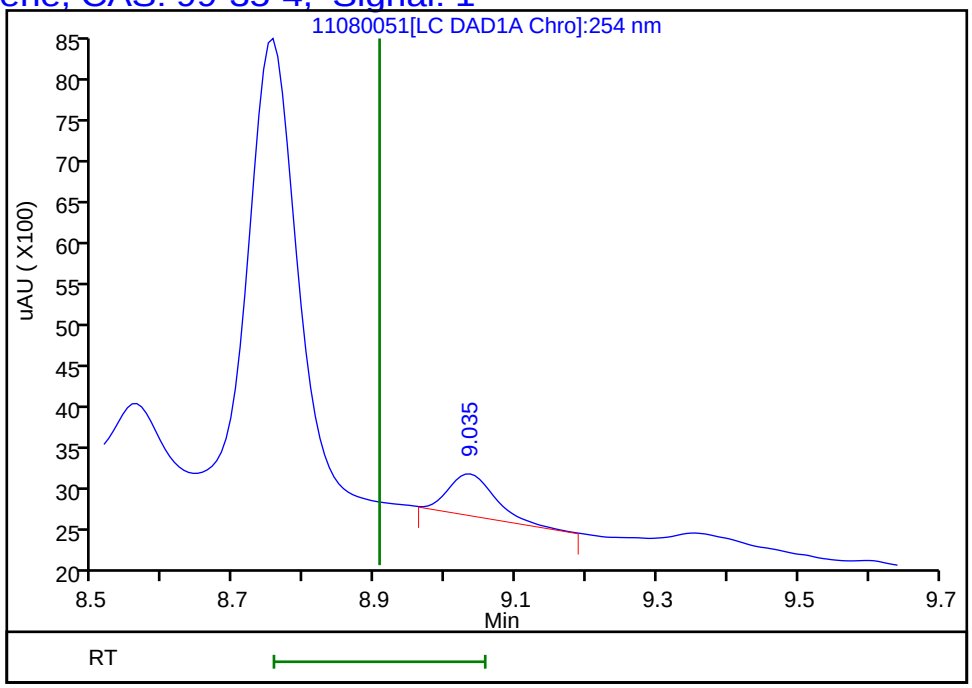
TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080051.D

Injection Date:	09-Nov-2018 05:59:59	Instrument ID:	CHHPLC_X3		
Lims ID:	280-116538-A-6-A	Lab Sample ID:	280-116538-6		
Client ID:	DA1tw-001-181001-GW				
Operator ID:	hkf	ALS Bottle#:	50	Worklist Smp#:	51
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

8 1,3,5-Trinitrobenzene, CAS: 99-35-4, Signal: 1

RT: 9.03
Response: 2392
Amount: 0.010472



Reviewer: fiedlerh, 09-Nov-2018 12:04:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

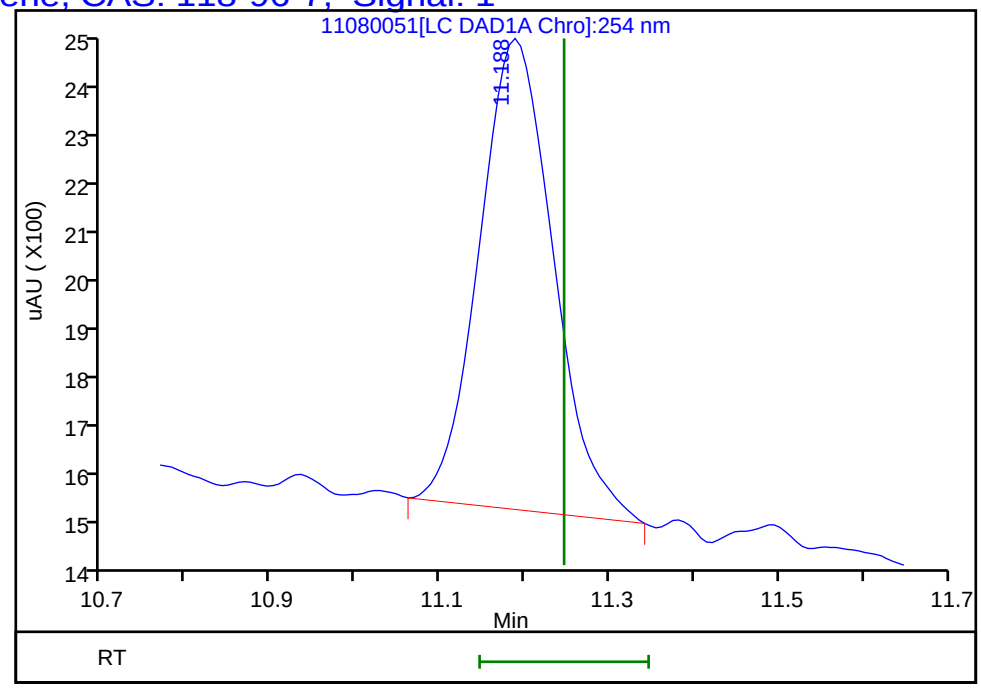
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080051.D				
Injection Date:	09-Nov-2018 05:59:59	Instrument ID:	CHHPLC_X3		
Lims ID:	280-116538-A-6-A	Lab Sample ID:	280-116538-6		
Client ID:	DA1tw-001-181001-GW				
Operator ID:	hkf	ALS Bottle#:	50	Worklist Smp#:	51
Injection Vol:	100.0 ul	Dil. Factor:	1.0000		
Method:	8330_X3	Limit Group:	GCSV - 8330		
Column:	UltraCarb5uODS (20) (4.60 mm)	Detector	LC DAD1B, 254 nm		

14 2,4,6-Trinitrotoluene, CAS: 118-96-7, Signal: 1

RT: 11.19
Response: 5864
Amount: 0.027341



Reviewer: fiedlerh, 09-Nov-2018 12:04:45
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
HMX	6.625	6.622	6.623	6.622	6.624	6.625	6.624	6.622			6.472 - 6.772	6.623
RDX	7.718	7.722	7.723	7.722	7.717	7.719	7.724	7.715			7.572 - 7.872	7.720
Picric acid	8.065	8.062	8.056	8.049	8.037	8.025	8.018	7.968			7.899 - 8.199	8.035
1,3,5-Trinitrobenzene	8.865	8.869	8.869	8.862	8.857	8.859	8.864	8.855			8.712 - 9.012	8.863
1,3-Dinitrobenzene	9.512	9.516	9.516	9.509	9.503	9.512	9.511	9.502			9.359 - 9.659	9.510
Nitrobenzene	9.898	9.902	9.902	9.895	9.890	9.892	9.898	9.888			9.745 - 10.045	9.896
Tetryl	10.218	10.216	10.216	10.209	10.210	10.212	10.211	10.208			10.059 - 10.359	10.213
Nitroglycerin	10.725	10.722	10.722	10.715	10.710	10.712	10.711	10.708			10.565 - 10.865	10.716
2,4,6-Trinitrotoluene	11.165	11.162	11.162	11.155	11.157	11.159	11.158	11.155			11.055 - 11.255	11.159
4-Amino-2,6-dinitrotoluene	11.318	11.316	11.322	11.315	11.310	11.312	11.311	11.308			11.215 - 11.415	11.314
2-Amino-4,6-dinitrotoluene	11.598	11.596	11.602	11.595	11.590	11.592	11.591	11.588			11.495 - 11.695	11.594
2,6-Dinitrotoluene	11.765	11.756	11.762	11.755	11.750	11.752	11.751	11.748			11.655 - 11.855	11.755
2,4-Dinitrotoluene	11.952	11.949	11.956	11.942	11.943	11.945	11.944	11.942			11.842 - 12.042	11.947
2-Nitrotoluene	12.785	12.789	12.789	12.782	12.777	12.785	12.778	12.775			12.632 - 12.932	12.783
4-Nitrotoluene	13.218	13.216	13.216	13.209	13.210	13.212	13.211	13.208			13.059 - 13.359	13.213
3-Nitrotoluene	13.812	13.809	13.809	13.802	13.797	13.799	13.798	13.795			13.652 - 13.952	13.803
PETN		14.916	14.916	14.909	14.910	14.905	14.904	14.895			14.759 - 15.059	14.908
1,2-Dinitrobenzene	8.705	8.702	8.703	8.702	8.697	8.699	8.704	8.695			8.552 - 8.852	8.701

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
HMX	80950 85940	83640 87649	81370 87246	83844 88926	Ave		84945.5714				3.5		20.0			
RDX	102150 107003	101000 105186	105630 105400	103860 106390	Ave		104577.327				2.0		20.0			
Picric acid	93950 80905	89880 82509	80500 84211	76192 86576	Ave		84340.3214				6.7		20.0			
1,3,5-Trinitrobenzene	202100 234028	227660 235761	222530 236230	227420 241536	Ave		228408.166				5.4		20.0			
1,3-Dinitrobenzene	277572 307465	303437 304447	303027 304477	298725 309038	Ave		301023.443				3.3		20.0			
Nitrobenzene	191717 200245	201876 200781	198214 198631	193980 204804	Ave		198780.920				2.1		20.0			
Tetryl	139850 166665	164520 170279	162800 170312	160332 172830	Ave		163448.446				6.4		20.0			
Nitroglycerin	59530 70785	65386 70242	68459 70136	68518 70507	Ave		67945.3646				5.6		20.0			
2,4,6-Trinitrotoluene	206026 213254	224442 215804	210707 214814	209992 220784	Ave		214477.993				2.8		20.0			
4-Amino-2,6-dinitrotoluene	173779 167448	169831 161815	164606 161970	161779 162780	Ave		165500.847				2.7		20.0			
2-Amino-4,6-dinitrotoluene	191376 201012	204327 198084	197906 202480	197823 202720	Ave		199465.924				2.1		20.0			
2,6-Dinitrotoluene	155783 152159	159342 155008	150588 150226	148247 153167	Ave		153065.012				2.3		20.0			
2,4-Dinitrotoluene	286926 302290	305649 297850	299481 296720	293297 303937	Ave		298268.777				2.0		20.0			
2-Nitrotoluene	137637 130803	137886 130219	132742 128507	127864 132138	Ave		132224.576				2.9		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
4-Nitrotoluene	117281 112786	117211 112420	114412 111061	110291 113768	Ave		113653.797				2.3		20.0			
3-Nitrotoluene	161604 145301	155100 144859	146165 142855	142582 146418	Ave		148110.392				4.5		20.0			
PETN	 76935	68194 76788	73842 76779	74512 77633	Ave		74954.8292				4.4		20.0			
1,2-Dinitrobenzene	113900 131463	133300 131203	126380 133312	125372 134889	Ave		128727.320				5.3		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 280-415256/14	05180014.D
Level 2	IC 280-415256/13	05180013.D
Level 3	IC 280-415256/12	05180012.D
Level 4	IC 280-415256/11	05180011.D
Level 5	IC 280-415256/10	05180010.D
Level 6	IC 280-415256/9	05180009.D
Level 7	IC 280-415256/8	05180008.D
Level 8	IC 280-415256/7	05180007.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
HMX	Ave	1619 61354	4182 87246	8137 222315	20961	34376	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
RDX	Ave	2043 73630	5050 105400	10563 265976	25965	42801	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Picric acid	Ave	1879 57756	4494 84211	8050 216440	19048	32362	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3,5-Trinitrobenzene	Ave	4042 165033	11383 236230	22253 603841	56855	93611	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
1,3-Dinitrobenzene	Ave	5557 213326	15187 304781	30333 773367	74756	123109	0.0200 0.701	0.0501 1.00	0.100 2.50	0.250	0.400
Nitrobenzene	Ave	3842 140828	10114 199028	19861 513035	48592	80258	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
Tetryl	Ave	2797 119195	8226 170312	16280 432075	40083	66666	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400
Nitroglycerin	Ave	11906 491693	32693 701363	68459 1762679	171294	283140	0.200 7.00	0.500 10.0	1.00 25.0	2.50	4.00
2,4,6-Trinitrotoluene	Ave	4137 151667	11267 215673	21155 554169	52708	85643	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
4-Amino-2,6-dinitrotoluene	Ave	3486 113610	8517 162456	16510 408172	40566	67180	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2-Amino-4,6-dinitrotoluene	Ave	3839 139075	10247 203087	19850 508320	49604	80646	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,6-Dinitrotoluene	Ave	3125 108831	7991 150677	15104 384067	37173	61046	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
2,4-Dinitrotoluene	Ave	5750 208912	15313 297313	30008 761362	73471	121158	0.0200 0.701	0.0501 1.00	0.100 2.51	0.251	0.401
2-Nitrotoluene	Ave	2761 91427	6915 128893	13314 331335	32062	52478	0.0201 0.702	0.0502 1.00	0.100 2.51	0.251	0.401
4-Nitrotoluene	Ave	2355 79009	5884 111505	11487 285557	27683	45295	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 415256

SDG No.:

Instrument ID: CHHPLC_X3 GC Column: UltraCarb5u ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/18/2018 10:34 Calibration End Date: 05/18/2018 13:14 Calibration ID: 32415

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
3-Nitrotoluene	Ave	3245 101807	7786 143426	14675 367509	35788	58353	0.0201 0.703	0.0502 1.00	0.100 2.51	0.251	0.402
PETN	Ave	 537514	34097 767790	73842 1940836	186281	307741	 7.00	0.500 10.0	1.00 25.0	2.50	4.00
1,2-Dinitrobenzene	Ave	2278 91842	6665 133312	12638 337223	31343	52585	0.0200 0.700	0.0500 1.00	0.100 2.50	0.250	0.400

Curve Type Legend:
Ave = Average

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180007.D
Lims ID: IC MAIN L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 18-May-2018 10:34:02 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L8
Misc. Info.: 280-0070054-007
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:16 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:54:21

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.622	6.622	0.000	222315	2.50	2.62	
5 RDX	1	7.715	7.722	-0.007	265976	2.50	2.54	
6 2,4,6-Trinitrophenol	1	7.968	8.049	-0.081	216440	2.50	2.57	
$ 7 1,2-Dinitrobenzene	1	8.695	8.702	-0.007	337223	2.50	2.62	
8 1,3,5-Trinitrobenzene	1	8.855	8.862	-0.007	603841	2.50	2.64	
9 1,3-Dinitrobenzene	1	9.502	9.509	-0.007	773367	2.50	2.57	
11 Nitrobenzene	1	9.888	9.895	-0.007	513035	2.51	2.58	
12 Tetryl	1	10.208	10.209	-0.001	432075	2.50	2.64	
13 Nitroglycerin	2	10.708	10.715	-0.007	1762679	25.0	25.9	
14 2,4,6-Trinitrotoluene	1	11.155	11.155	0.000	554169	2.51	2.58	
15 4-Amino-2,6-dinitrotoluene	1	11.308	11.315	-0.007	408172	2.51	2.47	
16 2-Amino-4,6-dinitrotoluene	1	11.588	11.595	-0.007	508320	2.51	2.55	
17 2,6-Dinitrotoluene	1	11.748	11.755	-0.007	384067	2.51	2.51	
18 2,4-Dinitrotoluene	1	11.942	11.942	0.000	761362	2.51	2.55	
19 o-Nitrotoluene	1	12.775	12.782	-0.007	331335	2.51	2.51	
20 p-Nitrotoluene	1	13.208	13.209	-0.001	285557	2.51	2.51	
21 m-Nitrotoluene	1	13.795	13.802	-0.007	367509	2.51	2.48	
22 PETN	2	14.895	14.909	-0.014	1940836	25.0	25.9	

Reagents:

8330IntermStk_00055 Amount Added: 250.00 Units: uL

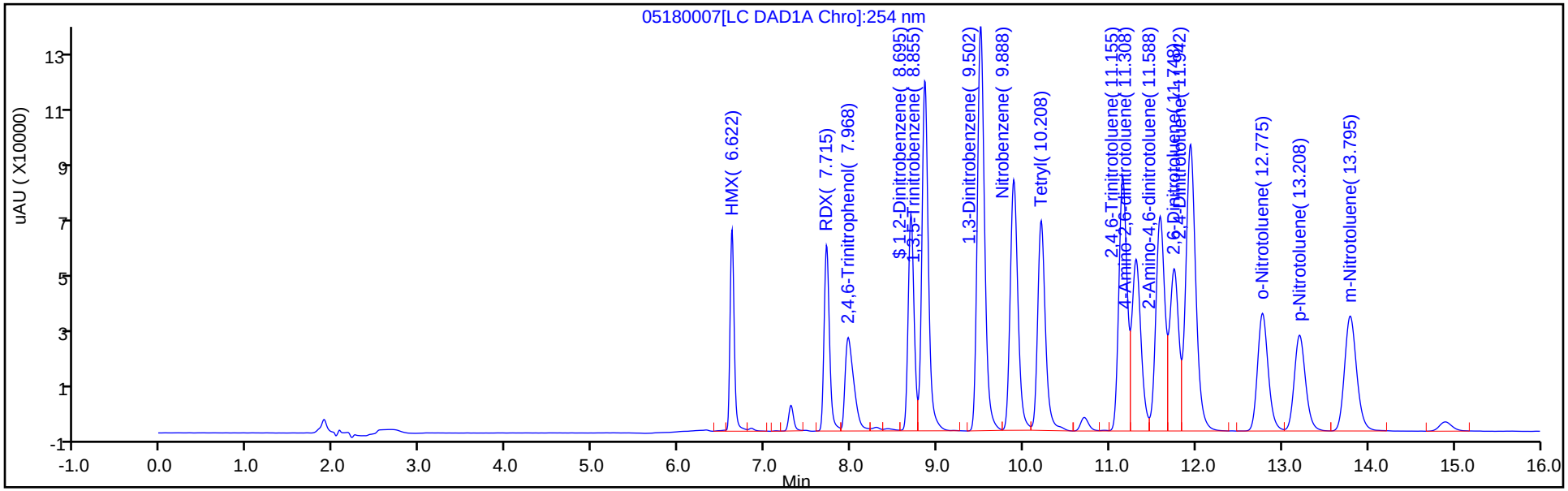
Report Date: 22-May-2018 12:01:17 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

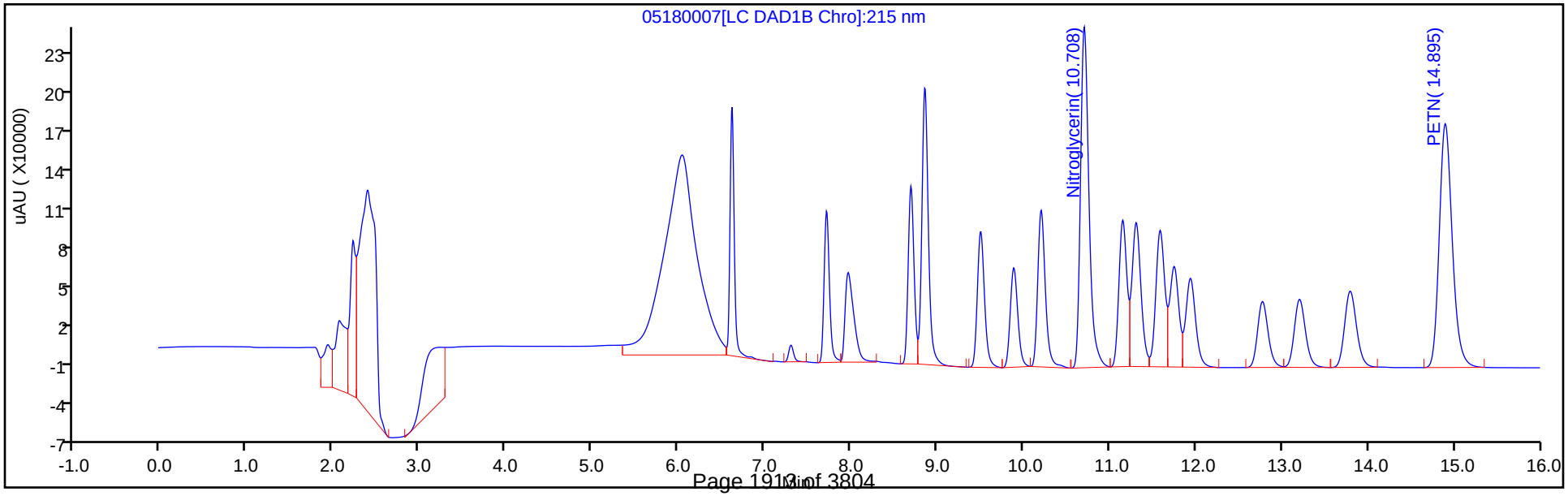
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180007.D

Injection Date:	18-May-2018 10:34:02	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L8			Worklist Smp#:	7
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180008.D
Lims ID: IC MAIN L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 18-May-2018 10:57:00 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L7
Misc. Info.: 280-0070054-008
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:17 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:06:57

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.622	0.002	87246	1.00	1.03	
5 RDX	1	7.724	7.722	0.002	105400	1.00	1.01	
6 2,4,6-Trinitrophenol	1	8.018	8.049	-0.031	84211	1.00	1.00	
$ 7 1,2-Dinitrobenzene	1	8.704	8.702	0.002	133312	1.00	1.04	
8 1,3,5-Trinitrobenzene	1	8.864	8.862	0.002	236230	1.00	1.03	
9 1,3-Dinitrobenzene	1	9.511	9.509	0.002	304781	1.00	1.01	
11 Nitrobenzene	1	9.898	9.895	0.003	199028	1.00	1.00	
12 Tetryl	1	10.211	10.209	0.002	170312	1.00	1.04	
13 Nitroglycerin	2	10.711	10.715	-0.004	701363	10.0	10.3	
14 2,4,6-Trinitrotoluene	1	11.158	11.155	0.003	215673	1.00	1.01	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.315	-0.004	162456	1.00	0.9816	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.595	-0.004	203087	1.00	1.02	
17 2,6-Dinitrotoluene	1	11.751	11.755	-0.004	150677	1.00	0.9844	
18 2,4-Dinitrotoluene	1	11.944	11.942	0.002	297313	1.00	1.00	
19 o-Nitrotoluene	1	12.778	12.782	-0.004	128893	1.00	0.9748	
20 p-Nitrotoluene	1	13.211	13.209	0.002	111505	1.00	0.9811	
21 m-Nitrotoluene	1	13.798	13.802	-0.004	143426	1.00	0.9684	
22 PETN	2	14.904	14.909	-0.005	767790	10.0	10.2	

Reagents:

8330IntermStk_00055 Amount Added: 100.00 Units: uL

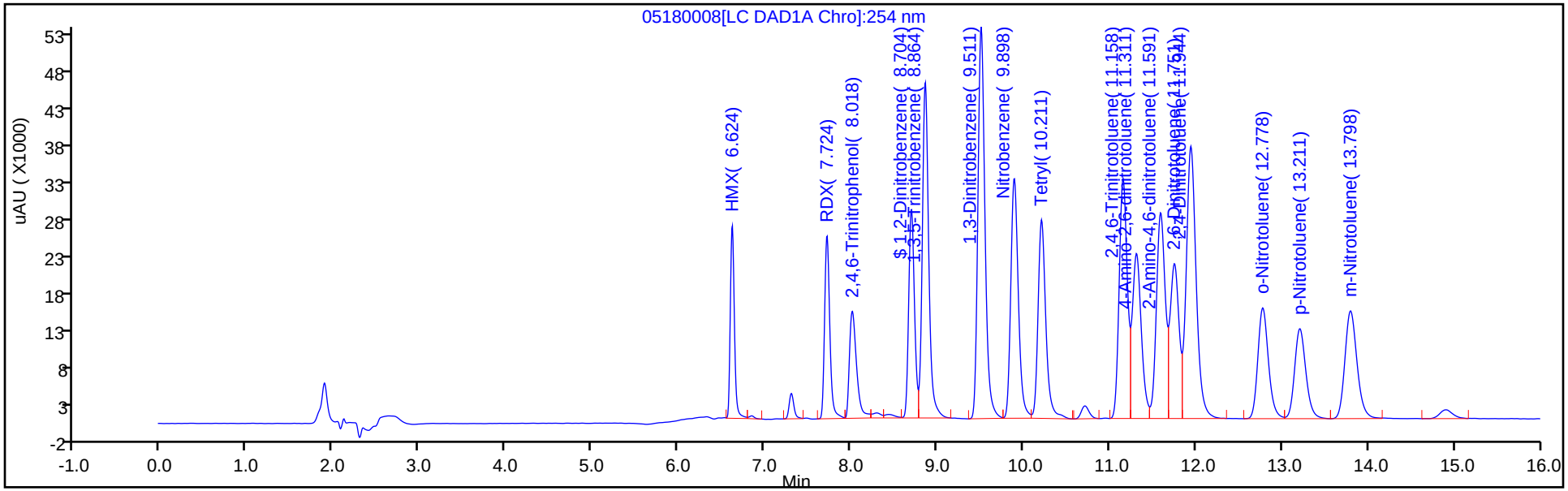
Report Date: 22-May-2018 12:01:18 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

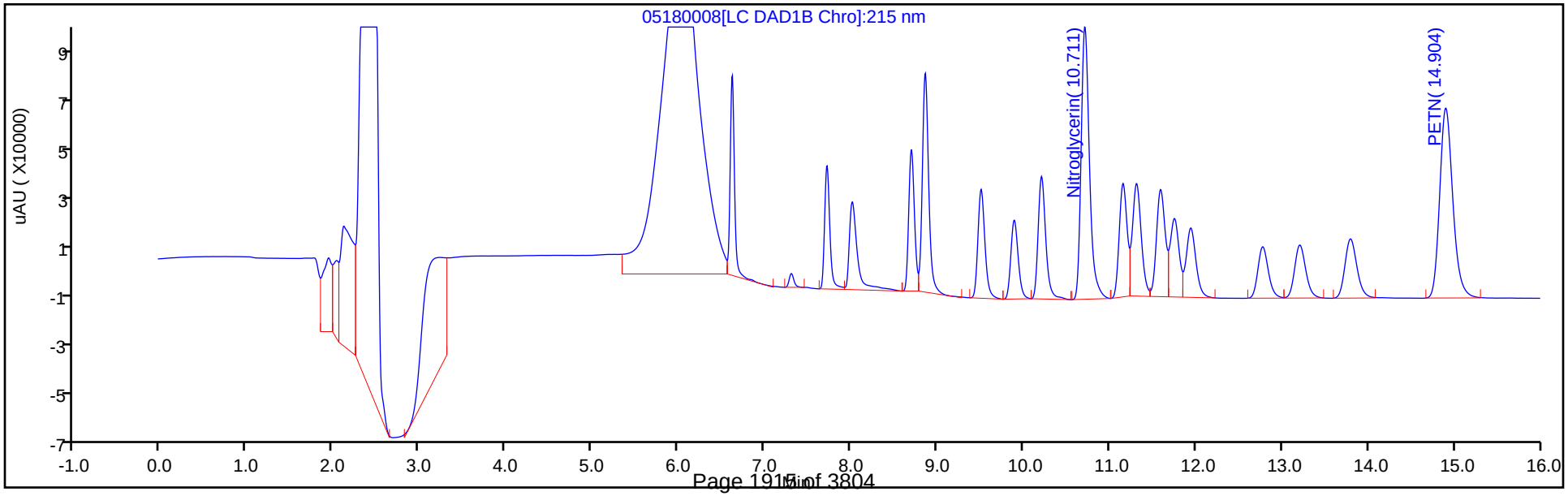
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180008.D

Injection Date:	18-May-2018 10:57:00	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L7			Worklist Smp#:	8
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180009.D
Lims ID: IC MAIN L6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 18-May-2018 11:19:59 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L6
Misc. Info.: 280-0070054-009
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:19 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:09:16

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.625	6.622	0.003	61354	0.7000	0.7223	
5 RDX	1	7.719	7.722	-0.003	73630	0.7000	0.7041	
6 2,4,6-Trinitrophenol	1	8.025	8.049	-0.024	57756	0.7000	0.6848	
$ 7 1,2-Dinitrobenzene	1	8.699	8.702	-0.003	91842	0.7000	0.7135	
8 1,3,5-Trinitrobenzene	1	8.859	8.862	-0.003	165033	0.7000	0.7225	
9 1,3-Dinitrobenzene	1	9.512	9.509	0.003	213326	0.7007	0.7087	
11 Nitrobenzene	1	9.892	9.895	-0.003	140828	0.7014	0.7085	
12 Tetryl	1	10.212	10.209	0.003	119195	0.7000	0.7293	
13 Nitroglycerin	2	10.712	10.715	-0.003	491693	7.00	7.24	
14 2,4,6-Trinitrotoluene	1	11.159	11.155	0.004	151667	0.7028	0.7071	
15 4-Amino-2,6-dinitrotoluene	1	11.312	11.315	-0.003	113610	0.7021	0.6865	
16 2-Amino-4,6-dinitrotoluene	1	11.592	11.595	-0.003	139075	0.7021	0.6972	
17 2,6-Dinitrotoluene	1	11.752	11.755	-0.003	108831	0.7021	0.7110	
18 2,4-Dinitrotoluene	1	11.945	11.942	0.003	208912	0.7014	0.7004	
19 o-Nitrotoluene	1	12.785	12.782	0.003	91427	0.7021	0.6915	
20 p-Nitrotoluene	1	13.212	13.209	0.003	79009	0.7028	0.6952	
21 m-Nitrotoluene	1	13.799	13.802	-0.003	101807	0.7028	0.6874	
22 PETN	2	14.905	14.909	-0.004	537514	7.00	7.17	

Reagents:

8330IntermStk_00055 Amount Added: 70.00 Units: uL

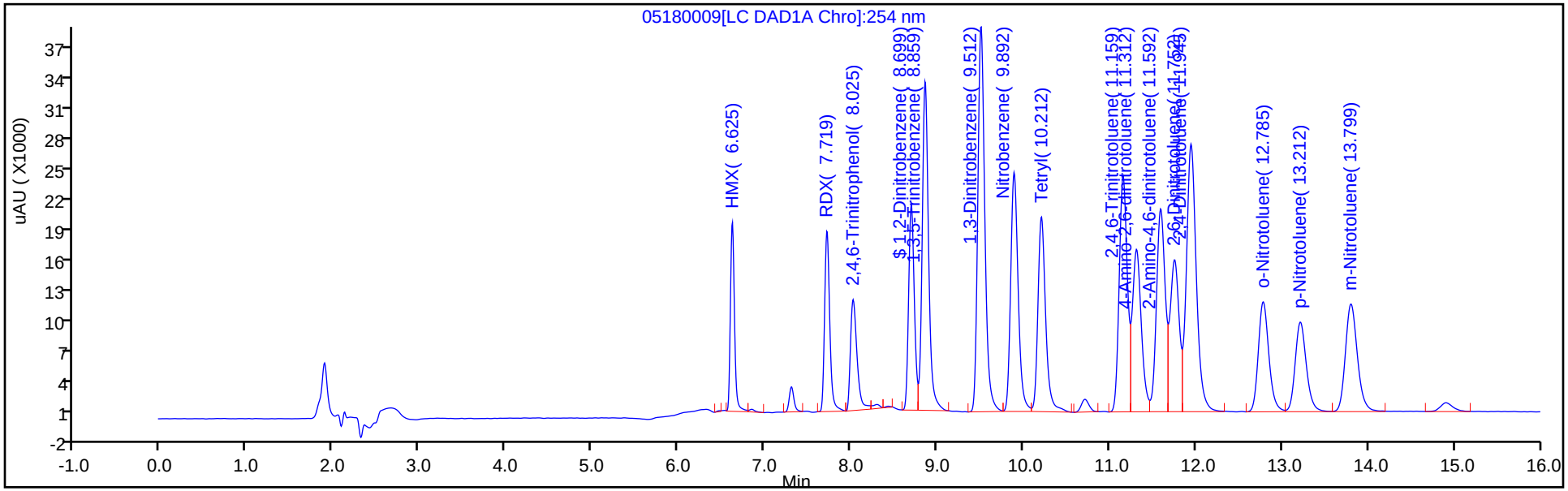
Report Date: 22-May-2018 12:01:20 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

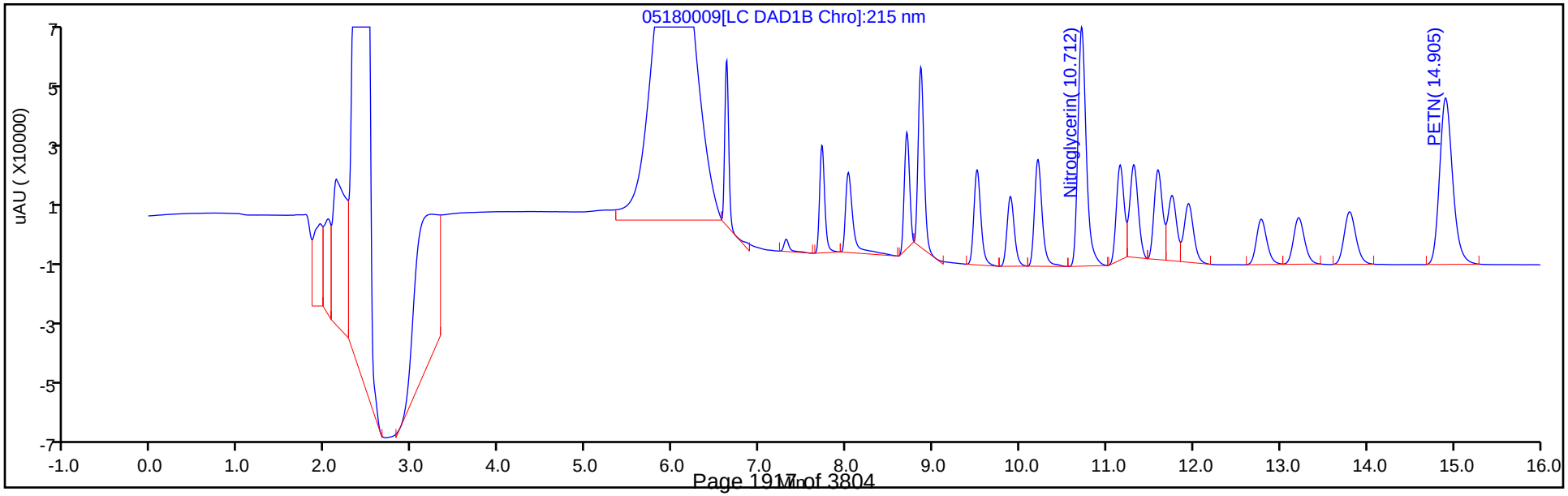
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180009.D

Injection Date:	18-May-2018 11:19:59	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L6			Worklist Smp#:	9
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180010.D
Lims ID: IC MAIN L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 18-May-2018 11:42:59 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L5
Misc. Info.: 280-0070054-010
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:21 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:13:29

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.622	0.002	34376	0.4000	0.4047	
5 RDX	1	7.717	7.722	-0.005	42801	0.4000	0.4093	
6 2,4,6-Trinitrophenol	1	8.037	8.049	-0.012	32362	0.4000	0.3837	
$ 7 1,2-Dinitrobenzene	1	8.697	8.702	-0.005	52585	0.4000	0.4085	
8 1,3,5-Trinitrobenzene	1	8.857	8.862	-0.005	93611	0.4000	0.4098	
9 1,3-Dinitrobenzene	1	9.503	9.509	-0.006	123109	0.4004	0.4090	
11 Nitrobenzene	1	9.890	9.895	-0.005	80258	0.4008	0.4038	
12 Tetryl	1	10.210	10.209	0.001	66666	0.4000	0.4079	
13 Nitroglycerin	2	10.710	10.715	-0.005	283140	4.00	4.17	
14 2,4,6-Trinitrotoluene	1	11.157	11.155	0.002	85643	0.4016	0.3993	
15 4-Amino-2,6-dinitrotoluene	1	11.310	11.315	-0.005	67180	0.4012	0.4059	
16 2-Amino-4,6-dinitrotoluene	1	11.590	11.595	-0.005	80646	0.4012	0.4043	
17 2,6-Dinitrotoluene	1	11.750	11.755	-0.005	61046	0.4012	0.3988	
18 2,4-Dinitrotoluene	1	11.943	11.942	0.001	121158	0.4008	0.4062	
19 o-Nitrotoluene	1	12.777	12.782	-0.005	52478	0.4012	0.3969	
20 p-Nitrotoluene	1	13.210	13.209	0.001	45295	0.4016	0.3985	
21 m-Nitrotoluene	1	13.797	13.802	-0.005	58353	0.4016	0.3940	
22 PETN	2	14.910	14.909	0.001	307741	4.00	4.11	

Reagents:

8330IntermStk_00055 Amount Added: 40.00 Units: uL

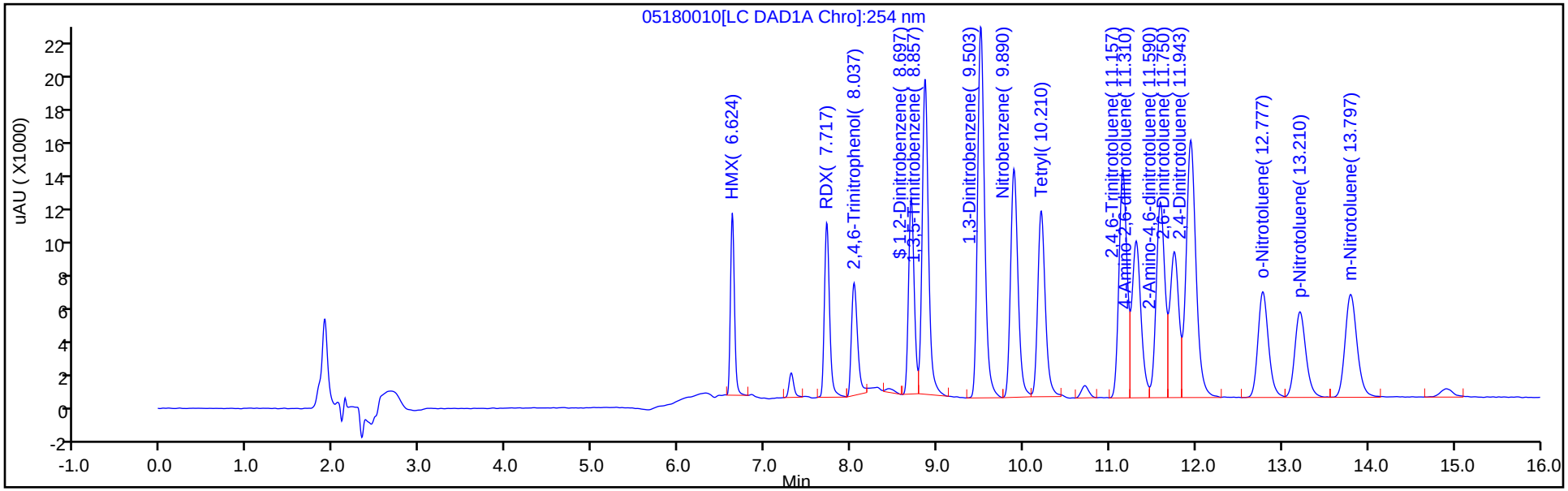
Report Date: 22-May-2018 12:01:22 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

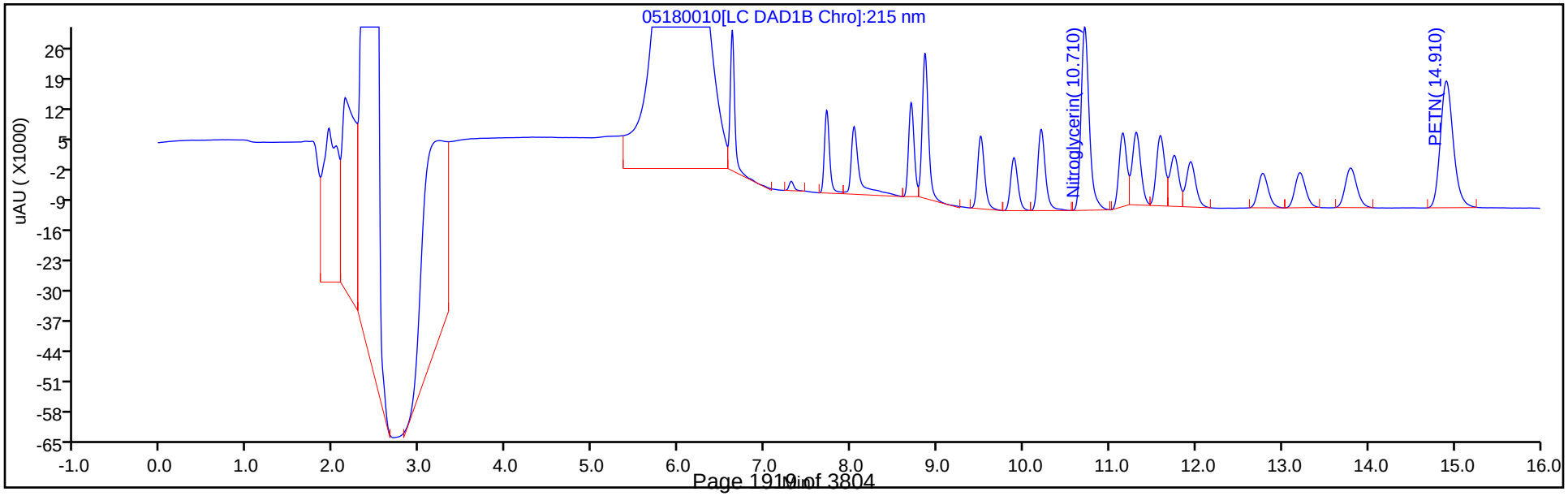
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180010.D

Injection Date:	18-May-2018 11:42:59	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L5			Worklist Smp#:	10
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180011.D
Lims ID: IC MAIN L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 18-May-2018 12:05:58 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L4
Misc. Info.: 280-0070054-011
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:23 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:16:46

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.622	6.622	0.000	20961	0.2500	0.2468	
5 RDX	1	7.722	7.722	0.000	25965	0.2500	0.2483	
6 2,4,6-Trinitrophenol	1	8.049	8.049	0.000	19048	0.2500	0.2258	
$ 7 1,2-Dinitrobenzene	1	8.702	8.702	0.000	31343	0.2500	0.2435	
8 1,3,5-Trinitrobenzene	1	8.862	8.862	0.000	56855	0.2500	0.2489	
9 1,3-Dinitrobenzene	1	9.509	9.509	0.000	74756	0.2503	0.2483	
11 Nitrobenzene	1	9.895	9.895	0.000	48592	0.2505	0.2445	
12 Tetryl	1	10.209	10.209	0.000	40083	0.2500	0.2452	
13 Nitroglycerin	2	10.715	10.715	0.000	171294	2.50	2.52	
14 2,4,6-Trinitrotoluene	1	11.155	11.155	0.000	52708	0.2510	0.2458	
15 4-Amino-2,6-dinitrotoluene	1	11.315	11.315	0.000	40566	0.2508	0.2451	
16 2-Amino-4,6-dinitrotoluene	1	11.595	11.595	0.000	49604	0.2508	0.2487	
17 2,6-Dinitrotoluene	1	11.755	11.755	0.000	37173	0.2508	0.2429	
18 2,4-Dinitrotoluene	1	11.942	11.942	0.000	73471	0.2505	0.2463	
19 o-Nitrotoluene	1	12.782	12.782	0.000	32062	0.2508	0.2425	
20 p-Nitrotoluene	1	13.209	13.209	0.000	27683	0.2510	0.2436	
21 m-Nitrotoluene	1	13.802	13.802	0.000	35788	0.2510	0.2416	
22 PETN	2	14.909	14.909	0.000	186281	2.50	2.49	

Reagents:

8330IntermStk_00055 Amount Added: 25.00 Units: uL

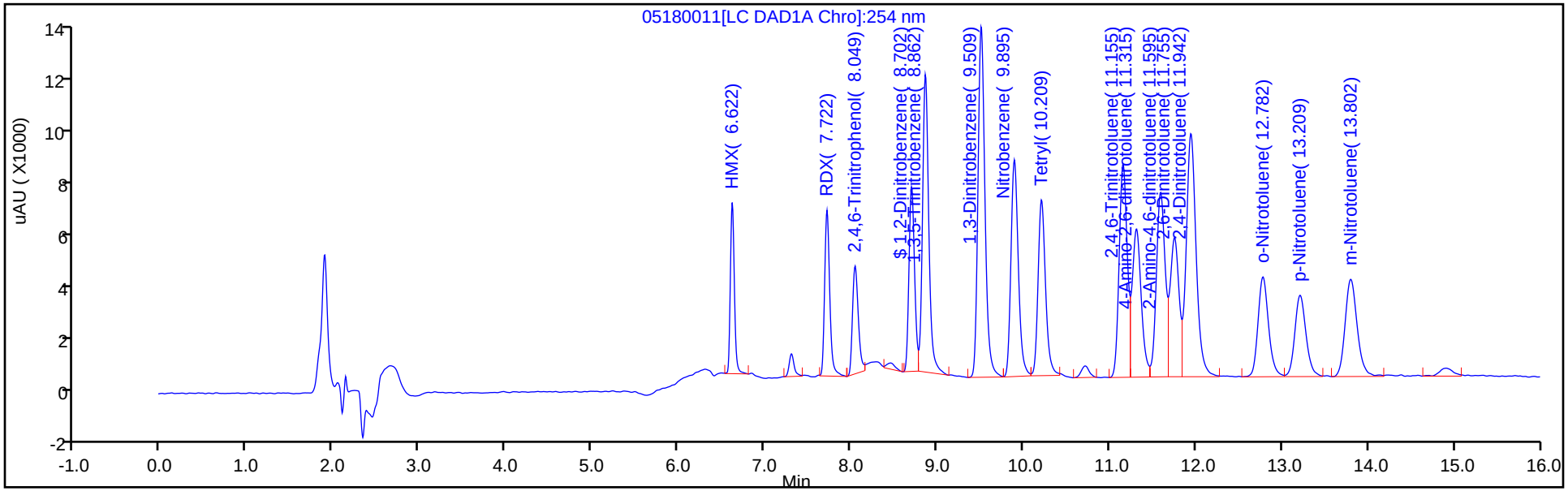
Report Date: 22-May-2018 12:01:24 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

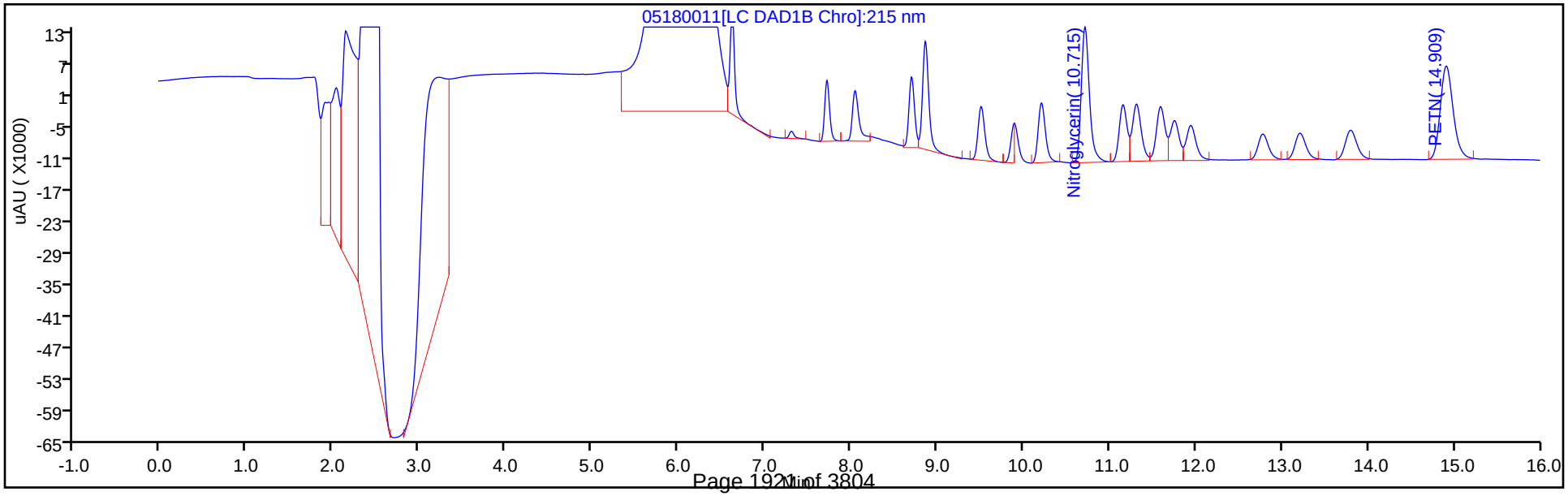
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180011.D

Injection Date:	18-May-2018 12:05:58	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L4			Worklist Smp#:	11
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180012.D
Lims ID: IC MAIN L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 18-May-2018 12:28:55 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L3
Misc. Info.: 280-0070054-012
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:24 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 18-May-2018 17:17:29

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.623	6.622	0.001	8137	0.1000	0.0958	
5 RDX	1	7.723	7.722	0.001	10563	0.1000	0.1010	
6 2,4,6-Trinitrophenol	1	8.056	8.049	0.007	8050	0.1000	0.0954	
$ 7 1,2-Dinitrobenzene	1	8.703	8.702	0.001	12638	0.1000	0.0982	
8 1,3,5-Trinitrobenzene	1	8.869	8.862	0.007	22253	0.1000	0.0974	
9 1,3-Dinitrobenzene	1	9.516	9.509	0.007	30333	0.1001	0.1008	
11 Nitrobenzene	1	9.902	9.895	0.007	19861	0.1002	0.0999	
12 Tetryl	1	10.216	10.209	0.007	16280	0.1000	0.0996	
13 Nitroglycerin	2	10.722	10.715	0.007	68459	1.00	1.01	
14 2,4,6-Trinitrotoluene	1	11.162	11.155	0.007	21155	0.1004	0.0986	
15 4-Amino-2,6-dinitrotoluene	1	11.322	11.315	0.007	16510	0.1003	0.0998	
16 2-Amino-4,6-dinitrotoluene	1	11.602	11.595	0.007	19850	0.1003	0.0995	
17 2,6-Dinitrotoluene	1	11.762	11.755	0.007	15104	0.1003	0.0987	
18 2,4-Dinitrotoluene	1	11.956	11.942	0.014	30008	0.1002	0.1006	
19 o-Nitrotoluene	1	12.789	12.782	0.007	13314	0.1003	0.1007	
20 p-Nitrotoluene	1	13.216	13.209	0.007	11487	0.1004	0.1011	
21 m-Nitrotoluene	1	13.809	13.802	0.007	14675	0.1004	0.0991	
22 PETN	2	14.916	14.909	0.007	73842	1.00	0.9852	

Reagents:

8330IntermStk_00055 Amount Added: 10.00 Units: uL

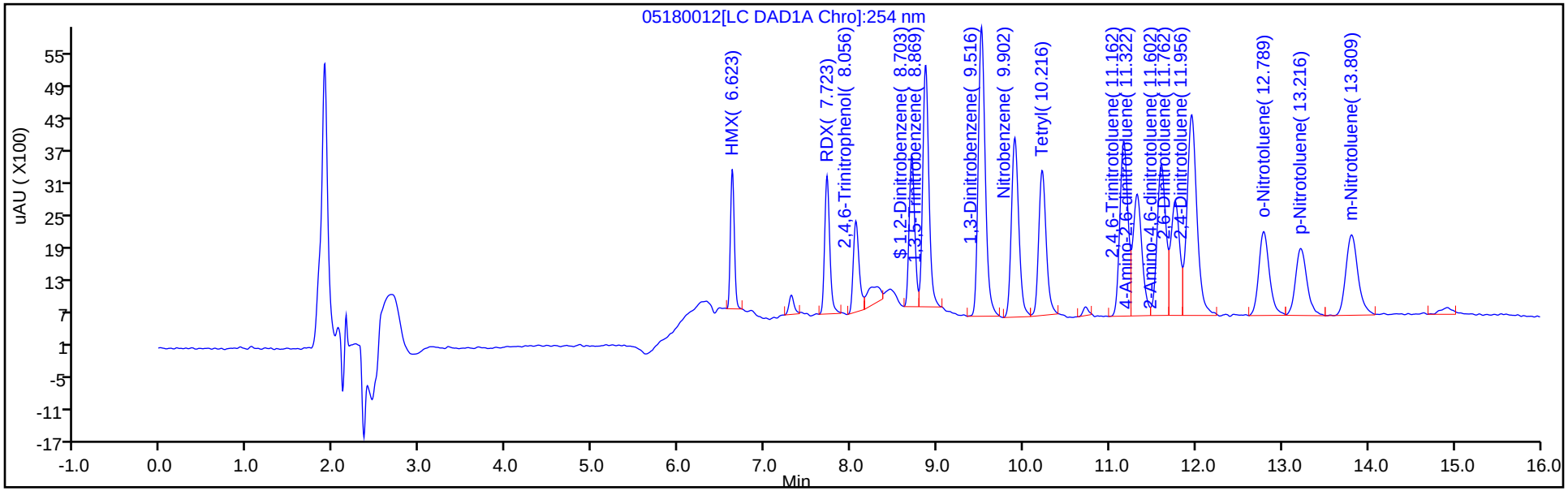
Report Date: 22-May-2018 12:01:25 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

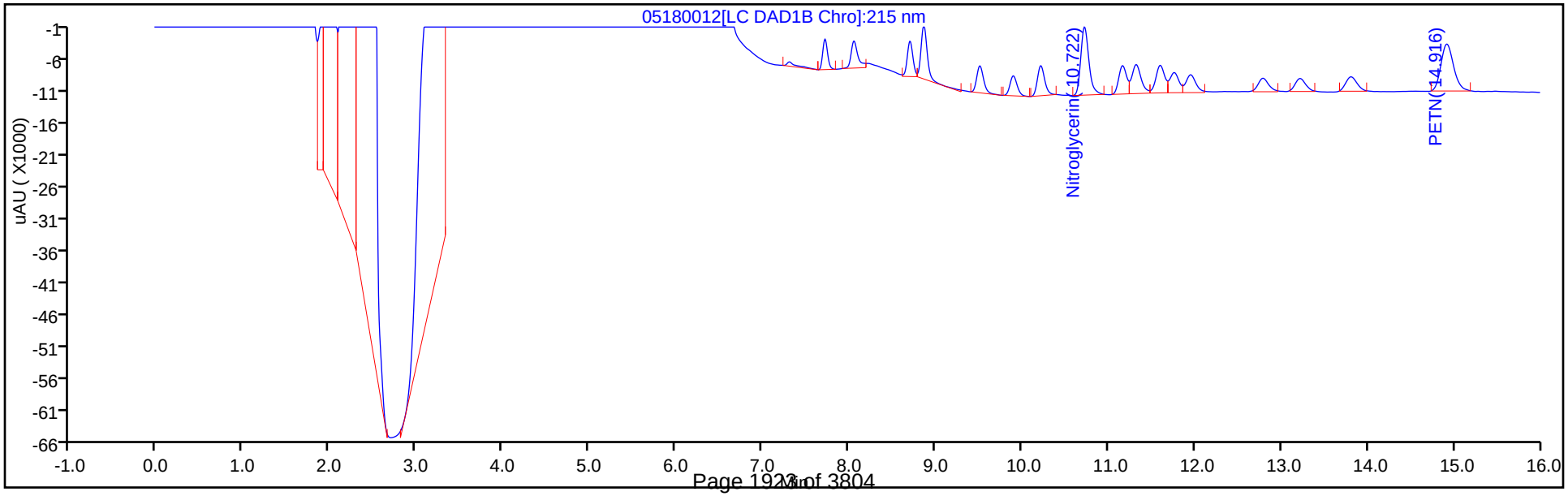
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180012.D

Injection Date:	18-May-2018 12:28:55	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L3			Worklist Smp#:	12
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180013.D
Lims ID: IC MAIN L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 18-May-2018 12:51:52 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L2
Misc. Info.: 280-0070054-013
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:26 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:08:19

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.622	6.622	0.000	4182	0.0500	0.0492	
5 RDX	1	7.722	7.722	0.000	5050	0.0500	0.0483	
6 2,4,6-Trinitrophenol	1	8.062	8.049	0.013	4494	0.0500	0.0533	
$ 7 1,2-Dinitrobenzene	1	8.702	8.702	0.000	6665	0.0500	0.0518	
8 1,3,5-Trinitrobenzene	1	8.869	8.862	0.007	11383	0.0500	0.0498	
9 1,3-Dinitrobenzene	1	9.516	9.509	0.007	15187	0.0501	0.0505	
11 Nitrobenzene	1	9.902	9.895	0.007	10114	0.0501	0.0509	
12 Tetryl	1	10.216	10.209	0.007	8226	0.0500	0.0503	
13 Nitroglycerin	2	10.722	10.715	0.007	32693	0.5000	0.4812	
14 2,4,6-Trinitrotoluene	1	11.162	11.155	0.007	11267	0.0502	0.0525	
15 4-Amino-2,6-dinitrotoluene	1	11.316	11.315	0.001	8517	0.0502	0.0515	
16 2-Amino-4,6-dinitrotoluene	1	11.596	11.595	0.001	10247	0.0502	0.0514	
17 2,6-Dinitrotoluene	1	11.756	11.755	0.001	7991	0.0502	0.0522	
18 2,4-Dinitrotoluene	1	11.949	11.942	0.007	15313	0.0501	0.0513	
19 o-Nitrotoluene	1	12.789	12.782	0.007	6915	0.0502	0.0523	
20 p-Nitrotoluene	1	13.216	13.209	0.007	5884	0.0502	0.0518	
21 m-Nitrotoluene	1	13.809	13.802	0.007	7786	0.0502	0.0526	
22 PETN	2	14.916	14.909	0.007	34097	0.5000	0.4549	

Reagents:

8330IntermStk_00055 Amount Added: 5.00 Units: uL

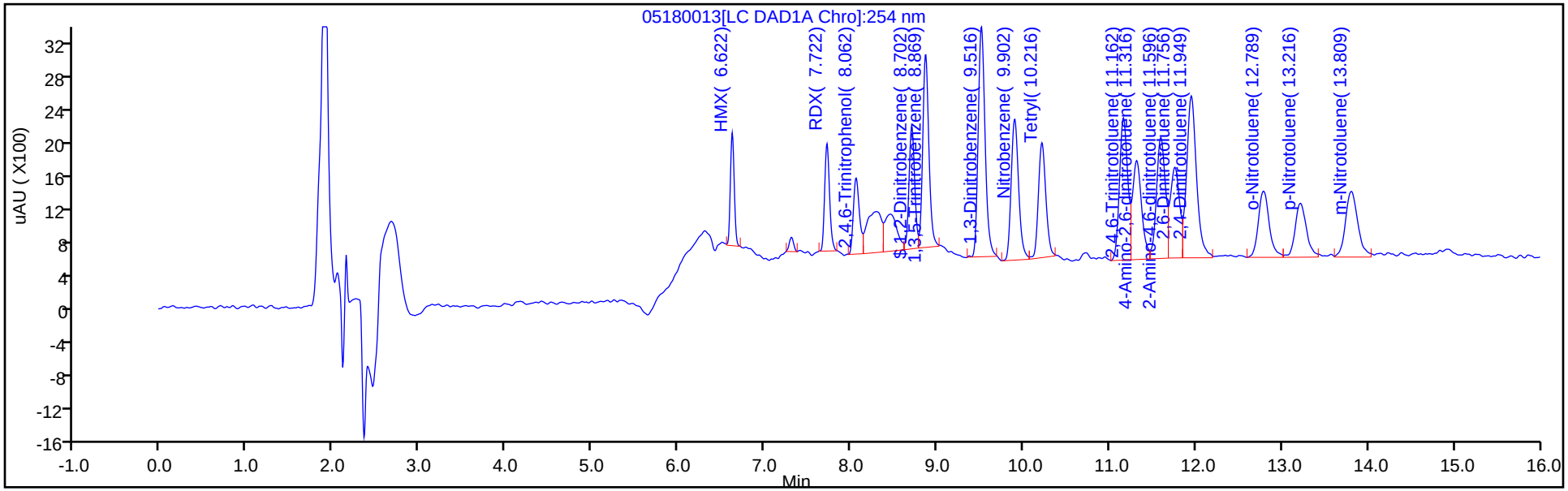
Report Date: 22-May-2018 12:01:27 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

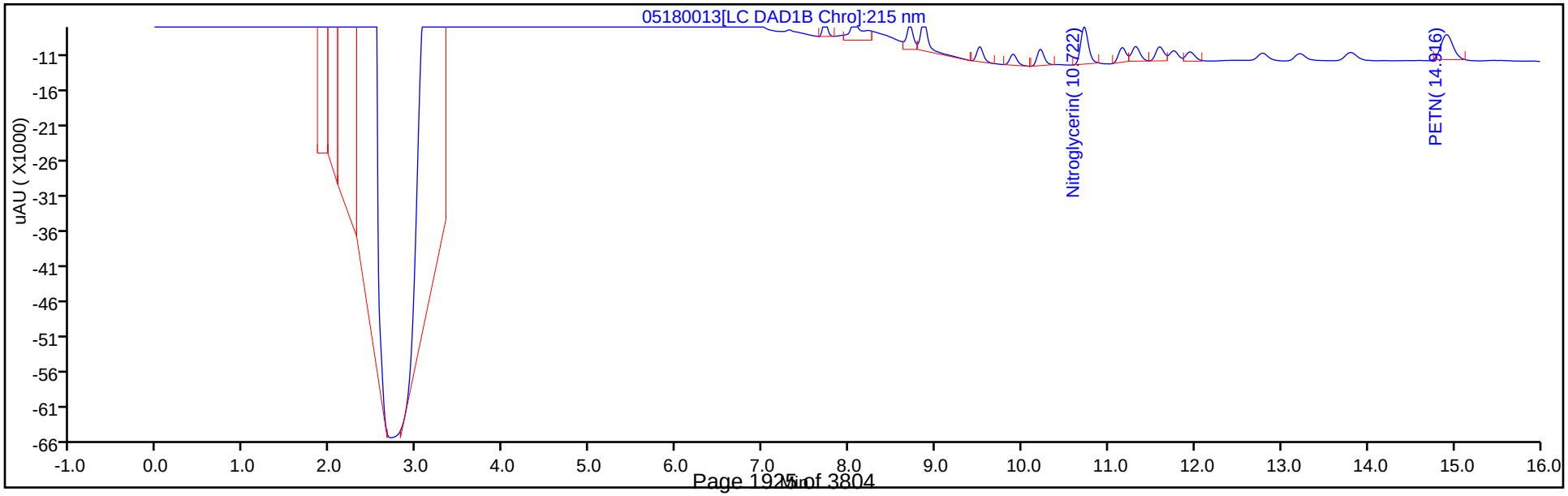
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180013.D

Injection Date:	18-May-2018 12:51:52	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L2			Worklist Smp#:	13
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D
Lims ID: IC MAIN L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 18-May-2018 13:14:50 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: IC MAIN L1
Misc. Info.: 280-0070054-014
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:27 Calib Date: 18-May-2018 16:41:32
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180023.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:19:59

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.625	6.622	0.003	1619	0.0200	0.0191	
	5 RDX	1	7.718	7.722	-0.004	2043	0.0200	0.0195	
	6 2,4,6-Trinitrophenol	1	8.065	8.049	0.016	1879	0.0200	0.0223	
$	7 1,2-Dinitrobenzene	1	8.705	8.702	0.003	2278	0.0200	0.0177	
	8 1,3,5-Trinitrobenzene	1	8.865	8.862	0.003	4042	0.0200	0.0177	
	9 1,3-Dinitrobenzene	1	9.512	9.509	0.003	5557	0.0200	0.0185	
	11 Nitrobenzene	1	9.898	9.895	0.003	3842	0.0200	0.0193	
	12 Tetryl	1	10.218	10.209	0.009	2797	0.0200	0.0171	
	13 Nitroglycerin	2	10.725	10.715	0.010	11906	0.2000	0.1752	
	14 2,4,6-Trinitrotoluene	1	11.165	11.155	0.010	4137	0.0201	0.0193	
	15 4-Amino-2,6-dinitrotoluene	1	11.318	11.315	0.003	3486	0.0201	0.0211	
	16 2-Amino-4,6-dinitrotoluene	1	11.598	11.595	0.003	3839	0.0201	0.0192	
	17 2,6-Dinitrotoluene	1	11.765	11.755	0.010	3125	0.0201	0.0204	
	18 2,4-Dinitrotoluene	1	11.952	11.942	0.010	5750	0.0200	0.0193	
	19 o-Nitrotoluene	1	12.785	12.782	0.003	2761	0.0201	0.0209	
	20 p-Nitrotoluene	1	13.218	13.209	0.009	2355	0.0201	0.0207	
	21 m-Nitrotoluene	1	13.812	13.802	0.010	3245	0.0201	0.0219	
	22 PETN	2		14.909			ND	ND	

QC Flag Legend

Processing Flags
ND - Not Detected or Marked ND

Reagents:

8330IntermStk_00055 Amount Added: 2.00 Units: uL

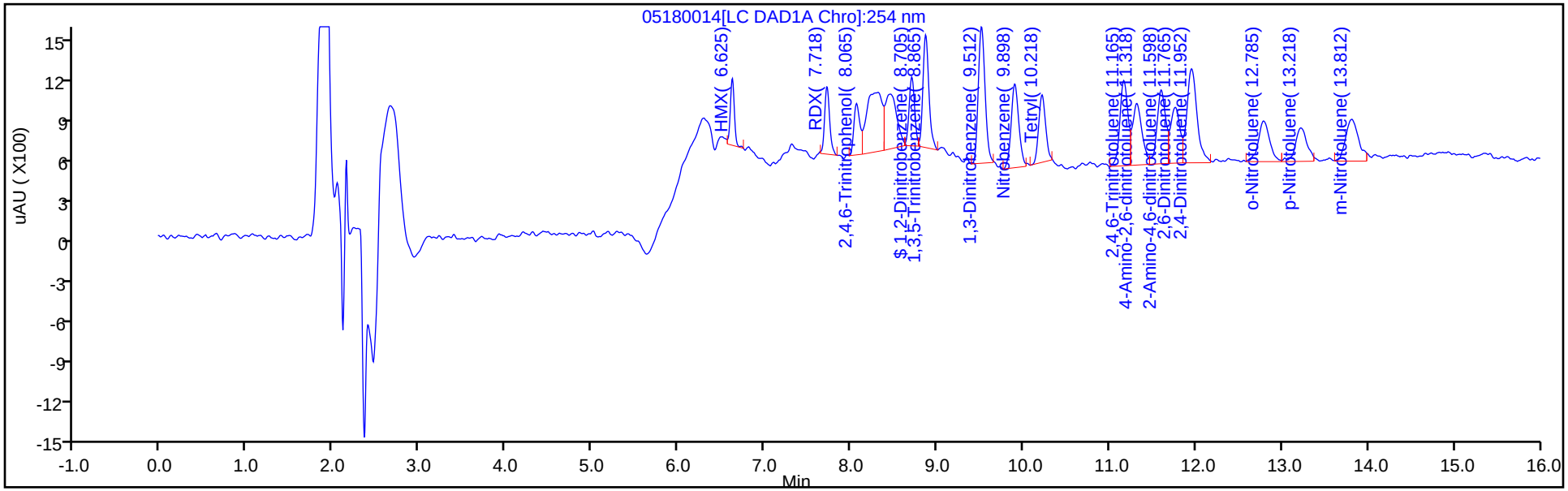
Report Date: 22-May-2018 12:01:27 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

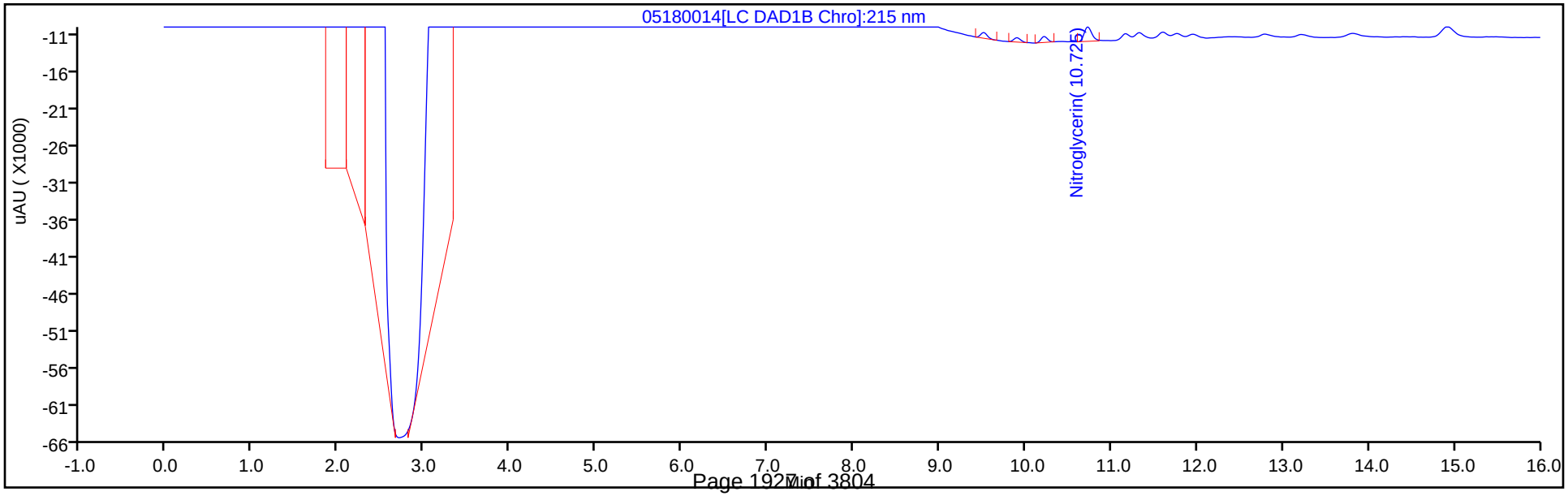
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Injection Date:	18-May-2018 13:14:50	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	IC MAIN L1			Worklist Smp#:	14
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Calibration / HMX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

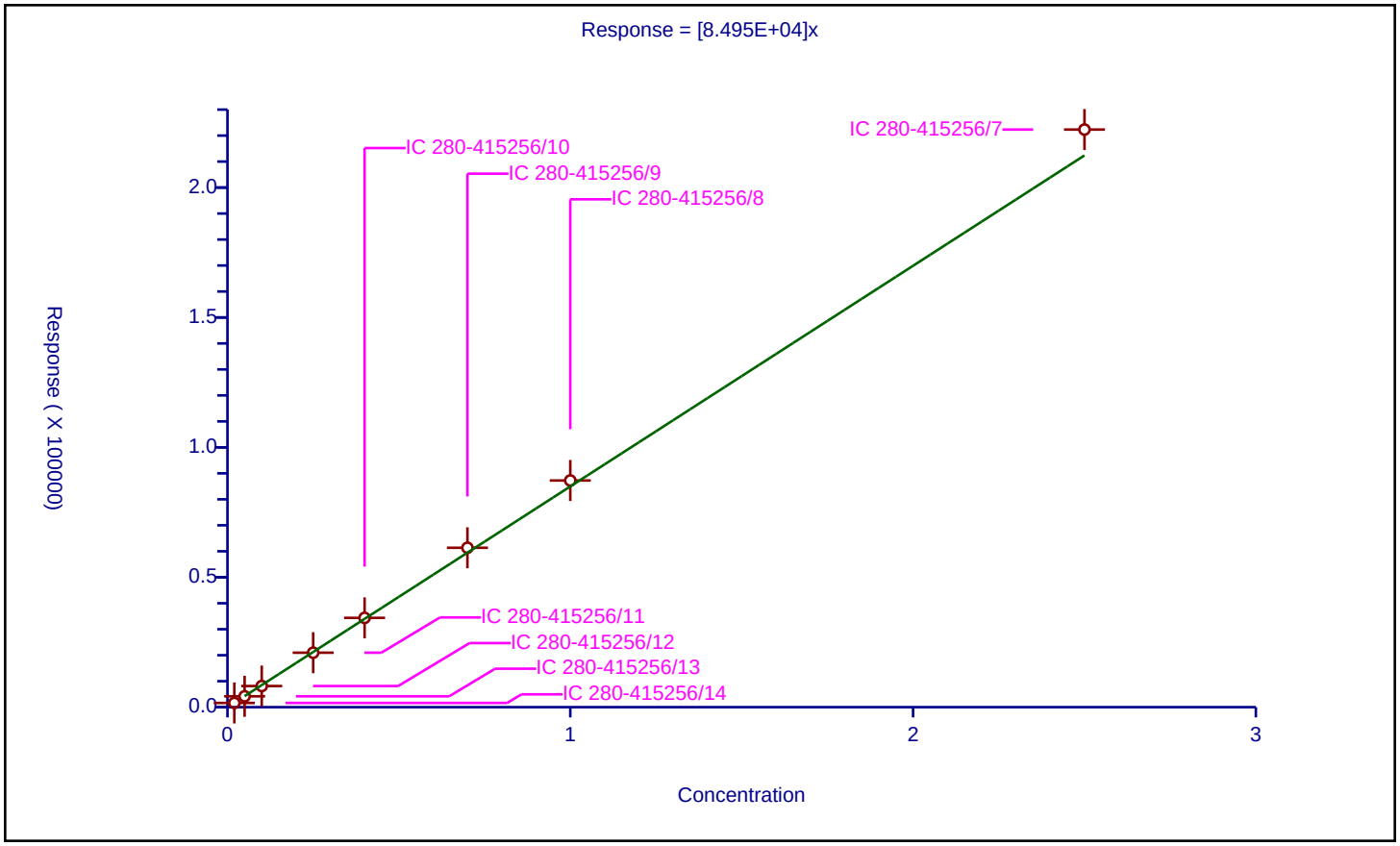
Curve Coefficients

Intercept:	0
Slope:	8.495E+04

Error Coefficients

Standard Error:	3930
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	1619.0			80950.0	Y
2	IC 280-415256/13	0.05	4182.0			83640.0	Y
3	IC 280-415256/12	0.1	8137.0			81370.0	Y
4	IC 280-415256/11	0.25	20961.0			83844.0	Y
5	IC 280-415256/10	0.4	34376.0			85940.0	Y
6	IC 280-415256/9	0.7	61354.0			87648.571429	Y
7	IC 280-415256/8	1.0	87246.0			87246.0	Y
8	IC 280-415256/7	2.5	222315.0			88926.0	Y



Calibration / RDX

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

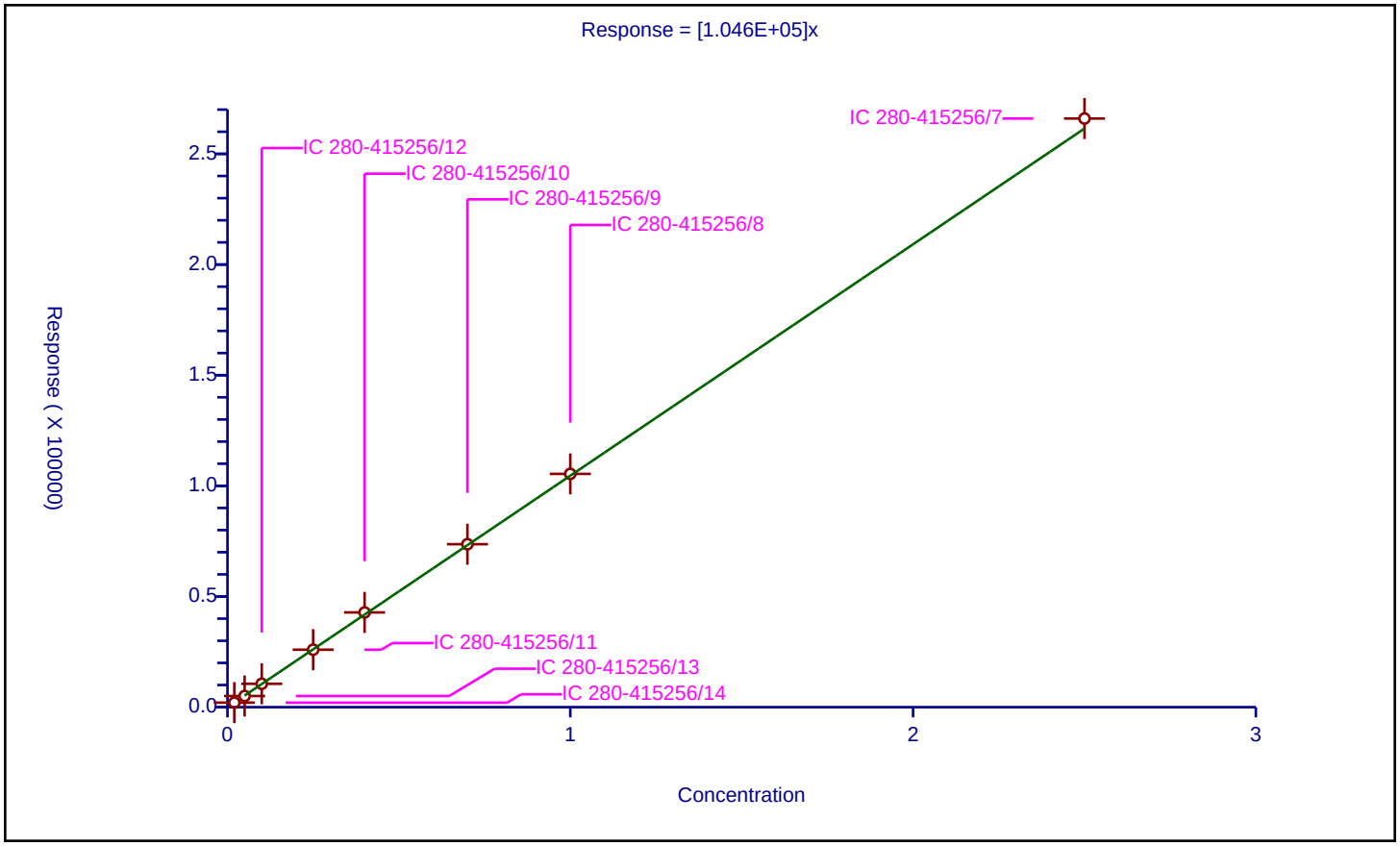
Curve Coefficients

Intercept:	0
Slope:	1.046E+05

Error Coefficients

Standard Error:	1790
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2043.0			102150.0	Y
2	IC 280-415256/13	0.05	5050.0			101000.0	Y
3	IC 280-415256/12	0.1	10563.0			105630.0	Y
4	IC 280-415256/11	0.25	25965.0			103860.0	Y
5	IC 280-415256/10	0.4	42801.0			107002.5	Y
6	IC 280-415256/9	0.7	73630.0			105185.714286	Y
7	IC 280-415256/8	1.0	105400.0			105400.0	Y
8	IC 280-415256/7	2.5	265976.0			106390.4	Y



Calibration / 2,4,6-Trinitrophenol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

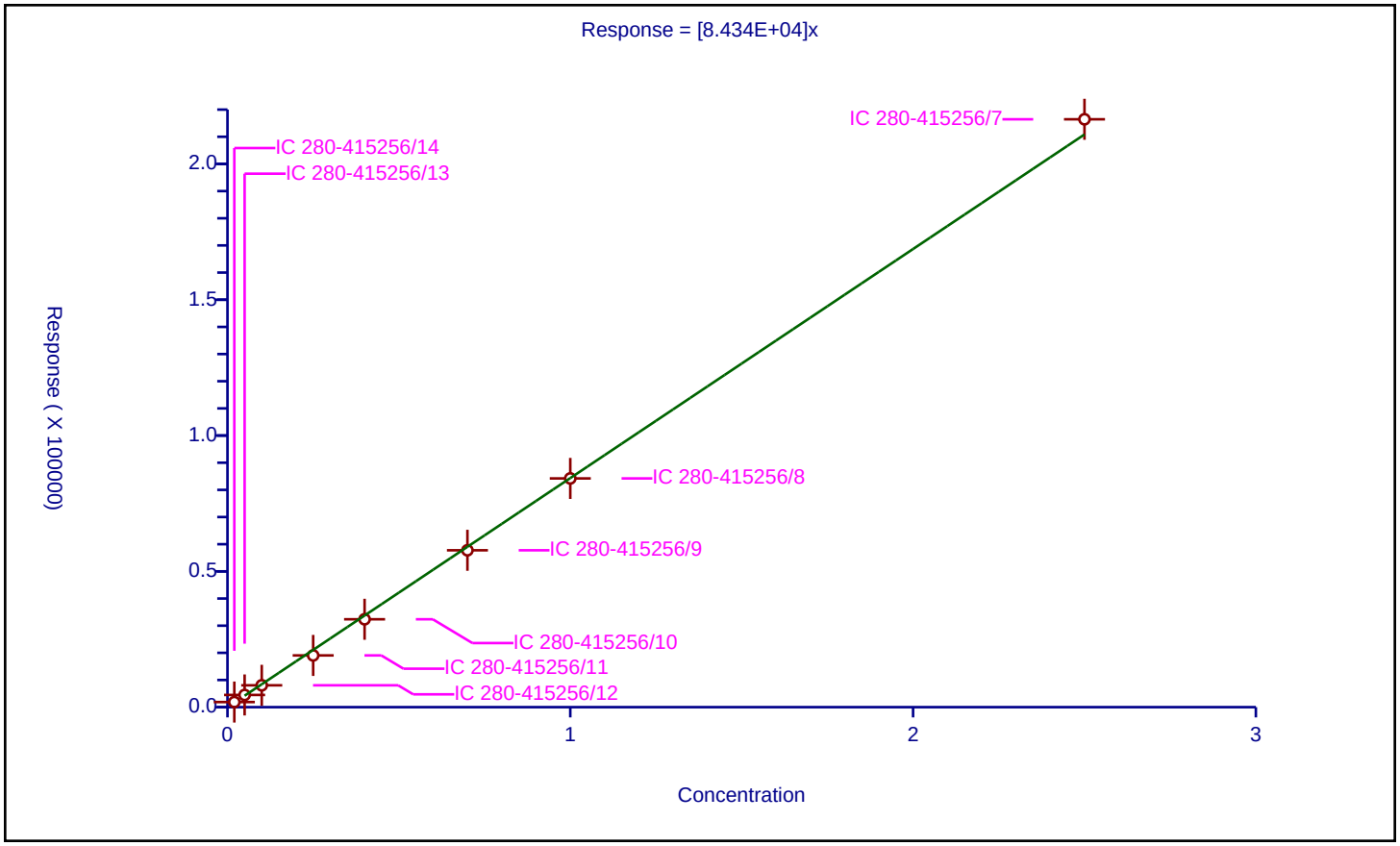
Curve Coefficients

Intercept:	0
Slope:	8.434E+04

Error Coefficients

Standard Error:	2370
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	1879.0			93950.0	Y
2	IC 280-415256/13	0.05	4494.0			89880.0	Y
3	IC 280-415256/12	0.1	8050.0			80500.0	Y
4	IC 280-415256/11	0.25	19048.0			76192.0	Y
5	IC 280-415256/10	0.4	32362.0			80905.0	Y
6	IC 280-415256/9	0.7	57756.0			82508.571429	Y
7	IC 280-415256/8	1.0	84211.0			84211.0	Y
8	IC 280-415256/7	2.5	216440.0			86576.0	Y



Calibration / 1,2-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

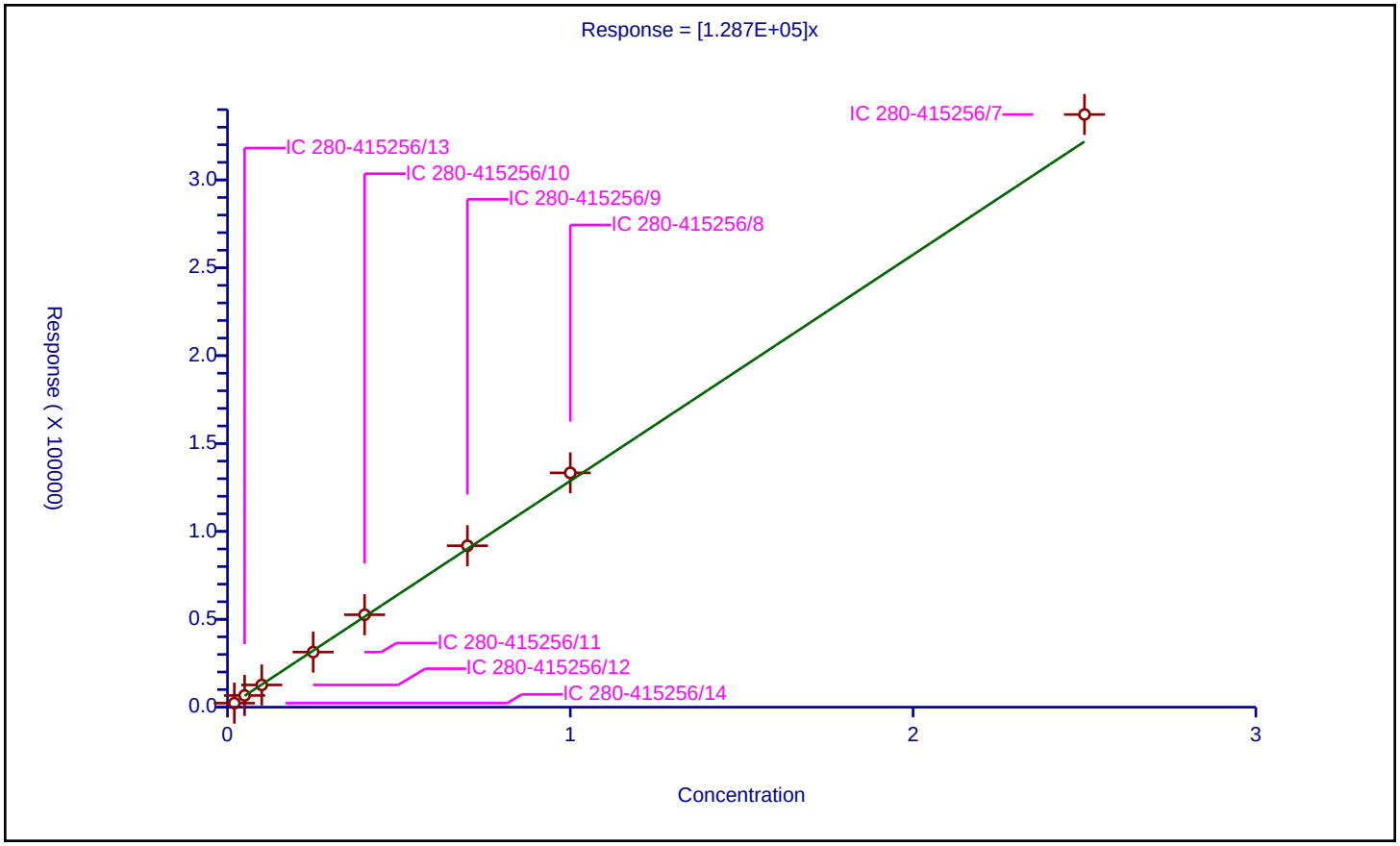
Curve Coefficients

Intercept:	0
Slope:	1.287E+05

Error Coefficients

Standard Error:	6130
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2278.0			113900.0	Y
2	IC 280-415256/13	0.05	6665.0			133300.0	Y
3	IC 280-415256/12	0.1	12638.0			126380.0	Y
4	IC 280-415256/11	0.25	31343.0			125372.0	Y
5	IC 280-415256/10	0.4	52585.0			131462.5	Y
6	IC 280-415256/9	0.7	91842.0			131202.857143	Y
7	IC 280-415256/8	1.0	133312.0			133312.0	Y
8	IC 280-415256/7	2.5	337223.0			134889.2	Y



Calibration / 1,3,5-Trinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

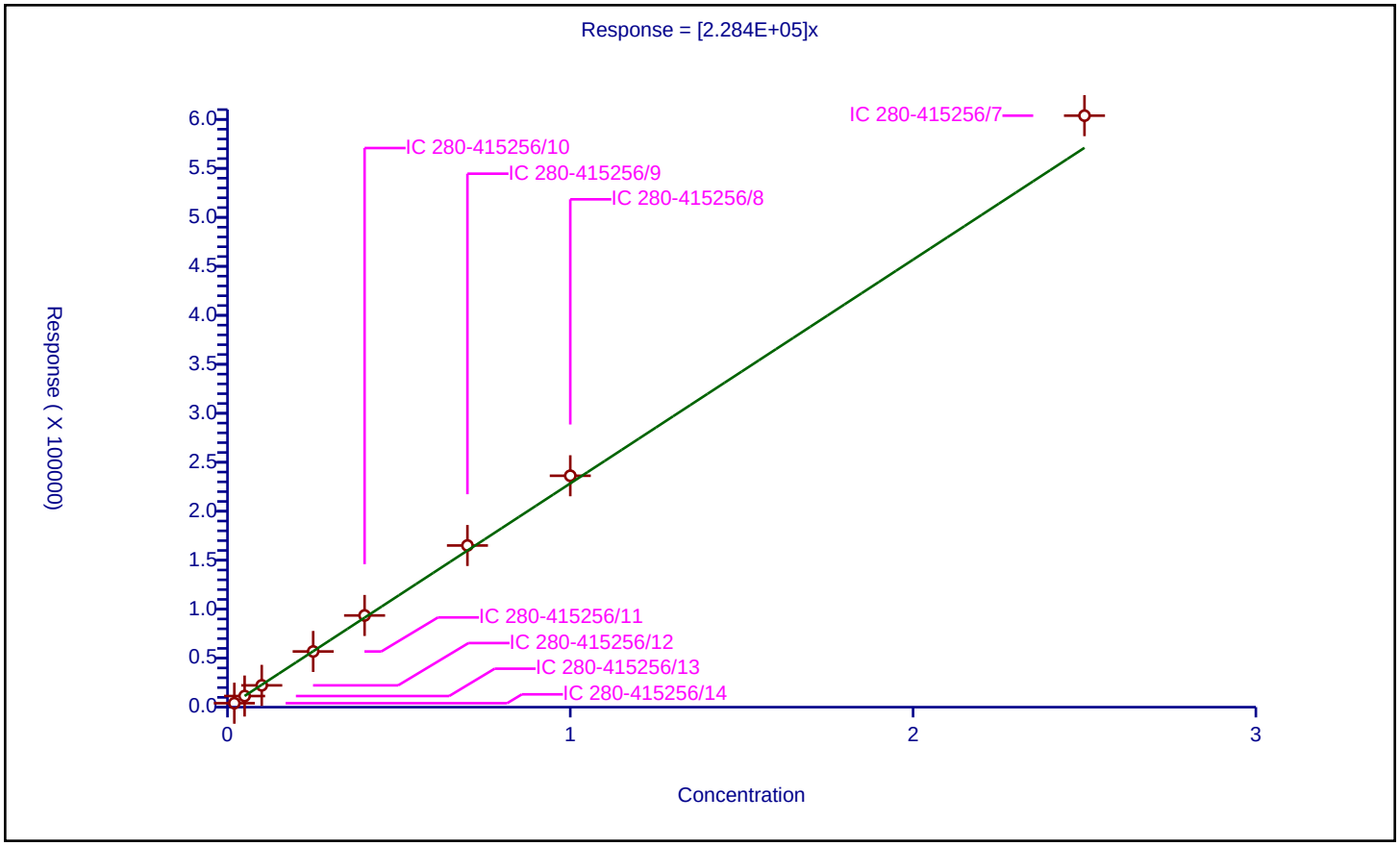
Curve Coefficients

Intercept:	0
Slope:	2.284E+05

Error Coefficients

Standard Error:	12900
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	4042.0			202100.0	Y
2	IC 280-415256/13	0.05	11383.0			227660.0	Y
3	IC 280-415256/12	0.1	22253.0			222530.0	Y
4	IC 280-415256/11	0.25	56855.0			227420.0	Y
5	IC 280-415256/10	0.4	93611.0			234027.5	Y
6	IC 280-415256/9	0.7	165033.0			235761.428571	Y
7	IC 280-415256/8	1.0	236230.0			236230.0	Y
8	IC 280-415256/7	2.5	603841.0			241536.4	Y



Calibration / 1,3-Dinitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

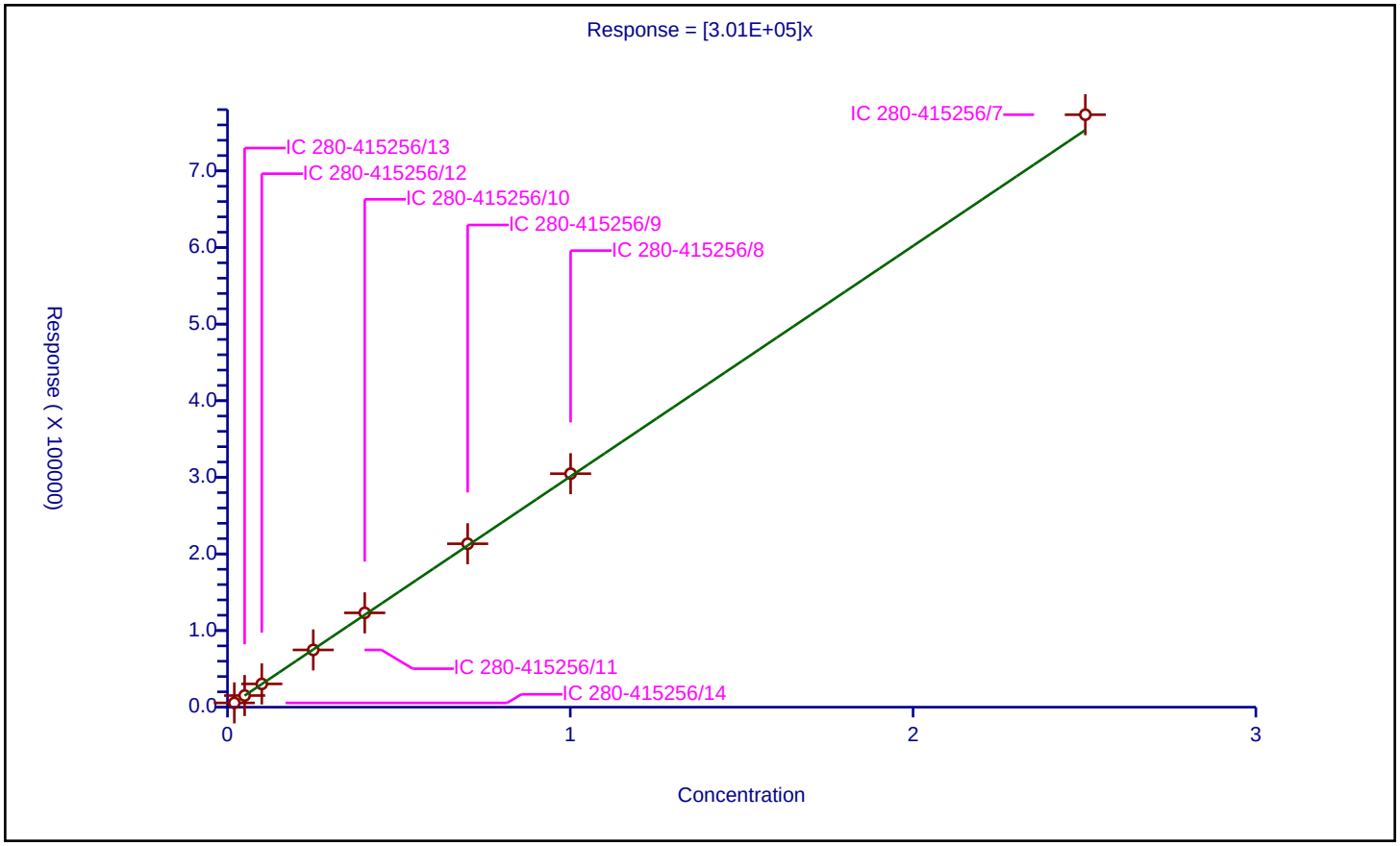
Curve Coefficients

Intercept:	0
Slope:	3.01E+05

Error Coefficients

Standard Error:	7810
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02002	5557.0			277572.427572	Y
2	IC 280-415256/13	0.05005	15187.0			303436.563437	Y
3	IC 280-415256/12	0.1001	30333.0			303026.973027	Y
4	IC 280-415256/11	0.25025	74756.0			298725.274725	Y
5	IC 280-415256/10	0.4004	123109.0			307465.034965	Y
6	IC 280-415256/9	0.7007	213326.0			304446.98159	Y
7	IC 280-415256/8	1.001	304781.0			304476.523477	Y
8	IC 280-415256/7	2.5025	773367.0			309037.762238	Y



Calibration / Nitrobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

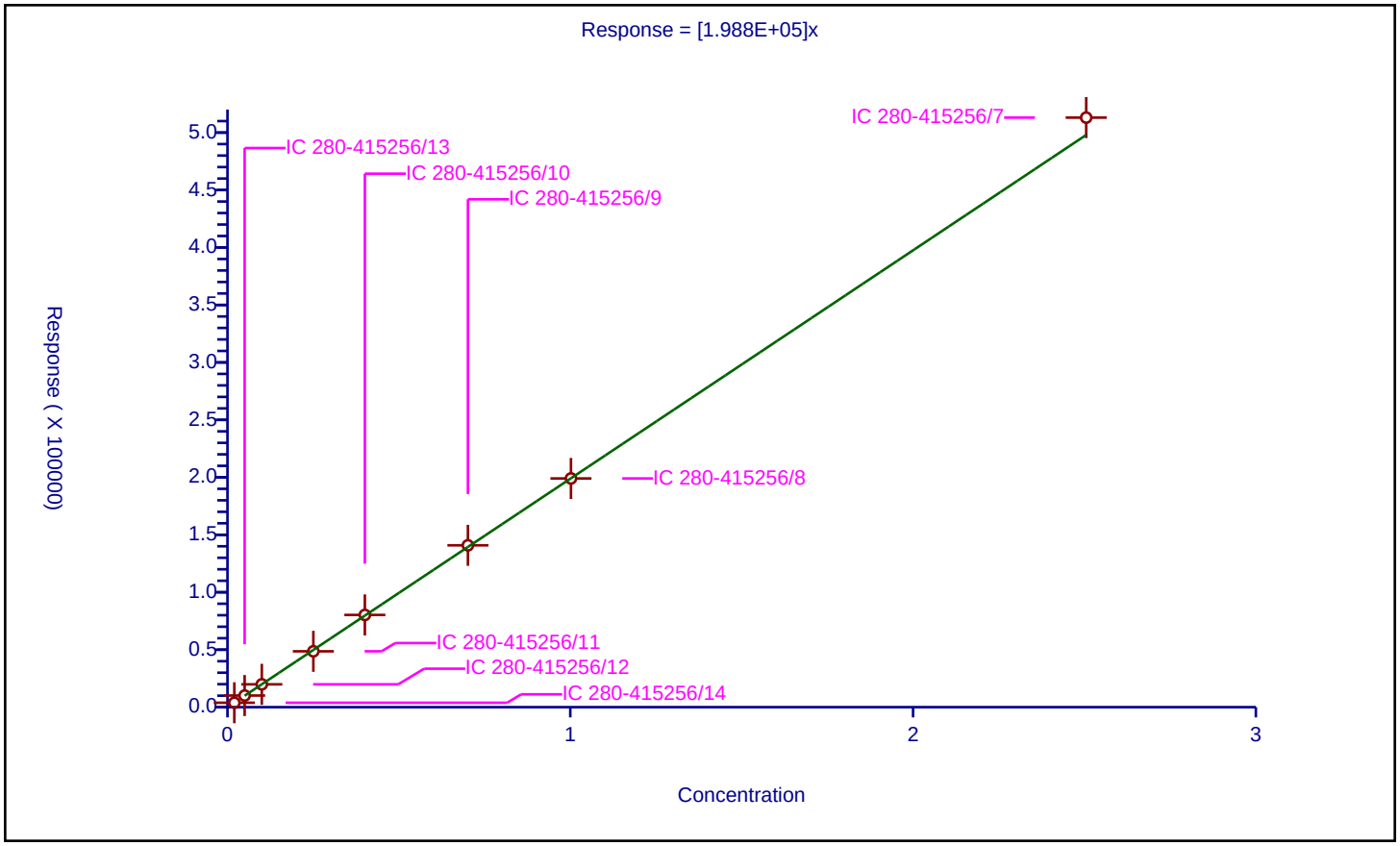
Curve Coefficients

Intercept:	0
Slope:	1.988E+05

Error Coefficients

Standard Error:	5750
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02004	3842.0			191716.566866	Y
2	IC 280-415256/13	0.0501	10114.0			201876.247505	Y
3	IC 280-415256/12	0.1002	19861.0			198213.572854	Y
4	IC 280-415256/11	0.2505	48592.0			193980.03992	Y
5	IC 280-415256/10	0.4008	80258.0			200244.510978	Y
6	IC 280-415256/9	0.7014	140828.0			200781.294554	Y
7	IC 280-415256/8	1.002	199028.0			198630.738523	Y
8	IC 280-415256/7	2.505	513035.0			204804.391218	Y



Calibration / Tetryl

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

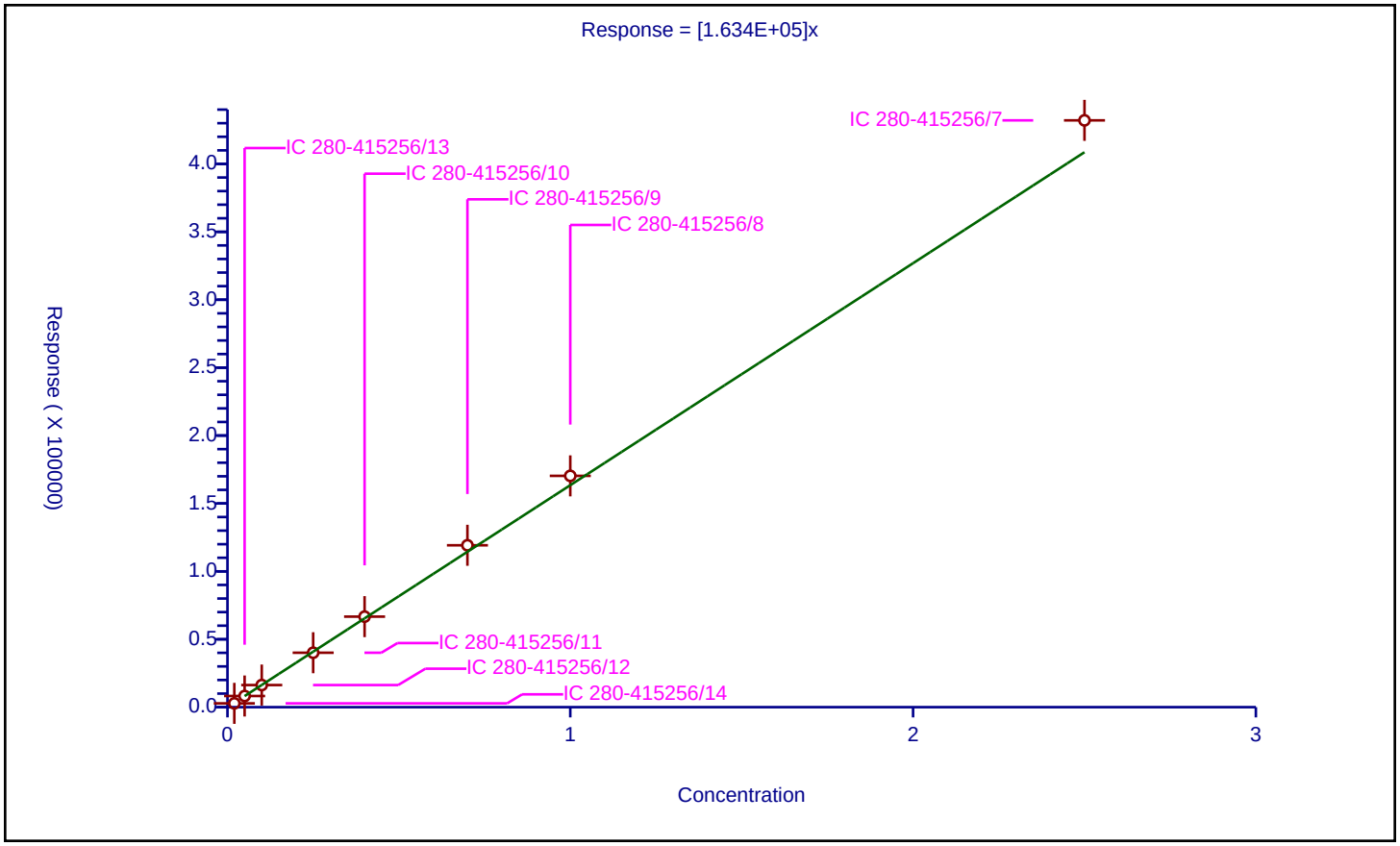
Curve Coefficients

Intercept:	0
Slope:	1.634E+05

Error Coefficients

Standard Error:	9430
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02	2797.0			139850.0	Y
2	IC 280-415256/13	0.05	8226.0			164520.0	Y
3	IC 280-415256/12	0.1	16280.0			162800.0	Y
4	IC 280-415256/11	0.25	40083.0			160332.0	Y
5	IC 280-415256/10	0.4	66666.0			166665.0	Y
6	IC 280-415256/9	0.7	119195.0			170278.571429	Y
7	IC 280-415256/8	1.0	170312.0			170312.0	Y
8	IC 280-415256/7	2.5	432075.0			172830.0	Y



Calibration / Nitroglycerin

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

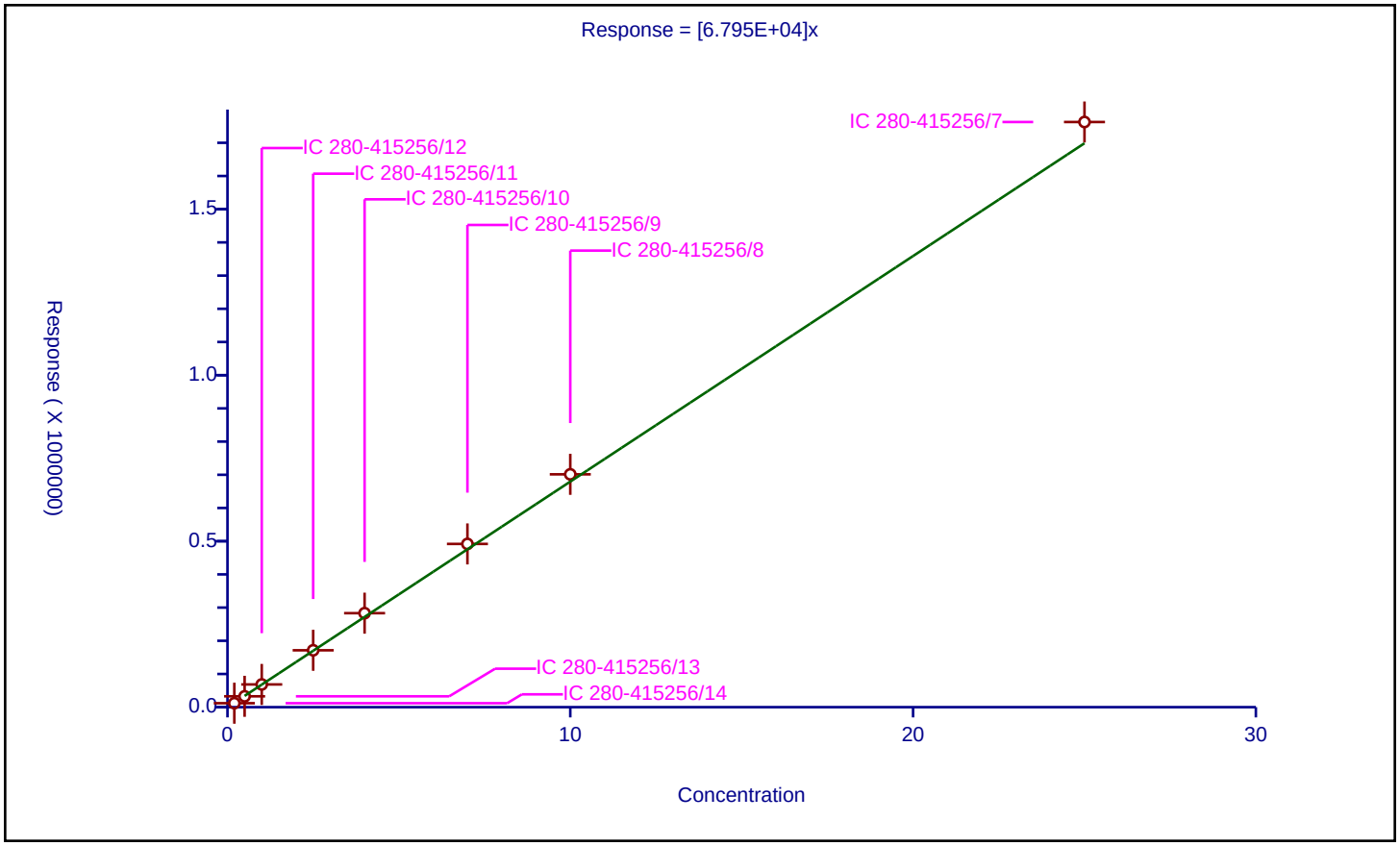
Curve Coefficients

Intercept:	0
Slope:	6.795E+04

Error Coefficients

Standard Error:	26700
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.2	11906.0			59530.0	Y
2	IC 280-415256/13	0.5	32693.0			65386.0	Y
3	IC 280-415256/12	1.0	68459.0			68459.0	Y
4	IC 280-415256/11	2.5	171294.0			68517.6	Y
5	IC 280-415256/10	4.0	283140.0			70785.0	Y
6	IC 280-415256/9	7.0	491693.0			70241.857143	Y
7	IC 280-415256/8	10.0	701363.0			70136.3	Y
8	IC 280-415256/7	25.0	1762679.0			70507.16	Y



Calibration / 2,4,6-Trinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

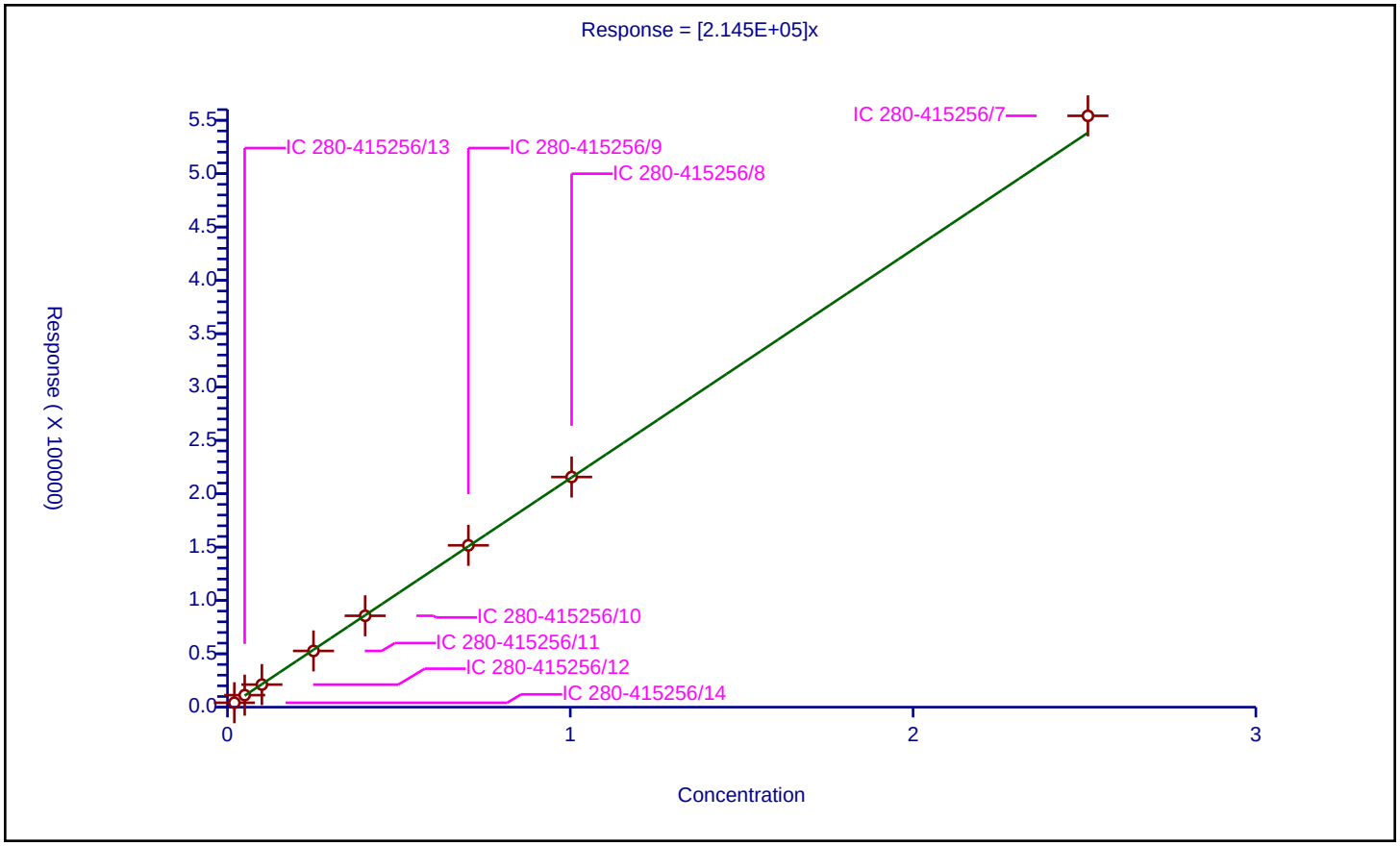
Curve Coefficients

Intercept:	0
Slope:	2.145E+05

Error Coefficients

Standard Error:	6020
Relative Standard Error:	2.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	4137.0			206025.896414	Y
2	IC 280-415256/13	0.0502	11267.0			224442.231076	Y
3	IC 280-415256/12	0.1004	21155.0			210707.171315	Y
4	IC 280-415256/11	0.251	52708.0			209992.031873	Y
5	IC 280-415256/10	0.4016	85643.0			213254.482072	Y
6	IC 280-415256/9	0.7028	151667.0			215803.927149	Y
7	IC 280-415256/8	1.004	215673.0			214813.74502	Y
8	IC 280-415256/7	2.51	554169.0			220784.462151	Y



Calibration / 4-Amino-2,6-dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

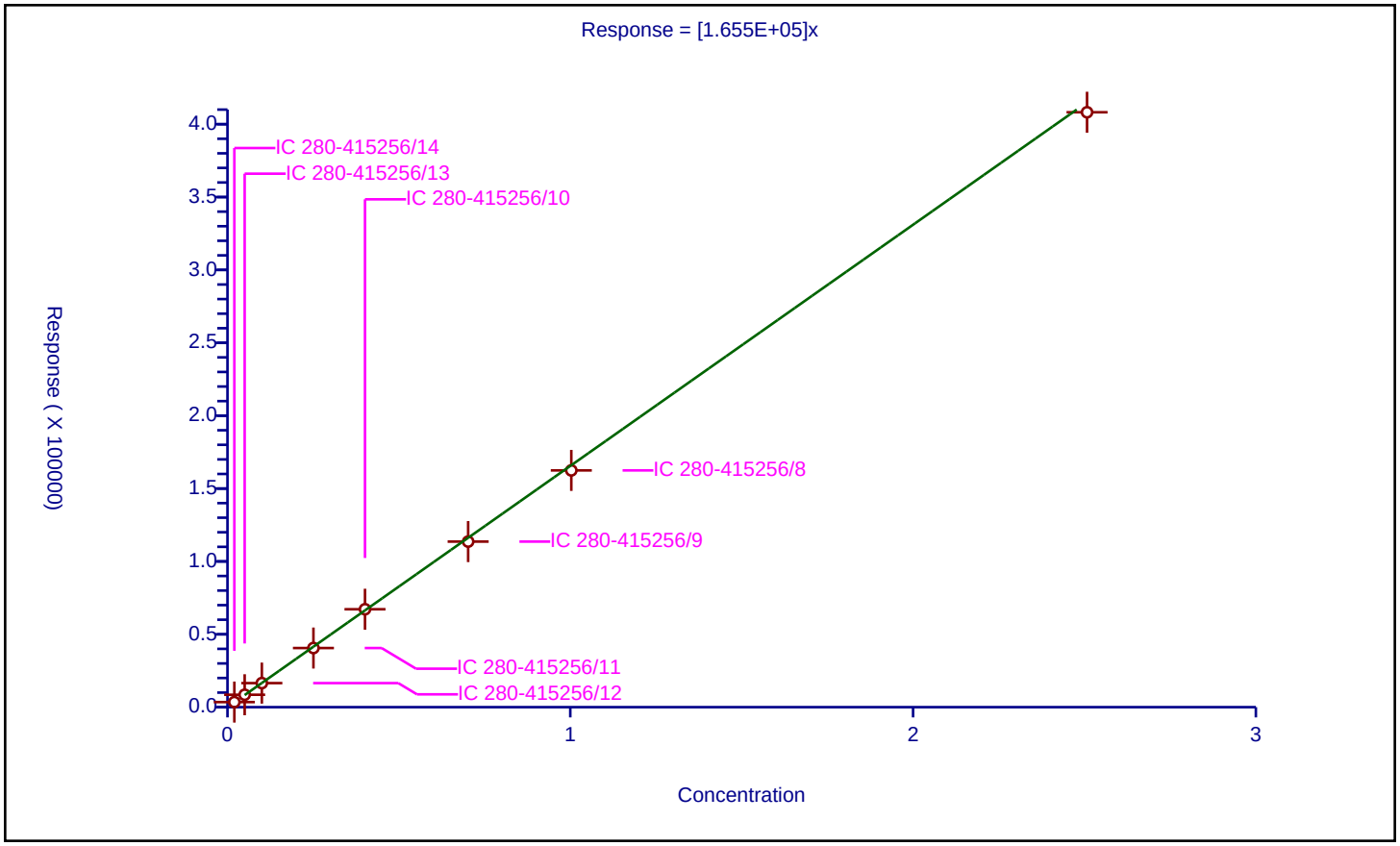
Curve Coefficients

Intercept:	0
Slope:	1.655E+05

Error Coefficients

Standard Error:	3100
Relative Standard Error:	2.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3486.0			173778.664008	Y
2	IC 280-415256/13	0.05015	8517.0			169830.508475	Y
3	IC 280-415256/12	0.1003	16510.0			164606.181456	Y
4	IC 280-415256/11	0.25075	40566.0			161778.664008	Y
5	IC 280-415256/10	0.4012	67180.0			167447.657029	Y
6	IC 280-415256/9	0.7021	113610.0			161814.556331	Y
7	IC 280-415256/8	1.003	162456.0			161970.089731	Y
8	IC 280-415256/7	2.5075	408172.0			162780.458624	Y



Calibration / 2-Amino-4,6-dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

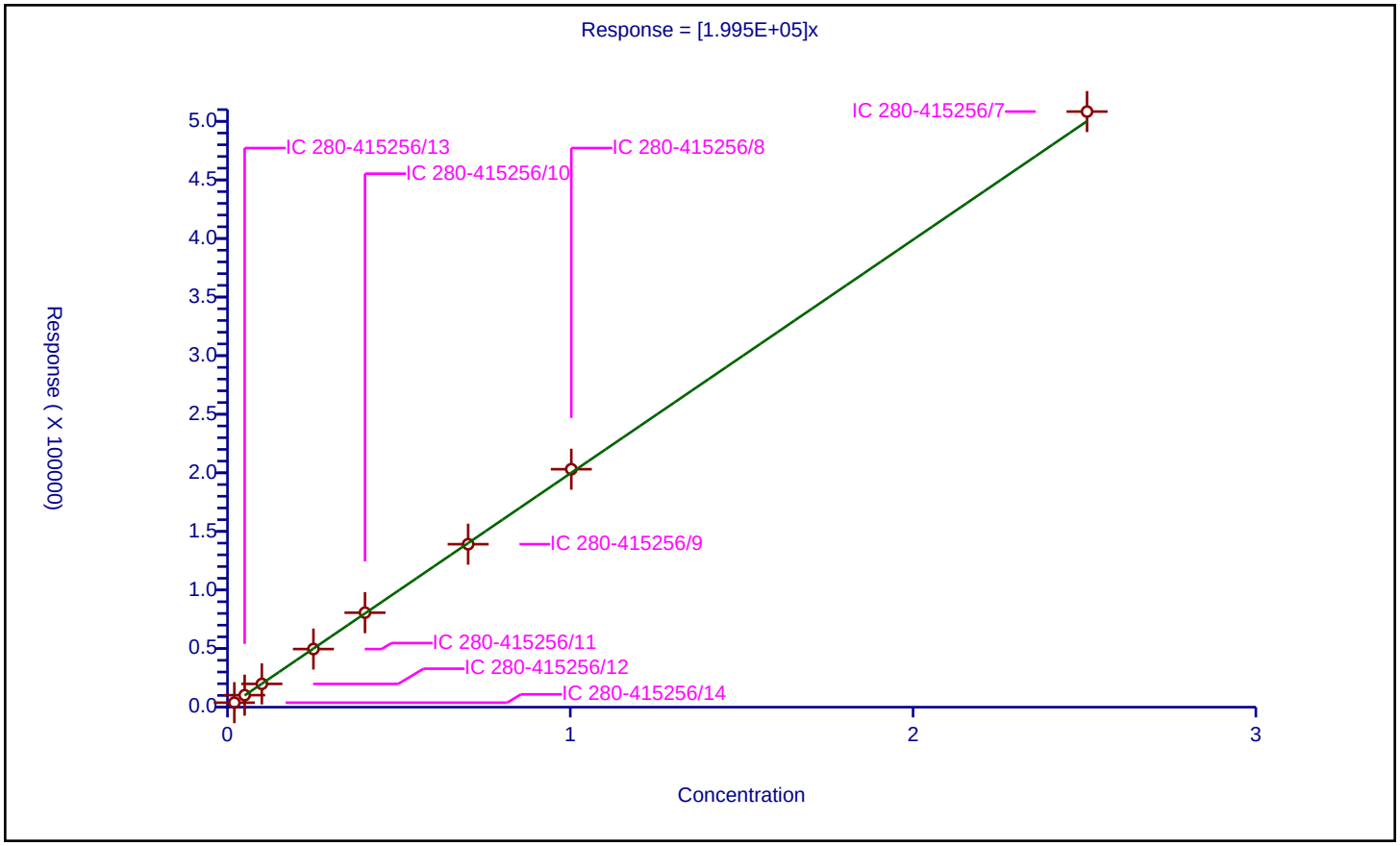
Curve Coefficients

Intercept:	0
Slope:	1.995E+05

Error Coefficients

Standard Error:	3320
Relative Standard Error:	2.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3839.0			191375.872383	Y
2	IC 280-415256/13	0.05015	10247.0			204327.018943	Y
3	IC 280-415256/12	0.1003	19850.0			197906.281157	Y
4	IC 280-415256/11	0.25075	49604.0			197822.532403	Y
5	IC 280-415256/10	0.4012	80646.0			201011.964108	Y
6	IC 280-415256/9	0.7021	139075.0			198084.318473	Y
7	IC 280-415256/8	1.003	203087.0			202479.561316	Y
8	IC 280-415256/7	2.5075	508320.0			202719.840479	Y



Calibration / 2,6-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

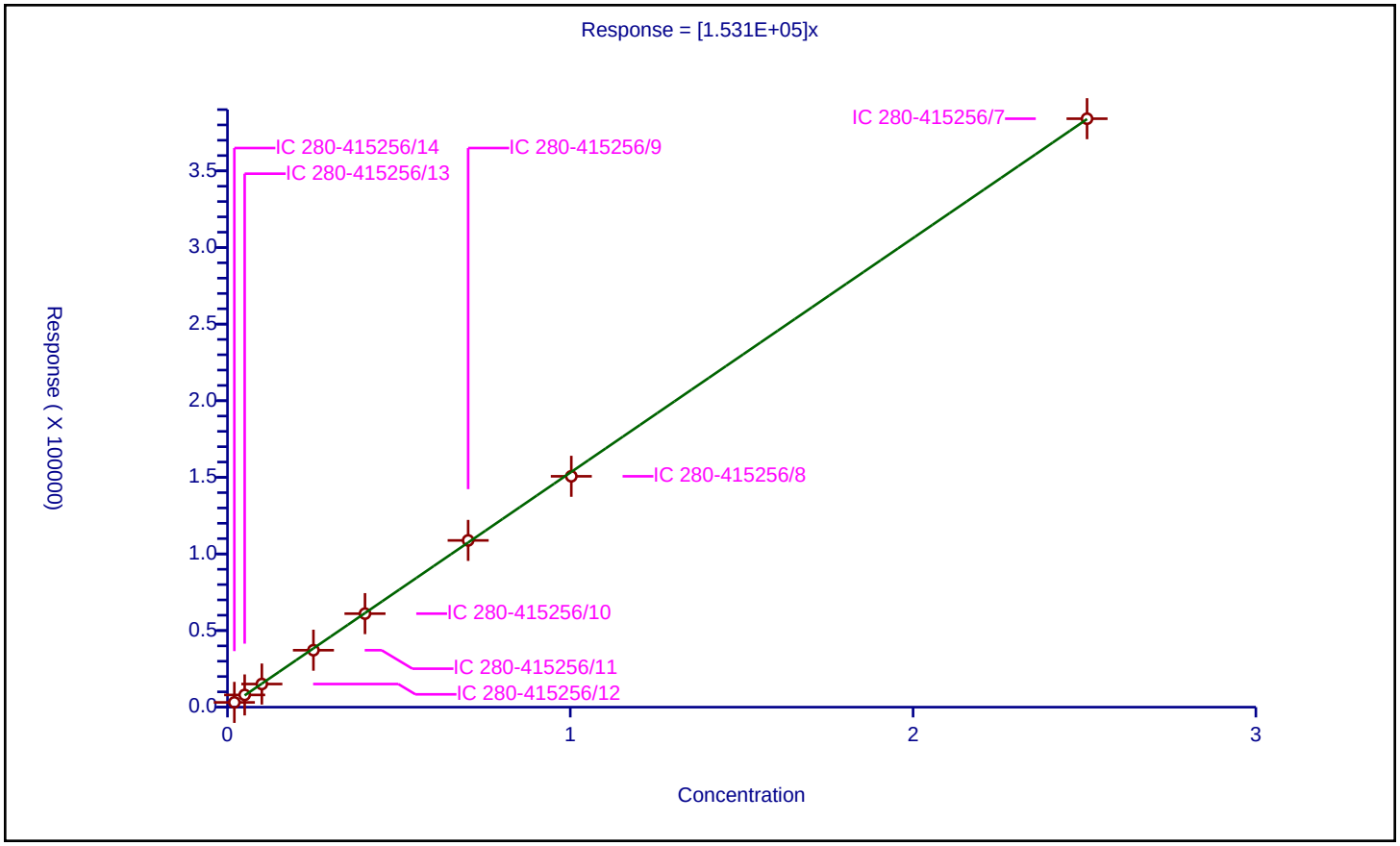
Curve Coefficients

Intercept:	0
Slope:	1.531E+05

Error Coefficients

Standard Error:	1300
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	3125.0			155782.652044	Y
2	IC 280-415256/13	0.05015	7991.0			159341.974078	Y
3	IC 280-415256/12	0.1003	15104.0			150588.235294	Y
4	IC 280-415256/11	0.25075	37173.0			148247.258225	Y
5	IC 280-415256/10	0.4012	61046.0			152158.524427	Y
6	IC 280-415256/9	0.7021	108831.0			155007.833642	Y
7	IC 280-415256/8	1.003	150677.0			150226.321037	Y
8	IC 280-415256/7	2.5075	384067.0			153167.298106	Y



Calibration / 2,4-Dinitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

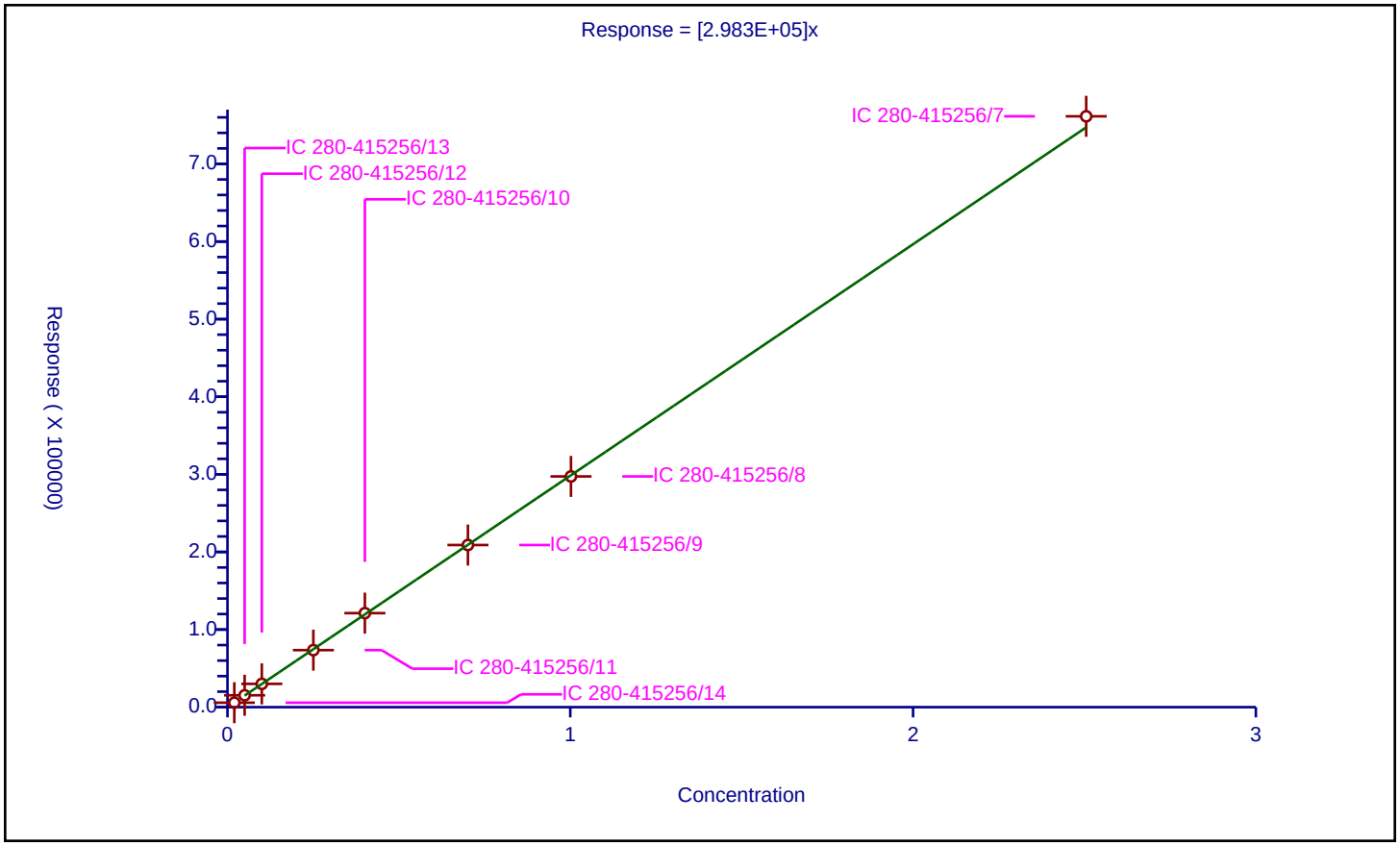
Curve Coefficients

Intercept:	0
Slope:	2.983E+05

Error Coefficients

Standard Error:	5460
Relative Standard Error:	2.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02004	5750.0			286926.147705	Y
2	IC 280-415256/13	0.0501	15313.0			305648.702595	Y
3	IC 280-415256/12	0.1002	30008.0			299481.037924	Y
4	IC 280-415256/11	0.2505	73471.0			293297.40519	Y
5	IC 280-415256/10	0.4008	121158.0			302290.419162	Y
6	IC 280-415256/9	0.7014	208912.0			297850.014257	Y
7	IC 280-415256/8	1.002	297313.0			296719.560878	Y
8	IC 280-415256/7	2.505	761362.0			303936.926148	Y



Calibration / o-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

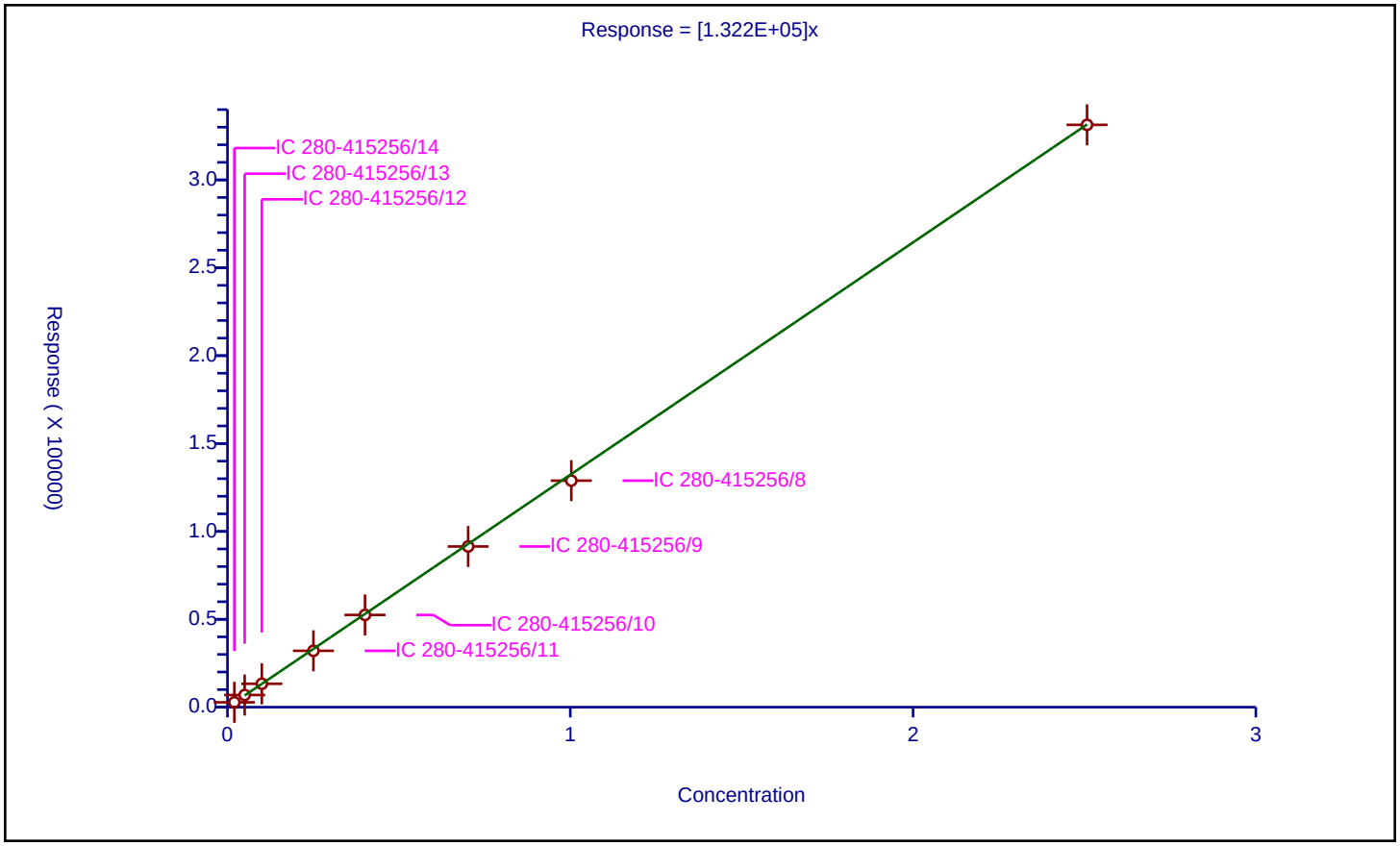
Curve Coefficients

Intercept:	0
Slope:	1.322E+05

Error Coefficients

Standard Error:	1580
Relative Standard Error:	2.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02006	2761.0			137637.088734	Y
2	IC 280-415256/13	0.05015	6915.0			137886.340977	Y
3	IC 280-415256/12	0.1003	13314.0			132741.774676	Y
4	IC 280-415256/11	0.25075	32062.0			127864.40678	Y
5	IC 280-415256/10	0.4012	52478.0			130802.592223	Y
6	IC 280-415256/9	0.7021	91427.0			130219.341974	Y
7	IC 280-415256/8	1.003	128893.0			128507.477567	Y
8	IC 280-415256/7	2.5075	331335.0			132137.587238	Y



Calibration / p-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

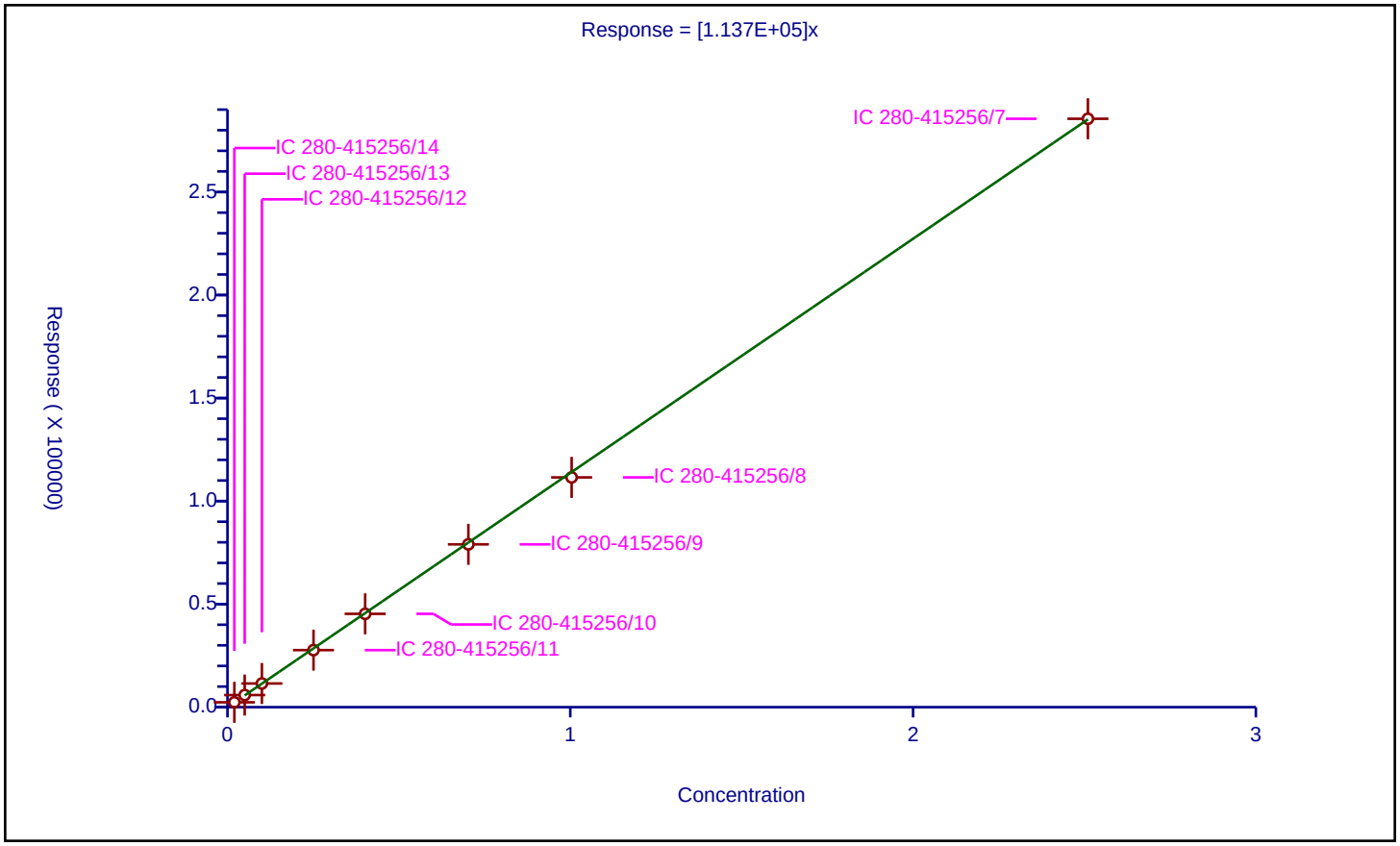
Curve Coefficients

Intercept:	0
Slope:	1.137E+05

Error Coefficients

Standard Error:	1100
Relative Standard Error:	2.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	2355.0			117280.876494	Y
2	IC 280-415256/13	0.0502	5884.0			117211.155378	Y
3	IC 280-415256/12	0.1004	11487.0			114412.350598	Y
4	IC 280-415256/11	0.251	27683.0			110290.836653	Y
5	IC 280-415256/10	0.4016	45295.0			112786.354582	Y
6	IC 280-415256/9	0.7028	79009.0			112420.318725	Y
7	IC 280-415256/8	1.004	111505.0			111060.756972	Y
8	IC 280-415256/7	2.51	285557.0			113767.729084	Y



Calibration / m-Nitrotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

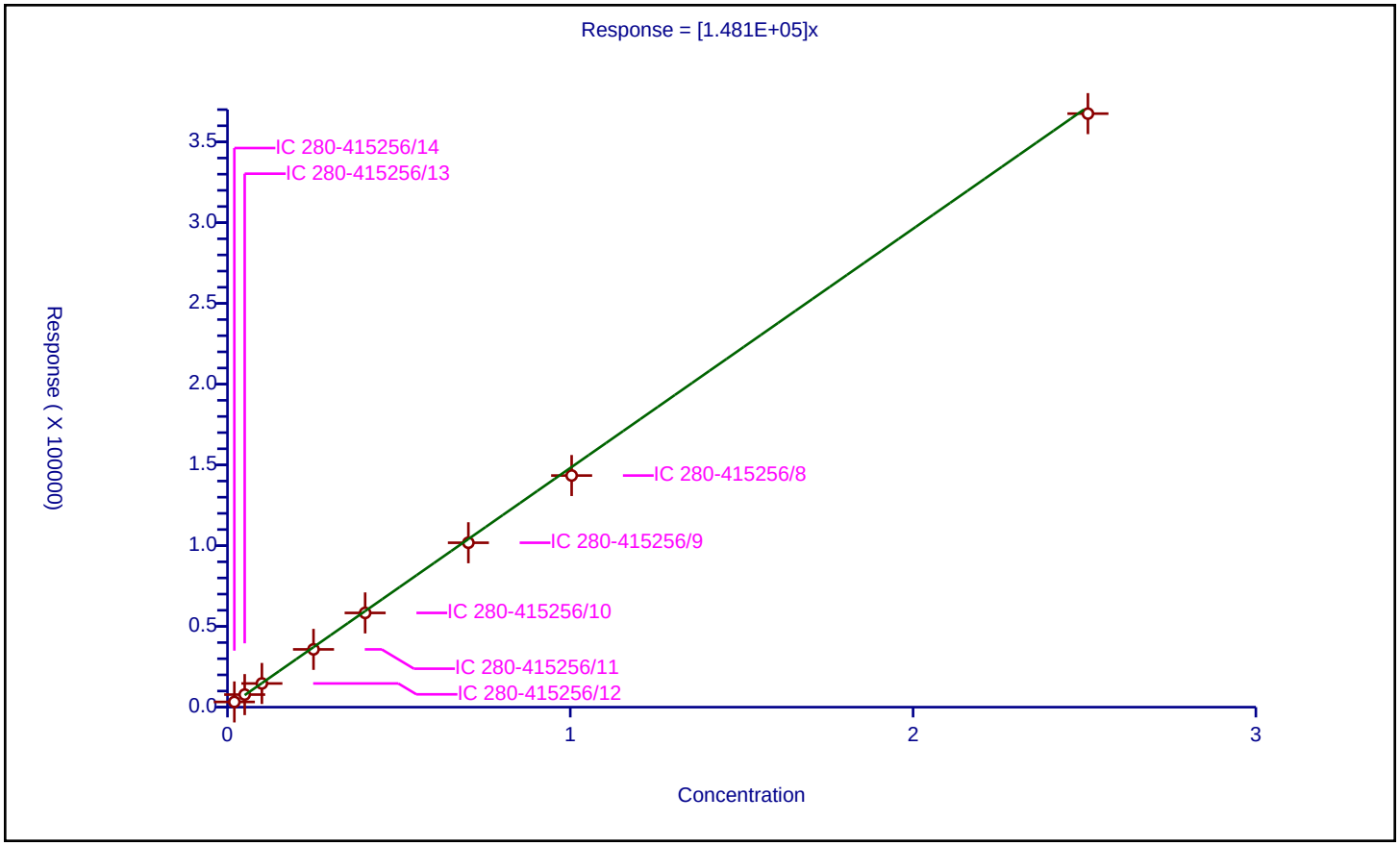
Curve Coefficients

Intercept:	0
Slope:	1.481E+05

Error Coefficients

Standard Error:	2790
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.02008	3245.0			161603.585657	Y
2	IC 280-415256/13	0.0502	7786.0			155099.601594	Y
3	IC 280-415256/12	0.1004	14675.0			146165.338645	Y
4	IC 280-415256/11	0.251	35788.0			142581.673307	Y
5	IC 280-415256/10	0.4016	58353.0			145301.294821	Y
6	IC 280-415256/9	0.7028	101807.0			144859.134889	Y
7	IC 280-415256/8	1.004	143426.0			142854.581673	Y
8	IC 280-415256/7	2.51	367509.0			146417.928287	Y



Calibration / PETN

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ESTD
Response Base:	
RF Rounding:	0

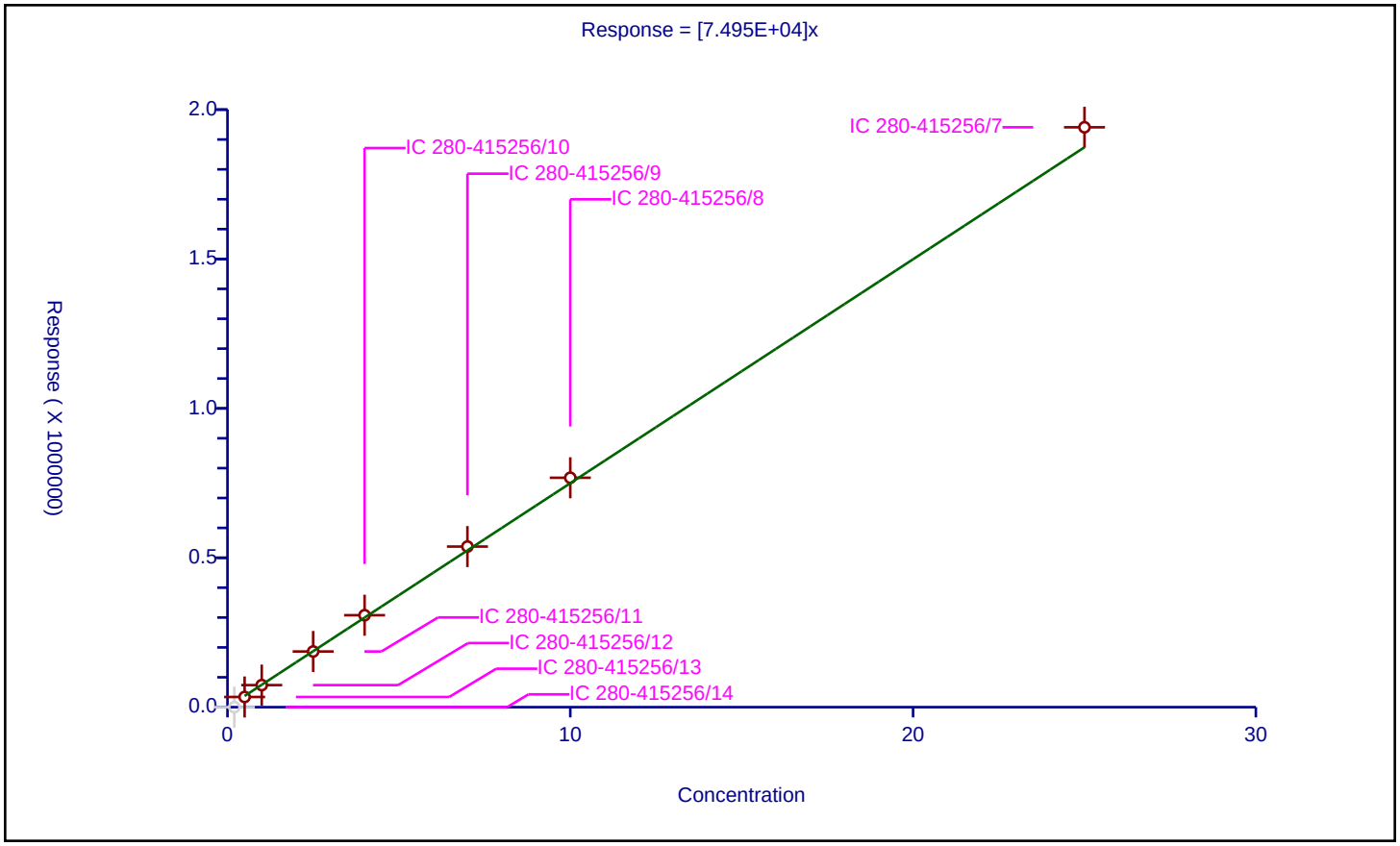
Curve Coefficients

Intercept:	0
Slope:	7.495E+04

Error Coefficients

Standard Error:	29000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Response	IS Amount	IS Response	RF	Used
1	IC 280-415256/14	0.2	0.0			0.0	N
2	IC 280-415256/13	0.5	34097.0			68194.0	Y
3	IC 280-415256/12	1.0	73842.0			73842.0	Y
4	IC 280-415256/11	2.5	186281.0			74512.4	Y
5	IC 280-415256/10	4.0	307741.0			76935.25	Y
6	IC 280-415256/9	7.0	537514.0			76787.714286	Y
7	IC 280-415256/8	10.0	767790.0			76779.0	Y
8	IC 280-415256/7	25.0	1940836.0			77633.44	Y



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 04/18/2018 11:11

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 04/18/2018 13:51

Lab File ID: 05180015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
MNX	Ave	13140	139188			400	959.2*	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 04/18/2018 11:11

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 04/18/2018 13:51

Lab File ID: 05180015.D

Analyte	RT	RT WINDOW	
		FROM	TO
MNX	7.30	7.15	7.45

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2018 13:37:47 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0070054-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:28 Calib Date: 18-May-2018 13:14:50
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:23:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.624	0.000	33119	0.4000	0.3899	
4 MNX	1	7.304	7.304	0.000	55675	NC	NC	
5 RDX	1	7.718	7.718	0.000	42920	0.4000	0.4104	
6 2,4,6-Trinitrophenol	1	8.038	8.038	0.000	35387	0.4000	0.4196	
$ 7 1,2-Dinitrobenzene	1	8.704	8.704	0.000	51224	0.4000	0.3979	
8 1,3,5-Trinitrobenzene	1	8.864	8.864	0.000	94671	0.4000	0.4145	
9 1,3-Dinitrobenzene	1	9.511	9.511	0.000	125716	0.4000	0.4176	
11 Nitrobenzene	1	9.898	9.898	0.000	81291	0.4000	0.4089	
12 Tetryl	1	10.211	10.211	0.000	70719	0.4000	0.4327	
13 Nitroglycerin	2	10.718	10.718	0.000	277340	4.00	4.08	
14 2,4,6-Trinitrotoluene	1	11.158	11.158	0.000	81234	0.4000	0.3788	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.311	0.000	66437	0.4000	0.4014	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.591	0.000	80254	0.4000	0.4023	
17 2,6-Dinitrotoluene	1	11.751	11.751	0.000	62107	0.4000	0.4058	
18 2,4-Dinitrotoluene	1	11.944	11.944	0.000	120805	0.4000	0.4050	
19 o-Nitrotoluene	1	12.778	12.778	0.000	52181	0.4000	0.3946	
20 p-Nitrotoluene	1	13.204	13.204	0.000	46822	0.4000	0.4120	
21 m-Nitrotoluene	1	13.791	13.791	0.000	58385	0.4000	0.3942	
22 PETN	2	14.898	14.898	0.000	309639	4.00	4.13	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

8330Surrogate_00098 Amount Added: 40.00 Units: uL
8330 LCS_00078 Amount Added: 40.00 Units: uL

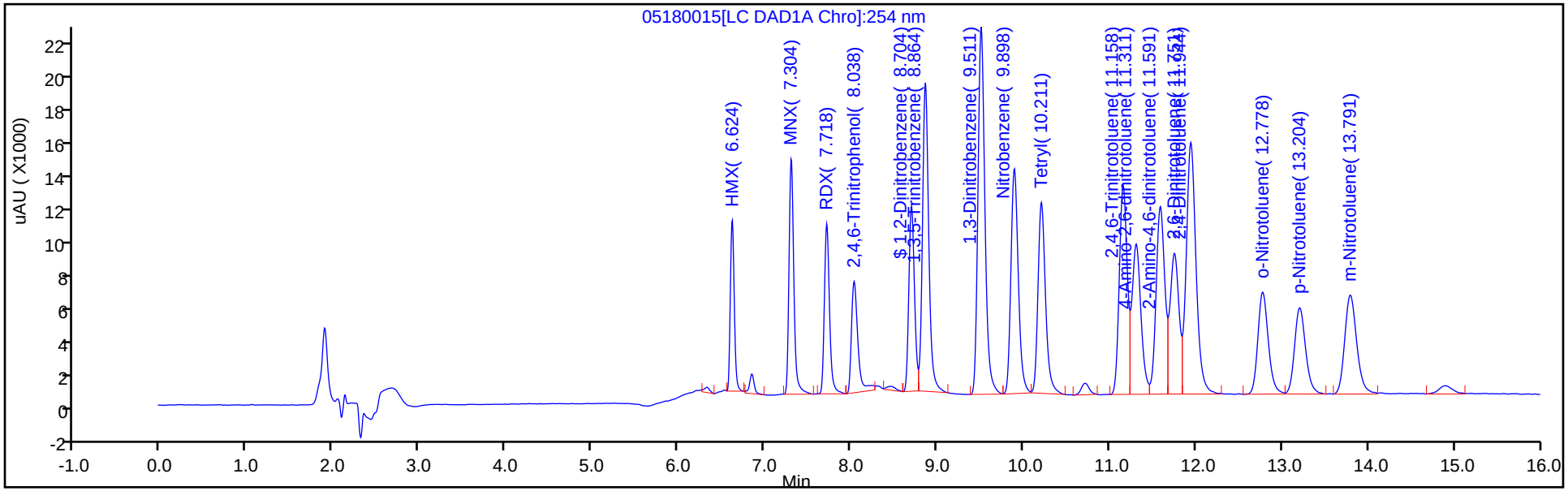
Report Date: 22-May-2018 12:01:28 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

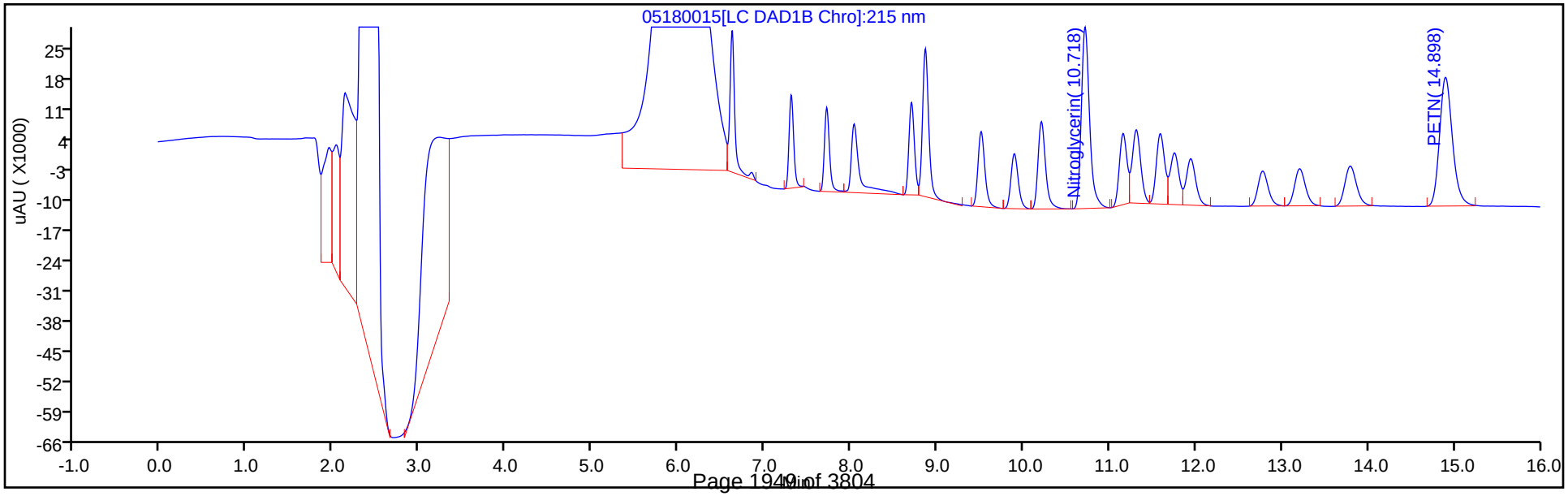
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D

Injection Date:	18-May-2018 13:37:47	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	ICV MAIN			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 05180015.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	82798		390	400	-2.5	20.0
RDX	Ave	104577	107300		410	400	2.6	20.0
Picric acid	Ave	84340	88468		420	400	4.9	20.0
1,3,5-Trinitrobenzene	Ave	228408	236678		414	400	3.6	20.0
1,3-Dinitrobenzene	Ave	301023	314290		418	400	4.4	20.0
Nitrobenzene	Ave	198781	203228		409	400	2.2	20.0
Tetryl	Ave	163448	176798		433	400	8.2	20.0
Nitroglycerin	Ave	67945	69335		4080	4000	2.0	20.0
2,4,6-Trinitrotoluene	Ave	214478	203085		379	400	-5.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	166093		401	400	0.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	200635		402	400	0.6	20.0
2,6-Dinitrotoluene	Ave	153065	155268		406	400	1.4	20.0
2,4-Dinitrotoluene	Ave	298269	302013		405	400	1.3	20.0
2-Nitrotoluene	Ave	132225	130453		395	400	-1.3	20.0
4-Nitrotoluene	Ave	113654	117055		412	400	3.0	20.0
3-Nitrotoluene	Ave	148110	145963		394	400	-1.5	20.0
PETN	Ave	74955	77410		4130	4000	3.3	20.0
1,2-Dinitrobenzene	Ave	128727	128060		398	400	-0.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-415256/15 Calibration Date: 05/18/2018 13:37

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 05180015.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.62	6.47	6.77
RDX	7.72	7.57	7.87
Picric acid	8.04	7.89	8.19
1,3,5-Trinitrobenzene	8.86	8.71	9.01
1,3-Dinitrobenzene	9.51	9.36	9.66
Nitrobenzene	9.90	9.75	10.05
Tetryl	10.21	10.06	10.36
Nitroglycerin	10.72	10.57	10.87
2,4,6-Trinitrotoluene	11.16	11.06	11.26
4-Amino-2,6-dinitrotoluene	11.31	11.21	11.41
2-Amino-4,6-dinitrotoluene	11.59	11.49	11.69
2,6-Dinitrotoluene	11.75	11.65	11.85
2,4-Dinitrotoluene	11.94	11.84	12.04
2-Nitrotoluene	12.78	12.63	12.93
4-Nitrotoluene	13.20	13.05	13.35
3-Nitrotoluene	13.79	13.64	13.94
PETN	14.90	14.75	15.05
1,2-Dinitrobenzene	8.70	8.55	8.85

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D
Lims ID: ICV MAIN
Client ID:
Sample Type: ICV
Inject. Date: 18-May-2018 13:37:47 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: ICV MAIN
Misc. Info.: 280-0070054-015
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist:

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 22-May-2018 12:01:28 Calib Date: 18-May-2018 13:14:50
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180014.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0304

First Level Reviewer: heikerl Date: 22-May-2018 11:23:09

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.624	6.624	0.000	33119	0.4000	0.3899	
4 MNX	1	7.304	7.304	0.000	55675	NC	NC	
5 RDX	1	7.718	7.718	0.000	42920	0.4000	0.4104	
6 2,4,6-Trinitrophenol	1	8.038	8.038	0.000	35387	0.4000	0.4196	
$ 7 1,2-Dinitrobenzene	1	8.704	8.704	0.000	51224	0.4000	0.3979	
8 1,3,5-Trinitrobenzene	1	8.864	8.864	0.000	94671	0.4000	0.4145	
9 1,3-Dinitrobenzene	1	9.511	9.511	0.000	125716	0.4000	0.4176	
11 Nitrobenzene	1	9.898	9.898	0.000	81291	0.4000	0.4089	
12 Tetryl	1	10.211	10.211	0.000	70719	0.4000	0.4327	
13 Nitroglycerin	2	10.718	10.718	0.000	277340	4.00	4.08	
14 2,4,6-Trinitrotoluene	1	11.158	11.158	0.000	81234	0.4000	0.3788	
15 4-Amino-2,6-dinitrotoluene	1	11.311	11.311	0.000	66437	0.4000	0.4014	
16 2-Amino-4,6-dinitrotoluene	1	11.591	11.591	0.000	80254	0.4000	0.4023	
17 2,6-Dinitrotoluene	1	11.751	11.751	0.000	62107	0.4000	0.4058	
18 2,4-Dinitrotoluene	1	11.944	11.944	0.000	120805	0.4000	0.4050	
19 o-Nitrotoluene	1	12.778	12.778	0.000	52181	0.4000	0.3946	
20 p-Nitrotoluene	1	13.204	13.204	0.000	46822	0.4000	0.4120	
21 m-Nitrotoluene	1	13.791	13.791	0.000	58385	0.4000	0.3942	
22 PETN	2	14.898	14.898	0.000	309639	4.00	4.13	

QC Flag Legend

Processing Flags
NC - Not Calibrated

Reagents:

8330Surrogate_00098 Amount Added: 40.00 Units: uL
8330 LCS_00078 Amount Added: 40.00 Units: uL

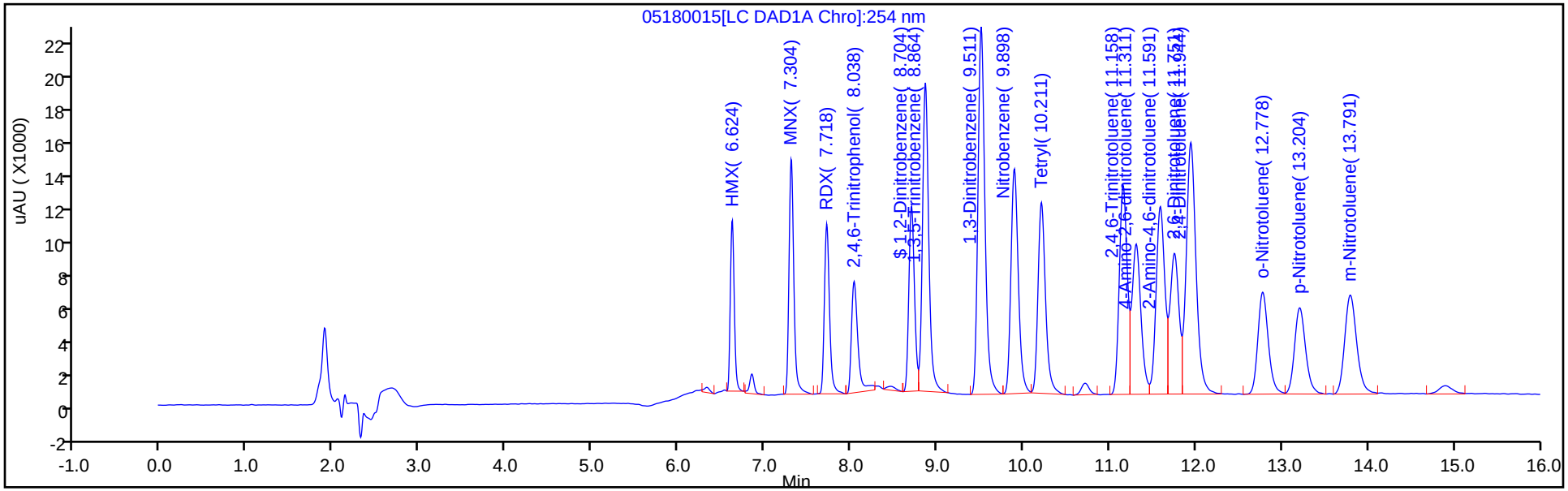
Report Date: 22-May-2018 12:01:28 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Denver

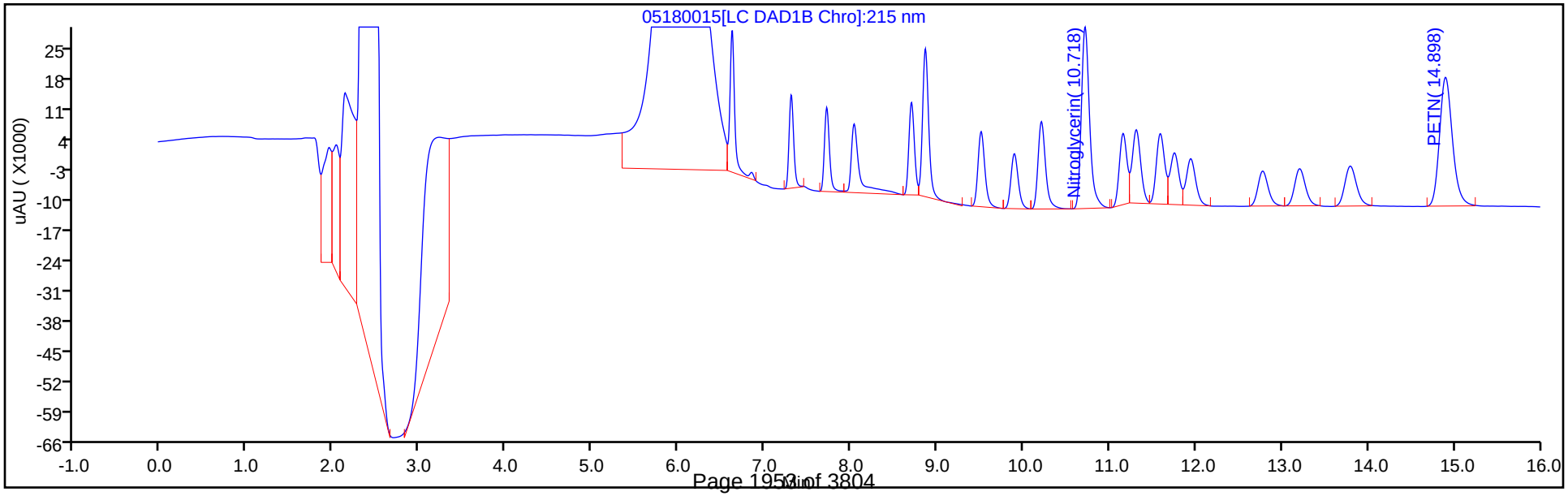
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180517-70054.b\05180015.D

Injection Date:	18-May-2018 13:37:47	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	ICV MAIN			Worklist Smp#:	15
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-436836/31 Calibration Date: 11/08/2018 22:43

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11080031.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	93620		276	250	10.2	20.0
RDX	Ave	104577	115304		276	250	10.3	20.0
Picric acid	Ave	84340	91140		270	250	8.1	20.0
1,3,5-Trinitrobenzene	Ave	228408	250712		274	250	9.8	20.0
1,3-Dinitrobenzene	Ave	301023	322845		268	250	7.2	20.0
Nitrobenzene	Ave	198781	198279		250	251	-0.3	20.0
Tetryl	Ave	163448	195780		299	250	19.8	20.0
Nitroglycerin	Ave	67945	76271		2810	2500	12.3	20.0
2,4,6-Trinitrotoluene	Ave	214478	248622		291	251	15.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	168088		255	251	1.6	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	218604		275	251	9.6	20.0
2,6-Dinitrotoluene	Ave	153065	162540		266	251	6.2	20.0
2,4-Dinitrotoluene	Ave	298269	311880		262	251	4.6	20.0
2-Nitrotoluene	Ave	132225	128754		244	251	-2.6	20.0
4-Nitrotoluene	Ave	113654	112801		249	251	-0.8	20.0
3-Nitrotoluene	Ave	148110	140837		239	251	-4.9	20.0
PETN	Ave	74955	82570		2750	2500	10.2	20.0
1,2-Dinitrobenzene	Ave	128727	147008		286	250	14.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-436836/31 Calibration Date: 11/08/2018 22:43

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11080031.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.65	6.50	6.80
RDX	7.76	7.61	7.91
Picric acid	8.12	7.97	8.27
1,3,5-Trinitrobenzene	8.91	8.76	9.06
1,3-Dinitrobenzene	9.57	9.42	9.72
Nitrobenzene	9.96	9.80	10.10
Tetryl	10.29	10.14	10.44
Nitroglycerin	10.80	10.64	10.94
2,4,6-Trinitrotoluene	11.25	11.15	11.35
4-Amino-2,6-dinitrotoluene	11.43	11.33	11.53
2-Amino-4,6-dinitrotoluene	11.72	11.61	11.81
2,6-Dinitrotoluene	11.86	11.76	11.96
2,4-Dinitrotoluene	12.06	11.96	12.16
2-Nitrotoluene	12.91	12.76	13.06
4-Nitrotoluene	13.35	13.20	13.50
3-Nitrotoluene	13.95	13.80	14.10
PETN	15.08	14.92	15.22
1,2-Dinitrobenzene	8.75	8.60	8.90

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080031.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 08-Nov-2018 22:43:22 ALS Bottle#: 7 Worklist Smp#: 31
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0075968-031
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Nov-2018 09:38:26 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0319

First Level Reviewer: fiedlerh Date: 09-Nov-2018 09:20:19

Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
2 HMX	1	6.649	6.653	-0.004	23405	0.2500	0.2755	
5 RDX	1	7.763	7.759	0.004	28826	0.2500	0.2756	
6 2,4,6-Trinitrophenol	1	8.123	8.119	0.004	22785	0.2500	0.2702	
$ 7 1,2-Dinitrobenzene	1	8.749	8.746	0.003	36752	0.2500	0.2855	
8 1,3,5-Trinitrobenzene	1	8.909	8.906	0.003	62678	0.2500	0.2744	
9 1,3-Dinitrobenzene	1	9.569	9.566	0.003	80792	0.2503	0.2684	
11 Nitrobenzene	1	9.956	9.953	0.003	49669	0.2505	0.2499	
12 Tetryl	1	10.289	10.286	0.003	48945	0.2500	0.2995	
13 Nitroglycerin	2	10.796	10.793	0.003	190677	2.50	2.81	
14 2,4,6-Trinitrotoluene	1	11.249	11.246	0.003	62404	0.2510	0.2910	
15 4-Amino-2,6-dinitrotoluene	1	11.429	11.426	0.003	42148	0.2508	0.2547	
16 2-Amino-4,6-dinitrotoluene	1	11.716	11.713	0.003	54815	0.2508	0.2748	
17 2,6-Dinitrotoluene	1	11.863	11.859	0.004	40757	0.2508	0.2663	
18 2,4-Dinitrotoluene	1	12.063	12.059	0.004	78126	0.2505	0.2619	
19 o-Nitrotoluene	1	12.909	12.906	0.003	32285	0.2508	0.2442	
20 p-Nitrotoluene	1	13.349	13.346	0.003	28313	0.2510	0.2491	
21 m-Nitrotoluene	1	13.949	13.946	0.003	35350	0.2510	0.2387	
22 PETN	2	15.083	15.073	0.010	206425	2.50	2.75	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

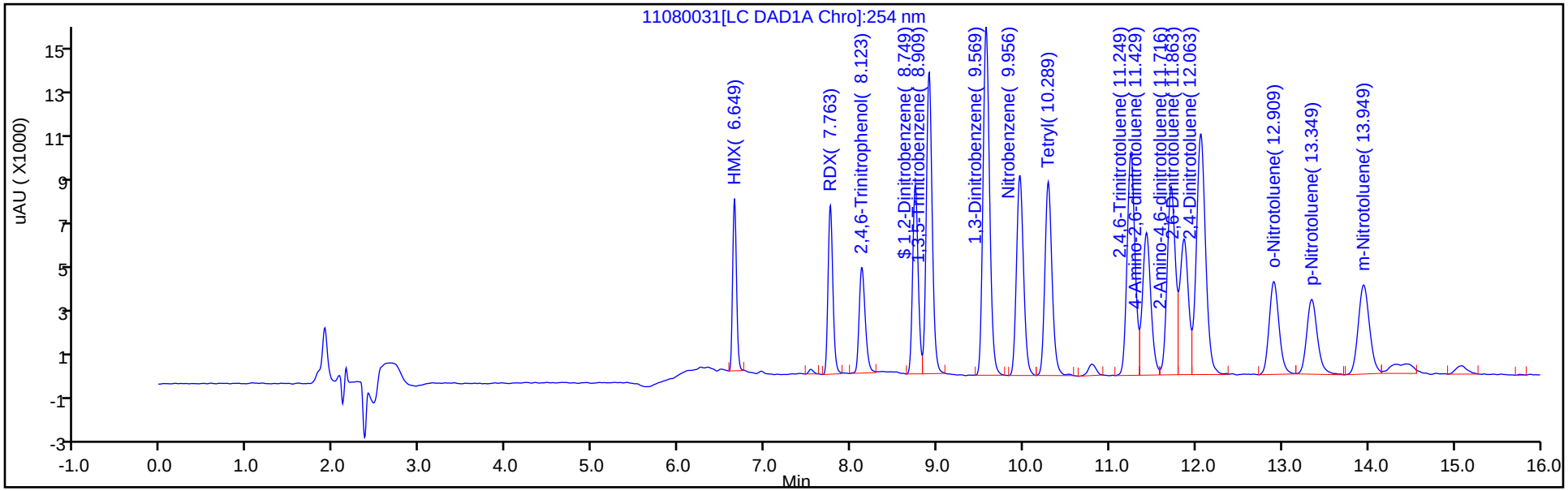
Report Date: 09-Nov-2018 09:38:27 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

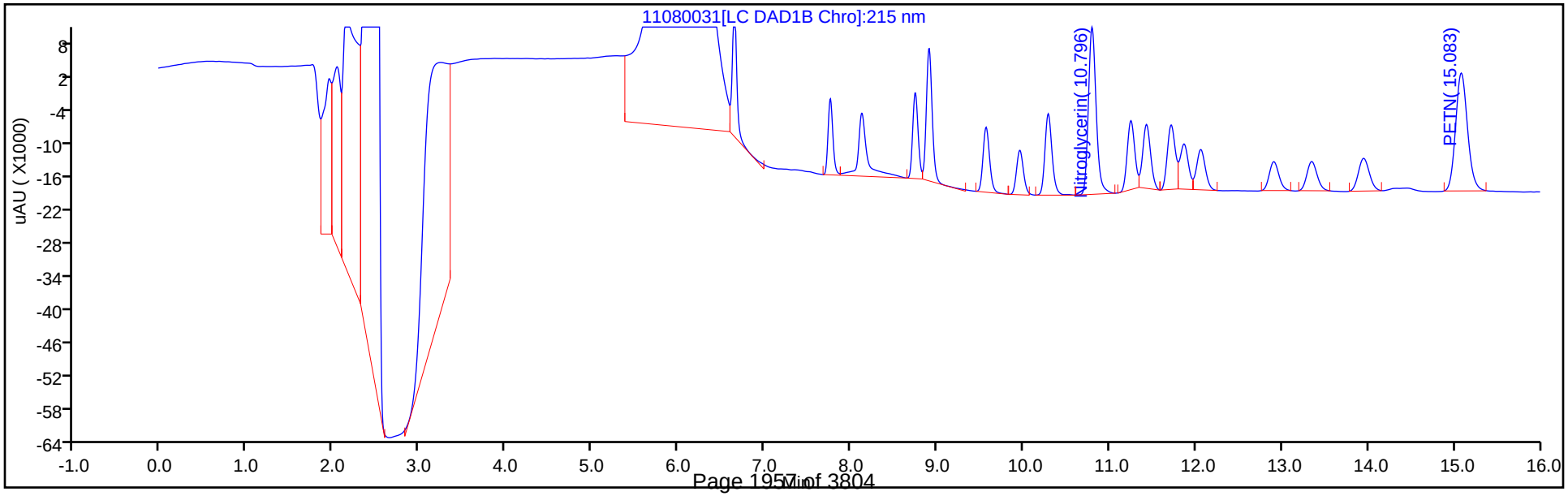
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080031.D

Injection Date:	08-Nov-2018 22:43:22	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	31
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-436836/43 Calibration Date: 11/09/2018 03:19

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11080043.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	99376		292	250	17.0	20.0
RDX	Ave	104577	119680		286	250	14.4	20.0
Picric acid	Ave	84340	91448		271	250	8.4	20.0
1,3,5-Trinitrobenzene	Ave	228408	249272		273	250	9.1	20.0
1,3-Dinitrobenzene	Ave	301023	324368		270	250	7.8	20.0
Nitrobenzene	Ave	198781	195377		246	251	-1.7	20.0
Tetryl	Ave	163448	196340		300	250	20.1*	20.0
Nitroglycerin	Ave	67945	77762		2860	2500	14.4	20.0
2,4,6-Trinitrotoluene	Ave	214478	246697		289	251	15.0	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	165145		250	251	-0.2	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	223198		281	251	11.9	20.0
2,6-Dinitrotoluene	Ave	153065	154903		254	251	1.2	20.0
2,4-Dinitrotoluene	Ave	298269	311158		261	251	4.3	20.0
2-Nitrotoluene	Ave	132225	125990		239	251	-4.7	20.0
4-Nitrotoluene	Ave	113654	111677		247	251	-1.7	20.0
3-Nitrotoluene	Ave	148110	134932		229	251	-8.9	20.0
PETN	Ave	74955	81708		2730	2500	9.0	20.0
1,2-Dinitrobenzene	Ave	128727	146184		284	250	13.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-436836/43 Calibration Date: 11/09/2018 03:19

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11080043.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.65	6.50	6.80
RDX	7.77	7.61	7.91
Picric acid	8.12	7.97	8.27
1,3,5-Trinitrobenzene	8.91	8.76	9.06
1,3-Dinitrobenzene	9.58	9.42	9.72
Nitrobenzene	9.97	9.80	10.10
Tetryl	10.30	10.14	10.44
Nitroglycerin	10.81	10.64	10.94
2,4,6-Trinitrotoluene	11.26	11.15	11.35
4-Amino-2,6-dinitrotoluene	11.44	11.33	11.53
2-Amino-4,6-dinitrotoluene	11.73	11.61	11.81
2,6-Dinitrotoluene	11.88	11.76	11.96
2,4-Dinitrotoluene	12.07	11.96	12.16
2-Nitrotoluene	12.93	12.76	13.06
4-Nitrotoluene	13.37	13.20	13.50
3-Nitrotoluene	13.97	13.80	14.10
PETN	15.09	14.92	15.22
1,2-Dinitrobenzene	8.76	8.60	8.90

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080043.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 09-Nov-2018 03:19:08 ALS Bottle#: 7 Worklist Smp#: 43
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0075968-043
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Nov-2018 12:06:11 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0319

First Level Reviewer: fiedlerh Date: 09-Nov-2018 12:03:01

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.646	6.653	-0.007	24844	0.2500	0.2925	M
	5 RDX	1	7.766	7.759	0.007	29920	0.2500	0.2861	M
	6 2,4,6-Trinitrophenol	1	8.119	8.119	0.000	22862	0.2500	0.2711	
$	7 1,2-Dinitrobenzene	1	8.759	8.746	0.013	36546	0.2500	0.2839	
	8 1,3,5-Trinitrobenzene	1	8.913	8.906	0.007	62318	0.2500	0.2728	
	9 1,3-Dinitrobenzene	1	9.579	9.566	0.013	81173	0.2503	0.2697	
	11 Nitrobenzene	1	9.966	9.953	0.013	48942	0.2505	0.2462	
	12 Tetryl	1	10.299	10.286	0.013	49085	0.2500	0.3003	
	13 Nitroglycerin	2	10.806	10.793	0.013	194406	2.50	2.86	
	14 2,4,6-Trinitrotoluene	1	11.259	11.246	0.013	61921	0.2510	0.2887	
	15 4-Amino-2,6-dinitrotoluene	1	11.439	11.426	0.013	41410	0.2508	0.2502	
	16 2-Amino-4,6-dinitrotoluene	1	11.726	11.713	0.013	55967	0.2508	0.2806	
	17 2,6-Dinitrotoluene	1	11.879	11.859	0.020	38842	0.2508	0.2538	
	18 2,4-Dinitrotoluene	1	12.072	12.059	0.013	77945	0.2505	0.2613	
	19 o-Nitrotoluene	1	12.926	12.906	0.020	31592	0.2508	0.2389	
	20 p-Nitrotoluene	1	13.366	13.346	0.020	28031	0.2510	0.2466	
	21 m-Nitrotoluene	1	13.966	13.946	0.020	33868	0.2510	0.2287	
	22 PETN	2	15.092	15.073	0.019	204269	2.50	2.73	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

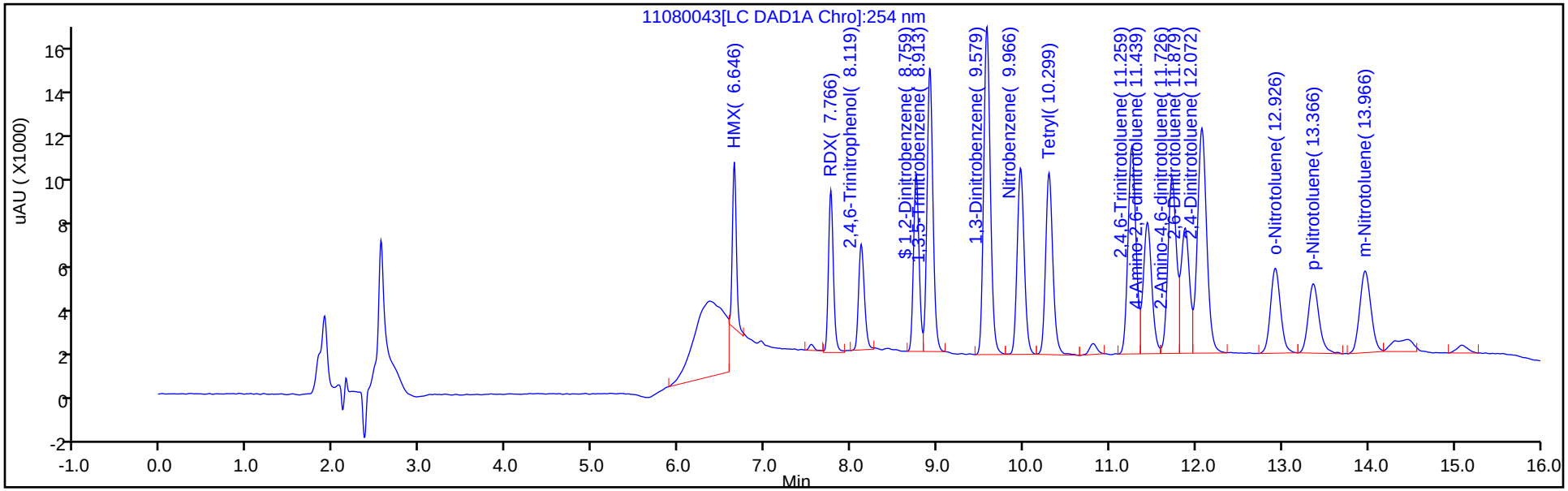
Report Date: 09-Nov-2018 12:06:12 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

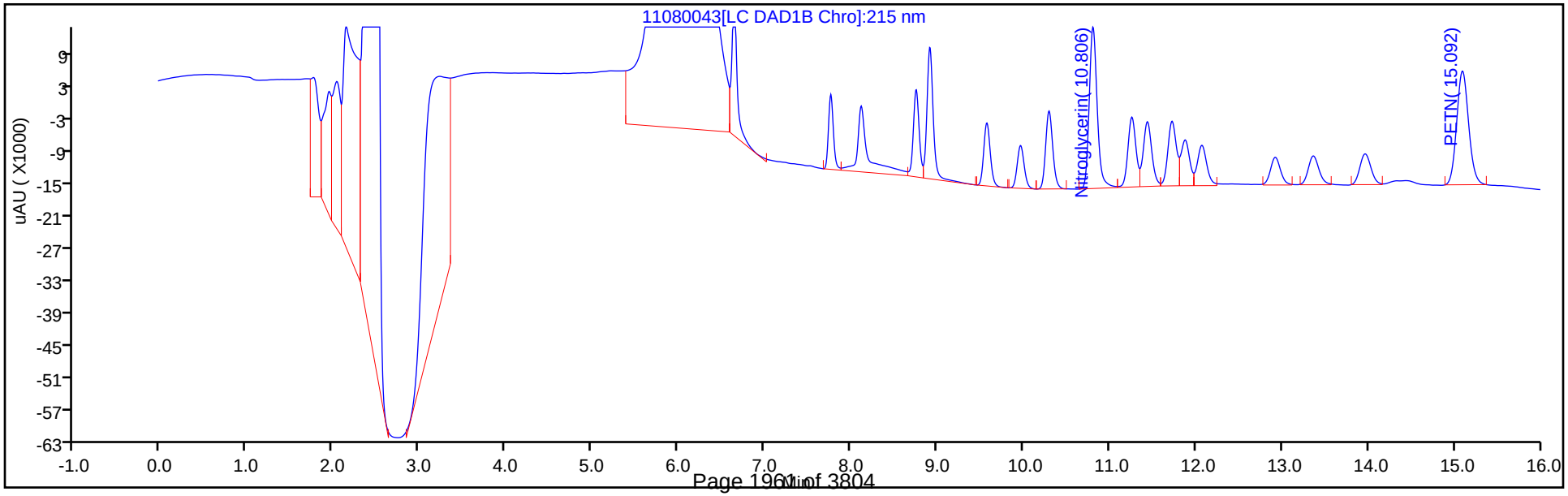
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080043.D

Injection Date:	09-Nov-2018 03:19:08	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	43
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Manual Integration/User Assign Peak Report

TestAmerica Denver

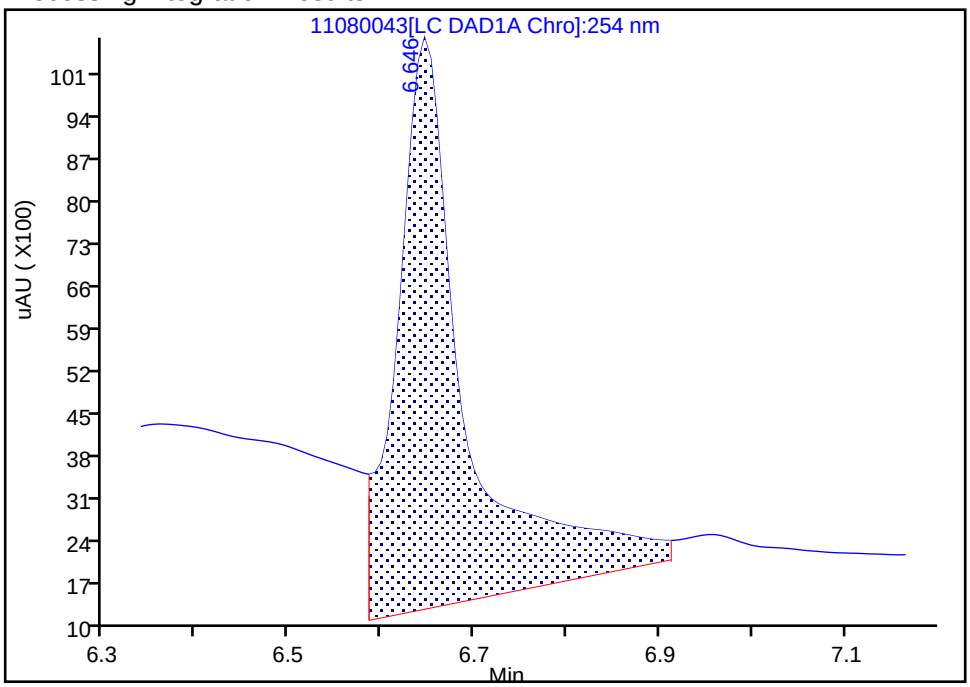
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080043.D
Injection Date: 09-Nov-2018 03:19:08 Instrument ID: CHHPLC_X3
Lims ID: CCV INT
Client ID:
Operator ID: hkf ALS Bottle#: 7 Worklist Smp#: 43
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

2 HMX, CAS: 2691-41-0

Signal: 1

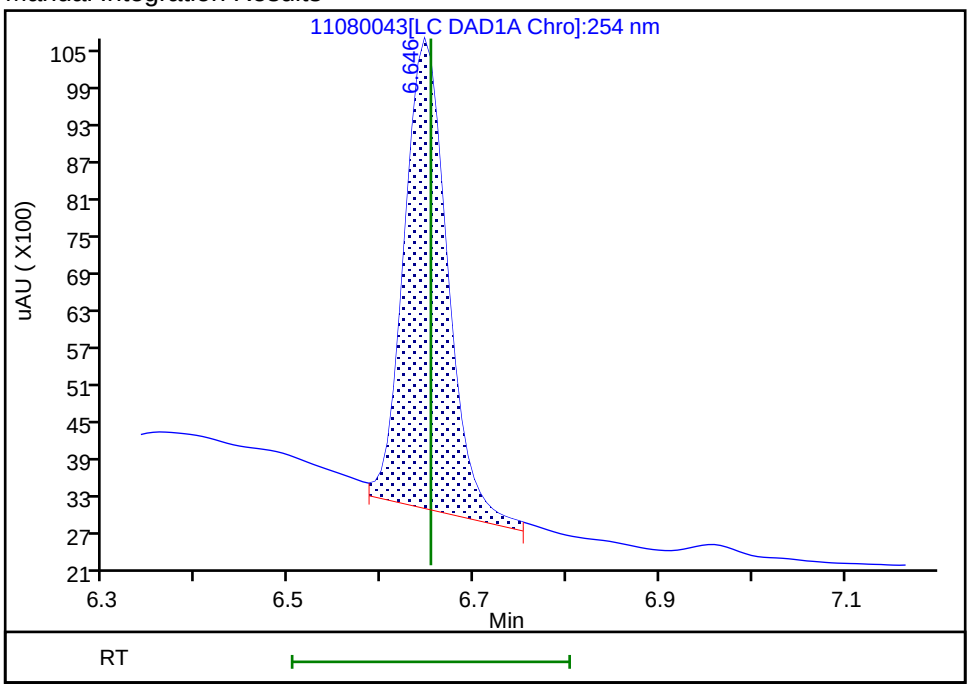
Processing Integration Results

RT: 6.65
Area: 48711
Amount: 0.573438
Amount Units: ug/mL



Manual Integration Results

RT: 6.65
Area: 24844
Amount: 0.292470
Amount Units: ug/mL



Reviewer: fiedlerh, 09-Nov-2018 12:02:55
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

Manual Integration/User Assign Peak Report

TestAmerica Denver

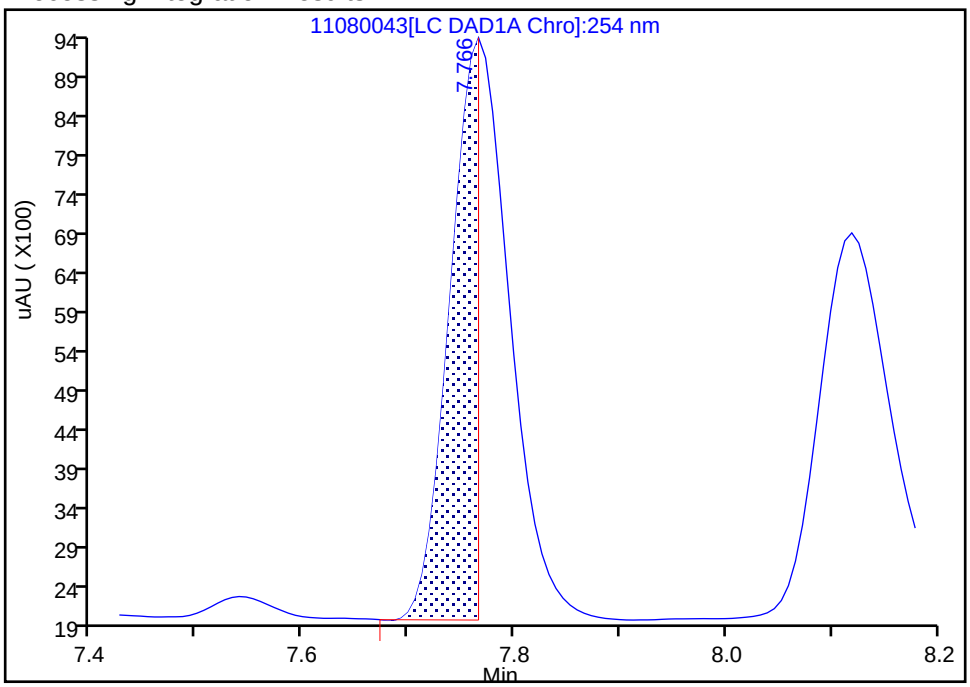
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080043.D
Injection Date: 09-Nov-2018 03:19:08 Instrument ID: CHHPLC_X3
Lims ID: CCV INT
Client ID:
Operator ID: hkf ALS Bottle#: 7 Worklist Smp#: 43
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Method: 8330_X3 Limit Group: GCSV - 8330
Column: UltraCarb5uODS (20) (4.60 mm) Detector LC DAD1B, 254 nm

5 RDX, CAS: 121-82-4

Signal: 1

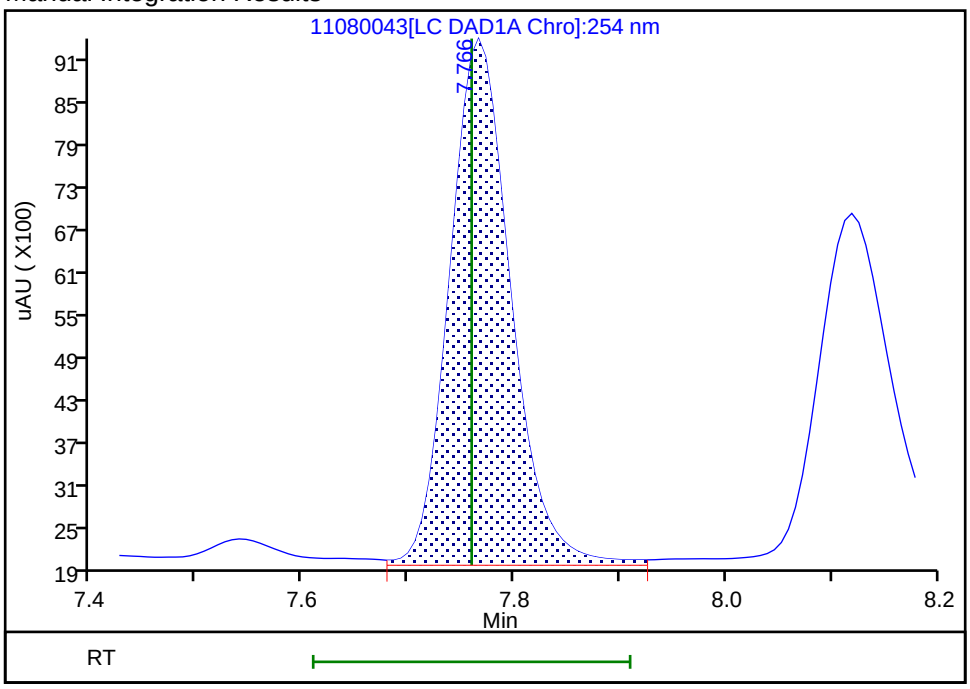
Processing Integration Results

RT: 7.77
Area: 13431
Amount: 0.128431
Amount Units: ug/mL



Manual Integration Results

RT: 7.77
Area: 29920
Amount: 0.286104
Amount Units: ug/mL



Reviewer: fiedlerh, 09-Nov-2018 12:02:57
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-436836/56 Calibration Date: 11/09/2018 07:54

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11080056.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	84946	96880		285	250	14.0	20.0
RDX	Ave	104577	115944		277	250	10.9	20.0
Picric acid	Ave	84340	90908		269	250	7.8	20.0
1,3,5-Trinitrobenzene	Ave	228408	252624		277	250	10.6	20.0
1,3-Dinitrobenzene	Ave	301023	324979		270	250	8.0	20.0
Nitrobenzene	Ave	198781	191952		242	251	-3.4	20.0
Tetryl	Ave	163448	193416		296	250	18.3	20.0
Nitroglycerin	Ave	67945	77107		2840	2500	13.5	20.0
2,4,6-Trinitrotoluene	Ave	214478	246590		289	251	15.0	20.0
4-Amino-2,6-dinitrotoluene	Ave	165501	166473		252	251	0.6	20.0
2-Amino-4,6-dinitrotoluene	Ave	199466	219059		275	251	9.8	20.0
2,6-Dinitrotoluene	Ave	153065	161623		265	251	5.6	20.0
2,4-Dinitrotoluene	Ave	298269	309381		260	251	3.7	20.0
2-Nitrotoluene	Ave	132225	125934		239	251	-4.8	20.0
4-Nitrotoluene	Ave	113654	111064		245	251	-2.3	20.0
3-Nitrotoluene	Ave	148110	132072		224	251	-10.8	20.0
PETN	Ave	74955	82548		2750	2500	10.1	20.0
1,2-Dinitrobenzene	Ave	128727	147088		286	250	14.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-436836/56 Calibration Date: 11/09/2018 07:54

Instrument ID: CHHPLC_X3 Calib Start Date: 05/18/2018 10:34

GC Column: UltraCarb5uODS ID: 4.60(mm) Calib End Date: 05/18/2018 13:14

Lab File ID: 11080056.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	6.65	6.50	6.80
RDX	7.77	7.61	7.91
Picric acid	8.13	7.97	8.27
1,3,5-Trinitrobenzene	8.92	8.76	9.06
1,3-Dinitrobenzene	9.58	9.42	9.72
Nitrobenzene	9.96	9.80	10.10
Tetryl	10.30	10.14	10.44
Nitroglycerin	10.80	10.64	10.94
2,4,6-Trinitrotoluene	11.25	11.15	11.35
4-Amino-2,6-dinitrotoluene	11.43	11.33	11.53
2-Amino-4,6-dinitrotoluene	11.72	11.61	11.81
2,6-Dinitrotoluene	11.86	11.76	11.96
2,4-Dinitrotoluene	12.06	11.96	12.16
2-Nitrotoluene	12.91	12.76	13.06
4-Nitrotoluene	13.34	13.20	13.50
3-Nitrotoluene	13.94	13.80	14.10
PETN	15.07	14.92	15.22
1,2-Dinitrobenzene	8.76	8.60	8.90

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080056.D
Lims ID: CCV INT
Client ID:
Sample Type: CCV
Inject. Date: 09-Nov-2018 07:54:54 ALS Bottle#: 7 Worklist Smp#: 56
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: CCV INT
Misc. Info.: 280-0075968-056
Operator ID: hkf Instrument ID: CHHPLC_X3
Sublist: chrom-8330_X3*sub9

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Nov-2018 12:06:23 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0319

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.648	6.653	-0.005	24220	0.2500	0.2851	
	5 RDX	1	7.768	7.759	0.009	28986	0.2500	0.2772	
	6 2,4,6-Trinitrophenol	1	8.128	8.119	0.009	22727	0.2500	0.2695	
$	7 1,2-Dinitrobenzene	1	8.755	8.746	0.009	36772	0.2500	0.2857	
	8 1,3,5-Trinitrobenzene	1	8.915	8.906	0.009	63156	0.2500	0.2765	
	9 1,3-Dinitrobenzene	1	9.575	9.566	0.009	81326	0.2503	0.2702	
	11 Nitrobenzene	1	9.962	9.953	0.009	48084	0.2505	0.2419	
	12 Tetryl	1	10.295	10.286	0.009	48354	0.2500	0.2958	
	13 Nitroglycerin	2	10.802	10.793	0.009	192767	2.50	2.84	
	14 2,4,6-Trinitrotoluene	1	11.248	11.246	0.002	61894	0.2510	0.2886	
	15 4-Amino-2,6-dinitrotoluene	1	11.428	11.426	0.002	41743	0.2508	0.2522	
	16 2-Amino-4,6-dinitrotoluene	1	11.715	11.713	0.002	54929	0.2508	0.2754	
	17 2,6-Dinitrotoluene	1	11.862	11.859	0.003	40527	0.2508	0.2648	
	18 2,4-Dinitrotoluene	1	12.055	12.059	-0.004	77500	0.2505	0.2598	
	19 o-Nitrotoluene	1	12.908	12.906	0.002	31578	0.2508	0.2388	
	20 p-Nitrotoluene	1	13.342	13.346	-0.004	27877	0.2510	0.2453	
	21 m-Nitrotoluene	1	13.942	13.946	-0.004	33150	0.2510	0.2238	
	22 PETN	2	15.068	15.073	-0.005	206371	2.50	2.75	

Reagents:

8330IntermStk_00056 Amount Added: 12.50 Units: uL

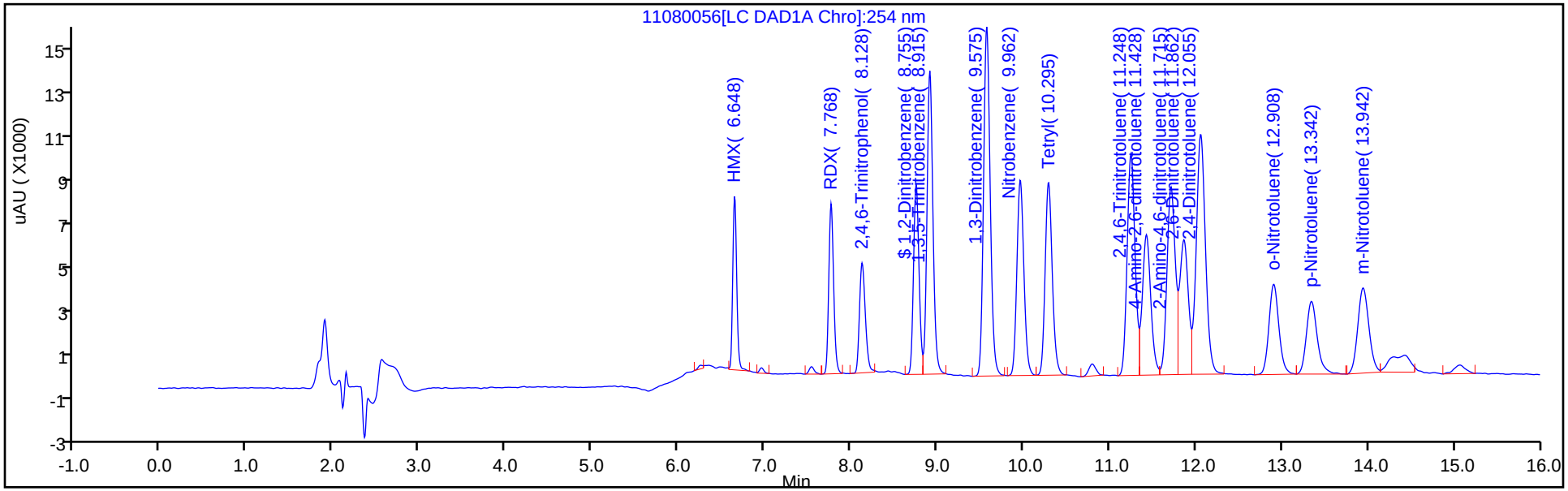
Report Date: 09-Nov-2018 12:06:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

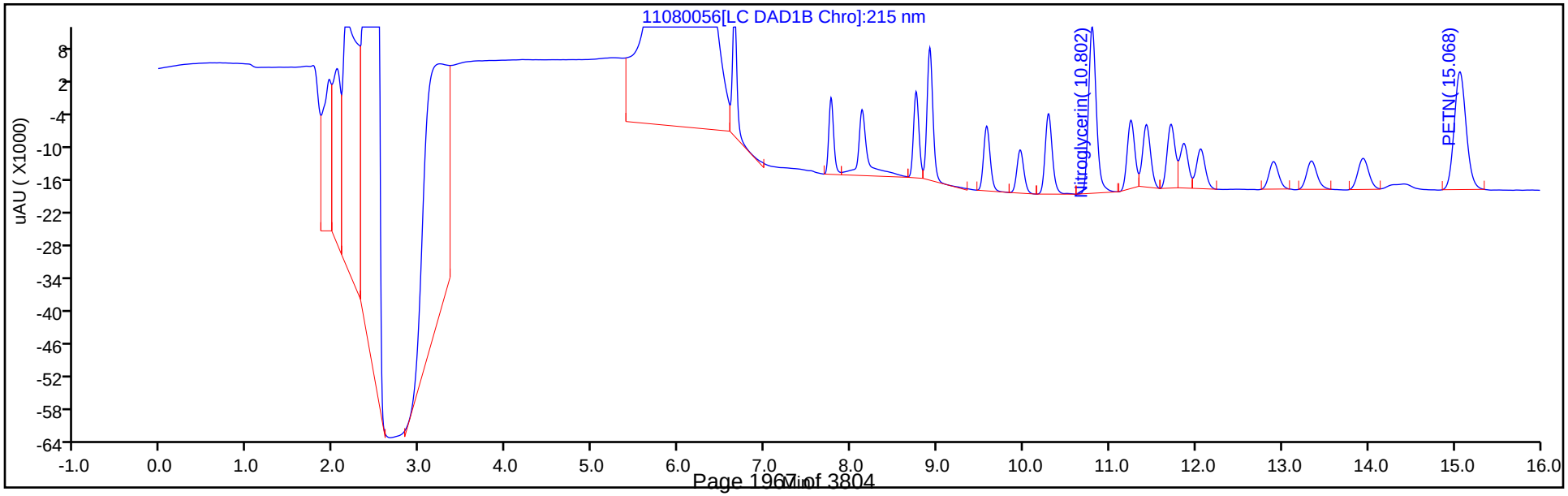
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080056.D

Injection Date:	09-Nov-2018 07:54:54	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	CCV INT			Worklist Smp#:	56
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 280-436459/1-A

Matrix: Water | Lab File ID: 11080033.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 11/06/2018 12:18

Sample wt/vol: 500(mL) | Date Analyzed: 11/08/2018 23:29

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436836 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	0.40	U	1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	0.20	U	0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	0.20	U	0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	0.20	U	0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	0.20	U	0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	0.12	U	0.20	0.12	0.051
88-72-2	2-Nitrotoluene	0.20	U	0.40	0.20	0.086
99-08-1	3-Nitrotoluene	0.20	U	0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	0.12	U	0.20	0.12	0.058
99-99-0	4-Nitrotoluene	0.40	U	1.0	0.40	0.20
2691-41-0	HMX	0.20	U	0.40	0.20	0.088
98-95-3	Nitrobenzene	0.20	U	0.40	0.20	0.091
55-63-0	Nitroglycerin	2.0	U	3.0	2.0	0.92
78-11-5	PETN	1.2	U	2.0	1.2	0.42
121-82-4	RDX	0.12	U	0.20	0.12	0.052
479-45-8	Tetryl	0.20	U	0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	103		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080033.D
Lims ID: MB 280-436459/1-A
Client ID:
Sample Type: MB
Inject. Date: 08-Nov-2018 23:29:18 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-436459/1-
Misc. Info.: 280-0075968-033
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Nov-2018 12:05:37 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0319

First Level Reviewer: fiedlerh Date: 09-Nov-2018 09:20:34

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	1 2,6-diamino-4-nitrotoluene	1		6.513				ND	
	25 TNX	1		6.546				ND	
	2 HMX	1		6.653				ND	
	3 2,4-diamino-6-nitrotoluene	1		6.687				ND	
	24 DNX	1		6.866				ND	
	4 MNX	1		7.326				ND	
	5 RDX	1		7.759				ND	
	6 2,4,6-Trinitrophenol	1	8.110	8.119	-0.009	1178		0.0140	
$	7 1,2-Dinitrobenzene	1	8.750	8.746	0.004	26640	0.2000	0.2069	
	8 1,3,5-Trinitrobenzene	1		8.906				ND	
	9 1,3-Dinitrobenzene	1		9.566				ND	
	11 Nitrobenzene	1		9.953				ND	
	10 3,5-Dinitroaniline	1		10.220				ND	
	12 Tetryl	1		10.286				ND	
	13 Nitroglycerin	2		10.793				ND	
	14 2,4,6-Trinitrotoluene	1		11.246				ND	
	15 4-Amino-2,6-dinitrotoluene	1		11.426				ND	
	16 2-Amino-4,6-dinitrotoluene	1		11.713				ND	
	17 2,6-Dinitrotoluene	1		11.859				ND	
	18 2,4-Dinitrotoluene	1		12.059				ND	
	19 o-Nitrotoluene	1		12.906				ND	
	20 p-Nitrotoluene	1		13.346				ND	
	21 m-Nitrotoluene	1		13.946				ND	
	22 PETN	2		15.073				ND	
	23 Ammonium Picrate	1		0.000				ND	

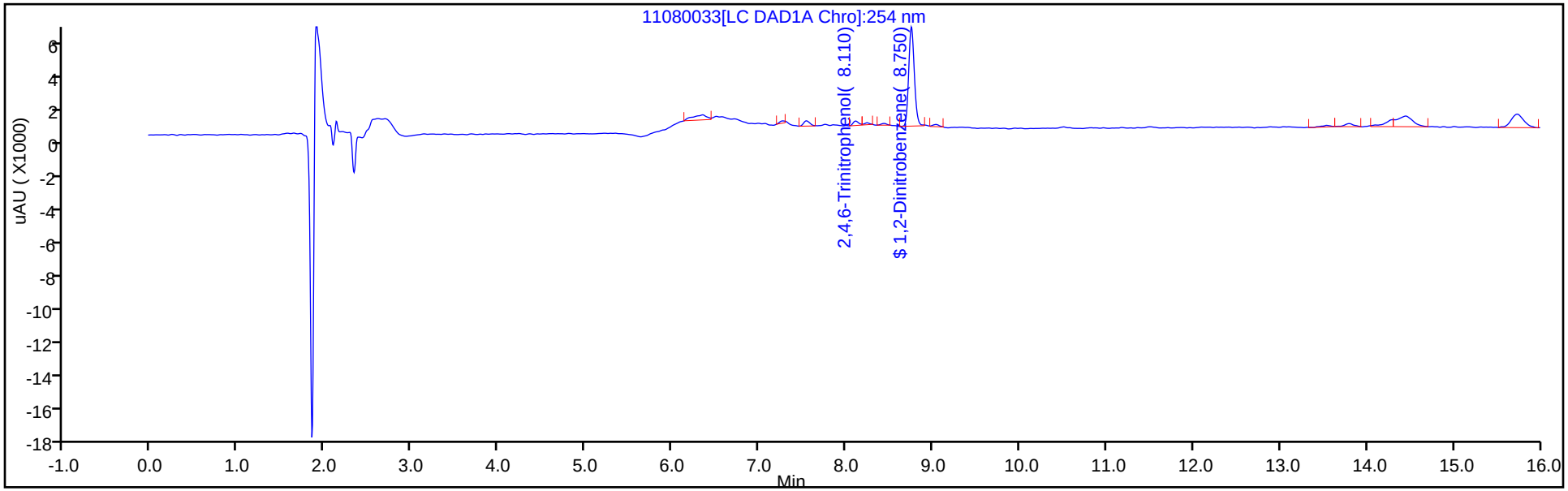
Report Date: 09-Nov-2018 12:05:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

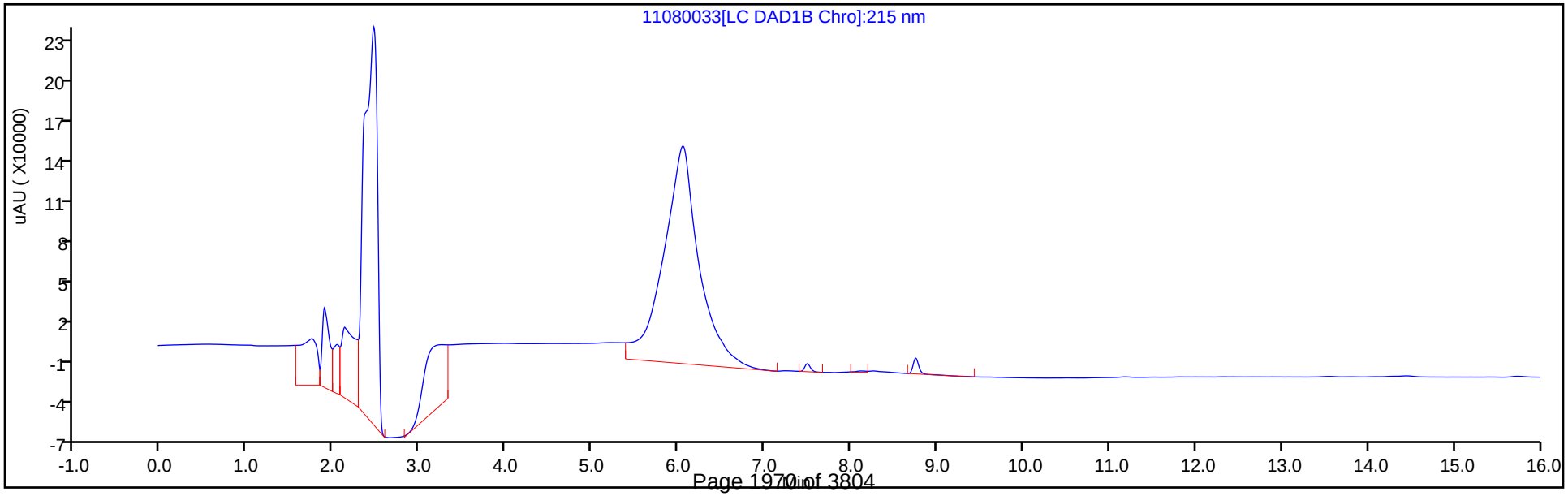
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080033.D

Injection Date:	08-Nov-2018 23:29:18	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	MB 280-436459/1-A			Worklist Smp#:	33
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	33
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080033.D
Lims ID: MB 280-436459/1-A
Client ID:
Sample Type: MB
Inject. Date: 08-Nov-2018 23:29:18 ALS Bottle#: 33 Worklist Smp#: 33
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: MB 280-436459/1-
Misc. Info.: 280-0075968-033
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Nov-2018 12:05:37 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0319

First Level Reviewer: fiedlerh Date: 09-Nov-2018 09:20:34

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2069	103.47

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-436459/2-A

Matrix: Water | Lab File ID: 11080034.D

Analysis Method: 8330B | Date Collected:

Extraction Method: 3535 | Date Extracted: 11/06/2018 12:18

Sample wt/vol: 500(mL) | Date Analyzed: 11/08/2018 23:52

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 100(uL) | GC Column: UltraCarb5uODS ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 436836 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
99-35-4	1,3,5-Trinitrobenzene	2.09		1.0	0.40	0.20
99-65-0	1,3-Dinitrobenzene	2.03		0.40	0.20	0.089
118-96-7	2,4,6-Trinitrotoluene	1.91		0.40	0.20	0.072
121-14-2	2,4-Dinitrotoluene	1.93		0.40	0.20	0.084
606-20-2	2,6-Dinitrotoluene	1.92		0.20	0.20	0.065
35572-78-2	2-Amino-4,6-dinitrotoluene	1.87		0.20	0.12	0.051
88-72-2	2-Nitrotoluene	1.75		0.40	0.20	0.086
99-08-1	3-Nitrotoluene	1.85		0.40	0.20	0.083
19406-51-0	4-Amino-2,6-dinitrotoluene	1.73		0.20	0.12	0.058
99-99-0	4-Nitrotoluene	1.87		1.0	0.40	0.20
2691-41-0	HMX	2.02		0.40	0.20	0.088
98-95-3	Nitrobenzene	1.93		0.40	0.20	0.091
55-63-0	Nitroglycerin	20.0		3.0	2.0	0.92
78-11-5	PETN	19.4		2.0	1.2	0.42
121-82-4	RDX	2.03		0.20	0.12	0.052
479-45-8	Tetryl	2.05		0.24	0.20	0.079

CAS NO.	SURROGATE	%REC	Q	LIMITS
528-29-0	1,2-Dinitrobenzene	102		83-119

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080034.D
Lims ID: LCS 280-436459/2-A
Client ID:
Sample Type: LCS
Inject. Date: 08-Nov-2018 23:52:15 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436459/2
Misc. Info.: 280-0075968-034
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Nov-2018 12:05:37 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0319

First Level Reviewer: fiedlerh Date: 09-Nov-2018 09:25:21

	Compound	Det	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/mL	OnCol Amt ug/mL	Flags
	2 HMX	1	6.652	6.653	-0.001	17187	0.2000	0.2023	
	5 RDX	1	7.765	7.759	0.006	21205	0.2000	0.2028	
	6 2,4,6-Trinitrophenol	1	8.119	8.119	0.000	17701	0.2000	0.2099	
$	7 1,2-Dinitrobenzene	1	8.752	8.746	0.006	26278	0.2000	0.2041	
	8 1,3,5-Trinitrobenzene	1	8.912	8.906	0.006	47802	0.2000	0.2093	
	9 1,3-Dinitrobenzene	1	9.572	9.566	0.006	61073	0.2000	0.2029	
	11 Nitrobenzene	1	9.958	9.953	0.005	38344	0.2000	0.1929	
	12 Tetryl	1	10.292	10.286	0.006	33460	0.2000	0.2047	
	13 Nitroglycerin	2	10.798	10.793	0.005	136067	2.00	2.00	
	14 2,4,6-Trinitrotoluene	1	11.252	11.246	0.006	41011	0.2000	0.1912	
	15 4-Amino-2,6-dinitrotoluene	1	11.438	11.426	0.012	28624	0.2000	0.1730	
	16 2-Amino-4,6-dinitrotoluene	1	11.725	11.713	0.012	37255	0.2000	0.1868	
	17 2,6-Dinitrotoluene	1	11.872	11.859	0.013	29419	0.2000	0.1922	
	18 2,4-Dinitrotoluene	1	12.072	12.059	0.013	57440	0.2000	0.1926	
	19 o-Nitrotoluene	1	12.925	12.906	0.019	23105	0.2000	0.1747	
	20 p-Nitrotoluene	1	13.365	13.346	0.019	21207	0.2000	0.1866	
	21 m-Nitrotoluene	1	13.972	13.946	0.026	27327	0.2000	0.1845	
	22 PETN	2	15.105	15.073	0.032	145162	2.00	1.94	

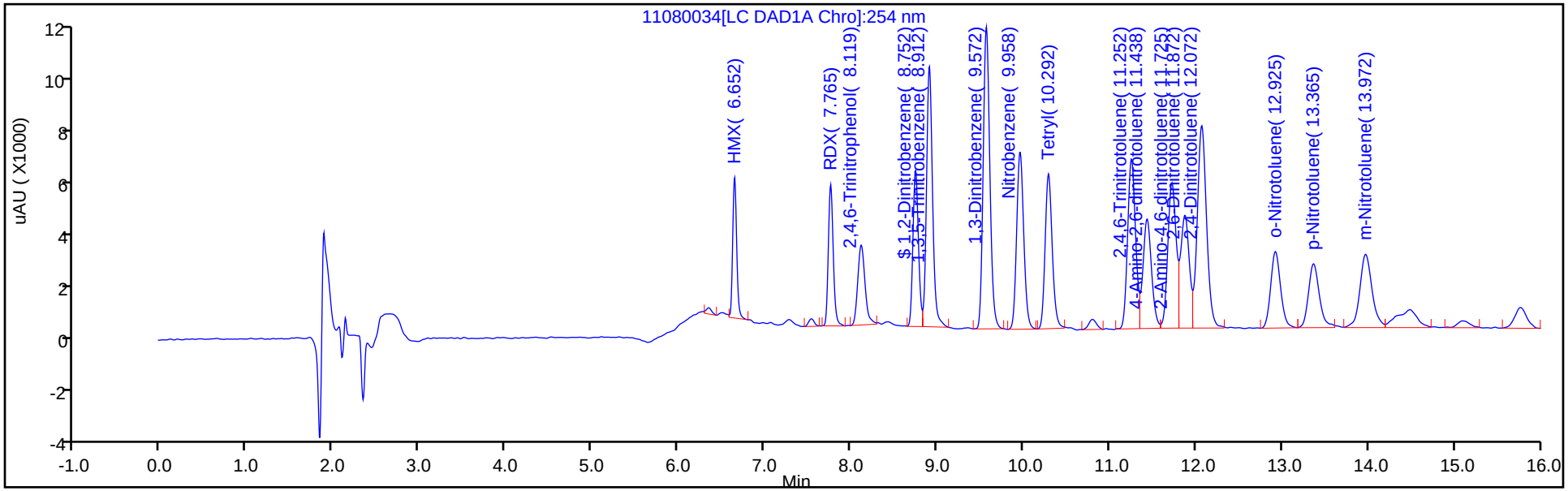
Report Date: 09-Nov-2018 12:05:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

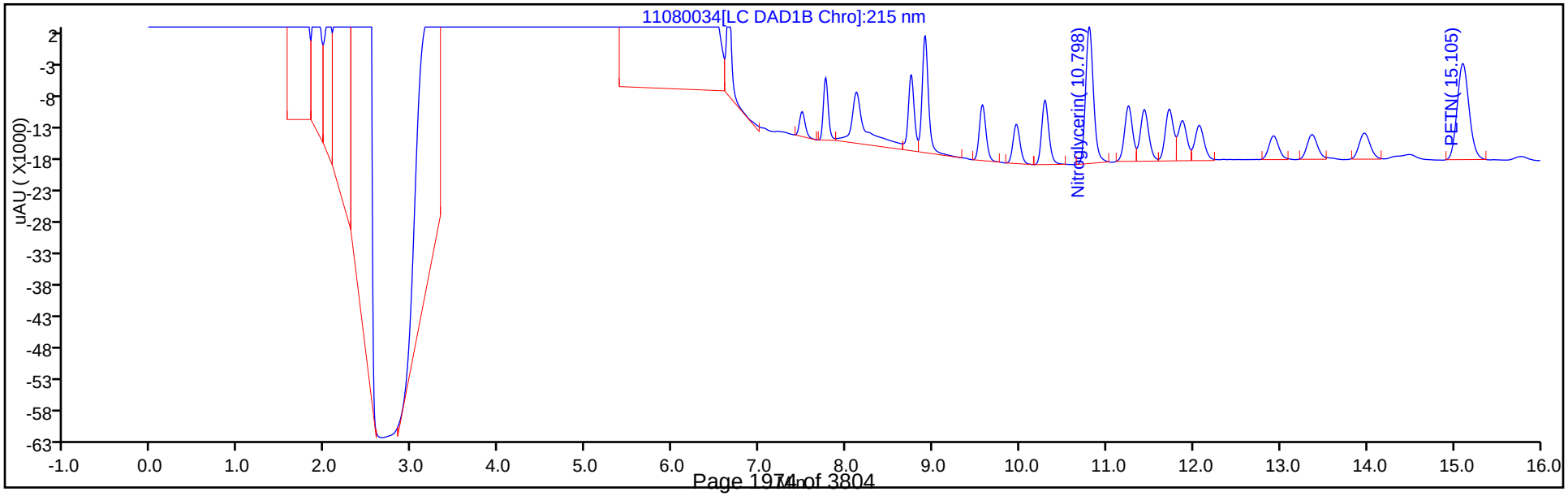
Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080034.D

Injection Date:	08-Nov-2018 23:52:15	Instrument ID:	CHHPLC_X3	Operator ID:	hkf
Lims ID:	LCS 280-436459/2-A			Worklist Smp#:	34
Client ID:					
Injection Vol:	100.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	34
Method:	8330_X3	Limit Group:	GCSV - 8330		

Column: UltraCarb5uODS (20) (4.60 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



TestAmerica Denver
Recovery Report

Data File: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\11080034.D
Lims ID: LCS 280-436459/2-A
Client ID:
Sample Type: LCS
Inject. Date: 08-Nov-2018 23:52:15 ALS Bottle#: 34 Worklist Smp#: 34
Injection Vol: 100.0 ul Dil. Factor: 1.0000
Sample Info: LCS 280-436459/2
Misc. Info.: 280-0075968-034
Operator ID: hkf Instrument ID: CHHPLC_X3

Method: \\ChromNA\Denver\ChromData\CHHPLC_X\20181108-75968.b\8330_X3.m
Limit Group: GCSV - 8330
Last Update: 09-Nov-2018 12:05:37 Calib Date: 21-Aug-2018 19:41:12
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\CHHPLC_X\20180821-73257.b\08210027.D

Column 1 : UltraCarb5uODS (20) (4.60 mm) Det: LC DAD1B, 254 nm
Process Host: CTX0319

First Level Reviewer: fiedlerh Date: 09-Nov-2018 09:25:21

Compound	Amount Added	Amount Recovered	% Rec.
$ 7 1,2-Dinitrobenzene	0.2000	0.2041	102.07

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 05/18/2018 10:34

Analysis Batch Number: 415256 End Date: 05/18/2018 18:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 280-415256/7		05/18/2018 10:34	1	05180007.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/8		05/18/2018 10:57	1	05180008.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/9		05/18/2018 11:19	1	05180009.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/10		05/18/2018 11:42	1	05180010.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/11		05/18/2018 12:05	1	05180011.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/12		05/18/2018 12:28	1	05180012.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/13		05/18/2018 12:51	1	05180013.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/14		05/18/2018 13:14	1	05180014.D	UltraCarb5uODS 4.6(mm)
ICV 280-415256/15		05/18/2018 13:37	1	05180015.D	UltraCarb5uODS 4.6(mm)
IC 280-415256/16		05/18/2018 14:00	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/17		05/18/2018 14:23	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/18		05/18/2018 14:46	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/19		05/18/2018 15:09	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/20		05/18/2018 15:32	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/21		05/18/2018 15:55	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/22		05/18/2018 16:18	1		UltraCarb5uODS 4.6(mm)
IC 280-415256/23		05/18/2018 16:41	1		UltraCarb5uODS 4.6(mm)
ICV 280-415256/24		05/18/2018 17:04	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/18/2018 17:27	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		05/18/2018 17:50	10		UltraCarb5uODS 4.6(mm)
CCV 280-415256/27		05/18/2018 18:13	1		UltraCarb5uODS 4.6(mm)
CCV 280-415256/28		05/18/2018 18:36	1		UltraCarb5uODS 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: CHHPLC_X3 Start Date: 11/08/2018 22:43

Analysis Batch Number: 436836 End Date: 11/09/2018 10:12

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-436836/31		11/08/2018 22:43	1	11080031.D	UltraCarb5uODS 4.6(mm)
CCV 280-436836/32		11/08/2018 23:06	1		UltraCarb5uODS 4.6(mm)
MB 280-436459/1-A		11/08/2018 23:29	1	11080033.D	UltraCarb5uODS 4.6(mm)
LCS 280-436459/2-A		11/08/2018 23:52	1	11080034.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 00:15	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 00:38	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 01:01	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 01:24	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 01:47	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 02:10	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 02:33	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 02:56	1		UltraCarb5uODS 4.6(mm)
CCV 280-436836/43		11/09/2018 03:19	1	11080043.D	UltraCarb5uODS 4.6(mm)
CCV 280-436836/44		11/09/2018 03:42	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 04:05	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 04:28	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 04:51	1		UltraCarb5uODS 4.6(mm)
280-116538-1		11/09/2018 05:14	1	11080049.D	UltraCarb5uODS 4.6(mm)
280-116538-2		11/09/2018 05:36	1	11080050.D	UltraCarb5uODS 4.6(mm)
280-116538-6		11/09/2018 05:59	1	11080051.D	UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 06:22	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 06:45	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 07:08	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 07:31	1		UltraCarb5uODS 4.6(mm)
CCV 280-436836/56		11/09/2018 07:54	1	11080056.D	UltraCarb5uODS 4.6(mm)
CCV 280-436836/57		11/09/2018 08:17	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 08:40	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 09:03	1		UltraCarb5uODS 4.6(mm)
ZZZZZ		11/09/2018 09:26	1		UltraCarb5uODS 4.6(mm)
CCV 280-436836/61		11/09/2018 09:49	1		UltraCarb5uODS 4.6(mm)
CCV 280-436836/62		11/09/2018 10:12	1		UltraCarb5uODS 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436459 Batch Start Date: 11/06/18 12:18 Batch Analyst: Becker, Chad B

Batch Method: 3535 Batch End Date: 11/06/18 14:43

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	8330 LCS 00082	8330Surrogate 00100
MB 280-436459/1		3535, 8330B				500 mL	5 mL		0.1 mL
LCS 280-436459/2		3535, 8330B				500 mL	5 mL	0.1 mL	0.1 mL
280-116538-F-1	SCLmw-001-181001-GW	3535, 8330B	T	694.6 g	284.9 g	409.7 mL	5 mL		0.1 mL
280-116538-F-2	SCLmw-003-181001-GW	3535, 8330B	T	750.9 g	284.9 g	466 mL	5 mL		0.1 mL
280-116538-A-6	DA1tw-001-181001-GW	3535, 8330B	T	718.6 g	258.3 g	460.3 mL	5 mL		0.1 mL

Batch Notes	
Acid ID	0.1%AAinACN_00119
Acid Name	0.1%AAinACN
Balance ID	24350888
Batch Comment	N. Elga, CaCl_Sol_00062 Reviewer: AP
First End time	11/06/2018 14:43
Pipette/Syringe/Dispenser ID	JiJi, soot
Solvent Lot #	Acetonitrile_00018, MeCl2_Cycl_00411
Solvent Name	ACN, MeCl2
SPE Cartridge Lot ID	004838184A / 004938274A
SPE Cartridge Type	Porapak Rdx WAT047220
Solid Phase Extraction Disk ID	S18-003691
Analyst ID - Spike Analyst	CB
Analyst ID - Spike Witness Analyst	AP
First Start time	11/06/2018 12:46

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 8330 Nitroguanidine

Nitroguanidine (HPLC) by Method 8330

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: S000006.D

Lab ID: LCS 320-259714/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Nitroguanidine	250	256	102	73-117	M

Column to be used to flag recovery and RPD values

FORM III 8330 Modified

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: S000008.D

Lab ID: 280-116538-1 MS Client ID: SCLmw-001-181001-GW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Nitroguanidine	250	6.0 U	253	101	73-117	M

Column to be used to flag recovery and RPD values

FORM III 8330 Modified

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: S000009.D

Lab ID: 280-116538-1 MSD Client ID: SCLmw-001-181001-GW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Nitroguanidine	250	248	99	2	15	73-117	M

Column to be used to flag recovery and RPD values

FORM III 8330 Modified

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Lab Sample ID: MB 320-259714/1-A

Matrix: Water Date Extracted: 11/16/2018 13:33

Lab File ID:(1) S000005.D Lab File ID:(2)

Date Analyzed:(1) 11/19/2018 17:36 Date Analyzed:(2)

Instrument ID:(1) LC12 Instrument ID:(2)

GC Column:(1) Zorbax CN ID: 4.6(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 320-259714/2-A	11/19/2018 17:52	
SCLmw-001-181001-GW	280-116538-1	11/19/2018 18:09	
SCLmw-001-181001-GW MS	280-116538-1 MS	11/19/2018 18:26	
SCLmw-001-181001-GW MSD	280-116538-1 MSD	11/19/2018 18:42	
SCLmw-003-181001-GW	280-116538-2	11/19/2018 18:59	

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW Lab Sample ID: 280-116538-1

Matrix: Water Lab File ID: S000007.D

Analysis Method: 8330 Modified Date Collected: 11/02/2018 10:45

Extraction Method: Filtration Date Extracted: 11/16/2018 13:33

Sample wt/vol: 10(mL) Date Analyzed: 11/19/2018 18:09

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 50(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 260209 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
556-88-7	Nitroguanidine	6.0	U	20	6.0	2.4

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000007.D				
Lims ID:	280-116538-A-1-A				
Client ID:	SCLmw-001-181001-GW				
Sample Type:	Client				
Inject. Date:	19-Nov-2018 18:09:37	ALS Bottle#:	14	Worklist Smp#:	7
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0067950-007				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\LC12 NGu Primary.m				
Limit Group:	LC 8330 Ngu ICAL				
Last Update:	19-Nov-2018 18:36:48	Calib Date:	09-Nov-2018 18:41:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D				
Column 1 :			Det: LC mwd1A, 263 nm		
Process Host:	CTX0313				
First Level Reviewer: ortizam		Date:	19-Nov-2018 18:36:55		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags

Reagents:

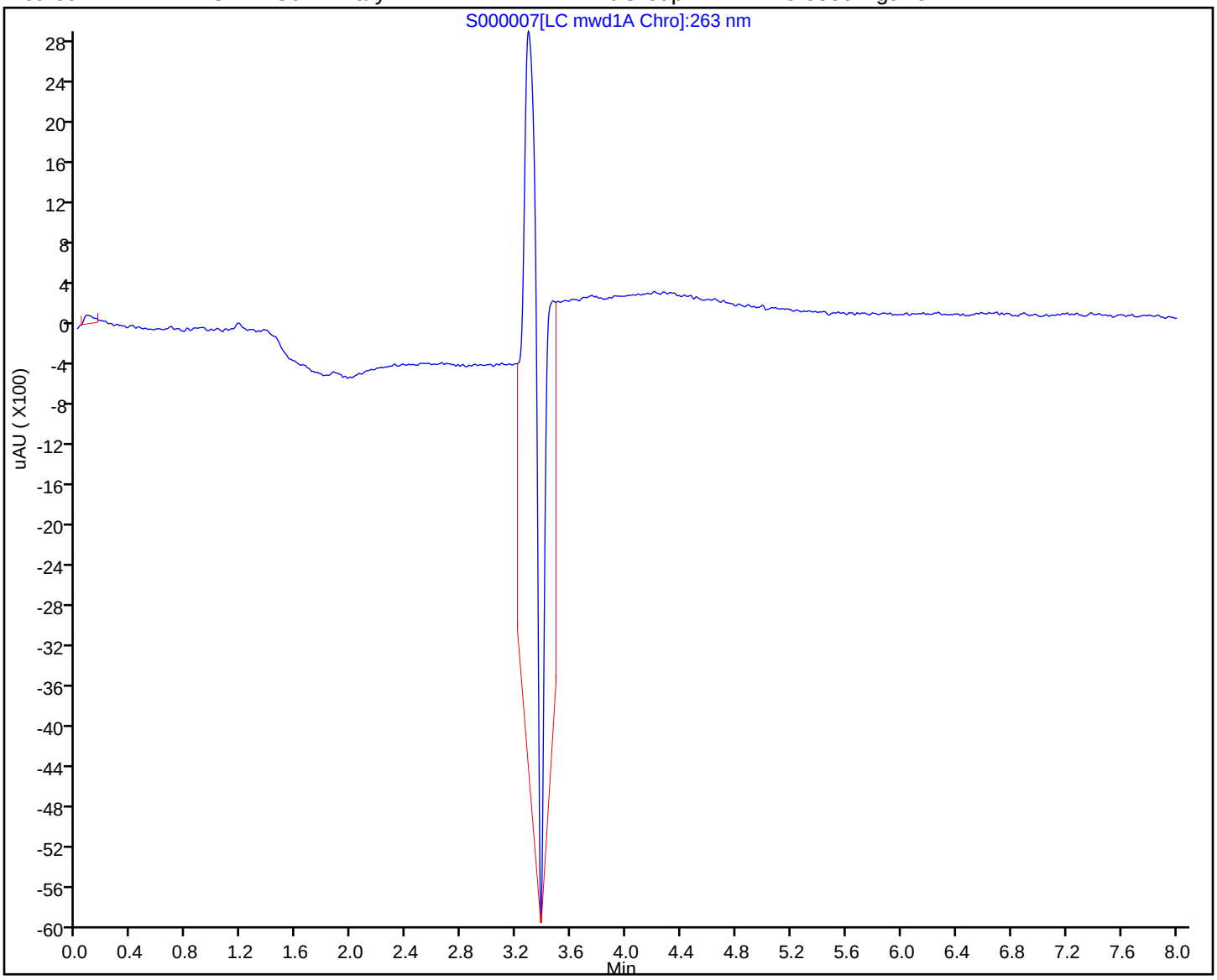
HPNQL4_00023 Amount Added: 1.00 Units: mL Run Reagent

Report Date: 19-Nov-2018 18:36:55 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000007.D

Injection Date:	19-Nov-2018 18:09:37	Instrument ID:	LC12		
Lims ID:	280-116538-A-1-A	Lab Sample ID:	320-116538-1		
Client ID:	SCLmw-001-181001-GW				
Operator ID:	AO	ALS Bottle#:	14	Worklist Smp#:	7
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-003-181001-GW Lab Sample ID: 280-116538-2

Matrix: Water Lab File ID: S000010.D

Analysis Method: 8330 Modified Date Collected: 11/02/2018 11:10

Extraction Method: Filtration Date Extracted: 11/16/2018 13:33

Sample wt/vol: 10(mL) Date Analyzed: 11/19/2018 18:59

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 50(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 260209 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
556-88-7	Nitroguanidine	6.0	U	20	6.0	2.4

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000010.D				
Lims ID:	280-116538-A-2-A				
Client ID:	SCLmw-003-181001-GW				
Sample Type:	Client				
Inject. Date:	19-Nov-2018 18:59:43	ALS Bottle#:	17	Worklist Smp#:	10
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0067950-010				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\LC12 NGu Primary.m				
Limit Group:	LC 8330 Ngu ICAL				
Last Update:	20-Nov-2018 09:41:01	Calib Date:	09-Nov-2018 18:41:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D				
Column 1 :			Det: LC mwd1A, 263 nm		
Process Host:	CTX0312				
First Level Reviewer: ortizam		Date:	20-Nov-2018 09:41:11		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ng/ml	Flags

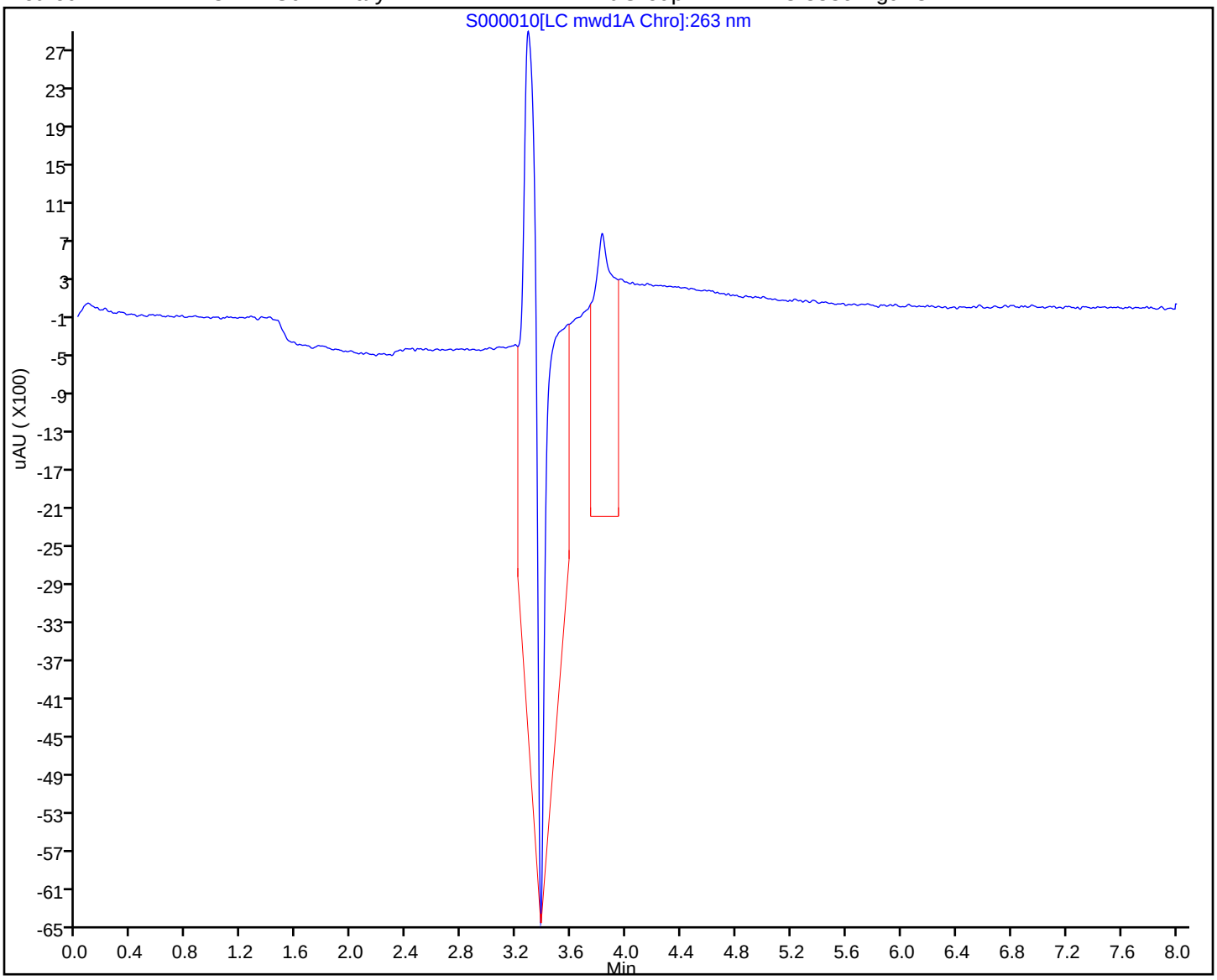
Reagents:

HPNQL4_00023 Amount Added: 1.00 Units: mL Run Reagent

Report Date: 20-Nov-2018 09:41:12 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Sacramento

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000010.D				
Injection Date:	19-Nov-2018 18:59:43	Instrument ID:	LC12		
Lims ID:	280-116538-A-2-A	Lab Sample ID:	320-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:	AO	ALS Bottle#:	17	Worklist Smp#:	10
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1 Analy Batch No.: 258267

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/09/2018 17:17 Calibration End Date: 11/09/2018 18:41 Calibration ID: 42148

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 320-258267/4	IA000004.D
Level 2	STD3 320-258267/5	IA000005.D
Level 3	STD4 320-258267/6	IA000006.D
Level 4	STD5 320-258267/7	IA000007.D
Level 5	STD6 320-258267/8	IA000008.D
Level 6	STD7 320-258267/9	IA000009.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Nitroguanidine	4.263	4.262	4.259	4.261	4.264	4.262					4.011 - 4.511	4.262

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1 Analy Batch No.: 258267

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/09/2018 17:17 Calibration End Date: 11/09/2018 18:41 Calibration ID: 42148

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 320-258267/4	IA000004.D
Level 2	STD3 320-258267/5	IA000005.D
Level 3	STD4 320-258267/6	IA000006.D
Level 4	STD5 320-258267/7	IA000007.D
Level 5	STD6 320-258267/8	IA000008.D
Level 6	STD7 320-258267/9	IA000009.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Nitroguanidine	75.050 74.786	72.820 75.451	73.830	74.595	Ave		74.4220000				1.3		20.0			

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1 Analy Batch No.: 258267

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/09/2018 17:17 Calibration End Date: 11/09/2018 18:41 Calibration ID: 42148

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD2 320-258267/4	IA000004.D
Level 2	STD3 320-258267/5	IA000005.D
Level 3	STD4 320-258267/6	IA000006.D
Level 4	STD5 320-258267/7	IA000007.D
Level 5	STD6 320-258267/8	IA000008.D
Level 6	STD7 320-258267/9	IA000009.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Nitroguanidine	Ave	1501 75451	3641	7383	14919	37393	20.0 1000	50.0	100	200	500

Curve Type Legend:
Ave = Average by Height

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000004.D				
Lims ID:	STD2				
Client ID:					
Sample Type:	IC	Calib Level:	2		
Inject. Date:	09-Nov-2018 17:17:54	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0067456-004				
Operator ID:	AO	Instrument ID:	LC12		
Sublist:	chrom-LC12 NGu Primary*sub1				
Method:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\LC12 NGu Primary.m				
Limit Group:	LC 8330 Ngu ICAL				
Last Update:	09-Nov-2018 19:51:02	Calib Date:	09-Nov-2018 18:41:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D				
Column 1 :			Det: LC mwd1A, 263 nm		
Process Host:	XAWRK001				
First Level Reviewer: ortizam		Date:	09-Nov-2018 17:39:25		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						M
4.263	4.261	0.002	1501H	20.0	20.2	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

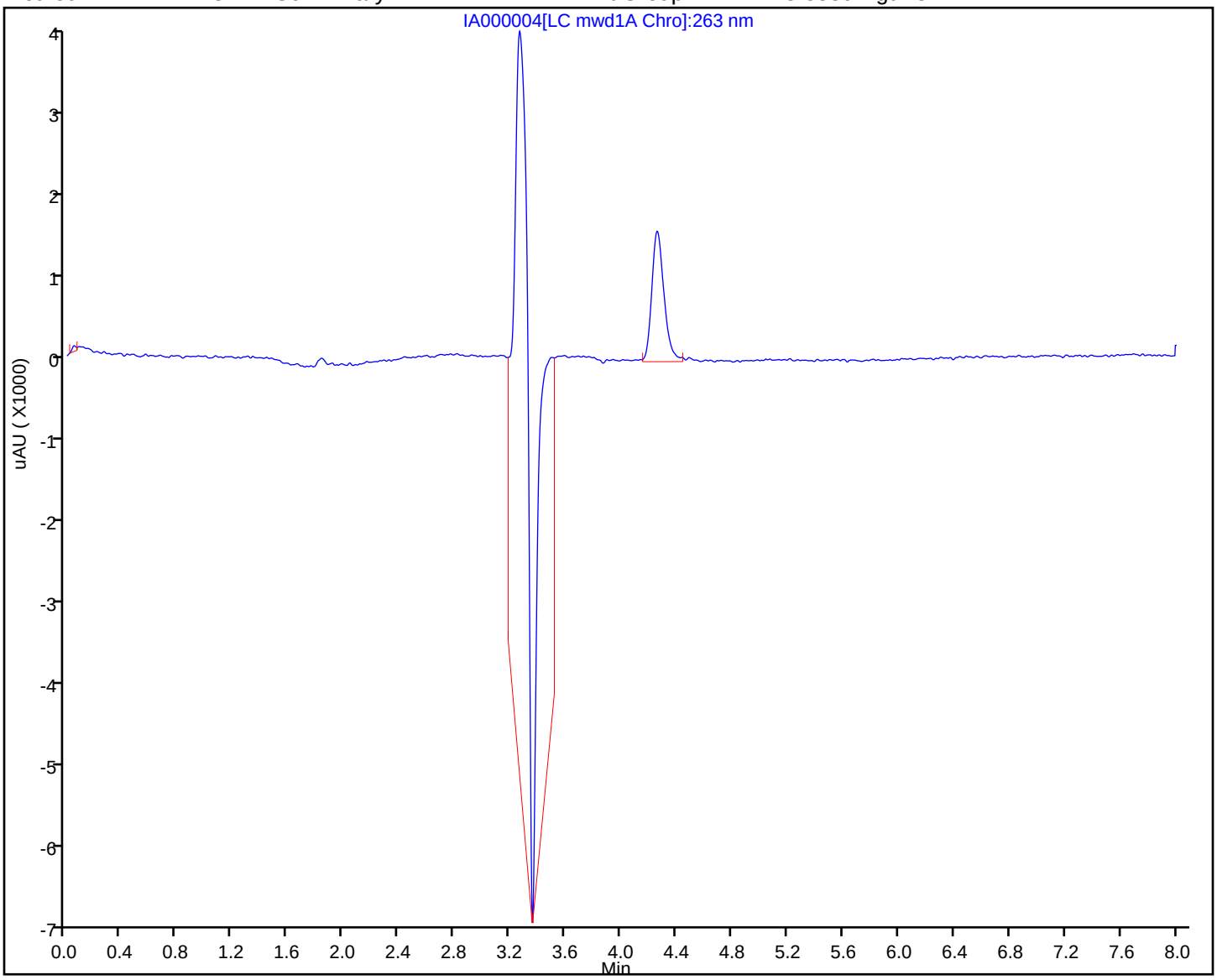
HPNQL2_00020 Amount Added: 1.00 Units: mL

Report Date: 09-Nov-2018 19:51:03 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000004.D

Injection Date:	09-Nov-2018 17:17:54	Instrument ID:	LC12		
Lims ID:	STD2				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	4
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

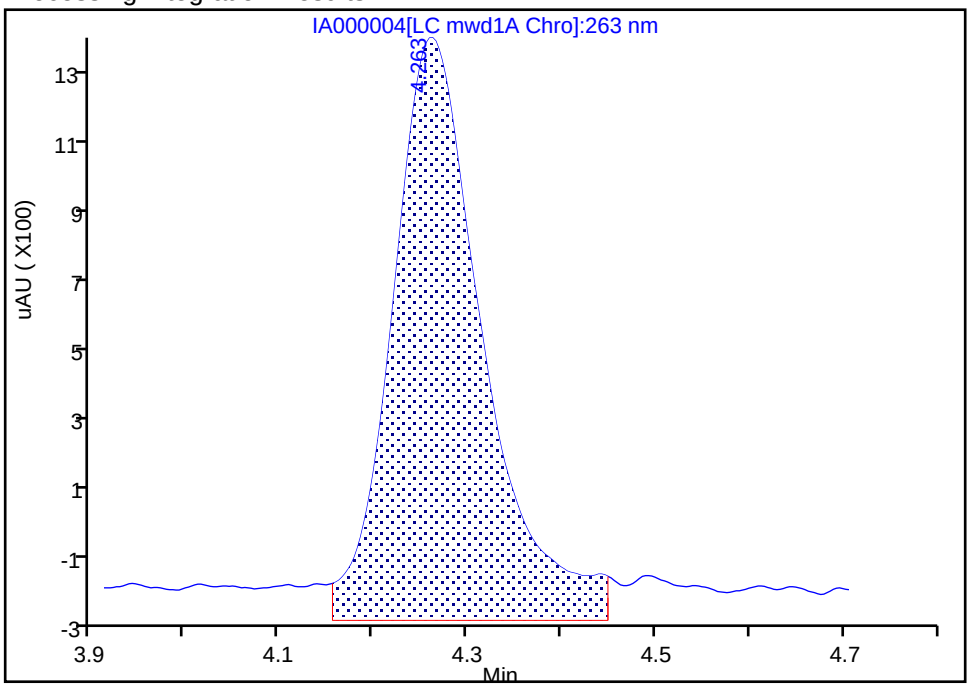
Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000004.D
Injection Date: 09-Nov-2018 17:17:54 Instrument ID: LC12
Lims ID: STD2
Client ID:
Operator ID: AO ALS Bottle#: 3 Worklist Smp#: 4
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Method: LC12 NGu Primary Limit Group: LC 8330 Ngu ICAL
Column: Detector LC mwd1A, 263 nm

1 Nitroguanidine, CAS: 556-88-7

Signal: 1

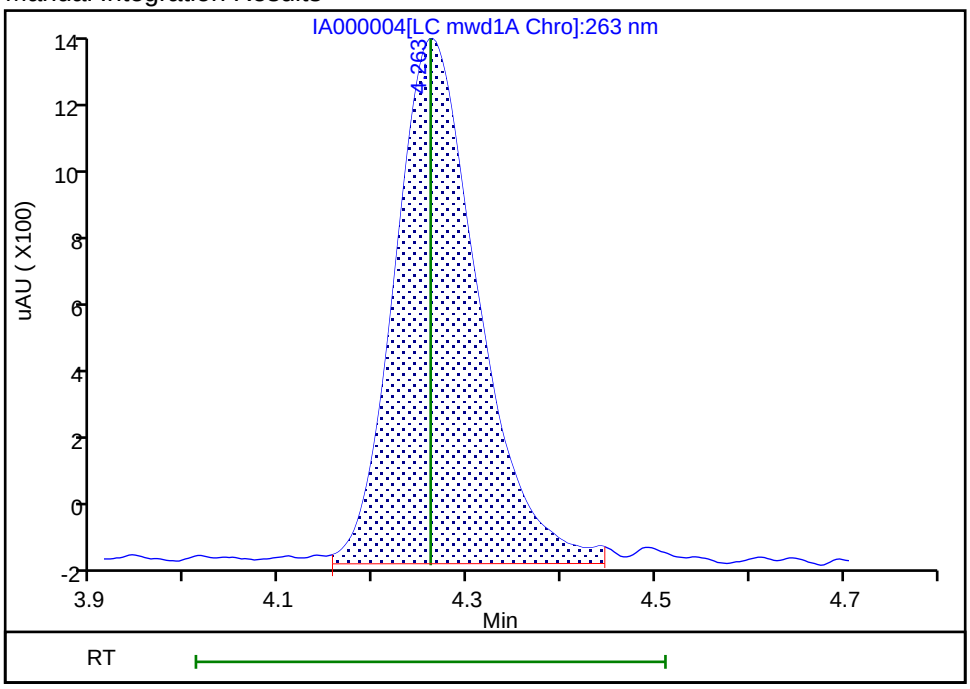
Processing Integration Results

RT: 4.26
Height: 1576
Amount: 20.000000
Amount Units: ng/ml



Manual Integration Results

RT: 4.26
Height: 1501
Amount: 20.168767
Amount Units: ng/ml



Reviewer: ortizam, 09-Nov-2018 17:39:24
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000005.D				
Lims ID:	STD3				
Client ID:					
Sample Type:	IC	Calib Level:	3		
Inject. Date:	09-Nov-2018 17:34:35	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0067456-005				
Operator ID:	AO	Instrument ID:	LC12		
Sublist:	chrom-LC12 NGu Primary*sub1				
Method:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\LC12 NGu Primary.m				
Limit Group:	LC 8330 Ngu ICAL				
Last Update:	09-Nov-2018 19:51:05	Calib Date:	09-Nov-2018 18:41:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D				
Column 1 :			Det: LC mwd1A, 263 nm		
Process Host:	XAWRK001				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						
4.262	4.261	0.001	3641H	50.0	48.9	

Reagents:

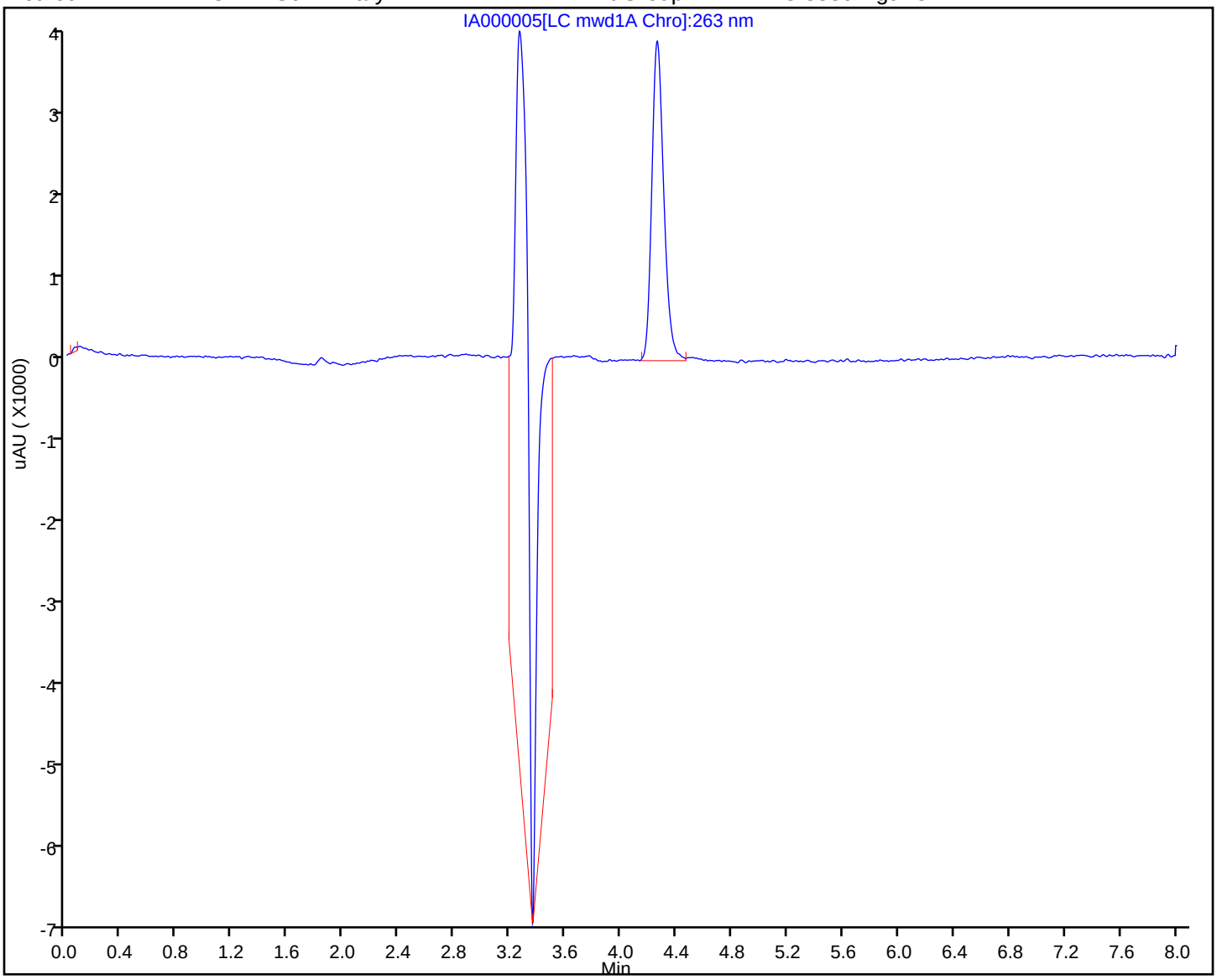
HPNQL3_00018 Amount Added: 1.00 Units: mL

Report Date: 09-Nov-2018 19:51:05 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000005.D

Injection Date:	09-Nov-2018 17:34:35	Instrument ID:	LC12		
Lims ID:	STD3				
Client ID:					
Operator ID:	AO	ALS Bottle#:	4	Worklist Smp#:	5
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000006.D				
Lims ID:	STD4				
Client ID:					
Sample Type:	IC	Calib Level:	4		
Inject. Date:	09-Nov-2018 17:51:15	ALS Bottle#:	5	Worklist Smp#:	6
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0067456-006				
Operator ID:	AO	Instrument ID:	LC12		
Sublist:	chrom-LC12 NGu Primary*sub1				
Method:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\LC12 NGu Primary.m				
Limit Group:	LC 8330 Ngu ICAL				
Last Update:	09-Nov-2018 19:51:06	Calib Date:	09-Nov-2018 18:41:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D				
Column 1 :			Det: LC mwd1A, 263 nm		
Process Host:	XAWRK001				
First Level Reviewer: ortizam		Date:	09-Nov-2018 18:13:41		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						M
4.259	4.261	-0.002	7383H	100.0	99.2	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

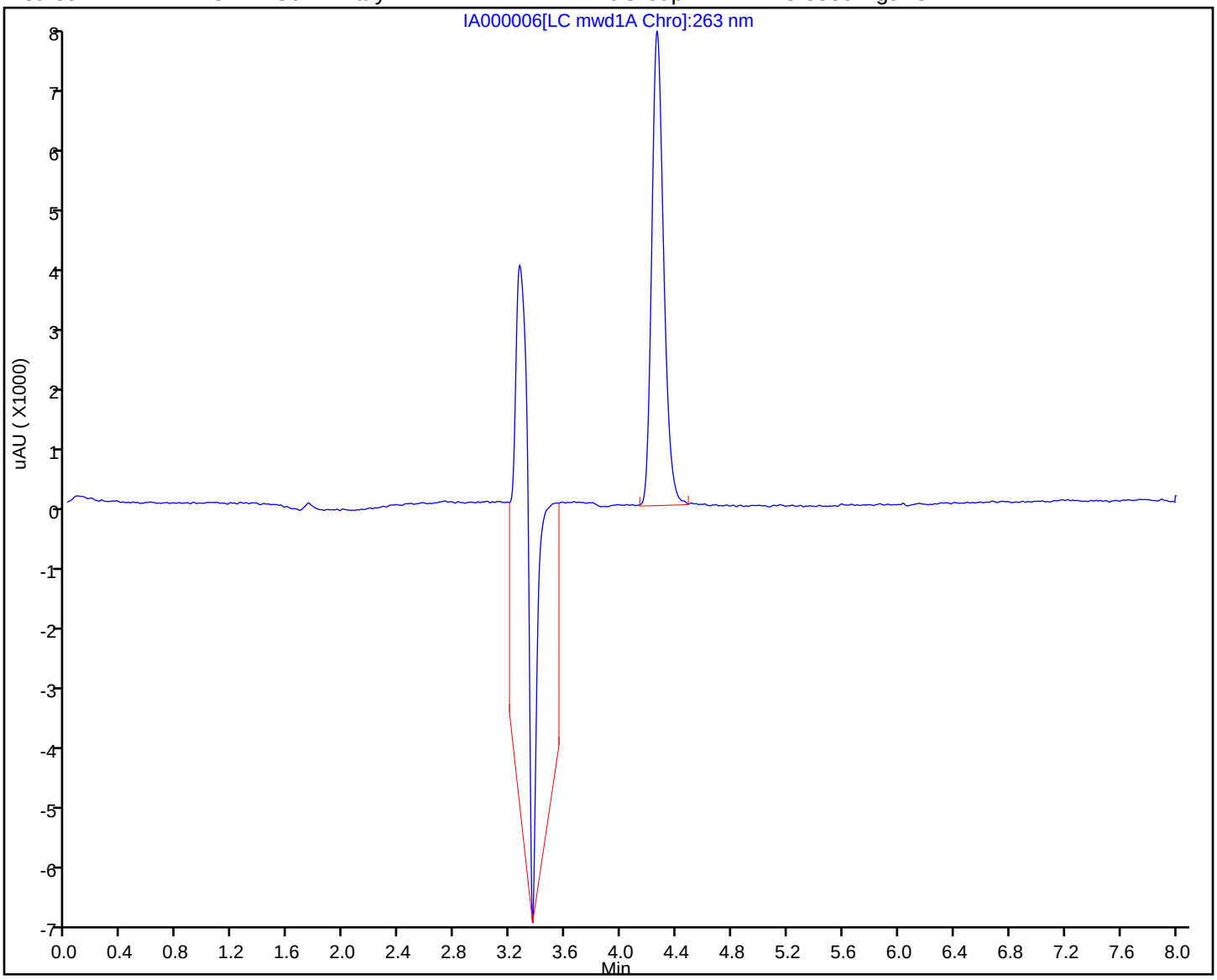
HPNQL4_00024 Amount Added: 1.00 Units: mL

Report Date: 09-Nov-2018 19:51:07 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000006.D

Injection Date:	09-Nov-2018 17:51:15	Instrument ID:	LC12		
Lims ID:	STD4				
Client ID:					
Operator ID:	AO	ALS Bottle#:	5	Worklist Smp#:	6
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

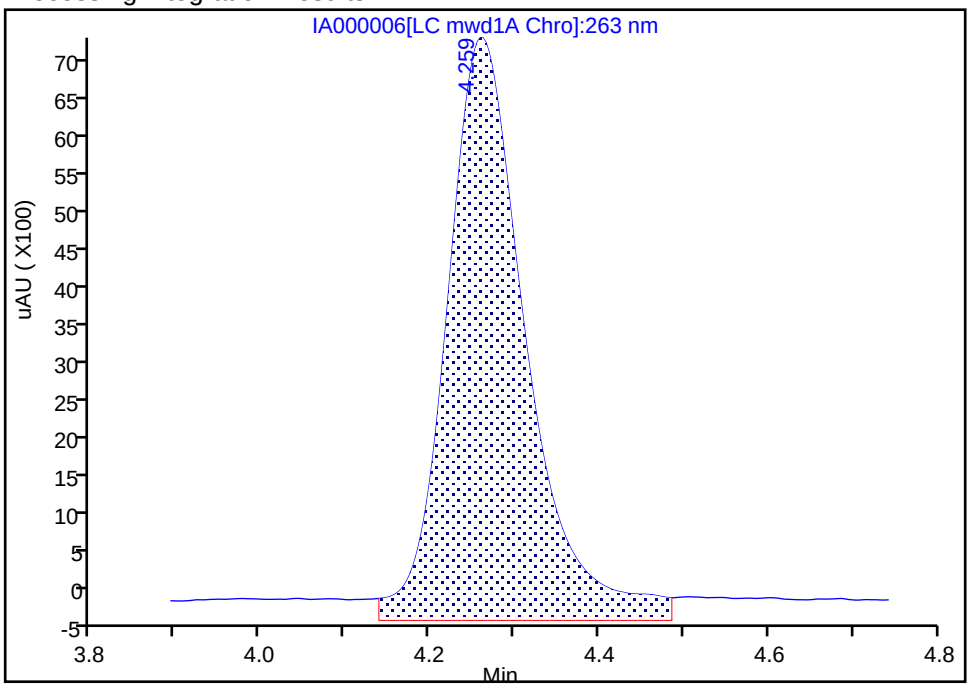
Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000006.D
Injection Date: 09-Nov-2018 17:51:15 Instrument ID: LC12
Lims ID: STD4
Client ID:
Operator ID: AO ALS Bottle#: 5 Worklist Smp#: 6
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Method: LC12 NGu Primary Limit Group: LC 8330 Ngu ICAL
Column: Detector LC mwd1A, 263 nm

1 Nitroguanidine, CAS: 556-88-7

Signal: 1

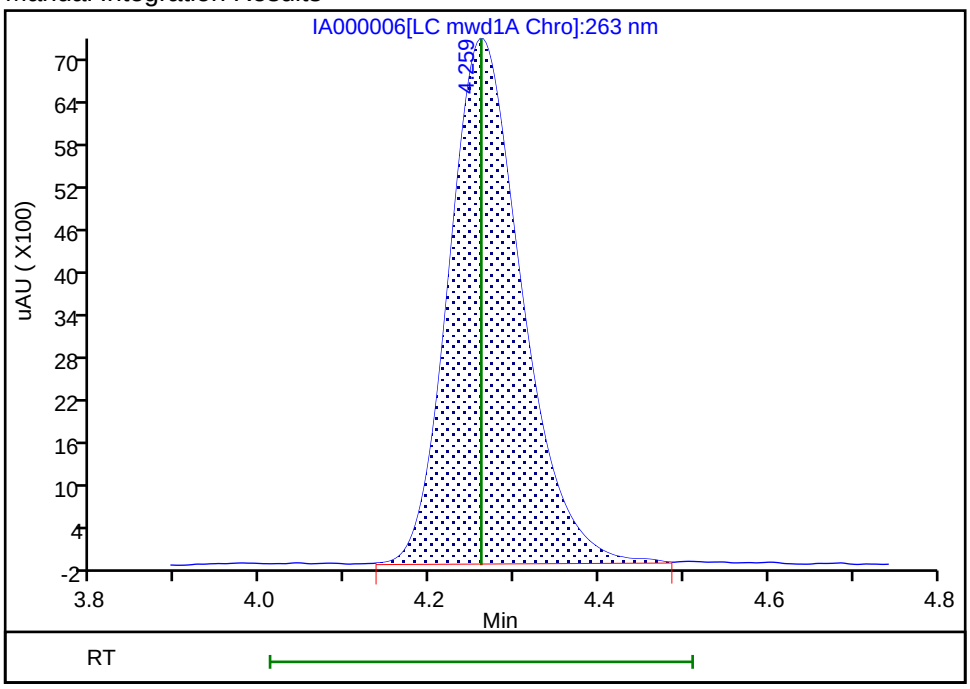
Processing Integration Results

RT: 4.26
Height: 7655
Amount: 102.3305
Amount Units: ng/ml



Manual Integration Results

RT: 4.26
Height: 7383
Amount: 99.204536
Amount Units: ng/ml



Reviewer: ortizam, 09-Nov-2018 18:13:40
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000007.D				
Lims ID:	STD5				
Client ID:					
Sample Type:	IC	Calib Level:	5		
Inject. Date:	09-Nov-2018 18:08:02	ALS Bottle#:	6	Worklist Smp#:	7
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0067456-007				
Operator ID:	AO	Instrument ID:	LC12		
Sublist:	chrom-LC12 NGu Primary*sub1				
Method:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\LC12 NGu Primary.m				
Limit Group:	LC 8330 Ngu ICAL				
Last Update:	09-Nov-2018 19:51:07	Calib Date:	09-Nov-2018 18:41:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D				
Column 1 :			Det: LC mwd1A, 263 nm		
Process Host:	XAWRK001				
First Level Reviewer: ortizam		Date:	09-Nov-2018 18:47:16		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						M
4.261	4.261	0.000	14919H	200.0	200.5	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

HPNQL5_00022 Amount Added: 1.00 Units: mL

Report Date: 09-Nov-2018 19:51:08 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000007.D

Injection Date: 09-Nov-2018 18:08:02 Instrument ID: LC12

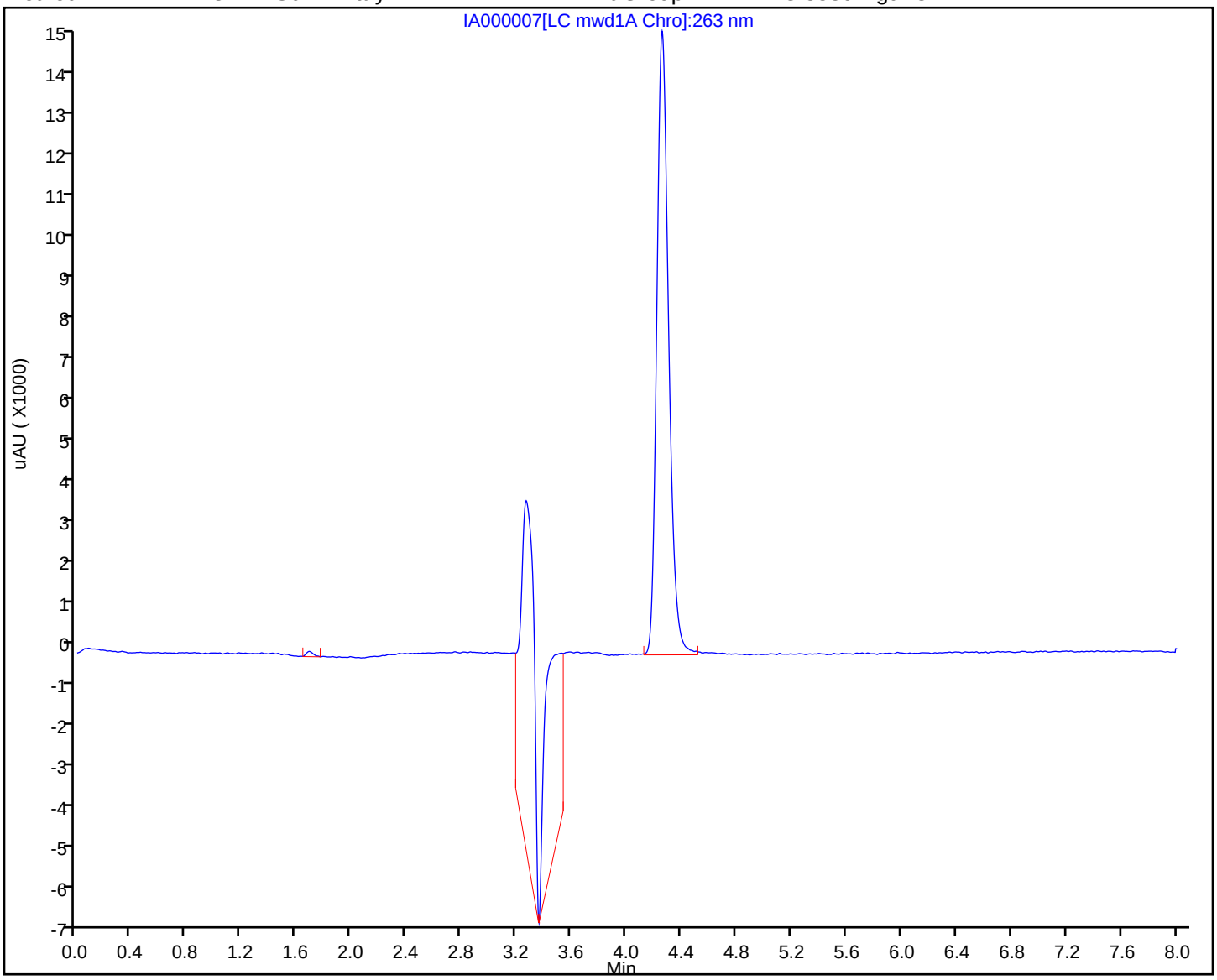
Lims ID: STD5

Client ID:

Operator ID: AO ALS Bottle#: 6 Worklist Smp#: 7

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: LC12 NGu Primary Limit Group: LC 8330 Ngu ICAL



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

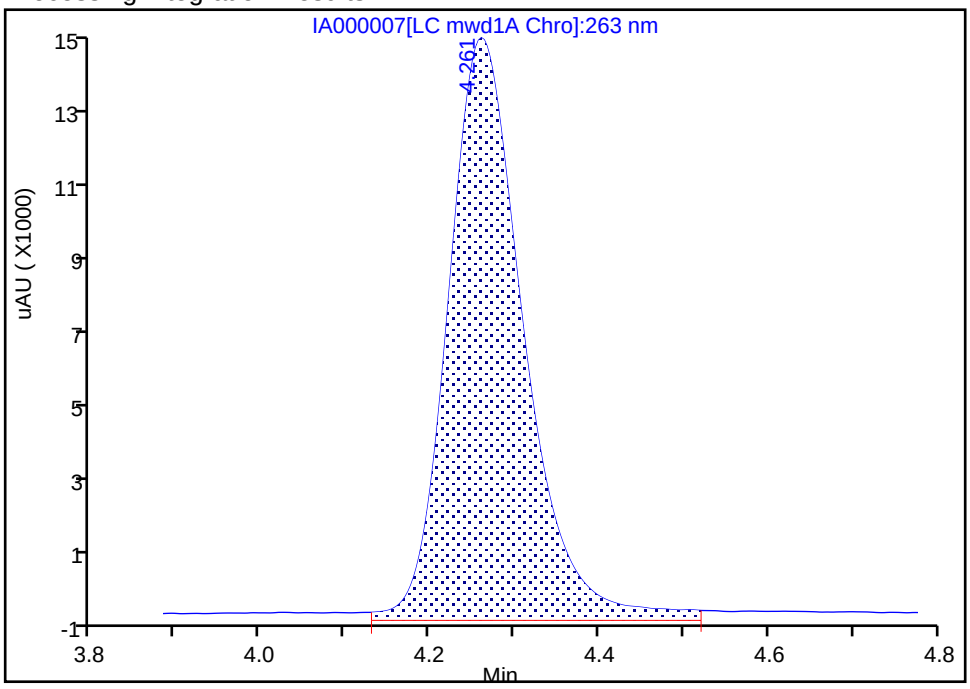
Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000007.D
Injection Date: 09-Nov-2018 18:08:02 Instrument ID: LC12
Lims ID: STD5
Client ID:
Operator ID: AO ALS Bottle#: 6 Worklist Smp#: 7
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Method: LC12 NGu Primary Limit Group: LC 8330 Ngu ICAL
Column: Detector LC mwd1A, 263 nm

1 Nitroguanidine, CAS: 556-88-7

Signal: 1

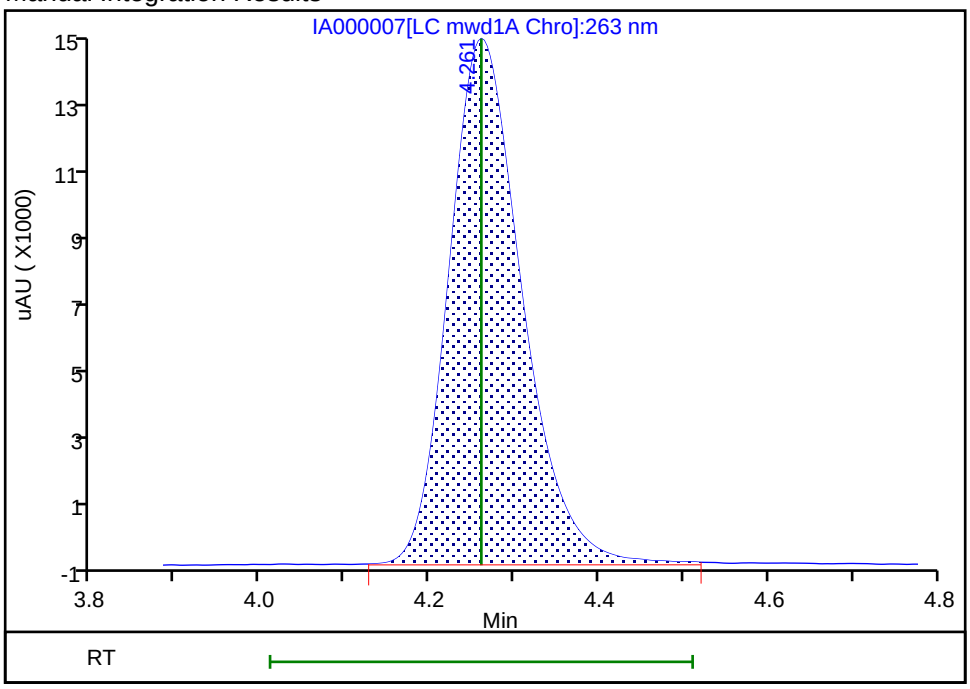
Processing Integration Results

RT: 4.26
Height: 15103
Amount: 202.9968
Amount Units: ng/ml



Manual Integration Results

RT: 4.26
Height: 14919
Amount: 200.4649
Amount Units: ng/ml



Reviewer: ortizam, 09-Nov-2018 18:47:07
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000008.D				
Lims ID:	STD6				
Client ID:					
Sample Type:	IC	Calib Level:	6		
Inject. Date:	09-Nov-2018 18:24:51	ALS Bottle#:	7	Worklist Smp#:	8
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0067456-008				
Operator ID:	AO	Instrument ID:	LC12		
Sublist:	chrom-LC12 NGu Primary*sub1				
Method:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\LC12 NGu Primary.m				
Limit Group:	LC 8330 Ngu ICAL				
Last Update:	09-Nov-2018 19:51:09	Calib Date:	09-Nov-2018 18:41:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D				
Column 1 :			Det: LC mwd1A, 263 nm		
Process Host:	XAWRK001				

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						
4.264	4.261	0.003	37393H	500.0	502.4	

Reagents:

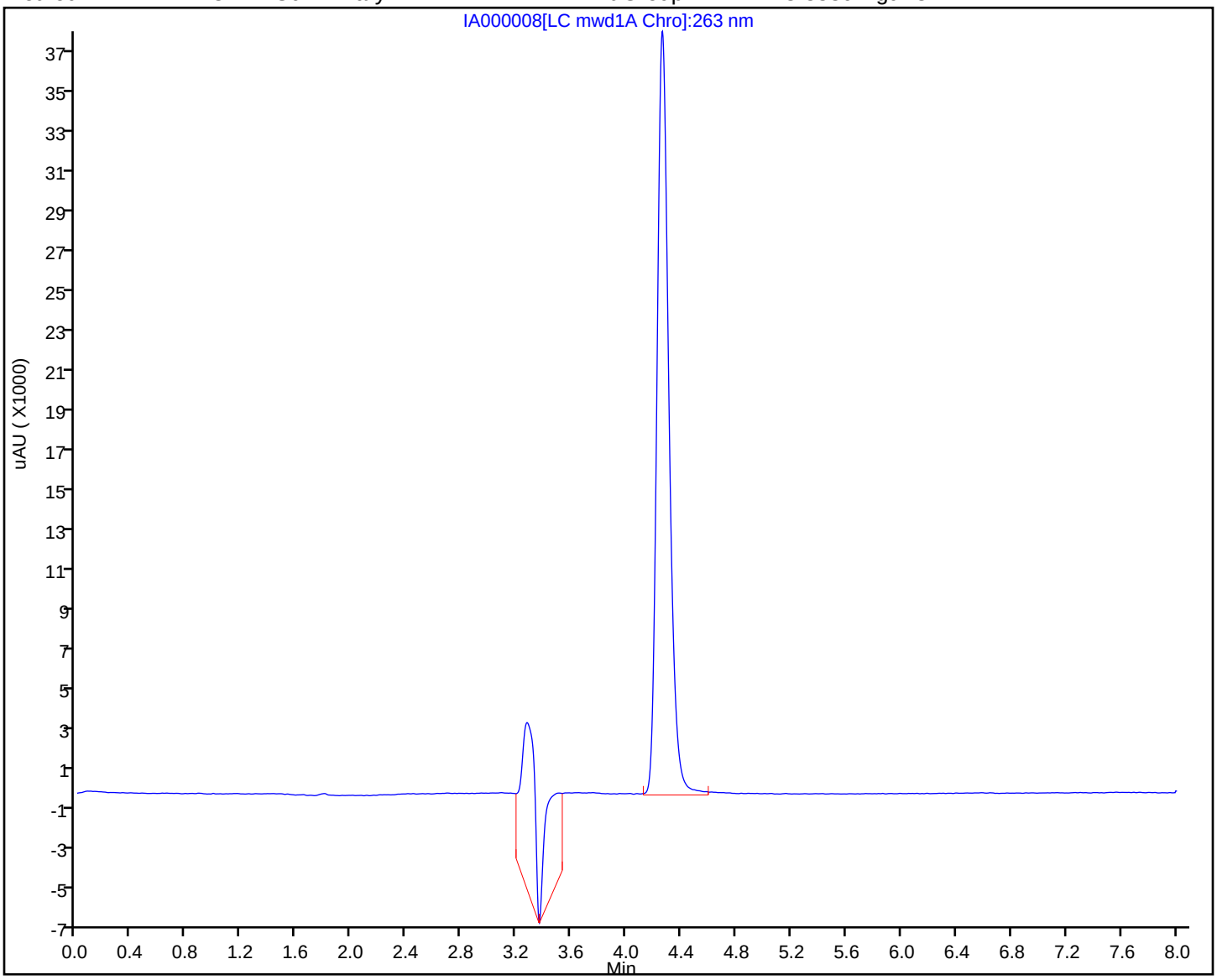
HPNQL6_00018 Amount Added: 1.00 Units: mL

Report Date: 09-Nov-2018 19:51:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000008.D

Injection Date:	09-Nov-2018 18:24:51	Instrument ID:	LC12		
Lims ID:	STD6				
Client ID:					
Operator ID:	AO	ALS Bottle#:	7	Worklist Smp#:	8
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 09-Nov-2018 18:41:35 ALS Bottle#: 8 Worklist Smp#: 9
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: 320-0067456-009
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12 NGu Primary*sub1

Method: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\LC12 NGu Primary.m
Limit Group: LC 8330 Ngu ICAL
Last Update: 09-Nov-2018 19:51:15 Calib Date: 09-Nov-2018 18:41:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D

Column 1 : Det: LC mwd1A, 263 nm
Process Host: XAWRK001

First Level Reviewer: ortizam Date: 09-Nov-2018 19:51:15

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						
4.262	4.261	0.001	75451H	1000.0	1013.8	

Reagents:

HPNQL7_00018 Amount Added: 1.00 Units: mL

Report Date: 09-Nov-2018 19:51:15 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D

Injection Date: 09-Nov-2018 18:41:35 Instrument ID: LC12

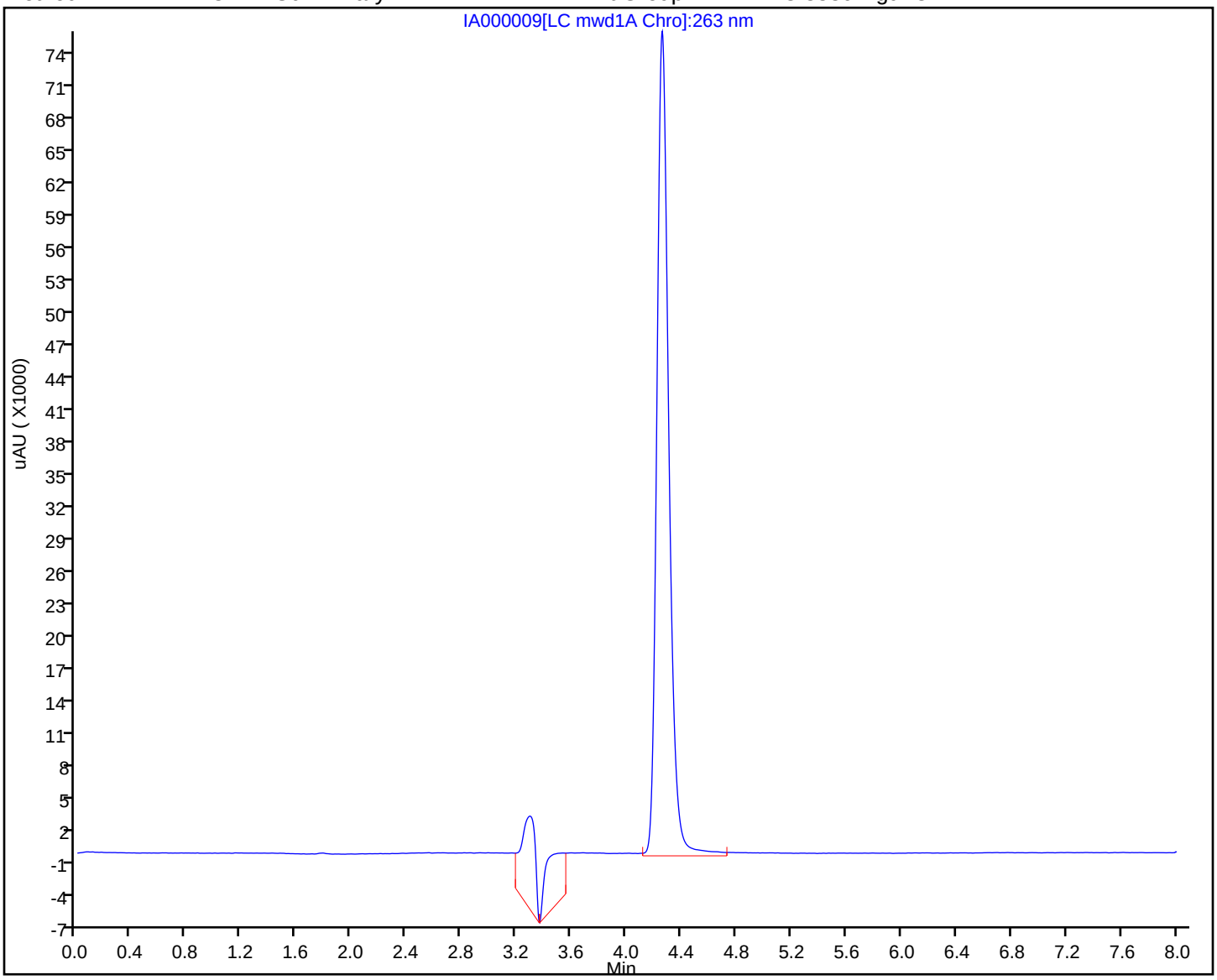
Lims ID: STD7

Client ID:

Operator ID: AO ALS Bottle#: 8 Worklist Smp#: 9

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: LC12 NGu Primary Limit Group: LC 8330 Ngu ICAL



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 320-258267/11 Calibration Date: 11/09/2018 19:15

Instrument ID: LC12 Calib Start Date: 11/09/2018 17:17

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/09/2018 18:41

Lab File ID: IA000011.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitroguanidine	Ave	74.42	73.67		495	500	-1.0	15.0

FORM VII 8330 Modified

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 320-258267/11 Calibration Date: 11/09/2018 19:15

Instrument ID: LC12 Calib Start Date: 11/09/2018 17:17

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/09/2018 18:41

Lab File ID: IA000011.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitroguanidine	4.26	4.02	4.52

Form VII 8330 Modified

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000011.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 09-Nov-2018 19:15:05 ALS Bottle#: 9 Worklist Smp#: 11
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: 320-0067456-011
Operator ID: AO Instrument ID: LC12
Sublist:

Method: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\LC12 NGu Primary.m
Limit Group: LC 8330 Ngu ICAL
Last Update: 10-Nov-2018 09:12:39 Calib Date: 09-Nov-2018 18:41:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D

Column 1 : Det: LC mwd1A, 263 nm
Process Host: CTX0303

First Level Reviewer: ortizam Date: 09-Nov-2018 19:50:42

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						
4.262	4.266	-0.004	36835H	500.0	494.9	

Reagents:

HPNQIC_00018 Amount Added: 1.00 Units: ml

Report Date: 12-Nov-2018 11:05:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000011.D

Injection Date: 09-Nov-2018 19:15:05 Instrument ID: LC12

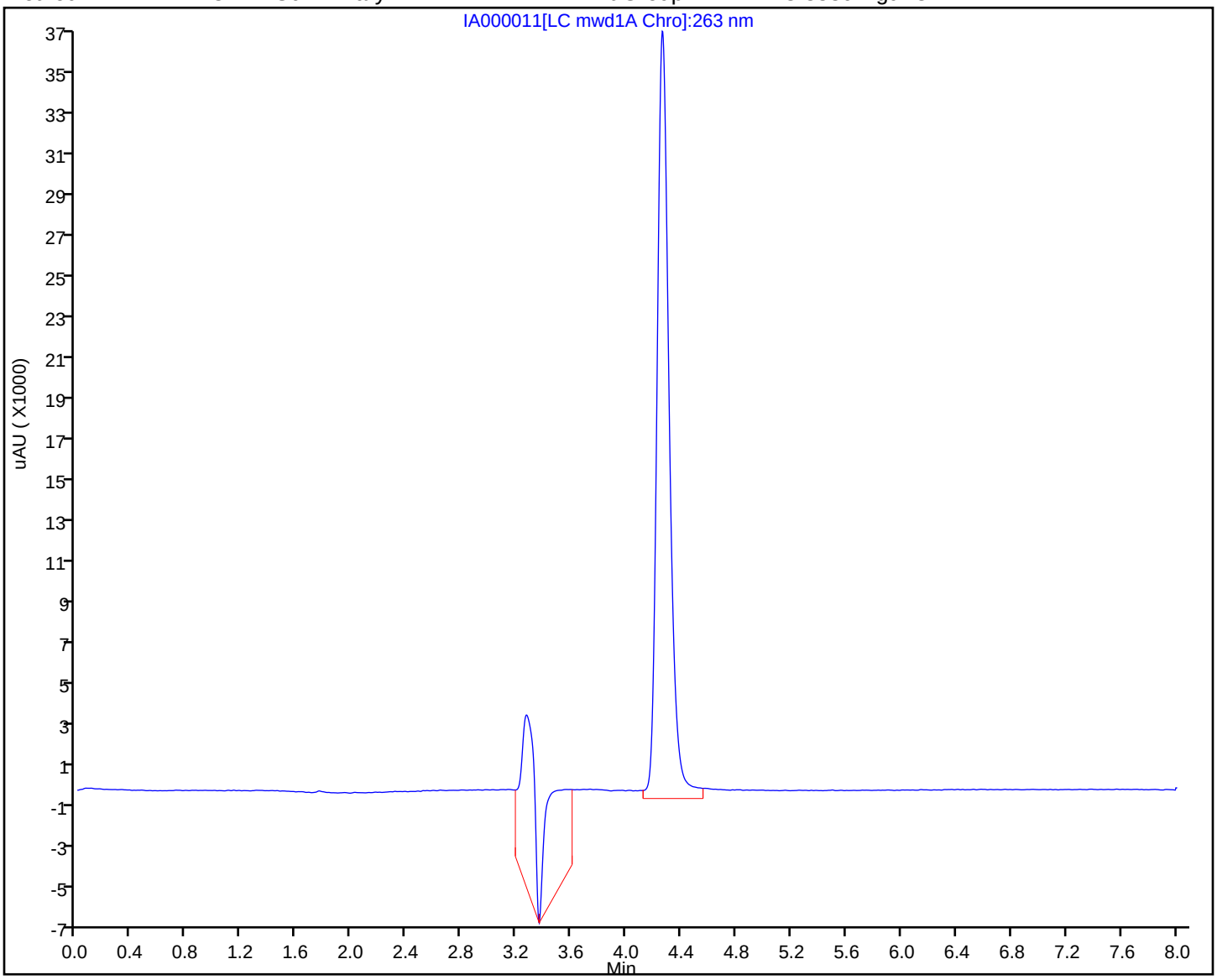
Lims ID: ICV

Client ID:

Operator ID: AO ALS Bottle#: 9 Worklist Smp#: 11

Injection Vol: 50.0 ul Dil. Factor: 1.0000

Method: LC12 NGu Primary Limit Group: LC 8330 Ngu ICAL



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Lab Sample ID: LODV 320-258267/12 Calibration Date: 11/09/2018 20:55

Instrument ID: LC12 Calib Start Date: 11/09/2018 17:17

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/09/2018 18:41

Lab File ID: IA000013.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitroguanidine	Ave	74.42	75.70		20.3	20.0	1.7	

FORM VII 8330 Modified

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Lab Sample ID: LODV 320-258267/12 Calibration Date: 11/09/2018 20:55

Instrument ID: LC12 Calib Start Date: 11/09/2018 17:17

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/09/2018 18:41

Lab File ID: IA000013.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitroguanidine	4.26	4.02	4.52

Form VII 8330 Modified

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000013.D
Lims ID: LODV
Client ID:
Sample Type: LODV
Inject. Date: 09-Nov-2018 20:55:12 ALS Bottle#: 3 Worklist Smp#: 12
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: 320-0067456-012
Operator ID: AO Instrument ID: LC12

Method: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\LC12 NGu Primary.m
Limit Group: LC 8330 Ngu ICAL
Last Update: 10-Nov-2018 09:12:39 Calib Date: 09-Nov-2018 18:41:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D

Column 1 : Det: LC mwd1A, 263 nm
Process Host: CTX0303

First Level Reviewer: ortizam Date: 10-Nov-2018 09:08:35

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						M
4.263	4.266	-0.003	1514H	20.0	20.3	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

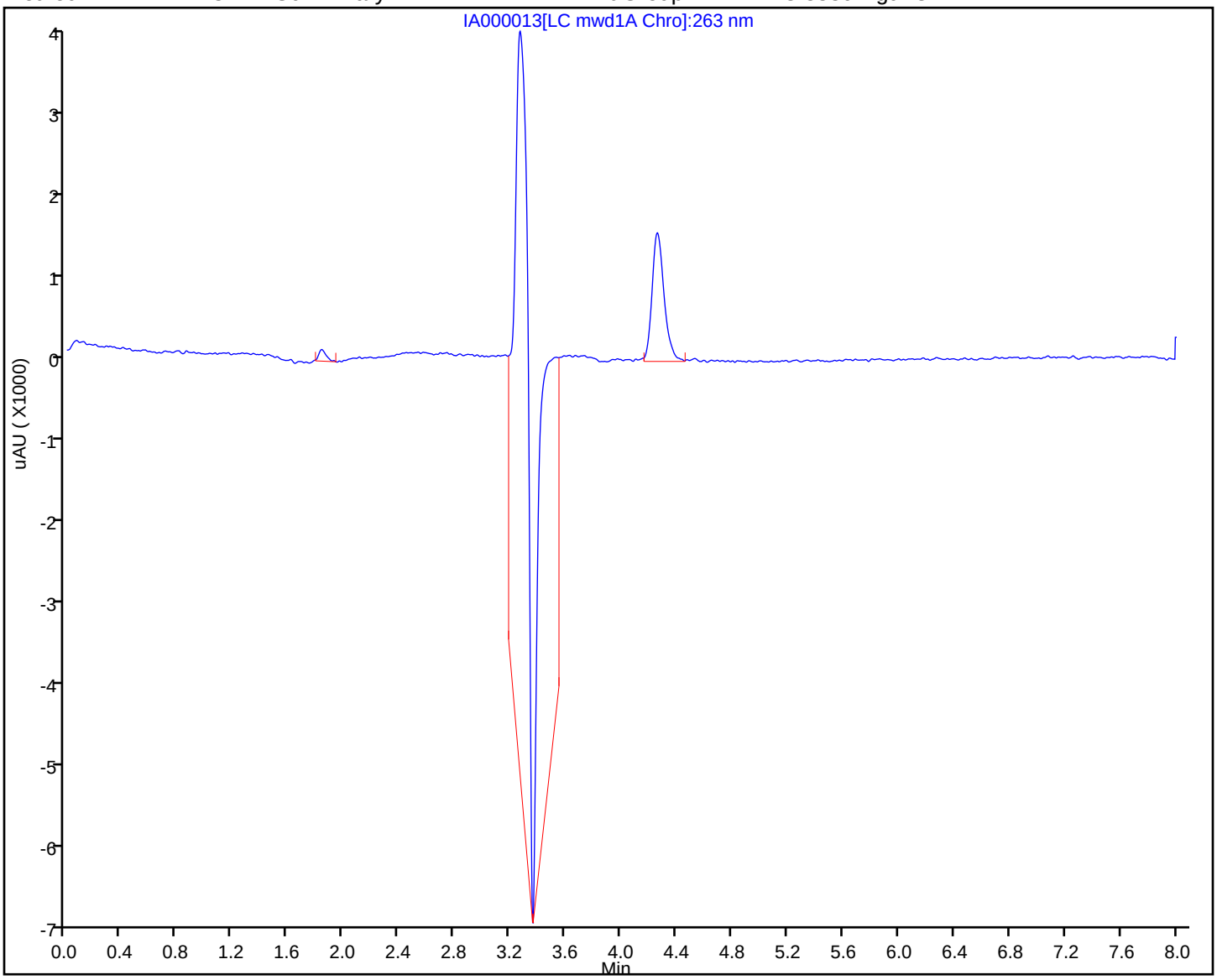
HPNQL2_00020 Amount Added: 1.00 Units: mL

Report Date: 12-Nov-2018 11:05:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000013.D

Injection Date:	09-Nov-2018 20:55:12	Instrument ID:	LC12		
Lims ID:	LODV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	12
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

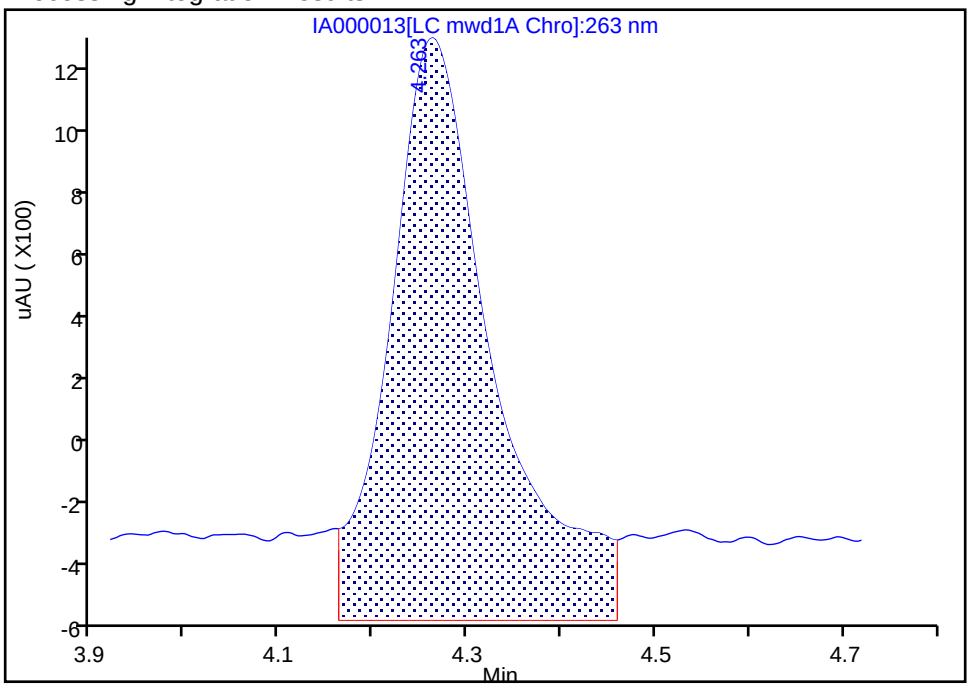
Data File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000013.D
Injection Date: 09-Nov-2018 20:55:12 Instrument ID: LC12
Lims ID: LODV
Client ID:
Operator ID: AO ALS Bottle#: 3 Worklist Smp#: 12
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Method: LC12 NGu Primary Limit Group: LC 8330 Ngu ICAL
Column: Detector LC mwd1A, 263 nm

1 Nitroguanidine, CAS: 556-88-7

Signal: 1

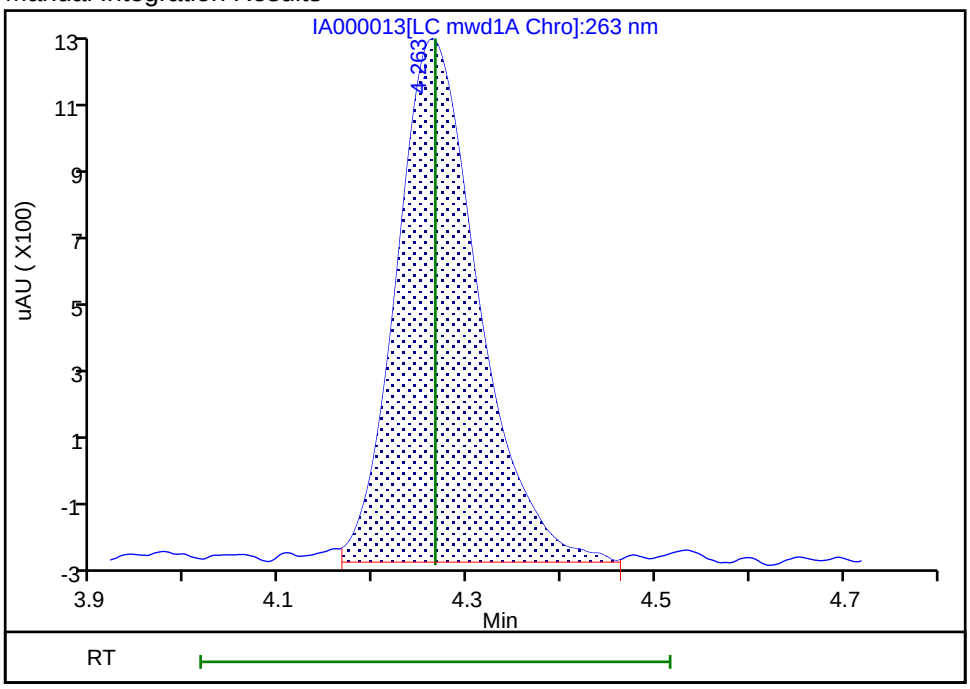
Processing Integration Results

RT: 4.26
Height: 1751
Amount: 23.527989
Amount Units: ng/ml



Manual Integration Results

RT: 4.26
Height: 1514
Amount: 20.343447
Amount Units: ng/ml



Reviewer: ortizam, 10-Nov-2018 09:08:34
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVRT 320-260209/3 Calibration Date: 11/19/2018 17:02

Instrument ID: LC12 Calib Start Date: 11/09/2018 17:17

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/09/2018 18:41

Lab File ID: S000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitroguanidine	Ave	74.42	77.33		208	200	3.9	15.0

FORM VII 8330 Modified

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVRT 320-260209/3 Calibration Date: 11/19/2018 17:02

Instrument ID: LC12 Calib Start Date: 11/09/2018 17:17

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/09/2018 18:41

Lab File ID: S000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitroguanidine	4.22	3.97	4.47

Form VII 8330 Modified

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000003.D				
Lims ID:	CCVRT				
Client ID:					
Sample Type:	CCVRT				
Inject. Date:	19-Nov-2018 17:02:50	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0067950-003				
Operator ID:	AO	Instrument ID:	LC12		
Sublist:	chrom-LC12 NGu Primary*sub1				
Method:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\LC12 NGu Primary.m				
Limit Group:	LC 8330 Ngu ICAL				
Last Update:	20-Nov-2018 10:14:01	Calib Date:	09-Nov-2018 18:41:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D				
Column 1 :			Det: LC mwd1A, 263 nm		
Process Host:	CTX0312				
First Level Reviewer: ortizam		Date:	20-Nov-2018 10:14:01		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						
4.216	4.216	0.000	15466H	200.0	207.8	

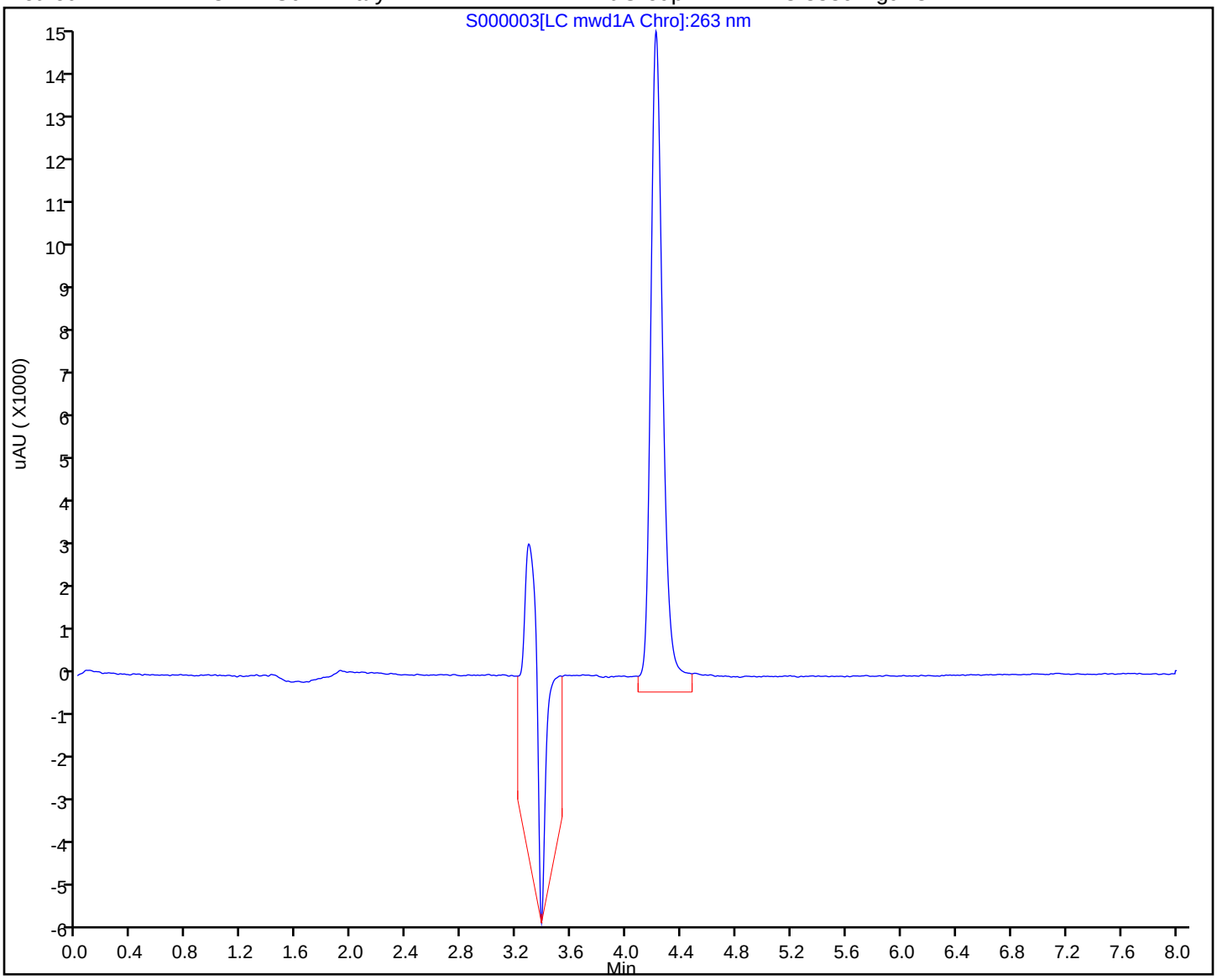
Reagents:

HPNQL5_00022 Amount Added: 1.00 Units: mL

Report Date: 20-Nov-2018 10:14:01 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Sacramento

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000003.D				
Injection Date:	19-Nov-2018 17:02:50	Instrument ID:	LC12		
Lims ID:	CCVRT				
Client ID:					
Operator ID:	AO	ALS Bottle#:	2	Worklist Smp#:	3
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 320-260209/11 Calibration Date: 11/19/2018 19:16

Instrument ID: LC12 Calib Start Date: 11/09/2018 17:17

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/09/2018 18:41

Lab File ID: S000011.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitroguanidine	Ave	74.42	75.54		102	100	1.5	15.0

FORM VII 8330 Modified

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 320-260209/11 Calibration Date: 11/19/2018 19:16

Instrument ID: LC12 Calib Start Date: 11/09/2018 17:17

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 11/09/2018 18:41

Lab File ID: S000011.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitroguanidine	4.22	3.97	4.47

Form VII 8330 Modified

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000011.D
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 19-Nov-2018 19:16:29 ALS Bottle#: 3 Worklist Smp#: 11
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: 320-0067950-011
Operator ID: AO Instrument ID: LC12
Sublist: chrom-LC12 NGu Primary*sub1

Method: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\LC12 NGu Primary.m
Limit Group: LC 8330 Ngu ICAL
Last Update: 20-Nov-2018 09:41:01 Calib Date: 09-Nov-2018 18:41:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D

Column 1 : Det: LC mwd1A, 263 nm
Process Host: CTX0312

First Level Reviewer: ortizam Date: 20-Nov-2018 09:41:01

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						M
4.219	4.219	0.000	7554H	100.0	101.5	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

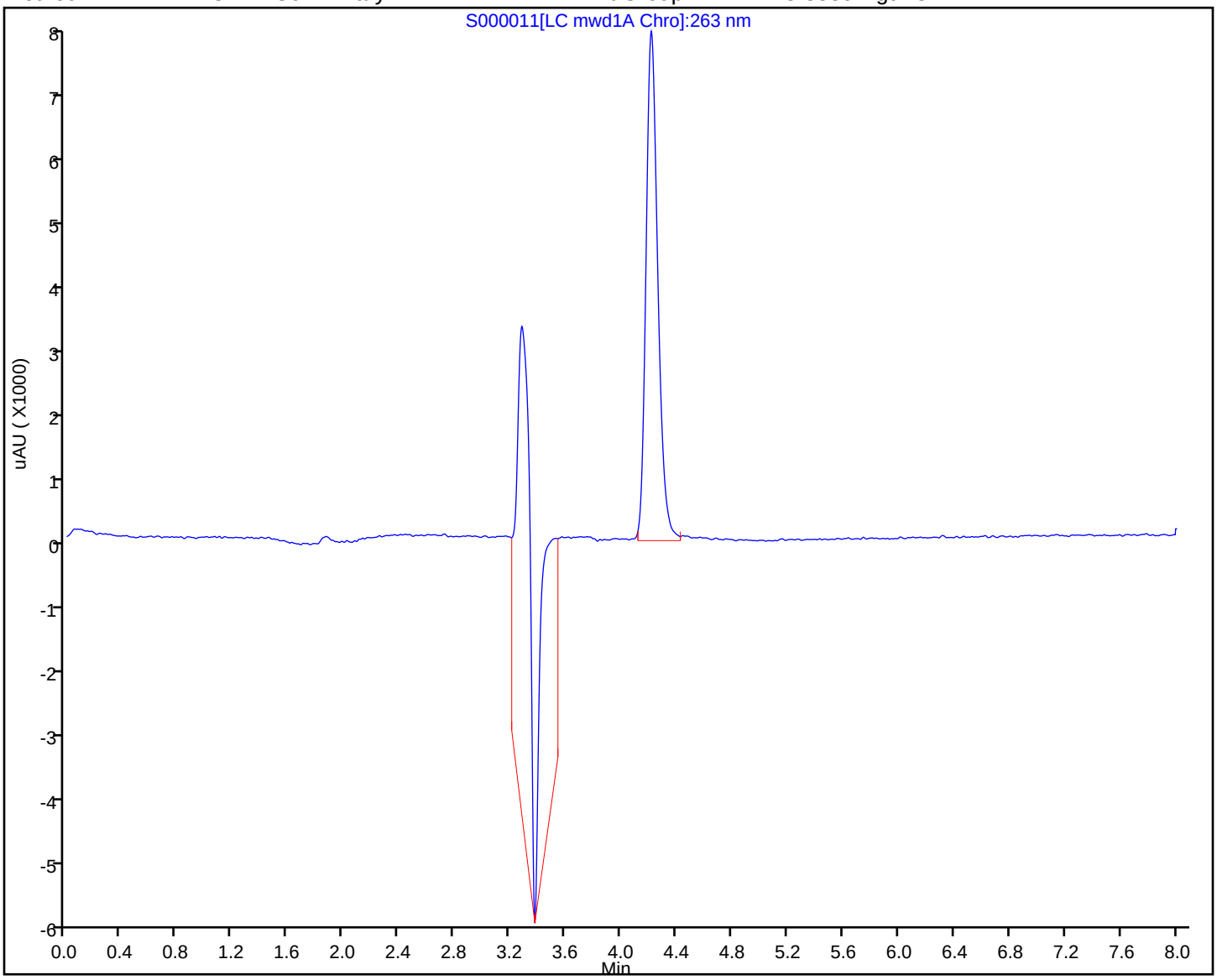
HPNQL4_00023 Amount Added: 1.00 Units: mL

Report Date: 20-Nov-2018 09:41:02 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000011.D

Injection Date:	19-Nov-2018 19:16:29	Instrument ID:	LC12		
Lims ID:	CCV				
Client ID:					
Operator ID:	AO	ALS Bottle#:	3	Worklist Smp#:	11
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

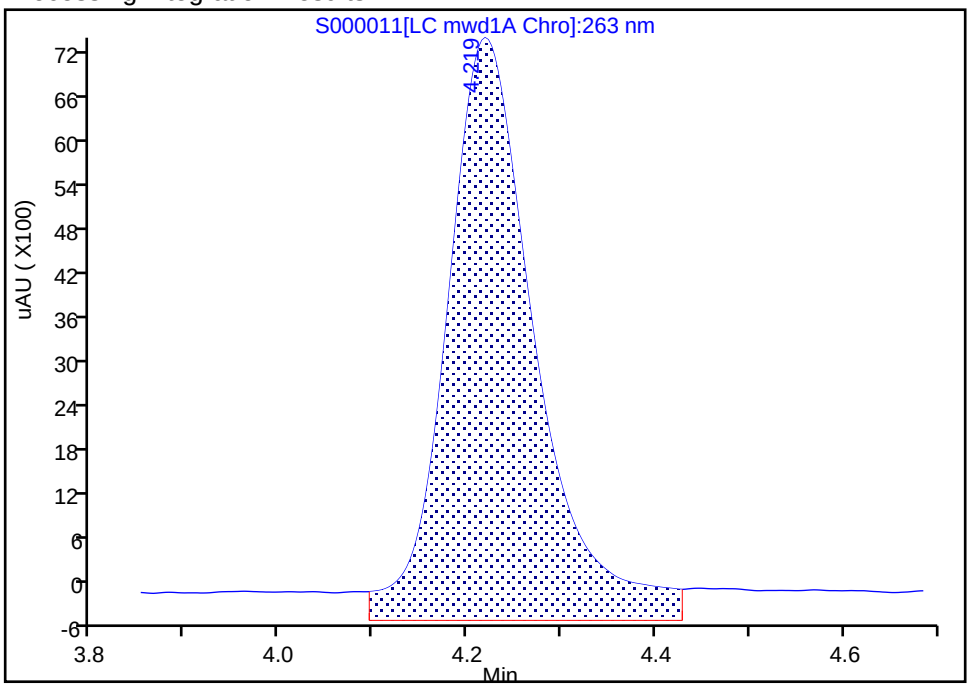
Data File: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000011.D
Injection Date: 19-Nov-2018 19:16:29 Instrument ID: LC12
Lims ID: CCV
Client ID:
Operator ID: AO ALS Bottle#: 3 Worklist Smp#: 11
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Method: LC12 NGu Primary Limit Group: LC 8330 Ngu ICAL
Column: Detector LC mwd1A, 263 nm

1 Nitroguanidine, CAS: 556-88-7

Signal: 1

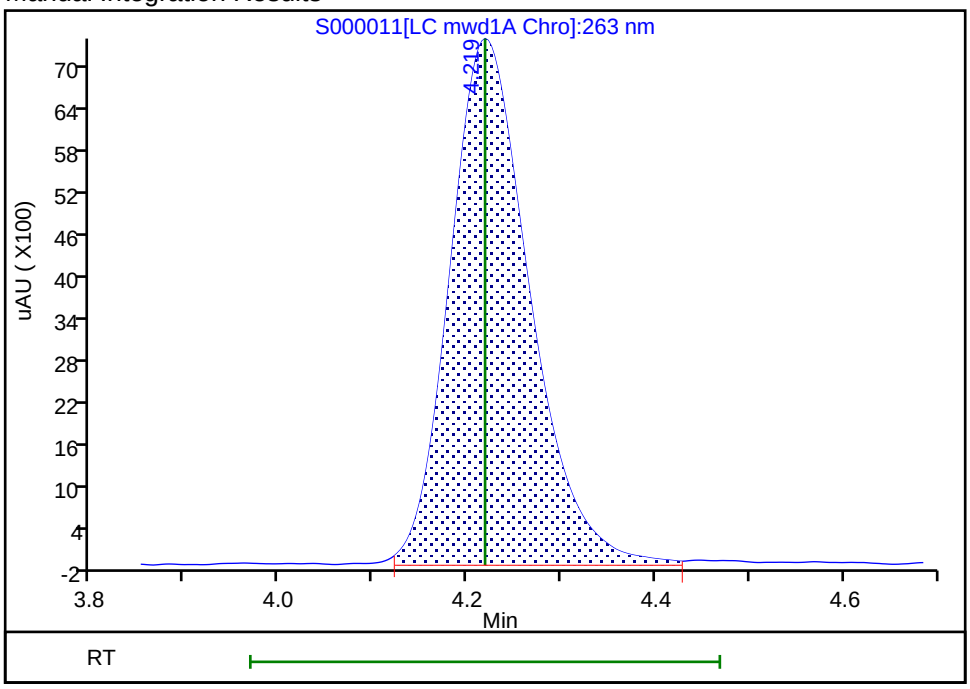
Processing Integration Results

RT: 4.22
Height: 7918
Amount: 106.3933
Amount Units: ng/ml



Manual Integration Results

RT: 4.22
Height: 7554
Amount: 101.5022
Amount Units: ng/ml



Reviewer: ortizam, 20-Nov-2018 09:40:54
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 320-259714/1-A

Matrix: Water | Lab File ID: S000005.D

Analysis Method: 8330 Modified | Date Collected:

Extraction Method: Filtration | Date Extracted: 11/16/2018 13:33

Sample wt/vol: 10(mL) | Date Analyzed: 11/19/2018 17:36

Con. Extract Vol.: 10(mL) | Dilution Factor: 1

Injection Volume: 50(uL) | GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 260209 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
556-88-7	Nitroguanidine	6.0	U	20	6.0	2.4

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000005.D				
Lims ID:	MB 320-259714/1-A				
Client ID:					
Sample Type:	MB				
Inject. Date:	19-Nov-2018 17:36:09	ALS Bottle#:	12	Worklist Smp#:	5
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0067950-005				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\LC12 NGu Primary.m				
Limit Group:	LC 8330 Ngu ICAL				
Last Update:	19-Nov-2018 17:46:48	Calib Date:	09-Nov-2018 18:41:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D				
Column 1 :			Det: LC mwd1A, 263 nm		
Process Host:	CTX0301				
First Level Reviewer: cartiera		Date:	19-Nov-2018 18:06:36		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags

Reagents:

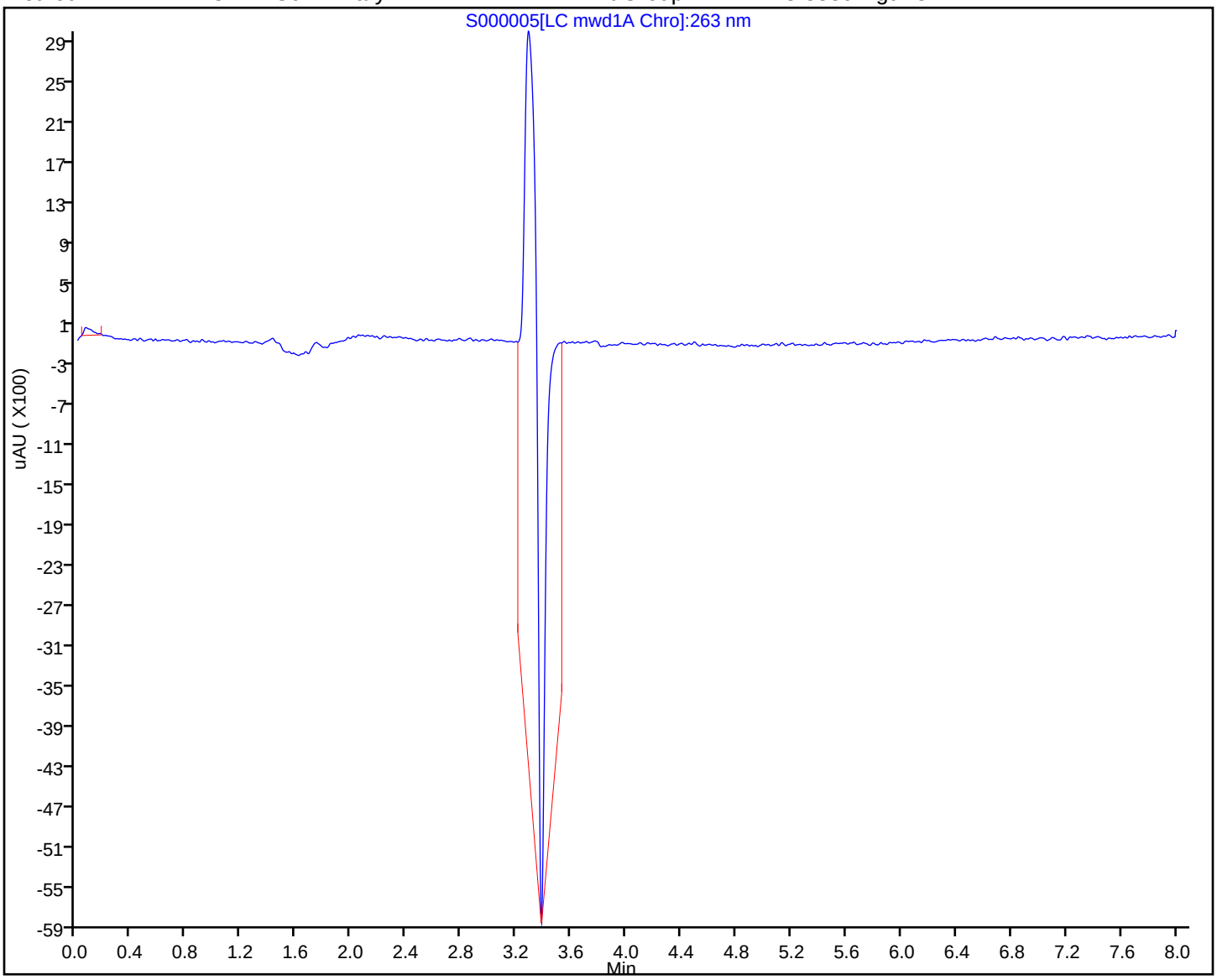
HPNQL4_00023 Amount Added: 1.00 Units: mL Run Reagent

Report Date: 19-Nov-2018 18:06:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000005.D

Injection Date:	19-Nov-2018 17:36:09	Instrument ID:	LC12		
Lims ID:	MB 320-259714/1-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	12	Worklist Smp#:	5
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-259714/2-A

Matrix: Water Lab File ID: S000006.D

Analysis Method: 8330 Modified Date Collected:

Extraction Method: Filtration Date Extracted: 11/16/2018 13:33

Sample wt/vol: 10(mL) Date Analyzed: 11/19/2018 17:52

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 50(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 260209 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
556-88-7	Nitroguanidine	256	M	20	6.0	2.4

TestAmerica Sacramento
Target Compound Quantitation Report

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000006.D
Lims ID: LCS 320-259714/2-A
Client ID:
Sample Type: LCS
Inject. Date: 19-Nov-2018 17:52:58 ALS Bottle#: 13 Worklist Smp#: 6
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Sample Info: 320-0067950-006
Operator ID: AO Instrument ID: LC12

Method: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\LC12 NGu Primary.m
Limit Group: LC 8330 Ngu ICAL
Last Update: 19-Nov-2018 18:36:48 Calib Date: 09-Nov-2018 18:41:35
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D

Column 1 : Det: LC mwd1A, 263 nm
Process Host: CTX0313

First Level Reviewer: ortizam Date: 19-Nov-2018 18:36:48

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						M
4.218	4.216	0.002	19034H	350.0	255.8	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

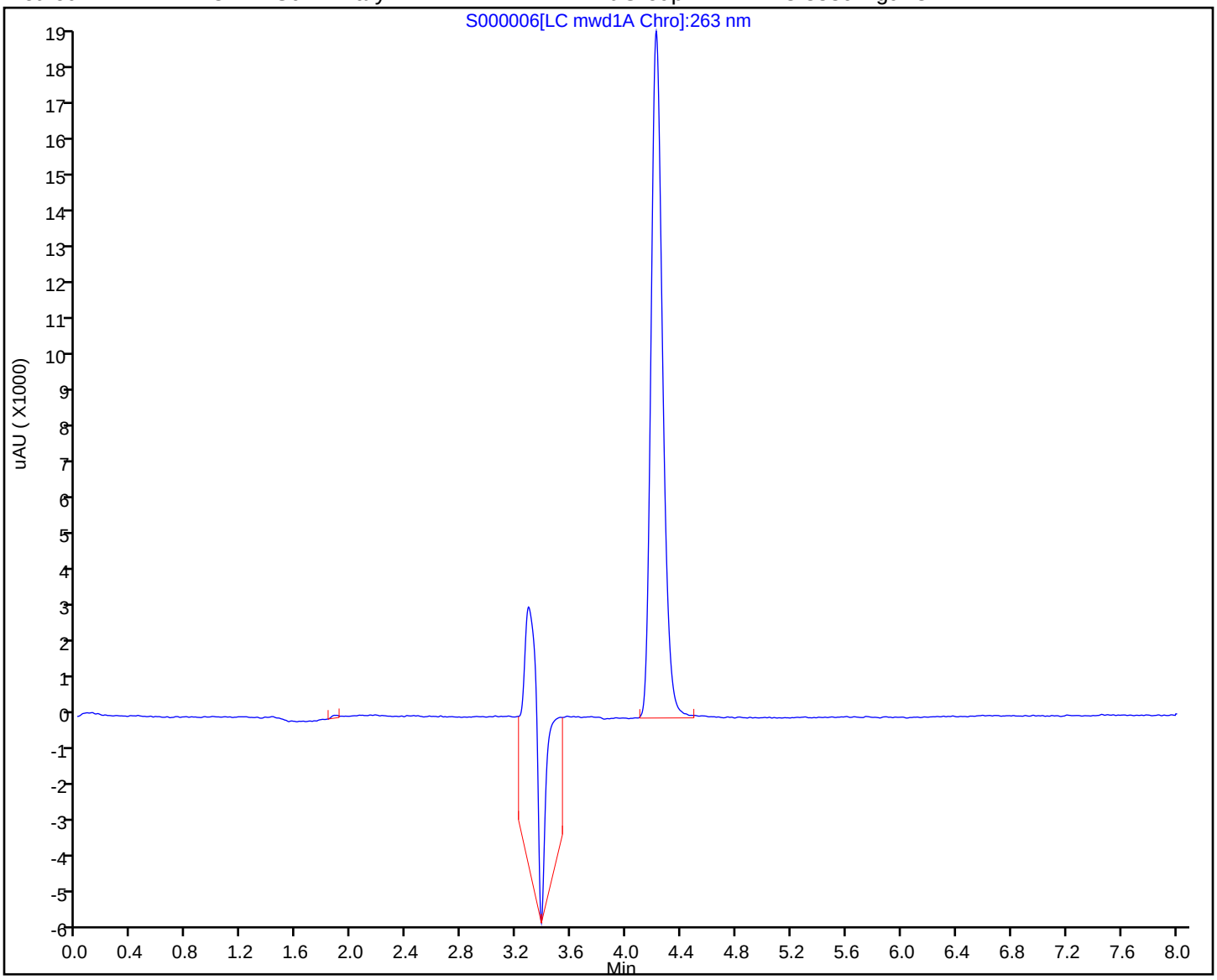
HPNQL4_00023 Amount Added: 1.00 Units: mL Run Reagent

Report Date: 19-Nov-2018 18:36:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000006.D

Injection Date:	19-Nov-2018 17:52:58	Instrument ID:	LC12		
Lims ID:	LCS 320-259714/2-A				
Client ID:					
Operator ID:	AO	ALS Bottle#:	13	Worklist Smp#:	6
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

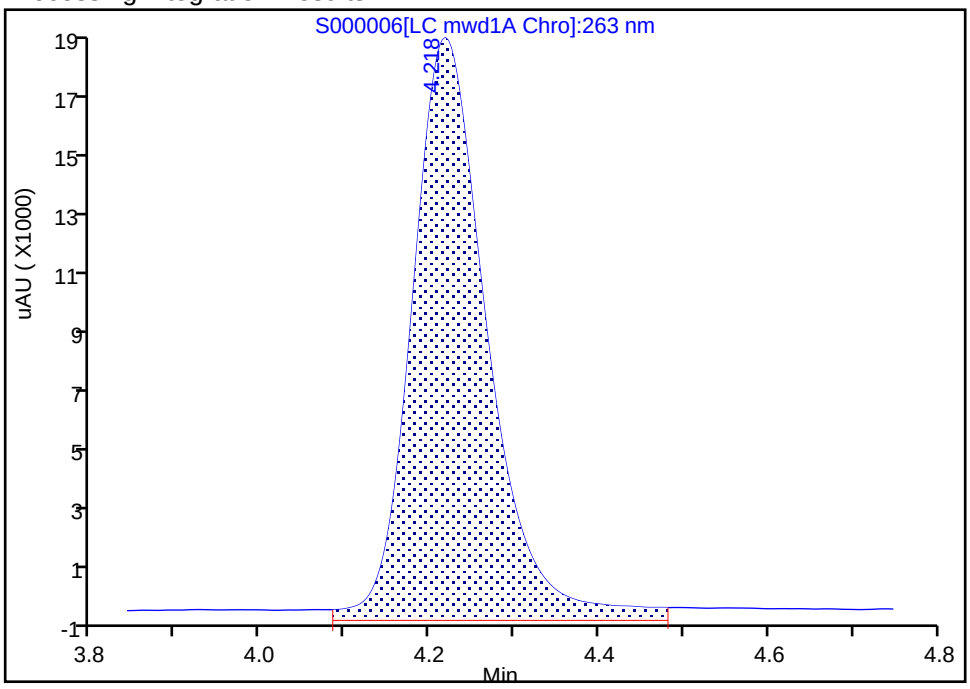
Data File: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000006.D
Injection Date: 19-Nov-2018 17:52:58 Instrument ID: LC12
Lims ID: LCS 320-259714/2-A
Client ID:
Operator ID: AO ALS Bottle#: 13 Worklist Smp#: 6
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Method: LC12 NGu Primary Limit Group: LC 8330 Ngu ICAL
Column: Detector LC mwd1A, 263 nm

1 Nitroguanidine, CAS: 556-88-7

Signal: 1

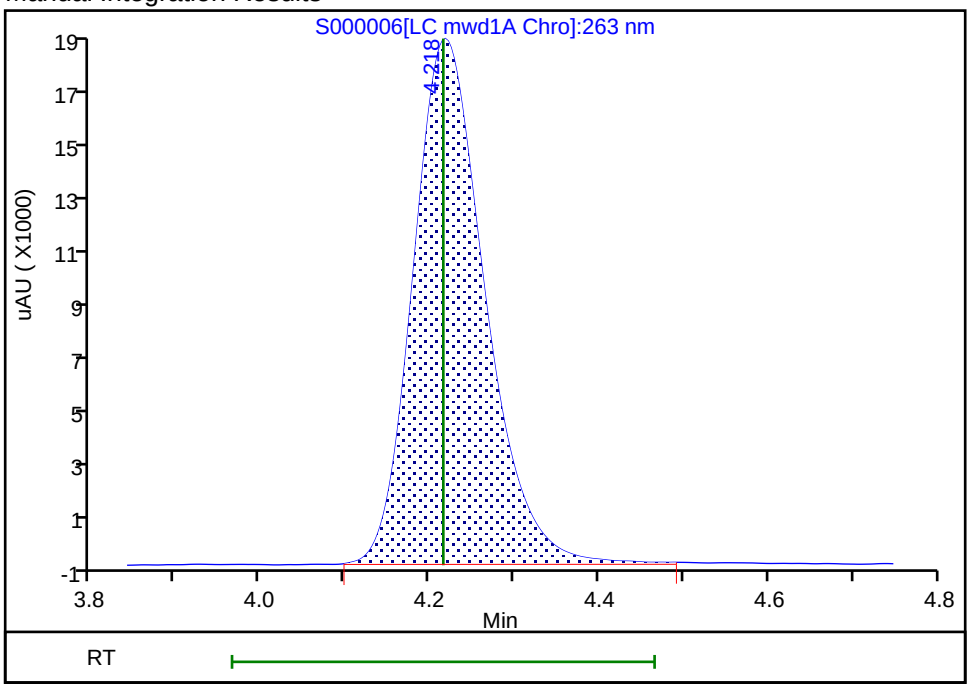
Processing Integration Results

RT: 4.22
Height: 19388
Amount: 260.5144
Amount Units: ng/ml



Manual Integration Results

RT: 4.22
Height: 19034
Amount: 255.7577
Amount Units: ng/ml



Reviewer: ortizam, 19-Nov-2018 18:36:43
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW MS Lab Sample ID: 280-116538-1 MS

Matrix: Water Lab File ID: S000008.D

Analysis Method: 8330 Modified Date Collected: 11/02/2018 10:45

Extraction Method: Filtration Date Extracted: 11/16/2018 13:33

Sample wt/vol: 10(mL) Date Analyzed: 11/19/2018 18:26

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 50(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 260209 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
556-88-7	Nitroguanidine	253	M	20	6.0	2.4

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000008.D				
Lims ID:	280-116538-A-1-B MS				
Client ID:					
Sample Type:	MS				
Inject. Date:	19-Nov-2018 18:26:17	ALS Bottle#:	15	Worklist Smp#:	8
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0067950-008				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\LC12 NGu Primary.m				
Limit Group:	LC 8330 Ngu ICAL				
Last Update:	20-Nov-2018 09:39:41	Calib Date:	09-Nov-2018 18:41:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D				
Column 1 :			Det: LC mwd1A, 263 nm		
Process Host:	CTX0312				
First Level Reviewer: cartiera		Date:	19-Nov-2018 18:45:55		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						M
4.217	4.219	-0.002	18797H	350.0	252.6	M

QC Flag Legend

Review Flags

M - Manually Integrated

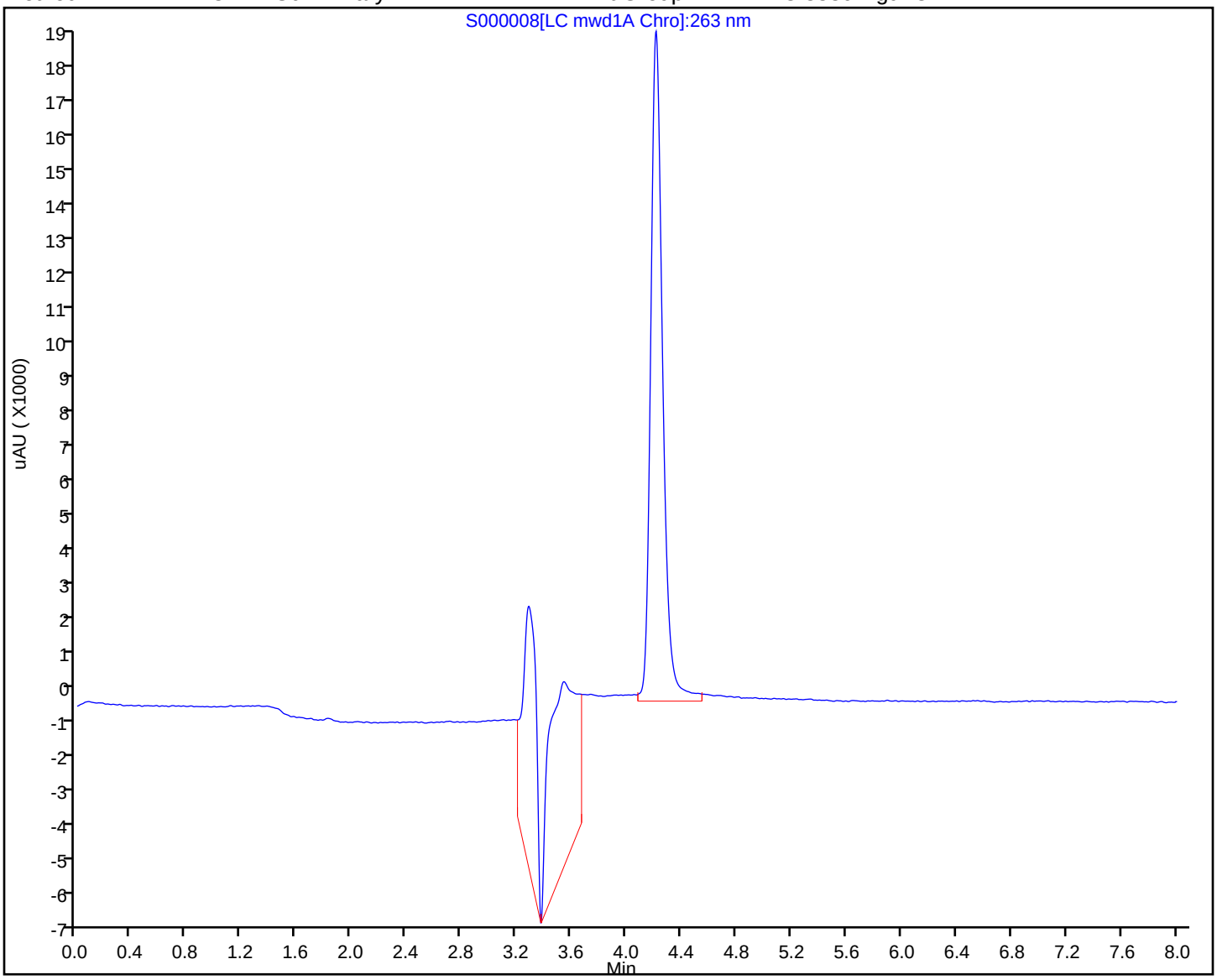
Reagents:

HPNQL4_00023 Amount Added: 1.00 Units: mL Run Reagent

Report Date: 20-Nov-2018 09:39:42 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Sacramento

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000008.D				
Injection Date:	19-Nov-2018 18:26:17	Instrument ID:	LC12		
Lims ID:	280-116538-A-1-B MS				
Client ID:					
Operator ID:	AO	ALS Bottle#:	15	Worklist Smp#:	8
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

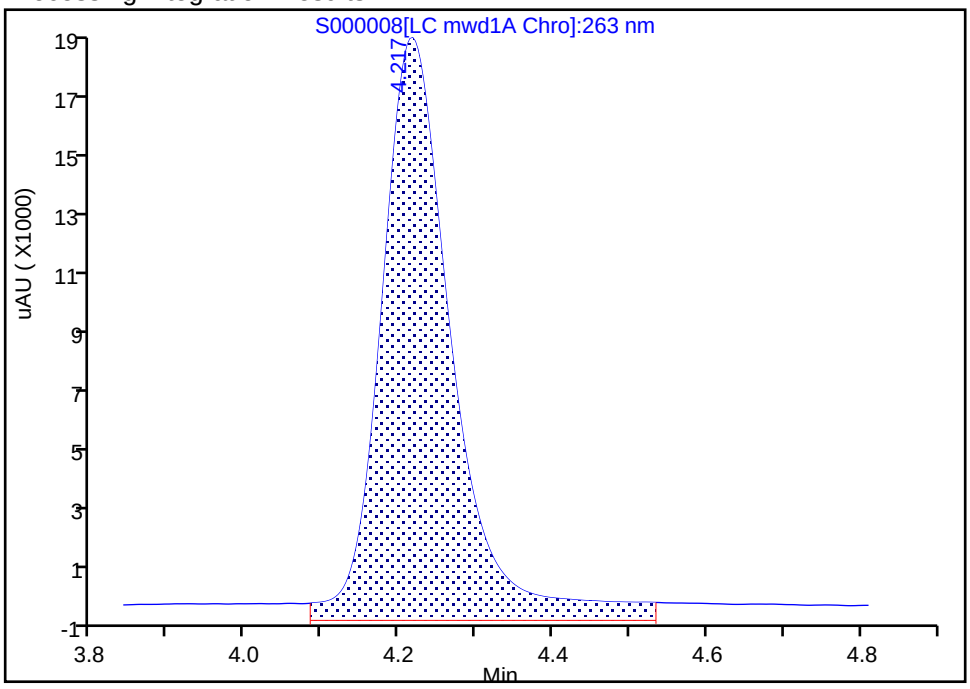
Data File: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000008.D
Injection Date: 19-Nov-2018 18:26:17 Instrument ID: LC12
Lims ID: 280-116538-A-1-B MS
Client ID:
Operator ID: AO ALS Bottle#: 15 Worklist Smp#: 8
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Method: LC12 NGu Primary Limit Group: LC 8330 Ngu ICAL
Column: Detector LC mwd1A, 263 nm

1 Nitroguanidine, CAS: 556-88-7

Signal: 1

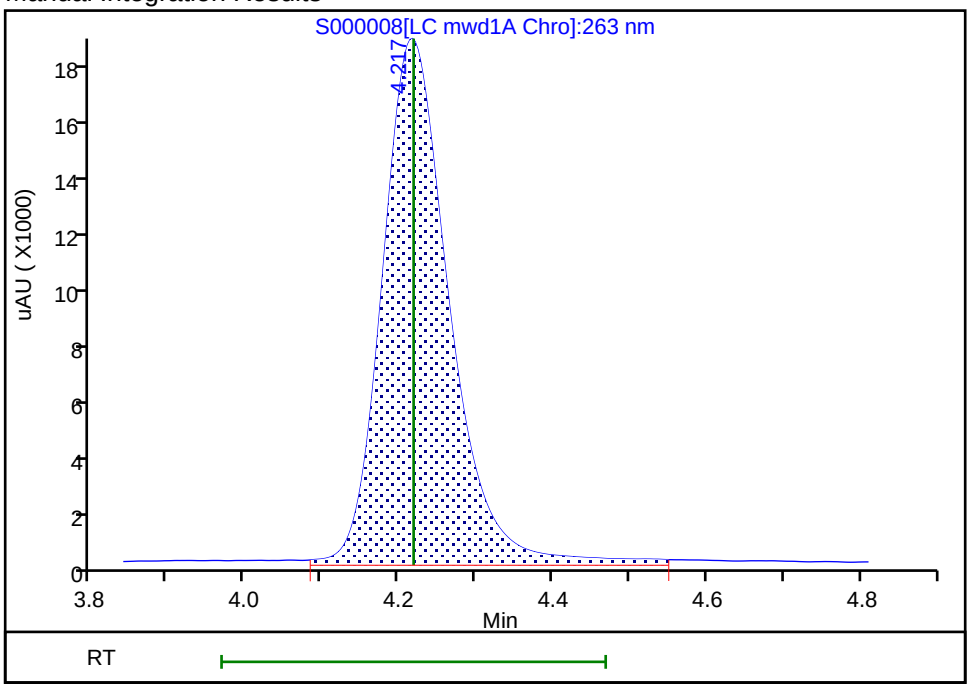
Processing Integration Results

RT: 4.22
Height: 19173
Amount: 257.6254
Amount Units: ng/ml



Manual Integration Results

RT: 4.22
Height: 18797
Amount: 252.5732
Amount Units: ng/ml



Reviewer: ortizam, 20-Nov-2018 09:39:39
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW MSD Lab Sample ID: 280-116538-1 MSD

Matrix: Water Lab File ID: S000009.D

Analysis Method: 8330 Modified Date Collected: 11/02/2018 10:45

Extraction Method: Filtration Date Extracted: 11/16/2018 13:33

Sample wt/vol: 10(mL) Date Analyzed: 11/19/2018 18:42

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 50(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 260209 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
556-88-7	Nitroguanidine	248	M	20	6.0	2.4

TestAmerica Sacramento
Target Compound Quantitation Report

Data File:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000009.D				
Lims ID:	280-116538-A-1-C MSD				
Client ID:					
Sample Type:	MSD				
Inject. Date:	19-Nov-2018 18:42:59	ALS Bottle#:	16	Worklist Smp#:	9
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Sample Info:	320-0067950-009				
Operator ID:	AO	Instrument ID:	LC12		
Method:	\\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\LC12 NGu Primary.m				
Limit Group:	LC 8330 Ngu ICAL				
Last Update:	20-Nov-2018 10:07:43	Calib Date:	09-Nov-2018 18:41:35		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Sacramento\ChromData\LC12\20181109-67456.b\IA000009.D				
Column 1 :			Det: LC mwd1A, 263 nm		
Process Host:	CTX0312				
First Level Reviewer: ortizam		Date:	20-Nov-2018 09:39:08		

RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ng/ml	OnCol Amt ng/ml	Flags
1 Nitroguanidine						M
4.217	4.219	-0.002	18472H	350.0	248.2	M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

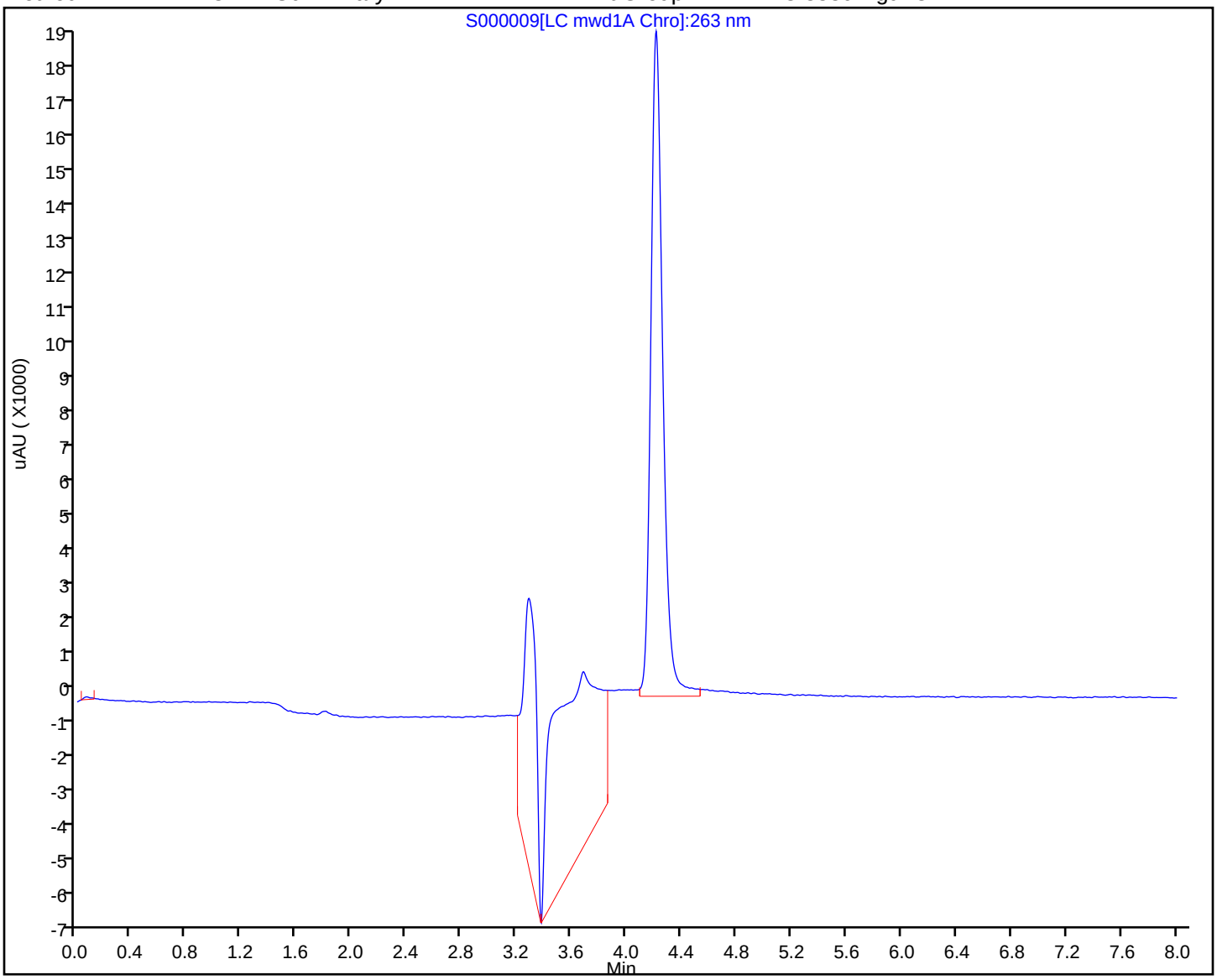
HPNQL4_00023 Amount Added: 1.00 Units: mL Run Reagent

Report Date: 20-Nov-2018 10:07:43 Chrom Revision: 2.3 19-Nov-2018 09:14:08

TestAmerica Sacramento

Data File: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000009.D

Injection Date:	19-Nov-2018 18:42:59	Instrument ID:	LC12		
Lims ID:	280-116538-A-1-C MSD				
Client ID:					
Operator ID:	AO	ALS Bottle#:	16	Worklist Smp#:	9
Injection Vol:	50.0 ul	Dil. Factor:	1.0000		
Method:	LC12 NGu Primary	Limit Group:	LC 8330 Ngu ICAL		



Manual Integration/User Assign Peak Report

TestAmerica Sacramento

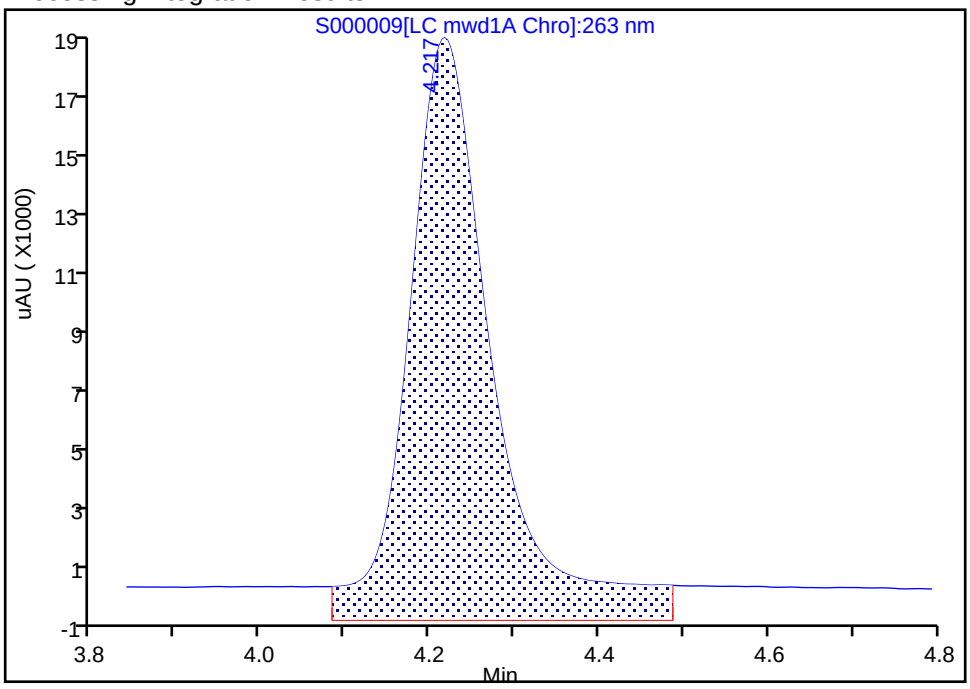
Data File: \\ChromNA\Sacramento\ChromData\LC12\20181119-67950.b\S000009.D
Injection Date: 19-Nov-2018 18:42:59 Instrument ID: LC12
Lims ID: 280-116538-A-1-C MSD
Client ID:
Operator ID: AO ALS Bottle#: 16 Worklist Smp#: 9
Injection Vol: 50.0 ul Dil. Factor: 1.0000
Method: LC12 NGu Primary Limit Group: LC 8330 Ngu ICAL
Column: Detector LC mwd1A, 263 nm

1 Nitroguanidine, CAS: 556-88-7

Signal: 1

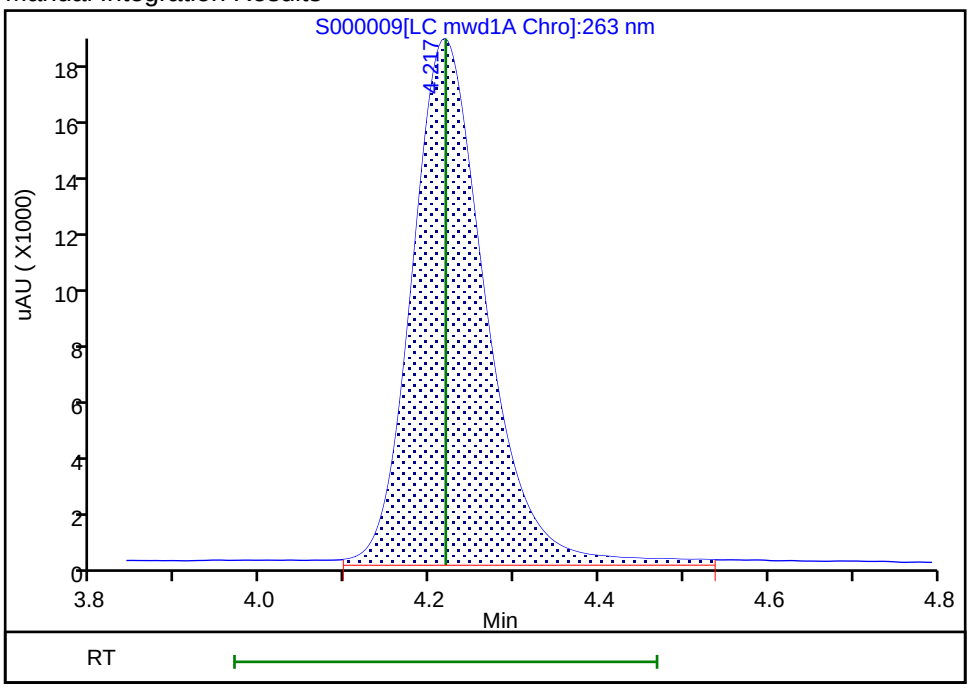
Processing Integration Results

RT: 4.22
Height: 19419
Amount: 260.9309
Amount Units: ng/ml



Manual Integration Results

RT: 4.22
Height: 18472
Amount: 248.2062
Amount Units: ng/ml



Reviewer: ortizam, 20-Nov-2018 10:07:41
Audit Action: Manually Integrated Audit Reason: Baseline Smoothing

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Instrument ID: LC12 Start Date: 11/09/2018 17:17

Analysis Batch Number: 258267 End Date: 11/09/2018 20:55

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD2 320-258267/4 IC		11/09/2018 17:17	1	IA000004.D	Zorbax CN 4.6(mm)
STD3 320-258267/5 IC		11/09/2018 17:34	1	IA000005.D	Zorbax CN 4.6(mm)
STD4 320-258267/6 IC		11/09/2018 17:51	1	IA000006.D	Zorbax CN 4.6(mm)
STD5 320-258267/7 IC		11/09/2018 18:08	1	IA000007.D	Zorbax CN 4.6(mm)
STD6 320-258267/8 IC		11/09/2018 18:24	1	IA000008.D	Zorbax CN 4.6(mm)
STD7 320-258267/9 IC		11/09/2018 18:41	1	IA000009.D	Zorbax CN 4.6(mm)
ICV 320-258267/11		11/09/2018 19:15	1	IA000011.D	Zorbax CN 4.6(mm)
LODV 320-258267/12		11/09/2018 20:55	1	IA000013.D	Zorbax CN 4.6(mm)

8330 Modified

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Instrument ID: LC12 Start Date: 11/19/2018 17:02

Analysis Batch Number: 260209 End Date: 11/19/2018 19:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-260209/3		11/19/2018 17:02	1	S000003.D	Zorbax CN 4.6(mm)
MB 320-259714/1-A		11/19/2018 17:36	1	S000005.D	Zorbax CN 4.6(mm)
LCS 320-259714/2-A		11/19/2018 17:52	1	S000006.D	Zorbax CN 4.6(mm)
280-116538-1		11/19/2018 18:09	1	S000007.D	Zorbax CN 4.6(mm)
280-116538-1 MS		11/19/2018 18:26	1	S000008.D	Zorbax CN 4.6(mm)
280-116538-1 MSD		11/19/2018 18:42	1	S000009.D	Zorbax CN 4.6(mm)
280-116538-2		11/19/2018 18:59	1	S000010.D	Zorbax CN 4.6(mm)
CCV 320-260209/11		11/19/2018 19:16	1	S000011.D	Zorbax CN 4.6(mm)

8330 Modified

HPLC/IC BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Batch Number: 259714 Batch Start Date: 11/16/18 13:33 Batch Analyst: Adams, Tanner J

Batch Method: Filtration Batch End Date: 11/16/18 14:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HPNQSP 00045			
MB 320-259714/1		Filtration, 8330 Modified		10 mL	10 mL				
LCS 320-259714/2		Filtration, 8330 Modified		10 mL	10 mL	50 uL			
280-116538-A-1	SCLmw-001-181001-GW	Filtration, 8330 Modified	T	10 mL	10 mL				
280-116538-A-1 MS	SCLmw-001-181001-GW	Filtration, 8330 Modified	T	10 mL	10 mL	50 uL			
280-116538-A-1 MSD	SCLmw-001-181001-GW	Filtration, 8330 Modified	T	10 mL	10 mL	50 uL			
280-116538-A-2	SCLmw-003-181001-GW	Filtration, 8330 Modified	T	10 mL	10 mL				

Batch Notes	
Batch Comment	Client labels match sample labels.
Filter ID	R8KA16111
Pipette/Syringe/Dispenser ID	10 mL pipette lot: 07242018; 2 mL vial lot: 18196406;Spike pipette K35057E

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Method 6860

Perchlorate (IC/MS) by Method 6860

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IC818K12012.d

Lab ID: LCS 280-437280/14 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	0.0500	0.0551	110	84-119	M

Column to be used to flag recovery and RPD values

FORM III 6860

FORM III
LCMS DETECTION LIMIT CHECK STANDARD RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IC818K12010.d

Lab ID: DLCK 280-437280/12 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	DLCK CONCENTRATION (ug/L)	DLCK % REC	QC LIMITS REC	#
Perchlorate	0.0500	0.0509	102	70-130	

Column to be used to flag recovery and RPD values

FORM III 6860

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IC818K12013.d

Lab ID: INF 280-437280/15 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	INF CONCENTRATION (ug/L)	INF % REC	QC LIMITS REC	#
Perchlorate	0.0500	0.0567	113	70-130	M

Column to be used to flag recovery and RPD values

FORM III 6860

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab File ID: IC818K12011.d Lab Sample ID: MB 280-437280/13

Matrix: Water Date Extracted:

Instrument ID: LC_LCMS8 Date Analyzed: 11/12/2018 14:58

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	ICB 280-437280/10	IC818K12008.d	11/12/2018 14:41
	DLCK 280-437280/12	IC818K12010.d	11/12/2018 14:51
	LCS 280-437280/14	IC818K12012.d	11/12/2018 15:04
	CCB 280-437280/23	IC818K12021.d	11/12/2018 15:52
SCLmw-001-181001-GW	280-116538-1	IC818K12026.d	11/12/2018 16:18
SCLmw-003-181001-GW	280-116538-2	IC818K12027.d	11/12/2018 16:23
	CCB 280-437280/33	IC818K12031.d	11/12/2018 16:49

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: LC_LCMS8 Calibration Start Date: 11/12/2018 14:10

GC Column: ID: () Calibration End Date: 11/12/2018 14:35

Calibration ID: 34286

		ClO418					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		476269	2.58				
UPPER LIMIT		714404	7.58				
LOWER LIMIT		238135	-2.42				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 280-437280/10		468030	2.62				
ICV 280-437280/11		460342	2.63				
DLCK 280-437280/12		466006	2.55				
MB 280-437280/13		491805	2.60				
LCS 280-437280/14		523290	2.54				
INF 280-437280/15		446081	2.51				
CCV 280-437280/21		444897	2.59				
CCVL 280-437280/22		450086	2.62				
CCB 280-437280/23		453399	2.55				
280-116538-1	SCLmw-001-181001-GW	419131	2.61				
280-116538-2	SCLmw-003-181001-GW	412736	2.58				
CCV 280-437280/31		439775	2.56				
CCVL 280-437280/32		462154	2.52				
CCB 280-437280/33		446873	2.60				

ClO418 = Perchlorate-18O

Area Limit = 50%-150% of internal standard area
RT Limit = ± 5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6860

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-001-181001-GW | Lab Sample ID: 280-116538-1

Matrix: Water | Lab File ID: IC818K12026.d

Analysis Method: 6860 | Date Collected: 11/02/2018 10:45

Extraction Method: | Date Extracted:

Sample wt/vol: 5(mL) | Date Analyzed: 11/12/2018 16:18

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 250(uL) | GC Column: ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.023	J	0.050	0.010	0.0040

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12026.d
Lims ID: 280-116538-O-1
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 12-Nov-2018 16:18:26 ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-O-1
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:15:07 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:08:10

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.611	2.553	0.058		419131	204.0		295	M
2 Perchlorate									R
99.0 > 83.0	2.611	2.604	0.007	1.000	408518	22.8		15.0	R
101.0 > 84.7	2.611	2.604	0.007	1.000	265707		1.54(2.30-3.80)	7.9	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

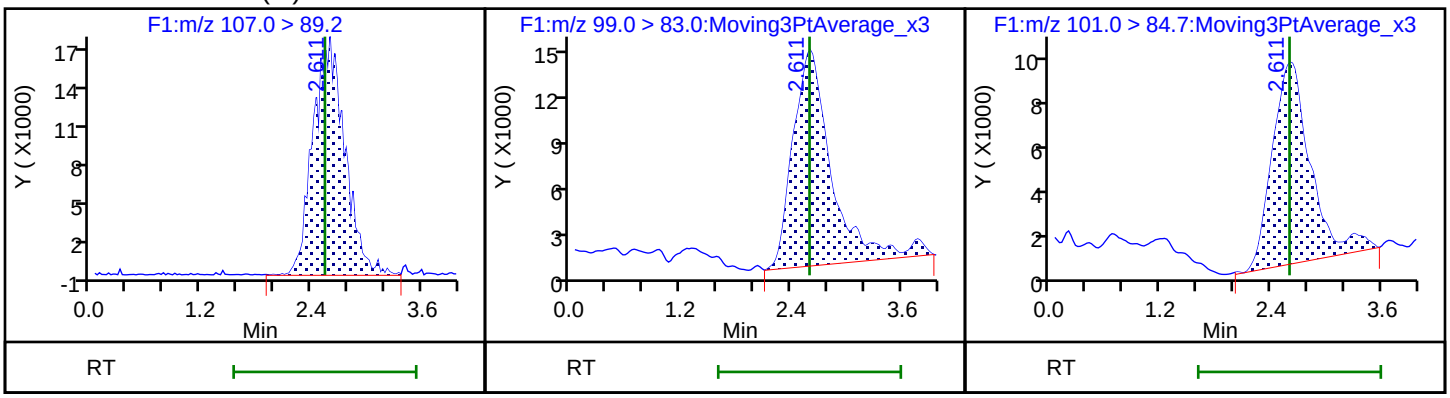
Report Date: 13-Nov-2018 09:15:17 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12026.d

Injection Date:	12-Nov-2018 16:18:26	Instrument ID:	LC_LCMS8		
Lims ID:	280-116538-O-1	Lab Sample ID:	280-116538-1		
Client ID:	SCLmw-001-181001-GW				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	28
Injection Vol:	250.0 ul	Dil. Factor:	1.0000		
Method:	6860-LCMS8	Limit Group:	LC - 6860 Perchlorate		

* 1 Perchlorate-18O (M) 2 Perchlorate 2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

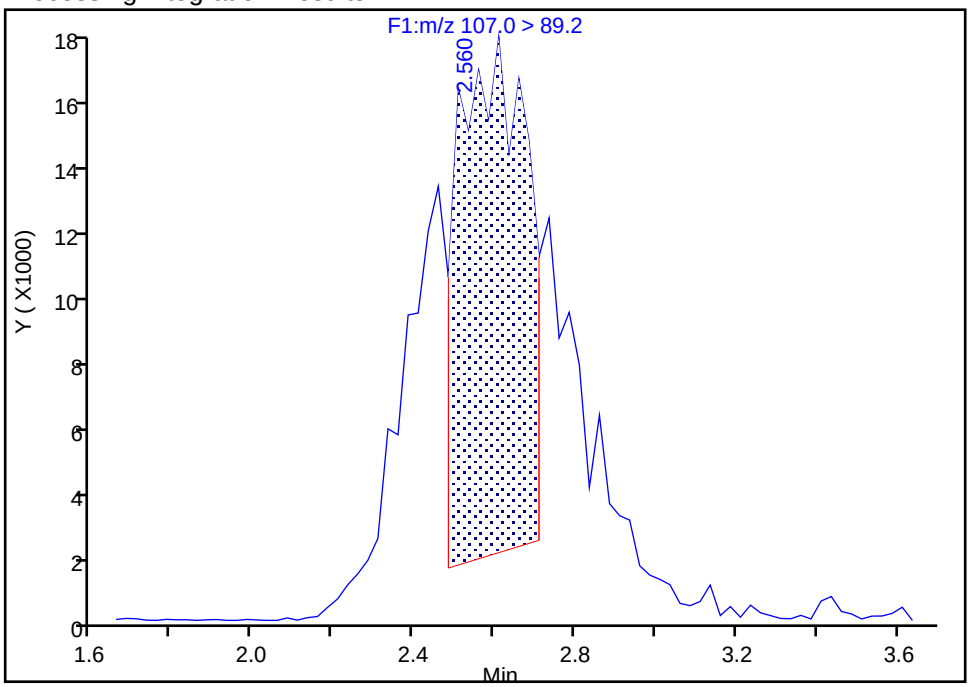
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12026.d				
Injection Date:	12-Nov-2018 16:18:26	Instrument ID:	LC_LCMS8		
Lims ID:	280-116538-O-1	Lab Sample ID:	280-116538-1		
Client ID:	SCLmw-001-181001-GW				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	28
Injection Vol:	250.0 ul	Dil. Factor:	1.0000		
Method:	6860-LCMS8	Limit Group:	LC - 6860 Perchlorate		
Column:		Detector	F1:MRM		

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

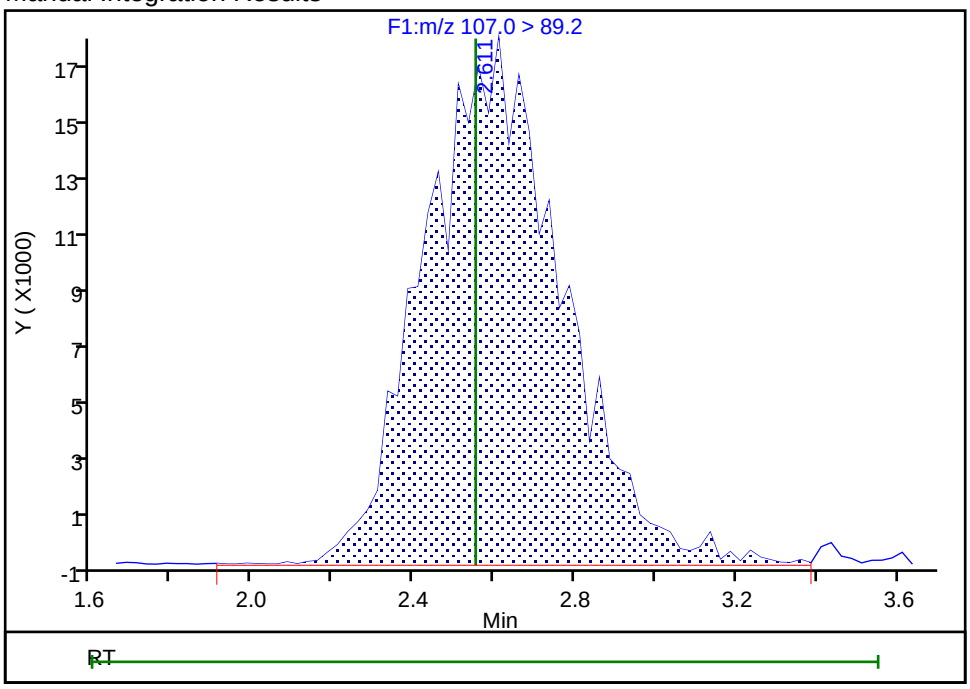
Processing Integration Results

RT: 2.56
Area: 176750
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.61
Area: 419131
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:08:06

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: SCLmw-003-181001-GW | Lab Sample ID: 280-116538-2

Matrix: Water | Lab File ID: IC818K12027.d

Analysis Method: 6860 | Date Collected: 11/02/2018 11:10

Extraction Method: | Date Extracted:

Sample wt/vol: 5(mL) | Date Analyzed: 11/12/2018 16:23

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 250(uL) | GC Column: | ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.010	U M	0.050	0.010	0.0040

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12027.d
Lims ID: 280-116538-O-2
Client ID: SCLmw-003-181001-GW
Sample Type: Client
Inject. Date: 12-Nov-2018 16:23:42 ALS Bottle#: 0 Worklist Smp#: 29
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: 280-116538-O-2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:15:07 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:08:22

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.577	2.553	0.024		412736	204.0		239	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

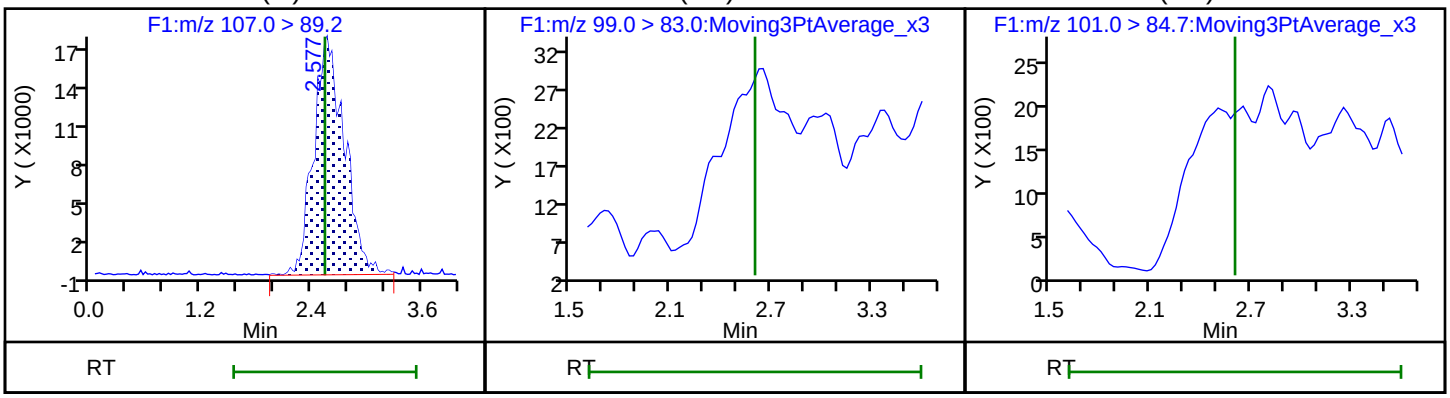
Report Date: 13-Nov-2018 09:15:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12027.d

Injection Date:	12-Nov-2018 16:23:42	Instrument ID:	LC_LCMS8		
Lims ID:	280-116538-O-2	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	250.0 ul	Dil. Factor:	1.0000		
Method:	6860-LCMS8	Limit Group:	LC - 6860 Perchlorate		

* 1 Perchlorate-18O (M) 2 Perchlorate (ND) 2 Perchlorate (ND)



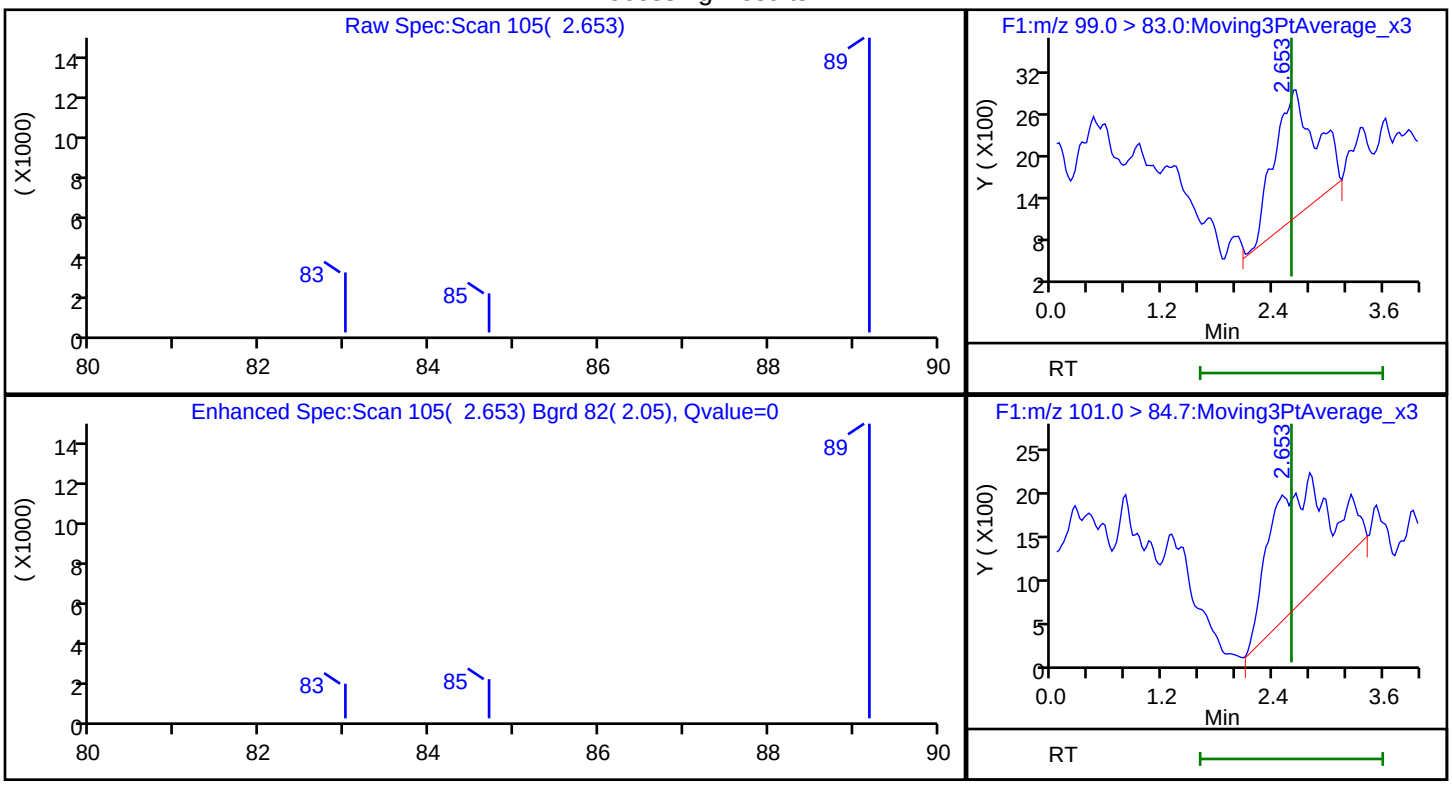
User Disabled Compound Report

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12027.d				
Injection Date:	12-Nov-2018 16:23:42	Instrument ID:	LC_LCMS8		
Lims ID:	280-116538-O-2	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	250.0 ul	Dil. Factor:	1.0000		
Method:	6860-LCMS8	Limit Group:	LC - 6860 Perchlorate		
Column:		Detector	F1:MRM		

2 Perchlorate, CAS: 14797-73-0

Processing Results



RT	Mass	Response	Amount
2.65	82.70	56670	2.639956
2.65	84.60	64759	

Reviewer: coopert, 13-Nov-2018 09:08:22

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

TestAmerica Denver

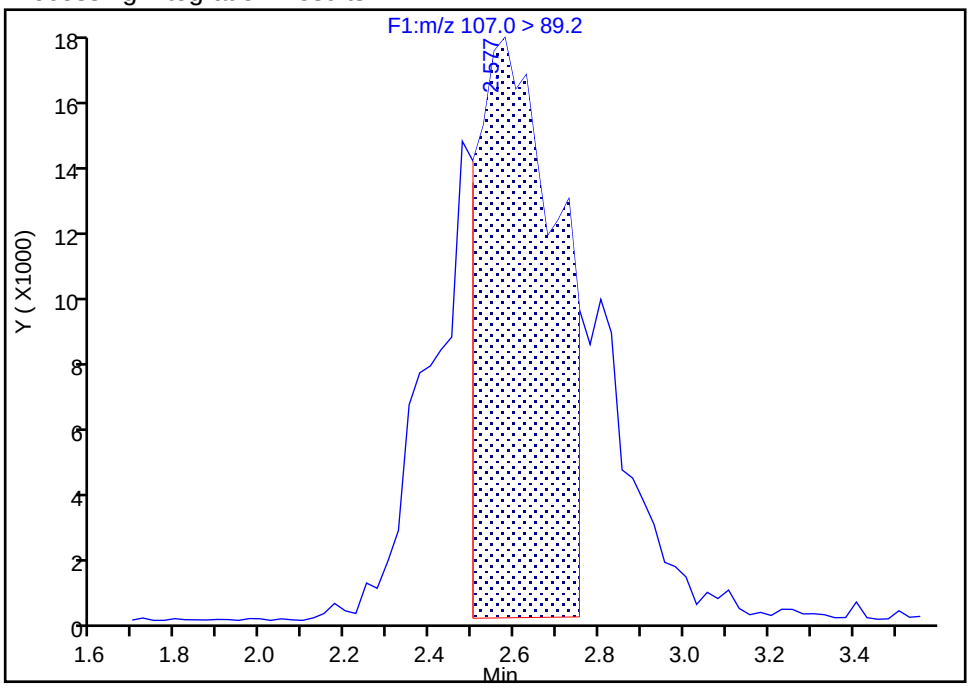
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12027.d				
Injection Date:	12-Nov-2018 16:23:42	Instrument ID:	LC_LCMS8		
Lims ID:	280-116538-O-2	Lab Sample ID:	280-116538-2		
Client ID:	SCLmw-003-181001-GW				
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	29
Injection Vol:	250.0 ul	Dil. Factor:	1.0000		
Method:	6860-LCMS8	Limit Group:	LC - 6860 Perchlorate		
Column:		Detector	F1:MRM		

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

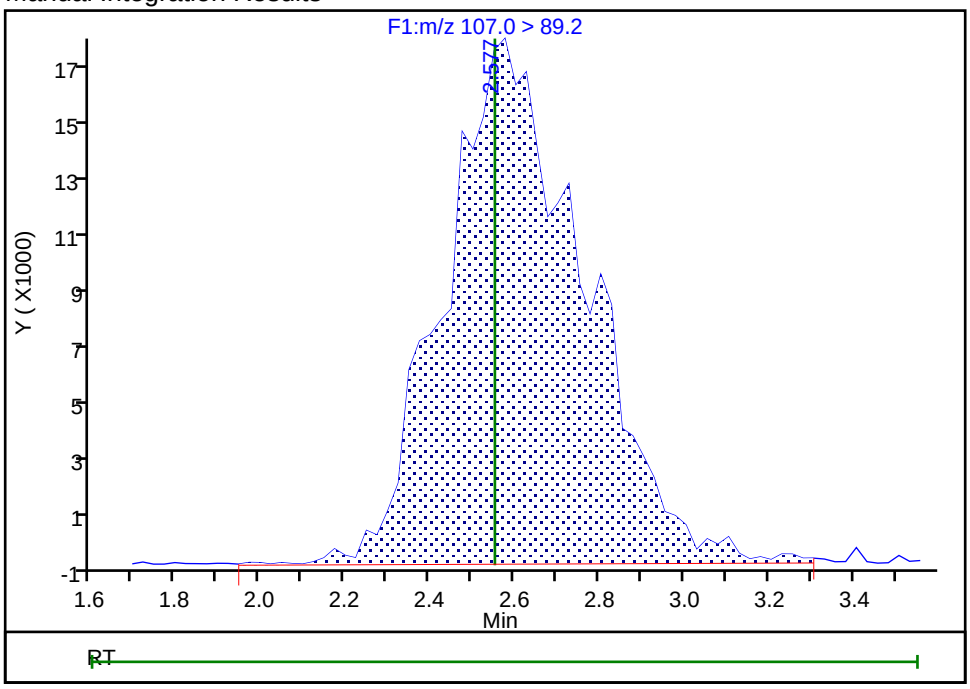
Processing Integration Results

RT: 2.58
Area: 220569
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.58
Area: 412736
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:08:18

Audit Action: Manually Integrated Audit Reason: Baseline

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437280

SDG No.:

Instrument ID: LC_LCMS8 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:10 Calibration End Date: 11/12/2018 14:35 Calibration ID: 34286

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD020 280-437280/4	IC818K12002.d
Level 2	STD050 280-437280/5	IC818K12003.d
Level 3	STD100 280-437280/6	IC818K12004.d
Level 4	STD200 280-437280/7	IC818K12005.d
Level 5	STD500 280-437280/8	IC818K12006.d
Level 6	STD1000 280-437280/9	IC818K12007.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perchlorate	9.1504 8.5063	8.2033	8.6877	8.2961	8.5220	Lin1	5.6272	8.4784							1.0000		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Denver Job No.: 280-116538-1 Analy Batch No.: 437280

SDG No.:

Instrument ID: LC_LCMS8 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 11/12/2018 14:10 Calibration End Date: 11/12/2018 14:35 Calibration ID: 34286

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD020 280-437280/4	IC818K12002.d
Level 2	STD050 280-437280/5	IC818K12003.d
Level 3	STD100 280-437280/6	IC818K12004.d
Level 4	STD200 280-437280/7	IC818K12005.d
Level 5	STD500 280-437280/8	IC818K12006.d
Level 6	STD1000 280-437280/9	IC818K12007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perchlorate	ClO4 18	Lin1	436030 19227438	1009578	2016554	3883591	9552126	20.0 1000	50.0	100	200	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12002.d
Lims ID: STD020
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 12-Nov-2018 14:10:09 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: STD020 prep 11/12/18 exp 11/19/18 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist: chrom-6860-LCMS8*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:51 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 12-Nov-2018 16:18:49

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.636	2.553	0.083		486045	204.0		364	M
2 Perchlorate									R
99.0 > 83.0	2.611	2.604	0.007	0.991	436030	20.9		15.6	R
101.0 > 84.7	2.611	2.604	0.007	0.991	305531		1.43(2.30-3.80)	23.9	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860CalStockW_00103 Amount Added: 100.00 Units: uL
6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:14:51 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12002.d

Injection Date: 12-Nov-2018 14:10:09 Instrument ID: LC_LCMS8

Lims ID: STD020

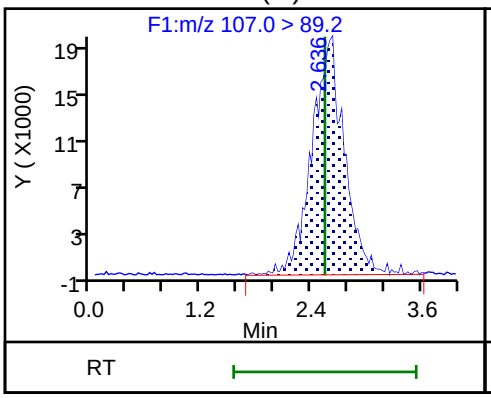
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 4

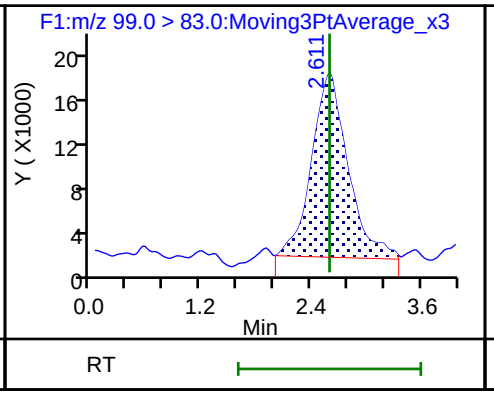
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

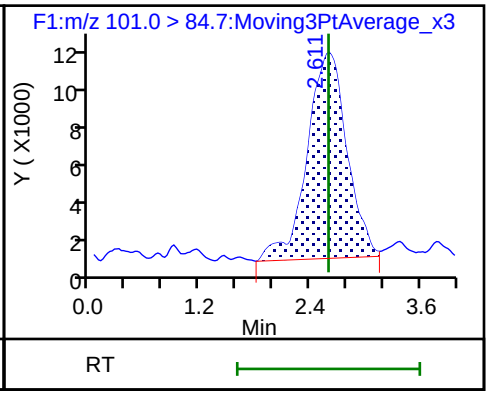
* 1 Perchlorate-18O (M)



2 Perchlorate



2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

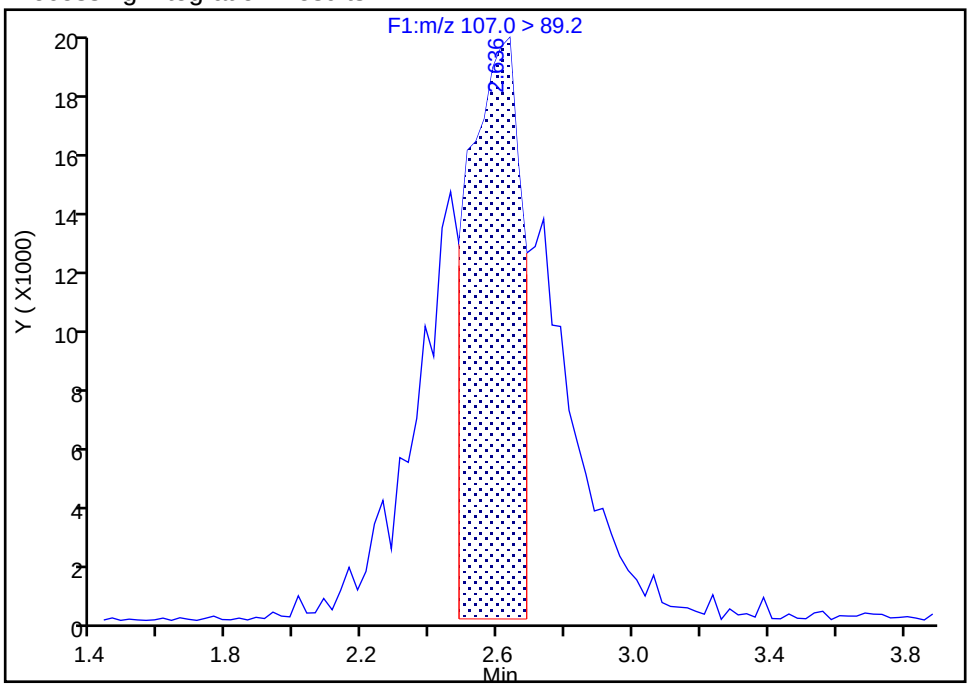
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12002.d
Injection Date: 12-Nov-2018 14:10:09 Instrument ID: LC_LCMS8
Lims ID: STD020
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

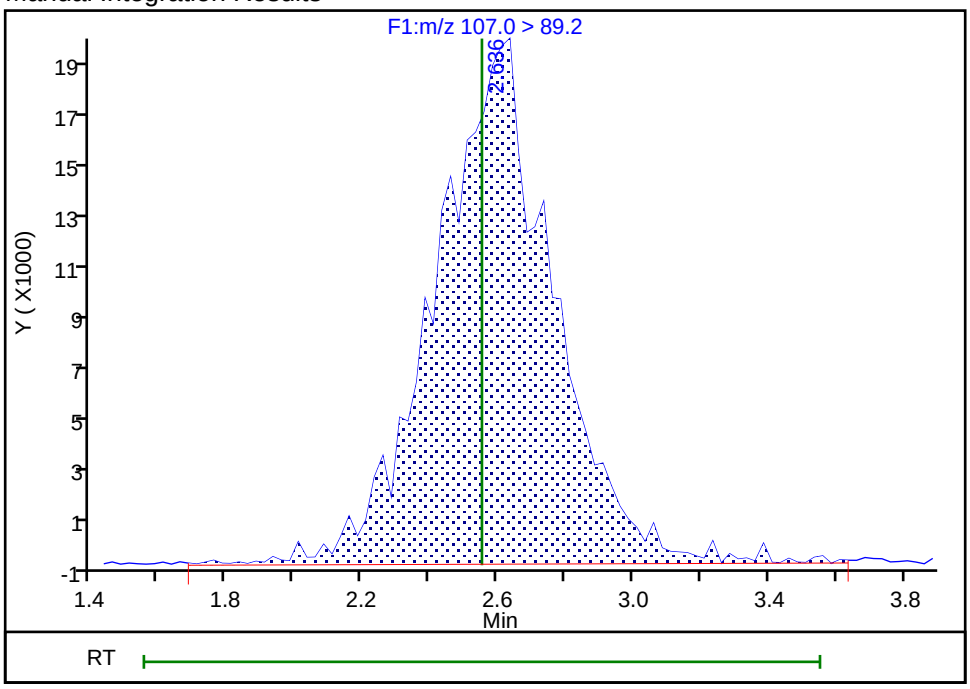
Processing Integration Results

RT: 2.64
Area: 204924
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.64
Area: 486045
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:00:26
Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12003.d
Lims ID: STD050
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 12-Nov-2018 14:15:17 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: STD050 prep 11/12/18 exp 11/19/18 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist: chrom-6860-LCMS8*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:52 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 08:55:41

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.636	2.553	0.083		502123	204.0		214	M
2 Perchlorate									R
99.0 > 83.0	2.586	2.604	-0.018	0.981	1009578	47.7		41.7	R
101.0 > 84.7	2.586	2.604	-0.018	0.981	708911		1.42(2.30-3.80)	29.9	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860CalStockW_00103 Amount Added: 250.00 Units: uL
6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:14:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12003.d

Injection Date: 12-Nov-2018 14:15:17 Instrument ID: LC_LCMS8

Lims ID: STD050

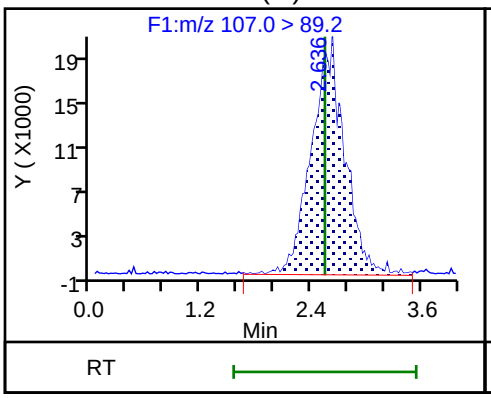
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 5

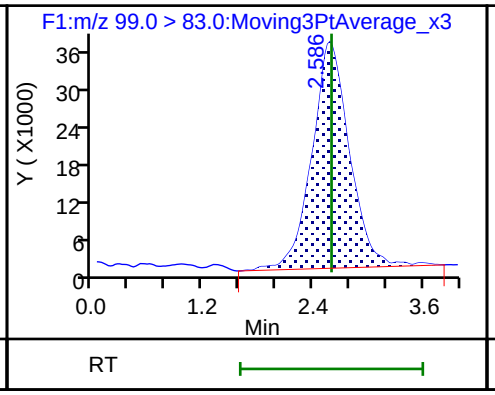
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

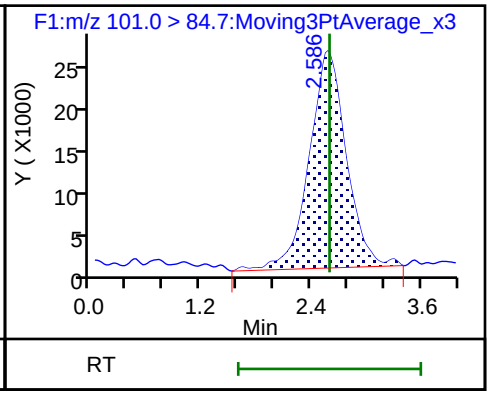
* 1 Perchlorate-18O (M)



2 Perchlorate



2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

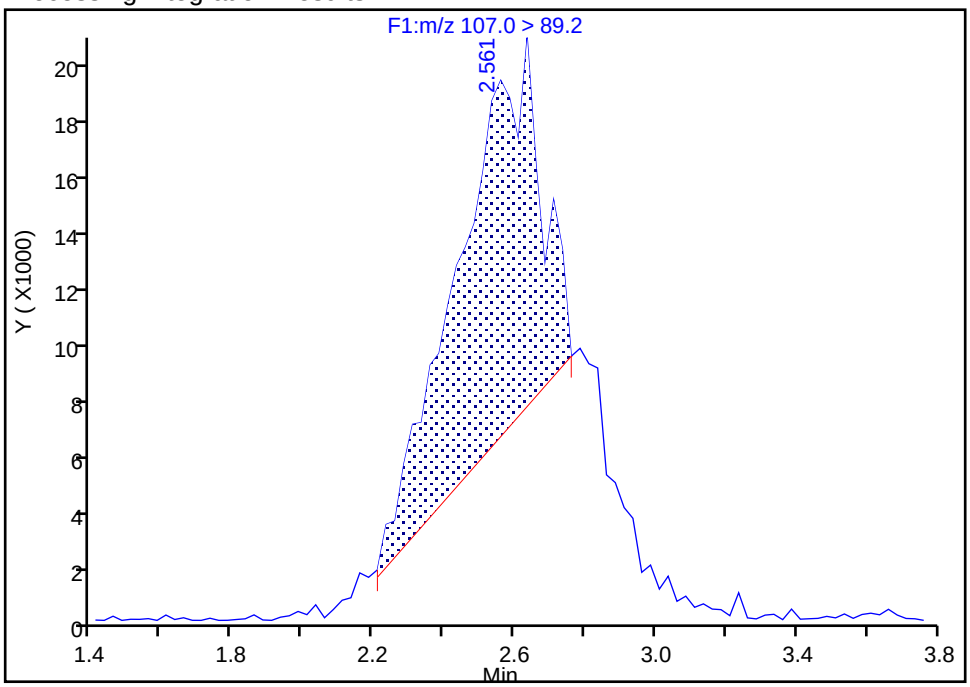
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12003.d
Injection Date: 12-Nov-2018 14:15:17 Instrument ID: LC_LCMS8
Lims ID: STD050
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

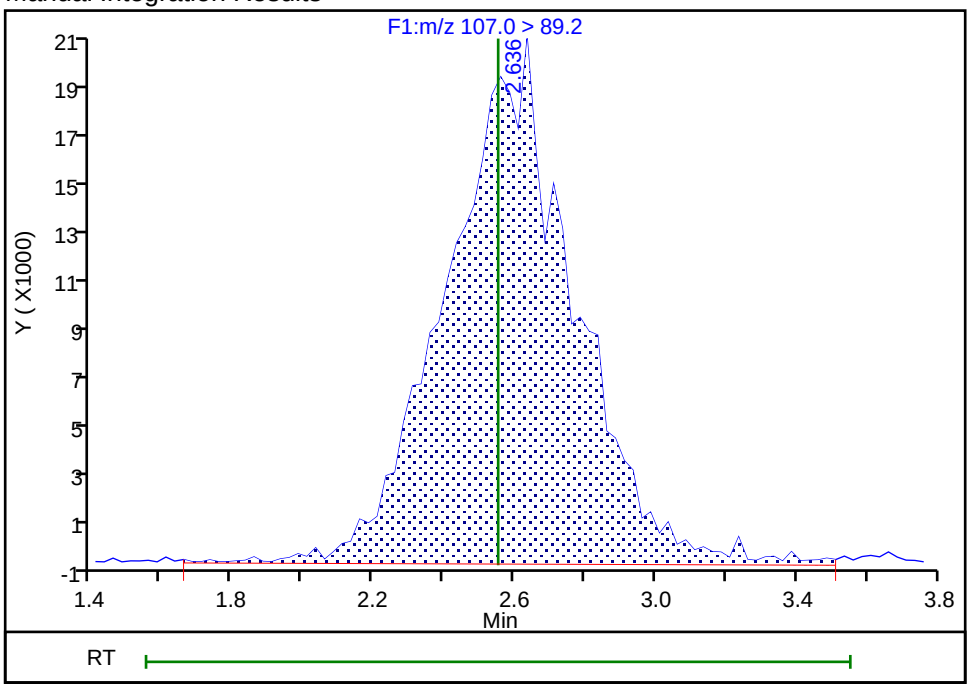
Processing Integration Results

RT: 2.56
Area: 215890
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.64
Area: 502123
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 08:55:36
Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12004.d
Lims ID: STD100
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 12-Nov-2018 14:20:25 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: STD100 prep 11/12/18 exp 11/19/18 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist: chrom-6860-LCMS8*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:53 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 08:56:04

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.536	2.553	-0.017		473518	204.0		269	M
2 Perchlorate									R
99.0 > 83.0	2.611	2.604	0.007	1.030	2016554	101.8		61.3	R
101.0 > 84.7	2.586	2.604	-0.018	1.020	1311265		1.54(2.30-3.80)	80.9	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860CalStockW_00103 Amount Added: 500.00 Units: uL
6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:14:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12004.d

Injection Date: 12-Nov-2018 14:20:25 Instrument ID: LC_LCMS8

Lims ID: STD100

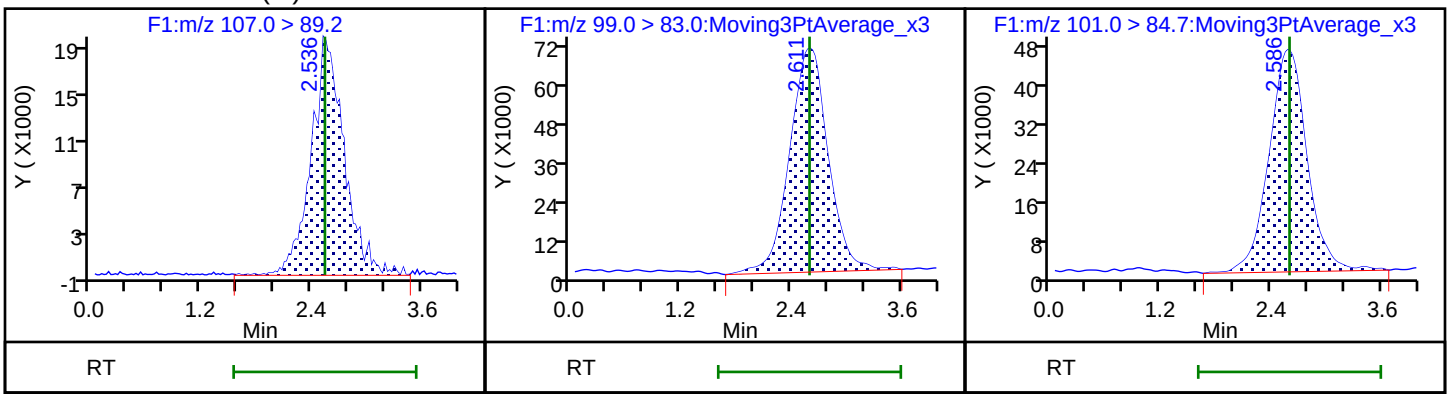
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 6

Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

* 1 Perchlorate-18O (M) 2 Perchlorate 2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

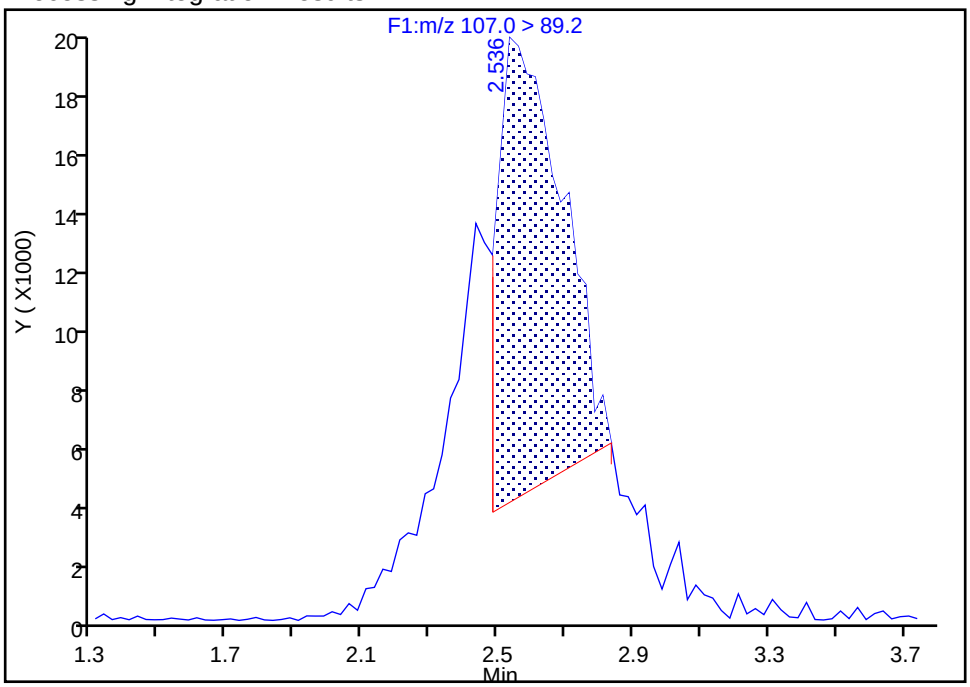
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12004.d
Injection Date: 12-Nov-2018 14:20:25 Instrument ID: LC_LCMS8
Lims ID: STD100
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

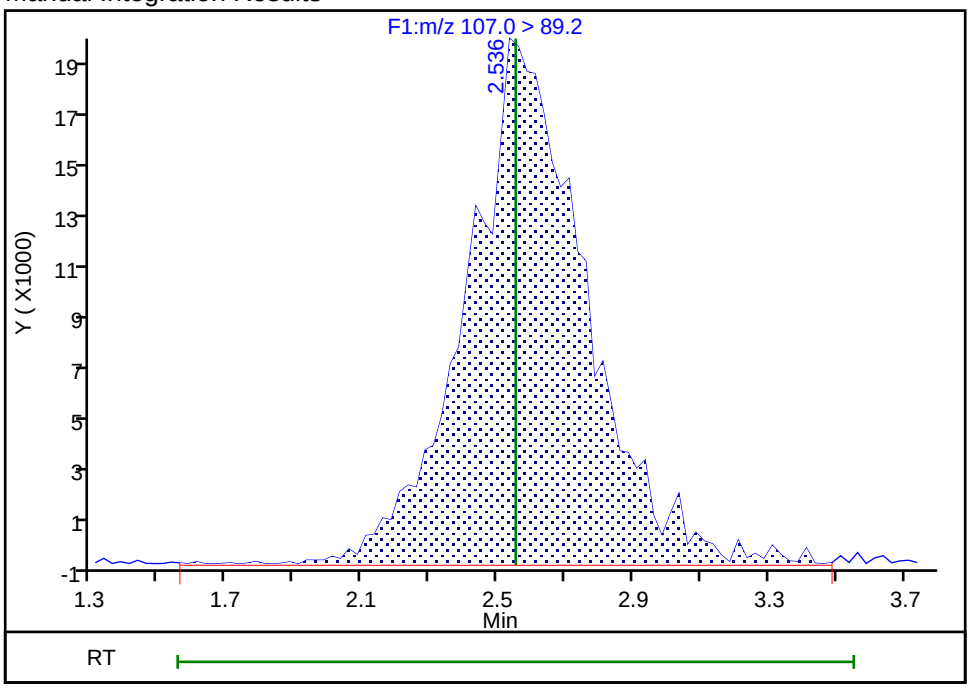
Processing Integration Results

RT: 2.54
Area: 191293
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.54
Area: 473518
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 08:55:52
Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12005.d
Lims ID: STD200
Client ID:
Sample Type: ICISAV Calib Level: 4
Inject. Date: 12-Nov-2018 14:25:35 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: STD200 prep 11/12/18 exp 11/19/18 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist: chrom-6860-LCMS8*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:53 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 08:56:19

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.553	2.553	0.0		477487	204.0		183	M
2 Perchlorate									R
99.0 > 83.0	2.604	2.604	0.0	1.020	3883591	195.0		116	R
101.0 > 84.7	2.604	2.604	0.0	1.020	2515232		1.54(2.30-3.80)	93.5	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860CalStockW_00103 Amount Added: 1000.00 Units: uL
6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:14:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12005.d

Injection Date: 12-Nov-2018 14:25:35 Instrument ID: LC_LCMS8

Lims ID: STD200

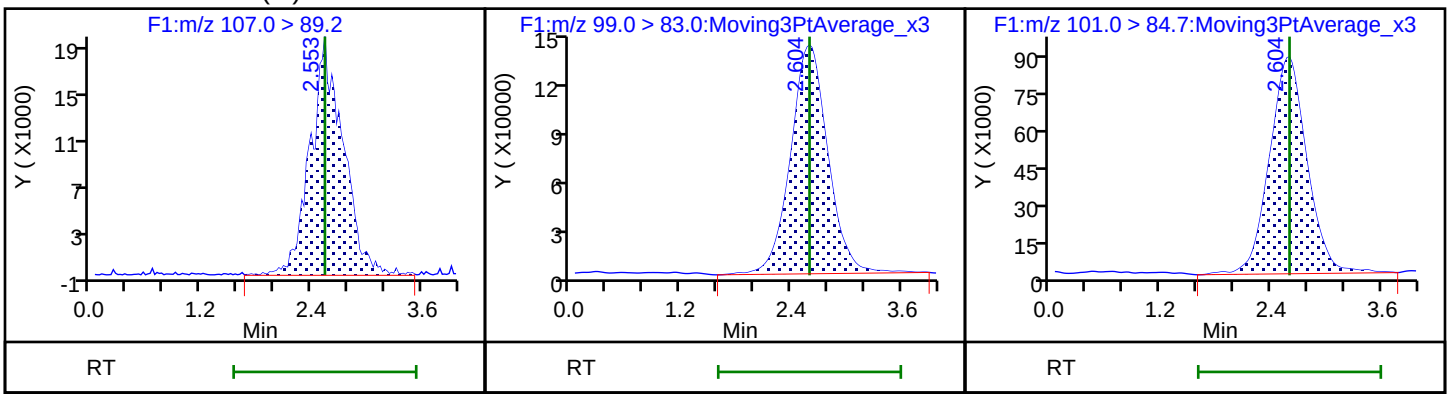
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 7

Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

* 1 Perchlorate-18O (M) 2 Perchlorate 2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

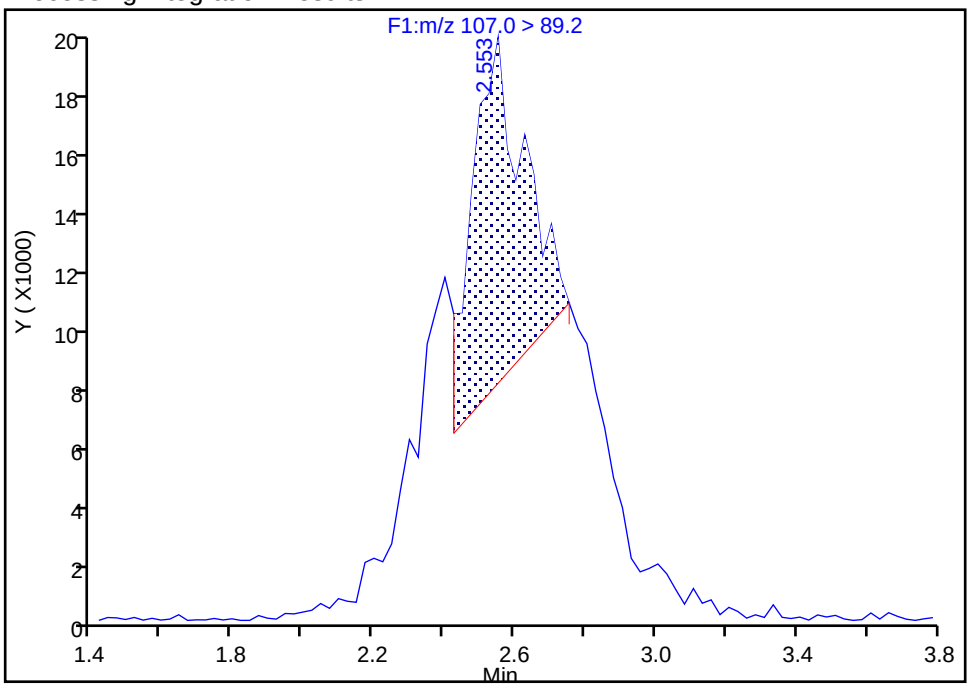
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12005.d
Injection Date: 12-Nov-2018 14:25:35 Instrument ID: LC_LCMS8
Lims ID: STD200
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

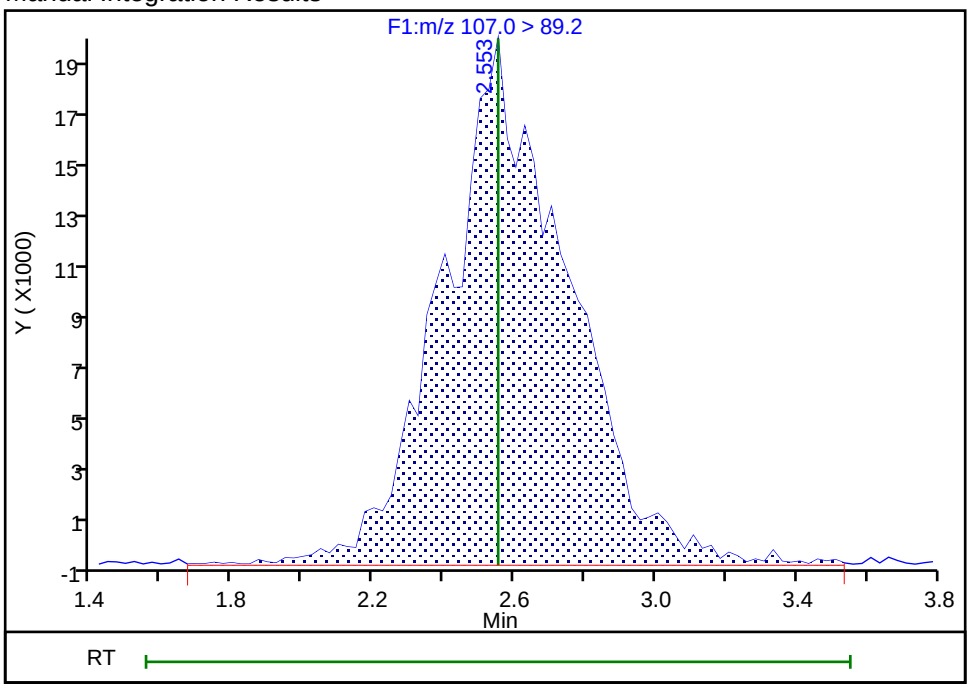
Processing Integration Results

RT: 2.55
Area: 117175
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.55
Area: 477487
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 08:56:15
Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12006.d
Lims ID: STD500
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 12-Nov-2018 14:30:44 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: STD500 prep 11/12/18 exp 11/19/18 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist: chrom-6860-LCMS8*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:54 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 08:57:09

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.586	2.553	0.033		457319	204.0		248	M
2 Perchlorate									RM
99.0 > 83.0	2.611	2.604	0.007	1.010	9552126	501.9		233	RM
101.0 > 84.7	2.586	2.604	-0.018	1.000	6478826		1.47(2.30-3.80)	318	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860CalStockW_00103 Amount Added: 2500.00 Units: uL
6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:14:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12006.d

Injection Date: 12-Nov-2018 14:30:44 Instrument ID: LC_LCMS8

Lims ID: STD500

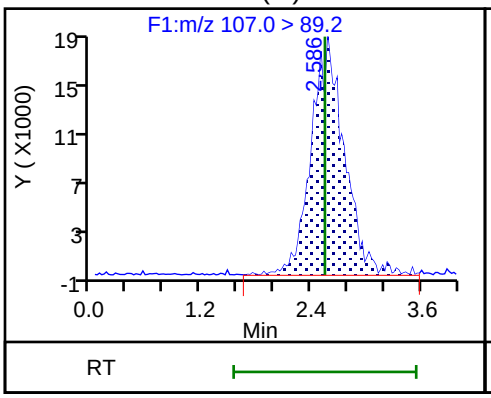
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 8

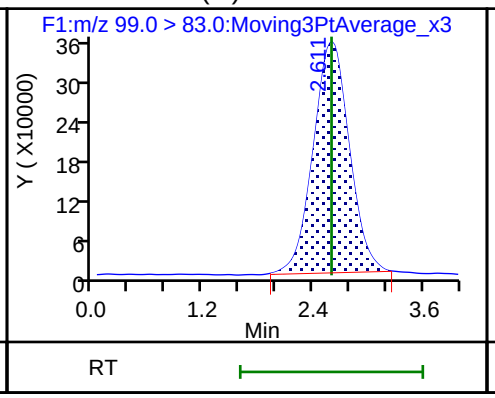
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

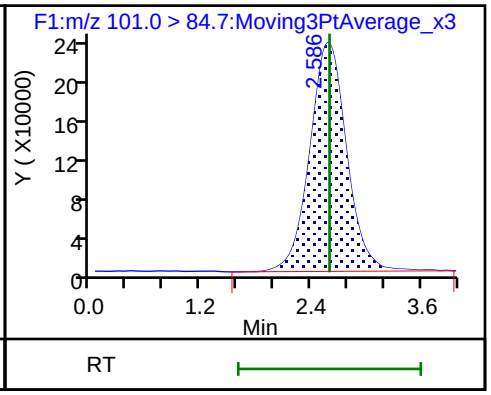
* 1 Perchlorate-18O (M)



2 Perchlorate (M)



2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

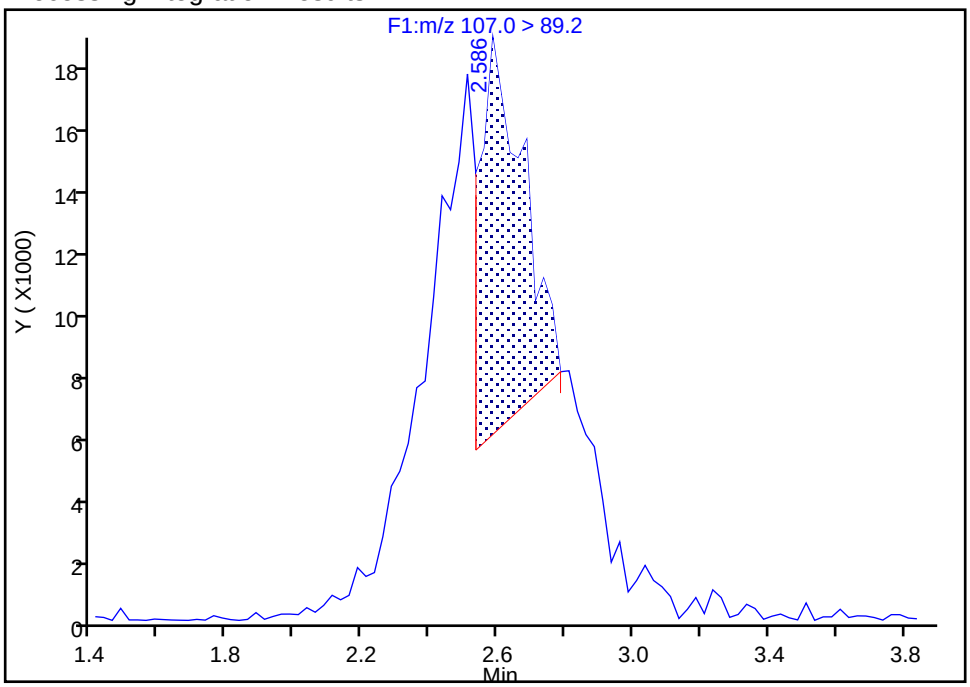
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12006.d
Injection Date: 12-Nov-2018 14:30:44 Instrument ID: LC_LCMS8
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

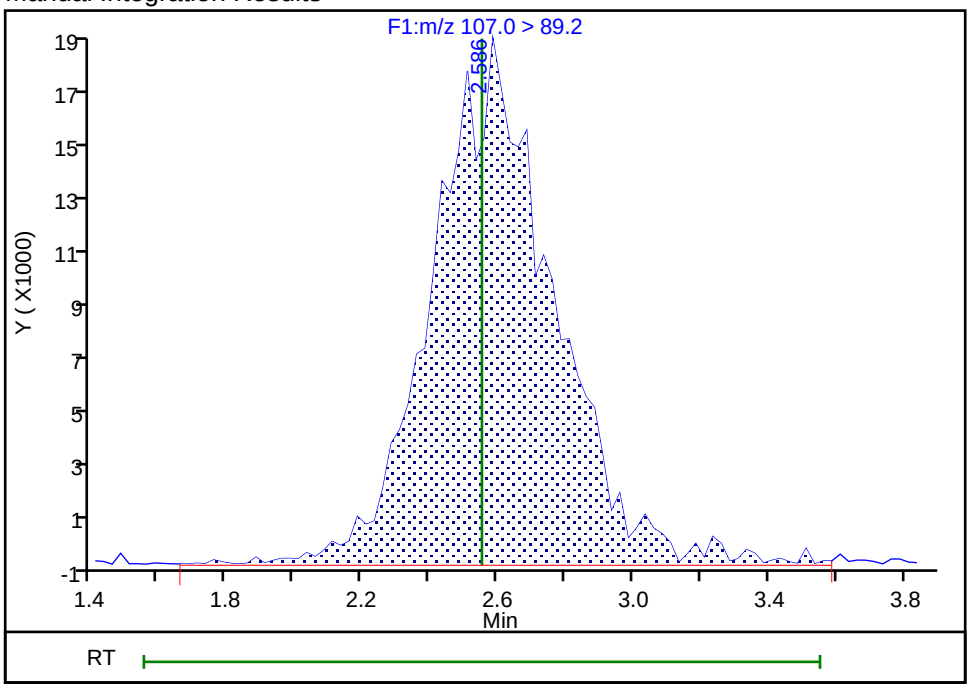
Processing Integration Results

RT: 2.59
Area: 104668
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.59
Area: 457319
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 08:56:30
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

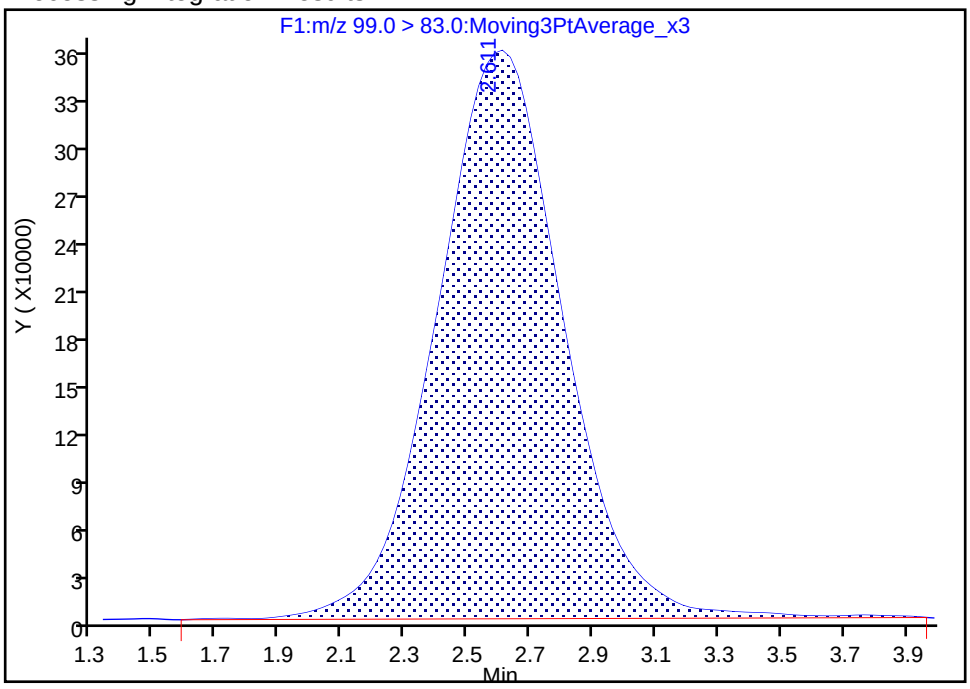
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12006.d
Injection Date: 12-Nov-2018 14:30:44 Instrument ID: LC_LCMS8
Lims ID: STD500
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

2 Perchlorate, CAS: 14797-73-0

Signal: 1

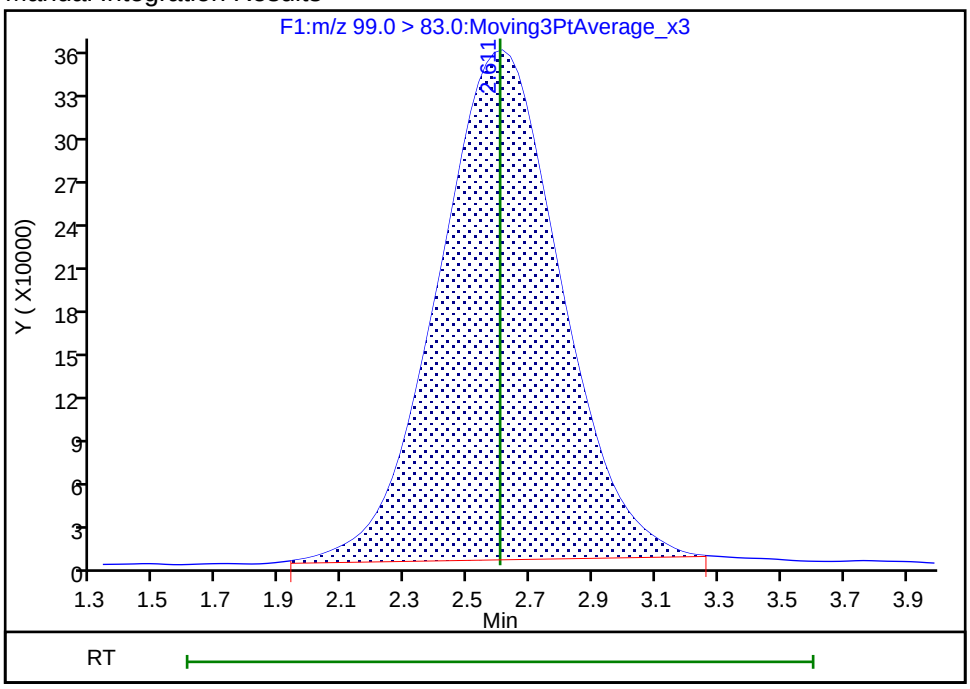
Processing Integration Results

RT: 2.61
Area: 9866996
Amount: 513.6094
Amount Units: ng/l



Manual Integration Results

RT: 2.61
Area: 9552126
Amount: 501.9057
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 08:57:36
Audit Action: Manually Integrated Audit Reason: Baseline

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d
Lims ID: STD1000
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 12-Nov-2018 14:35:55 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: STD1000 prep 11/12/18 exp 11/19/18 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist: chrom-6860-LCMS8*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:55 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 08:57:29

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.536	2.553	-0.017		461119	204.0		176	M
2 Perchlorate									RM
99.0 > 83.0	2.611	2.604	0.007	1.030	19227438	1002.6		531	RM
101.0 > 84.7	2.586	2.604	-0.018	1.020	12502741		1.54(2.30-3.80)	534	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860CalStockW_00103 Amount Added: 5000.00 Units: uL
6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:14:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Injection Date: 12-Nov-2018 14:35:55 Instrument ID: LC_LCMS8

Lims ID: STD1000

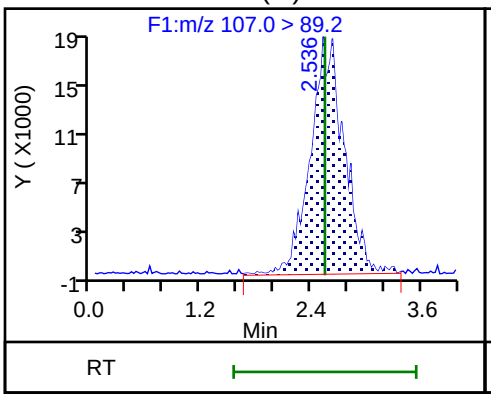
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 9

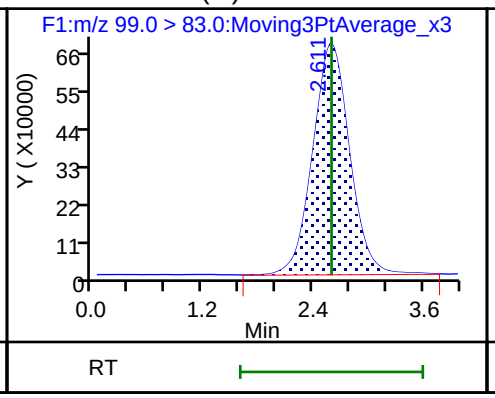
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

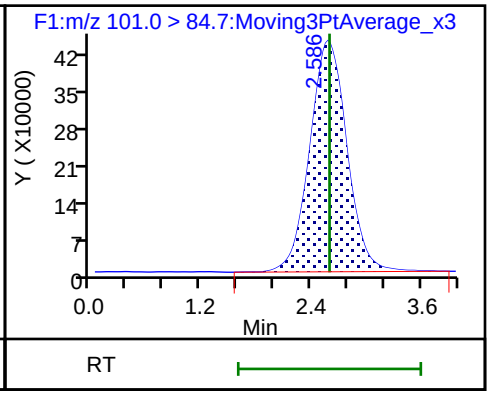
* 1 Perchlorate-18O (M)



2 Perchlorate (M)



2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

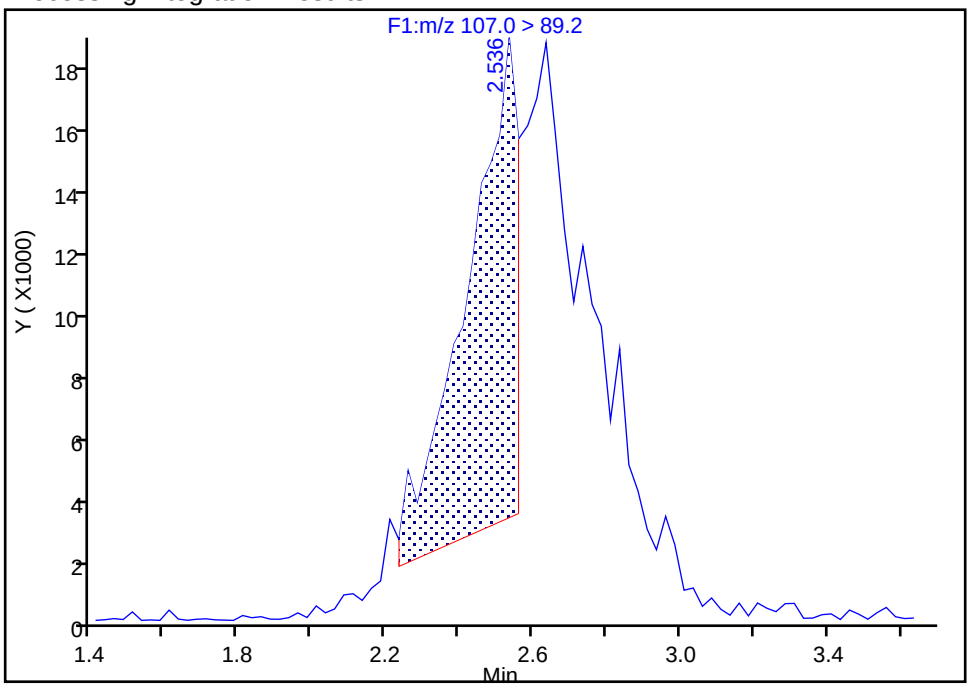
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d				
Injection Date:	12-Nov-2018 14:35:55	Instrument ID:	LC_LCMS8		
Lims ID:	STD1000				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	250.0 ul	Dil. Factor:	1.0000		
Method:	6860-LCMS8	Limit Group:	LC - 6860 Perchlorate		
Column:		Detector	F1:MRM		

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

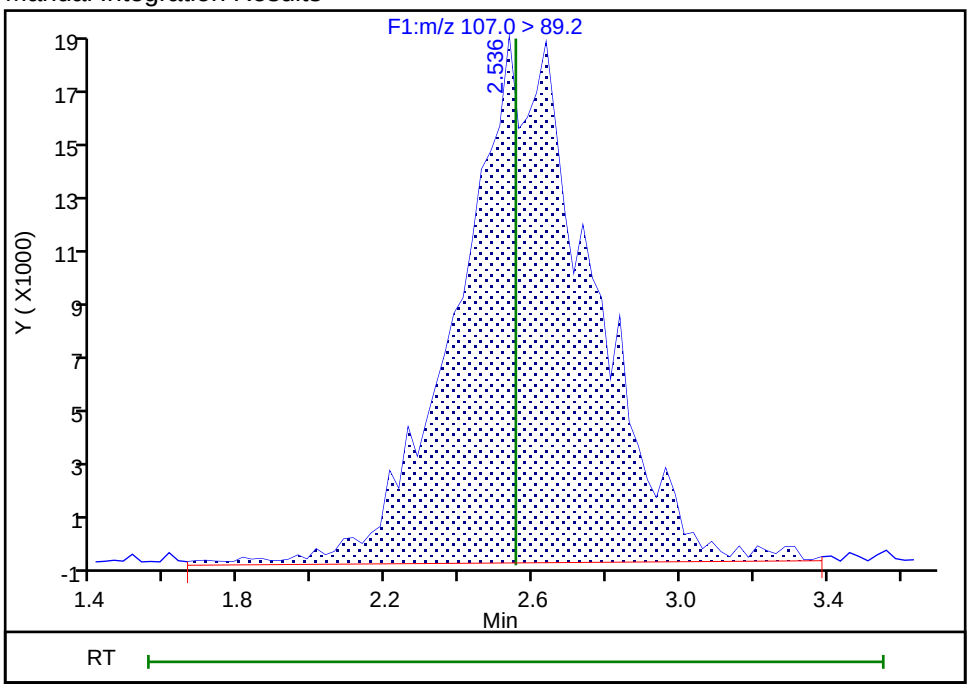
Processing Integration Results

RT: 2.54
Area: 140184
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.54
Area: 461119
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 08:57:17

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

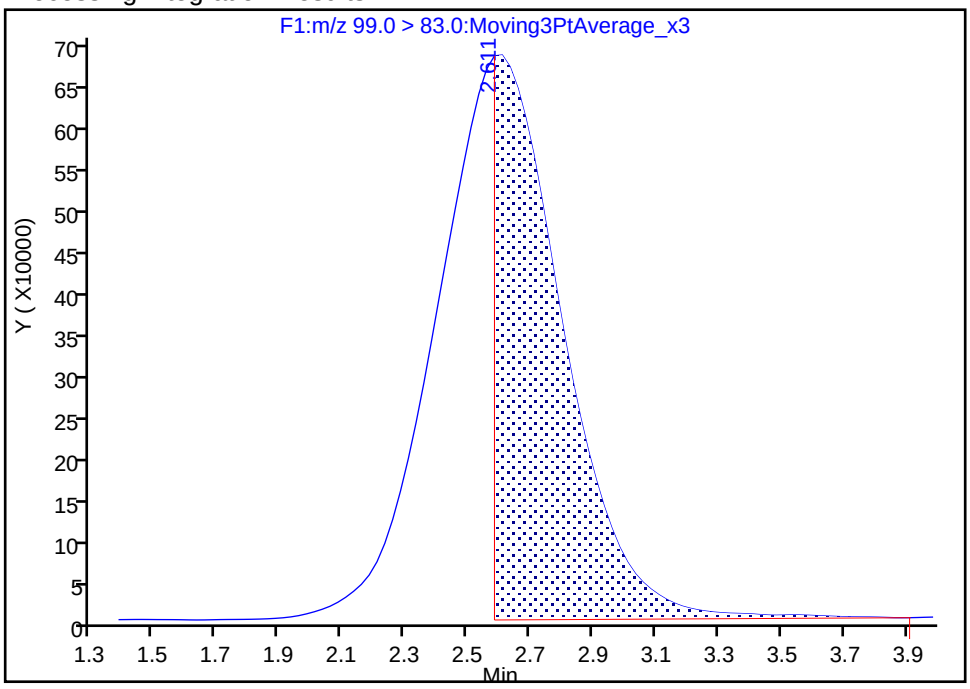
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d
Injection Date: 12-Nov-2018 14:35:55 Instrument ID: LC_LCMS8
Lims ID: STD1000
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

2 Perchlorate, CAS: 14797-73-0

Signal: 1

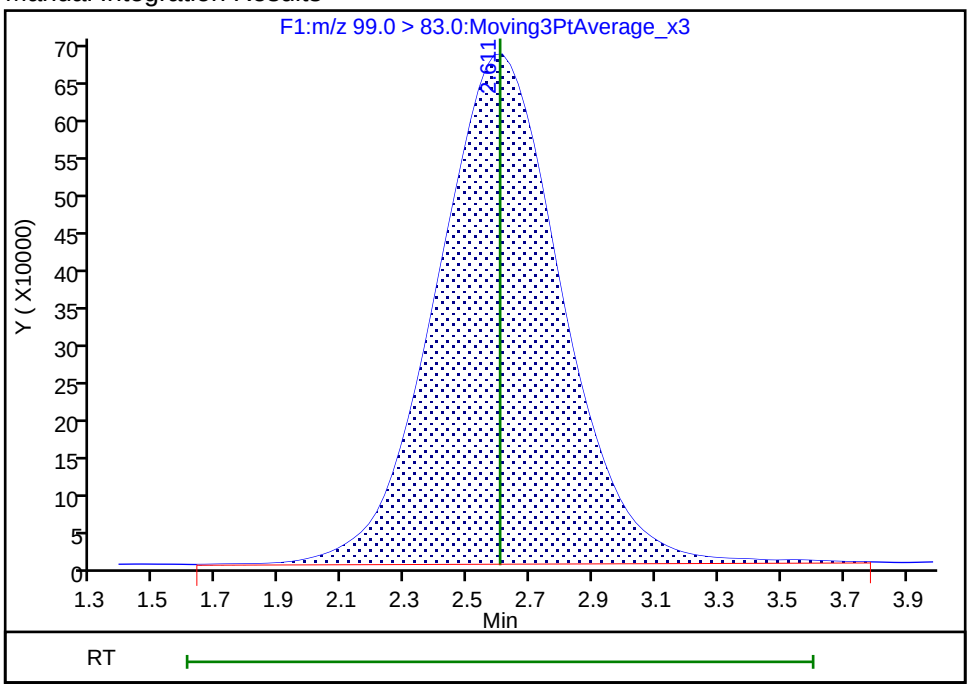
Processing Integration Results

RT: 2.61
Area: 10353132
Amount: 734.2567
Amount Units: ng/l



Manual Integration Results

RT: 2.61
Area: 19227438
Amount: 1002.6198
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 08:57:25
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICV 280-437280/11 Calibration Date: 11/12/2018 14:46

Instrument ID: LC_LCMS8 Calib Start Date: 11/12/2018 14:10

GC Column: ID: Calib End Date: 11/12/2018 14:35

Lab File ID: IC818K12009.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		8.941		0.210	0.200	5.1	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12009.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 12-Nov-2018 14:46:16 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: ICV prep 11/12/18 exp 11/19/18 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist: chrom-6860-LCMS8*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:57 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:02:06

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.626	2.553	0.073		460342	204.0		228	M
2 Perchlorate									M
99.0 > 83.0	2.601	2.604	-0.003	0.990	4035154	210.2		123	M
101.0 > 84.7	2.604	2.604	0.0	0.000	0		0.00(2.30-3.80)		

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

6860ICVStockW_00041 Amount Added: 1000.00 Units: uL
6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:14:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12009.d

Injection Date: 12-Nov-2018 14:46:16 Instrument ID: LC_LCMS8

Lims ID: ICV

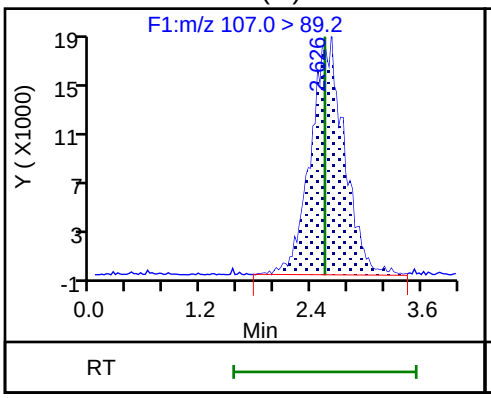
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 11

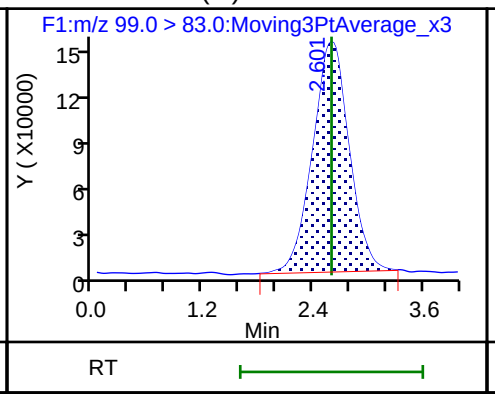
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

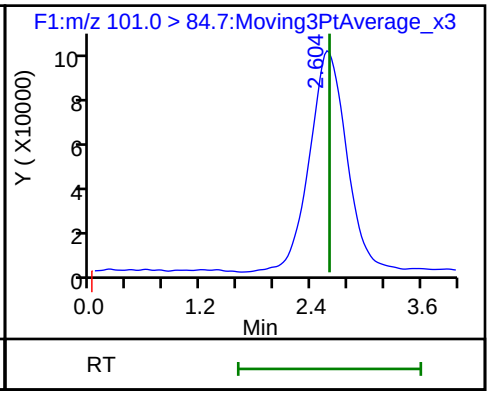
* 1 Perchlorate-18O (M)



2 Perchlorate (M)



2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

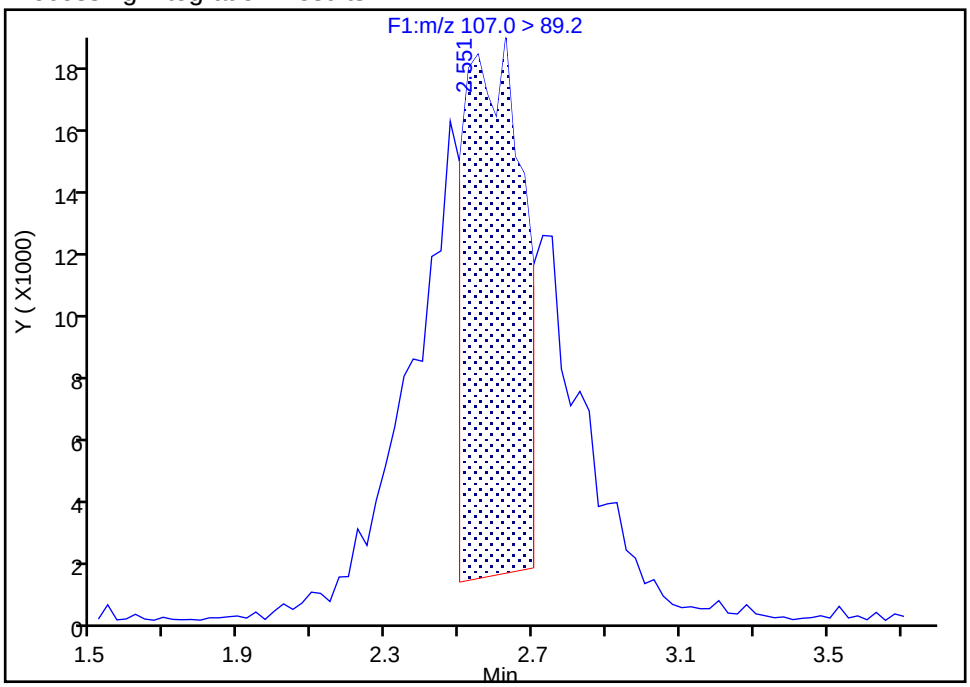
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12009.d				
Injection Date:	12-Nov-2018 14:46:16	Instrument ID:	LC_LCMS8		
Lims ID:	ICV				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	11
Injection Vol:	250.0 ul	Dil. Factor:	1.0000		
Method:	6860-LCMS8	Limit Group:	LC - 6860 Perchlorate		
Column:		Detector	F1:MRM		

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

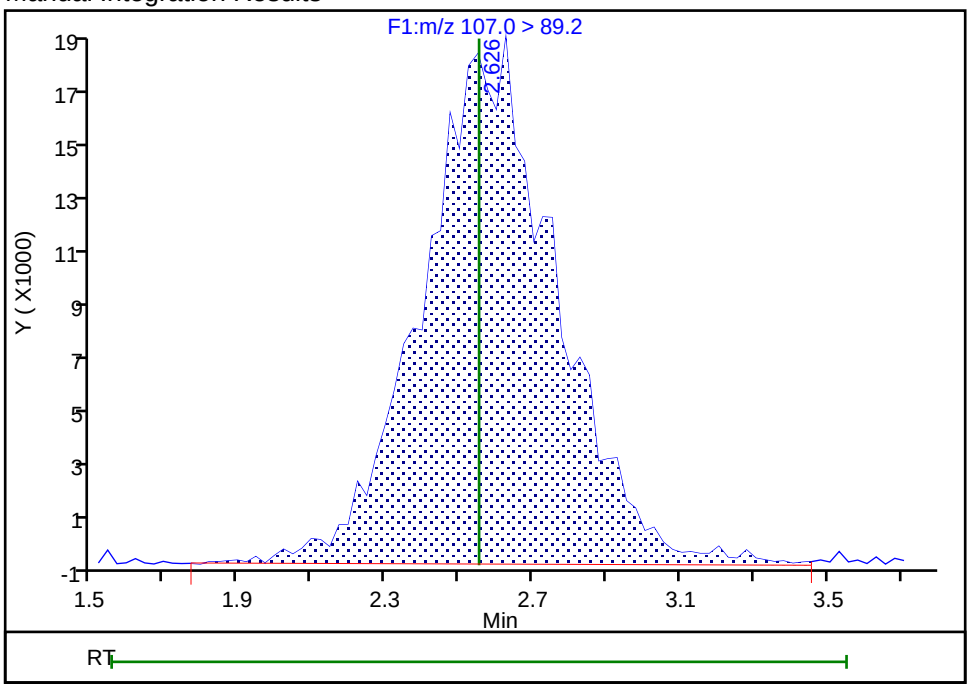
Processing Integration Results

RT: 2.55
Area: 174531
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.63
Area: 460342
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:01:55

Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

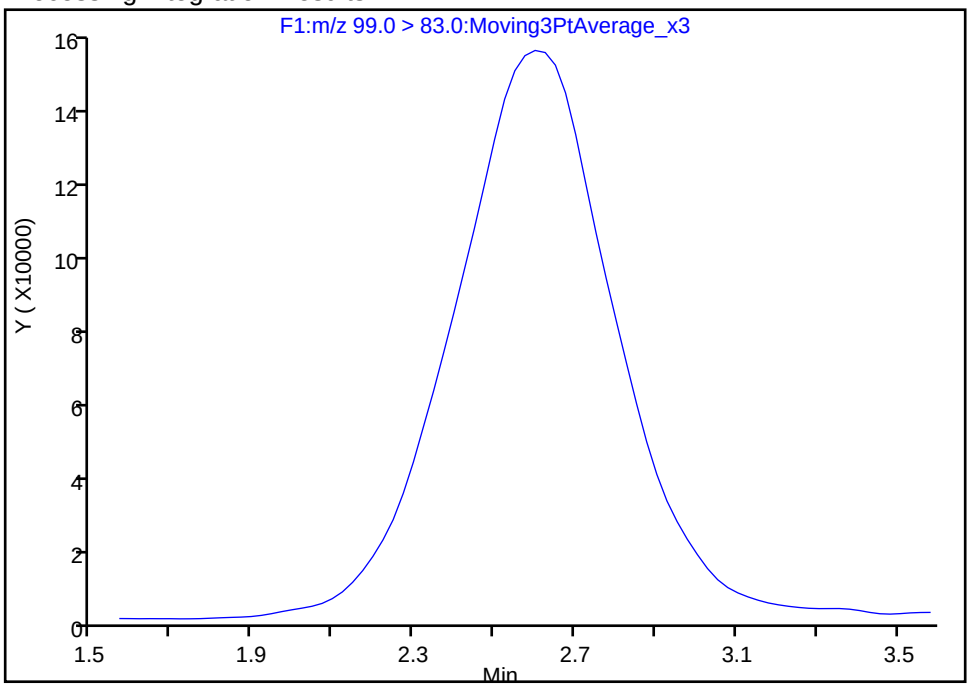
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12009.d
Injection Date: 12-Nov-2018 14:46:16 Instrument ID: LC_LCMS8
Lims ID: ICV
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

2 Perchlorate, CAS: 14797-73-0

Signal: 1

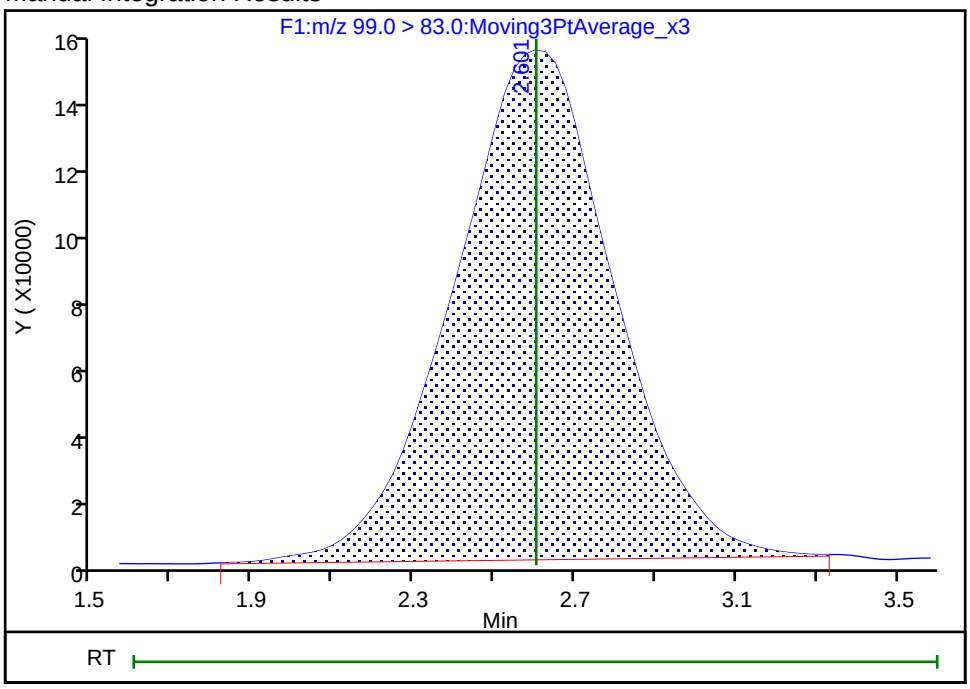
Not Detected
Expected RT: 2.60

Processing Integration Results



Manual Integration Results

RT: 2.60
Area: 4035154
Amount: 210.2451
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:02:20
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-437280/21 Calibration Date: 11/12/2018 15:41

Instrument ID: LC_LCMS8 Calib Start Date: 11/12/2018 14:10

GC Column: ID: Calib End Date: 11/12/2018 14:35

Lab File ID: IC818K12019.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		8.402		0.198	0.200	-1.2	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12019.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 12-Nov-2018 15:41:36 ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: CCV prep 11/12/18 exp 11/19/18 #1 inj 1
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist: chrom-6860-LCMS8*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:15:05 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:05:53

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.586	2.553	0.033		444897	204.0		274	M
2 Perchlorate									R
99.0 > 83.0	2.586	2.604	-0.018	1.000	3664739	197.5		195	R
101.0 > 84.7	2.560	2.604	-0.044	0.990	2422362		1.51(2.30-3.80)	161	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860-IS-Spike_00078 Amount Added: 50.00 Units: uL
6860CalStockW_00103 Amount Added: 1000.00 Units: uL

Report Date: 13-Nov-2018 09:15:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12019.d

Injection Date: 12-Nov-2018 15:41:36 Instrument ID: LC_LCMS8

Lims ID: CCV

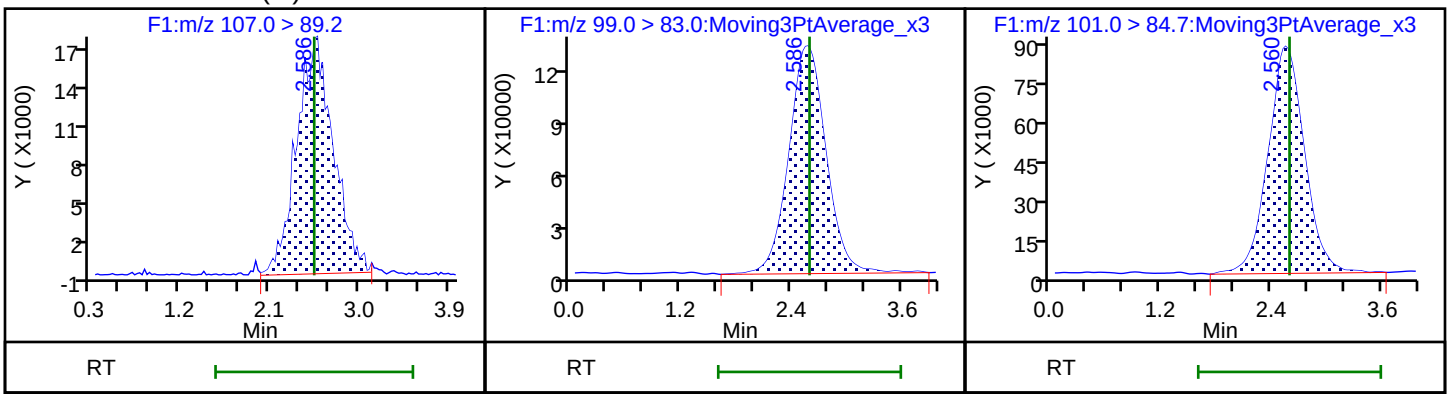
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 21

Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

* 1 Perchlorate-18O (M) 2 Perchlorate 2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

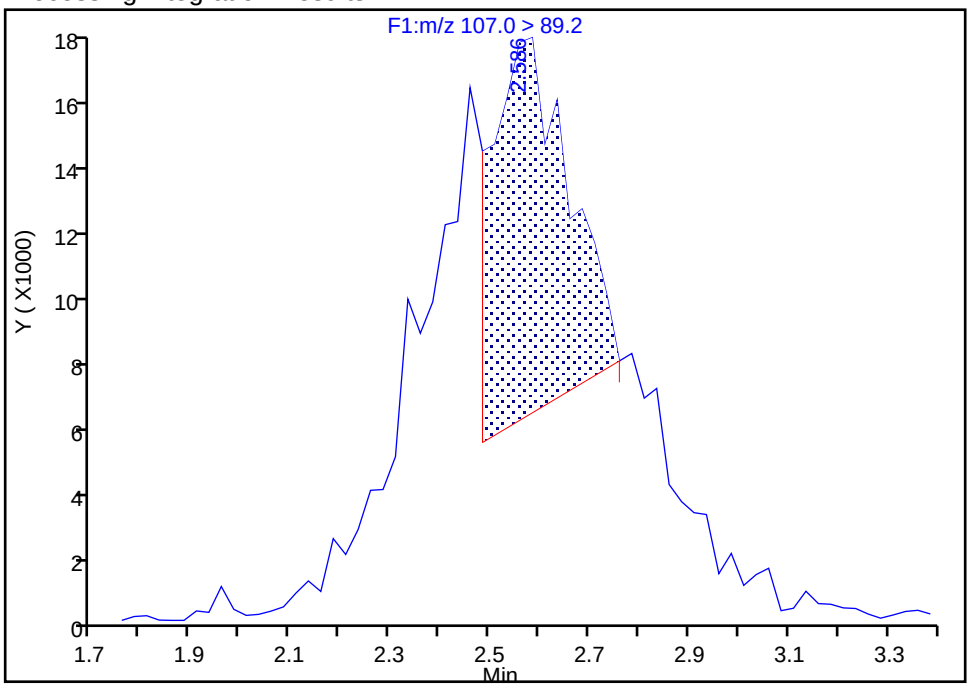
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12019.d
Injection Date: 12-Nov-2018 15:41:36 Instrument ID: LC_LCMS8
Lims ID: CCV
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

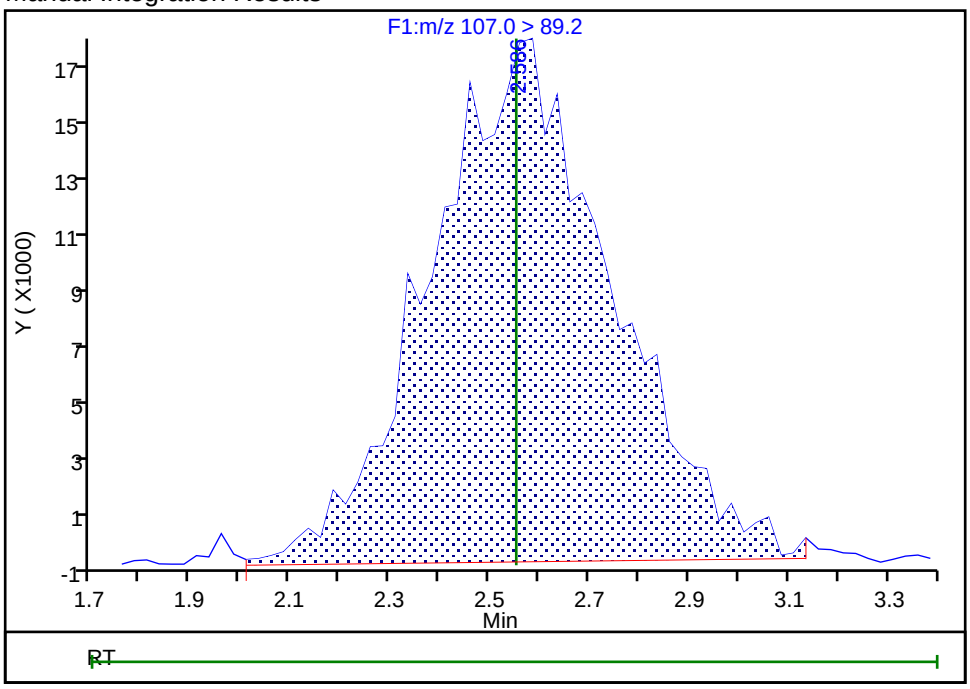
Processing Integration Results

RT: 2.59
Area: 119301
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.59
Area: 444897
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:05:47
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVL 280-437280/22 Calibration Date: 11/12/2018 15:46

Instrument ID: LC_LCMS8 Calib Start Date: 11/12/2018 14:10

GC Column: ID: Calib End Date: 11/12/2018 14:35

Lab File ID: IC818K12020.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		10.14		0.0233	0.0200	16.3	30.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12020.d
Lims ID: CCVL
Client ID:
Sample Type: CCVL
Inject. Date: 12-Nov-2018 15:46:50 ALS Bottle#: 0 Worklist Smp#: 22
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: CCVL prep 11/12/18 exp 11/19/18 #1 inj 1
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist: chrom-6860-LCMS8*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:15:07 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:06:17

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.624	2.553	0.071		450086	204.0		275	M
2 Perchlorate									RM
99.0 > 83.0	2.573	2.604	-0.031	0.981	447360	23.3		17.8	RM
101.0 > 84.7	2.599	2.604	-0.005	0.990	344519		1.30(2.30-3.80)	25.8	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860-IS-Spike_00078 Amount Added: 50.00 Units: uL
6860CalStockW_00103 Amount Added: 100.00 Units: uL

Report Date: 13-Nov-2018 09:15:08 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12020.d

Injection Date: 12-Nov-2018 15:46:50 Instrument ID: LC_LCMS8

Lims ID: CCVL

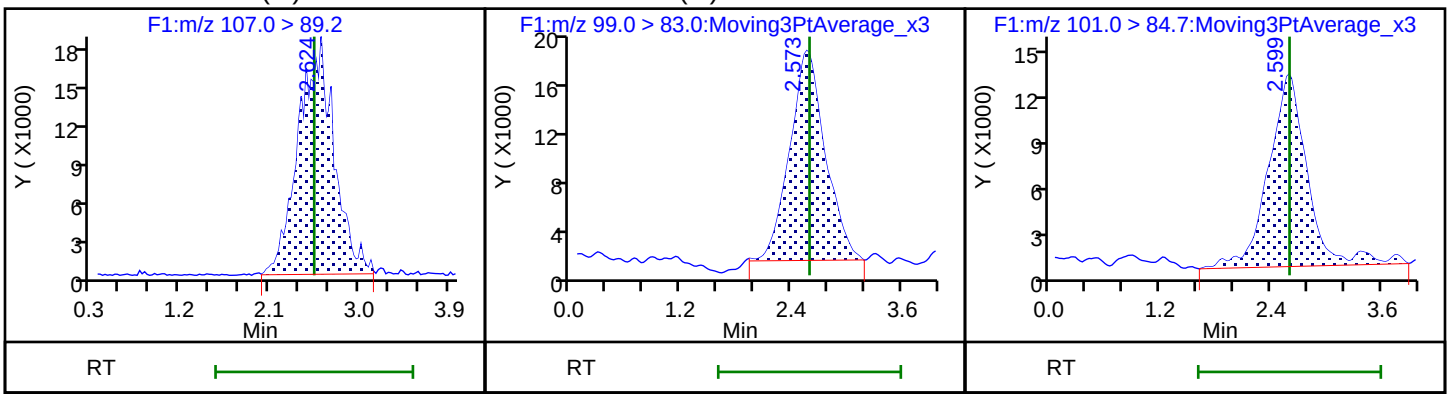
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 22

Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

* 1 Perchlorate-18O (M) 2 Perchlorate (M) 2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

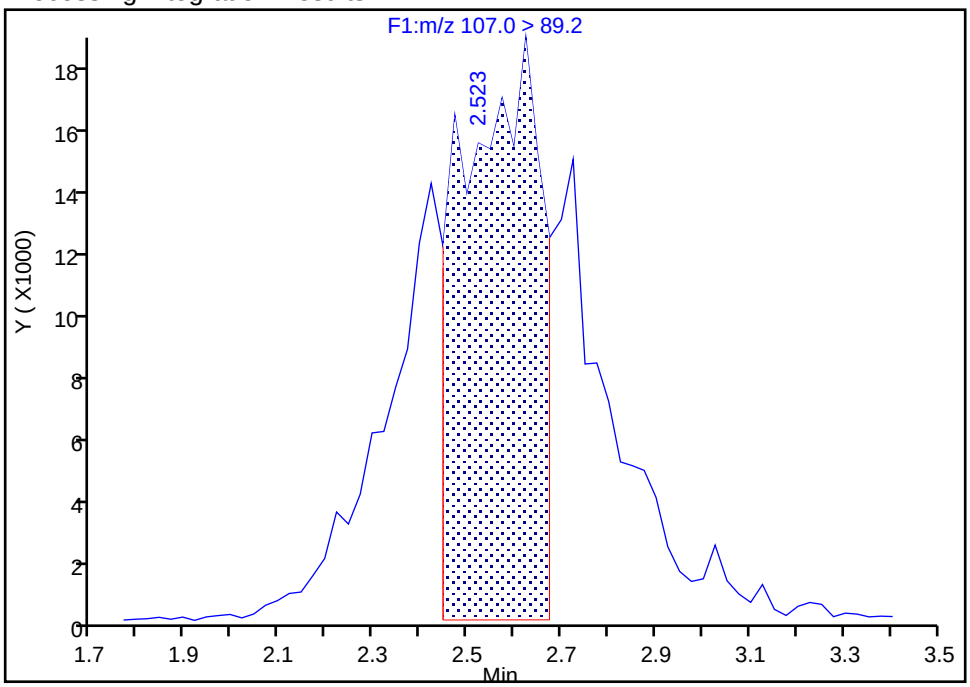
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12020.d
Injection Date: 12-Nov-2018 15:46:50 Instrument ID: LC_LCMS8
Lims ID: CCVL
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 22
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

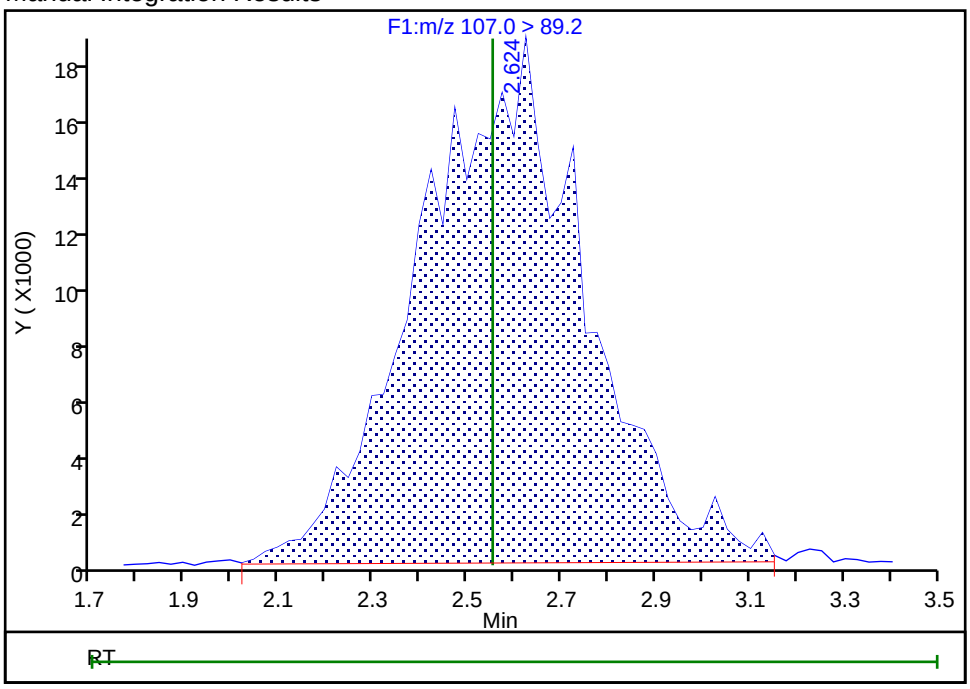
Processing Integration Results

RT: 2.52
Area: 206108
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.62
Area: 450086
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:06:09
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

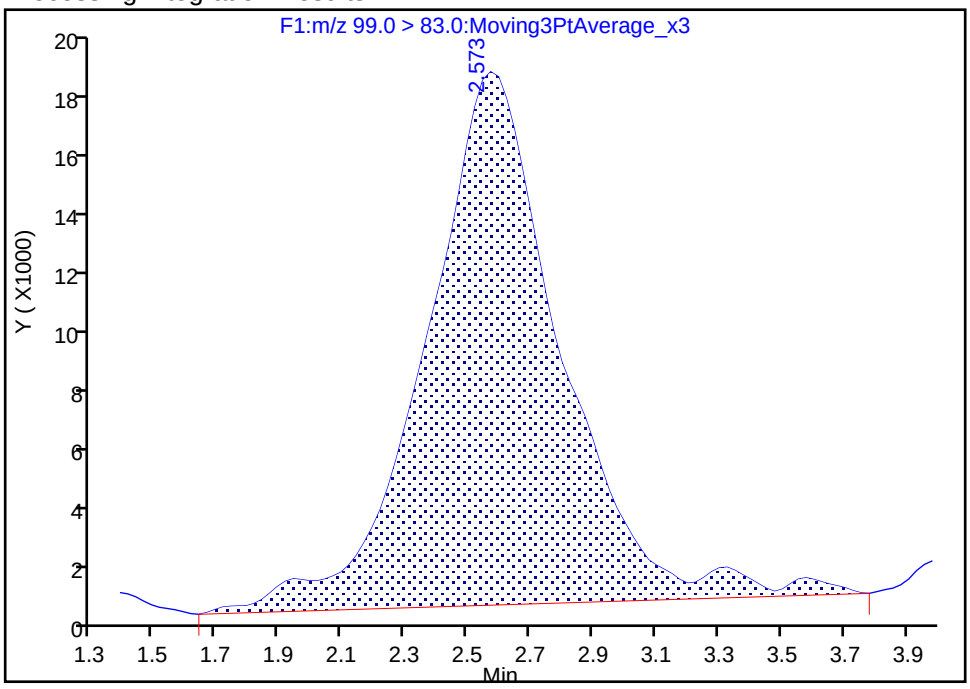
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12020.d				
Injection Date:	12-Nov-2018 15:46:50	Instrument ID:	LC_LCMS8		
Lims ID:	CCVL				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	250.0 ul	Dil. Factor:	1.0000		
Method:	6860-LCMS8	Limit Group:	LC - 6860 Perchlorate		
Column:		Detector	F1:MRM		

2 Perchlorate, CAS: 14797-73-0

Signal: 1

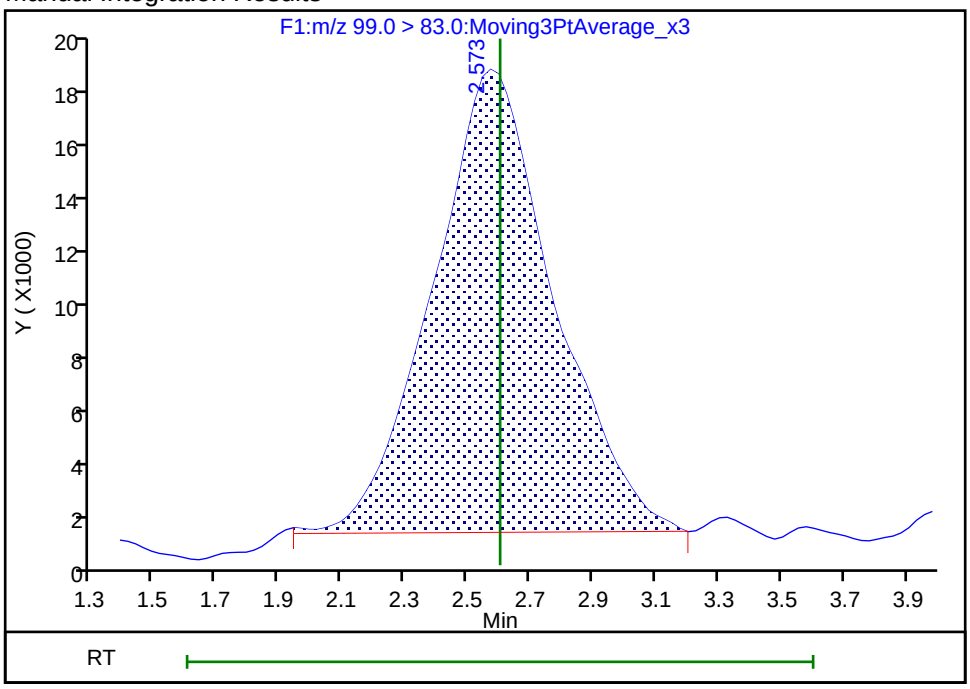
Processing Integration Results

RT: 2.57
Area: 523029
Amount: 27.296829
Amount Units: ng/l



Manual Integration Results

RT: 2.57
Area: 447360
Amount: 23.251650
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:06:14
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCV 280-437280/31 Calibration Date: 11/12/2018 16:39

Instrument ID: LC_LCMS8 Calib Start Date: 11/12/2018 14:10

GC Column: ID: Calib End Date: 11/12/2018 14:35

Lab File ID: IC818K12029.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		8.278		0.195	0.200	-2.7	20.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12029.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 12-Nov-2018 16:39:14 ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: CCV prep 11/12/18 exp 11/19/18 #1 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist: chrom-6860-LCMS8*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:15:23 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:09:11

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.561	2.553	0.008		439775	204.0		299	M
2 Perchlorate									R
99.0 > 83.0	2.586	2.604	-0.018	1.010	3569277	194.6		139	R
101.0 > 84.7	2.586	2.604	-0.018	1.010	2343599		1.52(2.30-3.80)	108	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860-IS-Spike_00078 Amount Added: 50.00 Units: uL
6860CalStockW_00103 Amount Added: 1000.00 Units: uL

Report Date: 13-Nov-2018 09:15:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12029.d

Injection Date: 12-Nov-2018 16:39:14 Instrument ID: LC_LCMS8

Lims ID: CCV

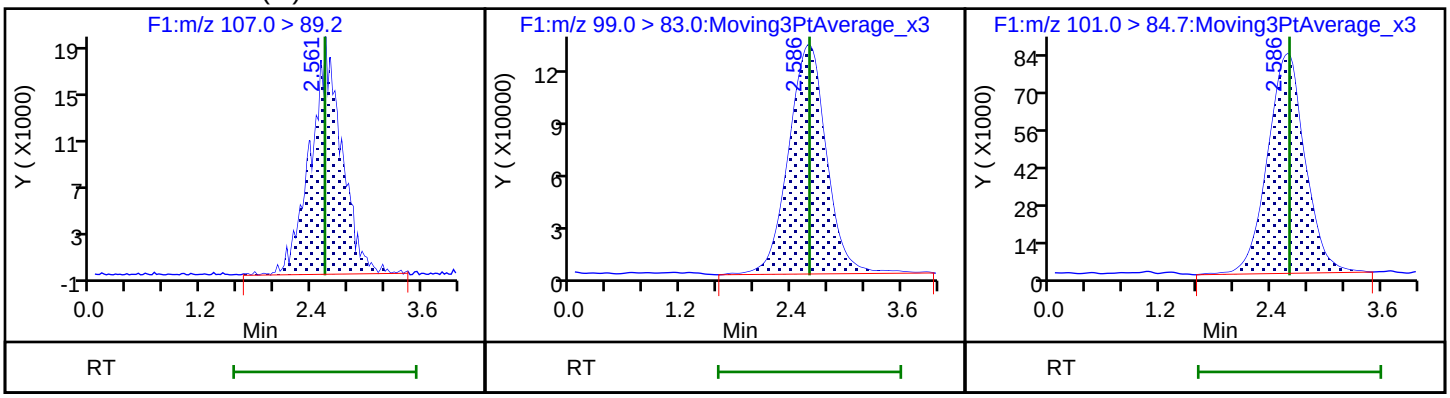
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 31

Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

* 1 Perchlorate-18O (M) 2 Perchlorate 2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

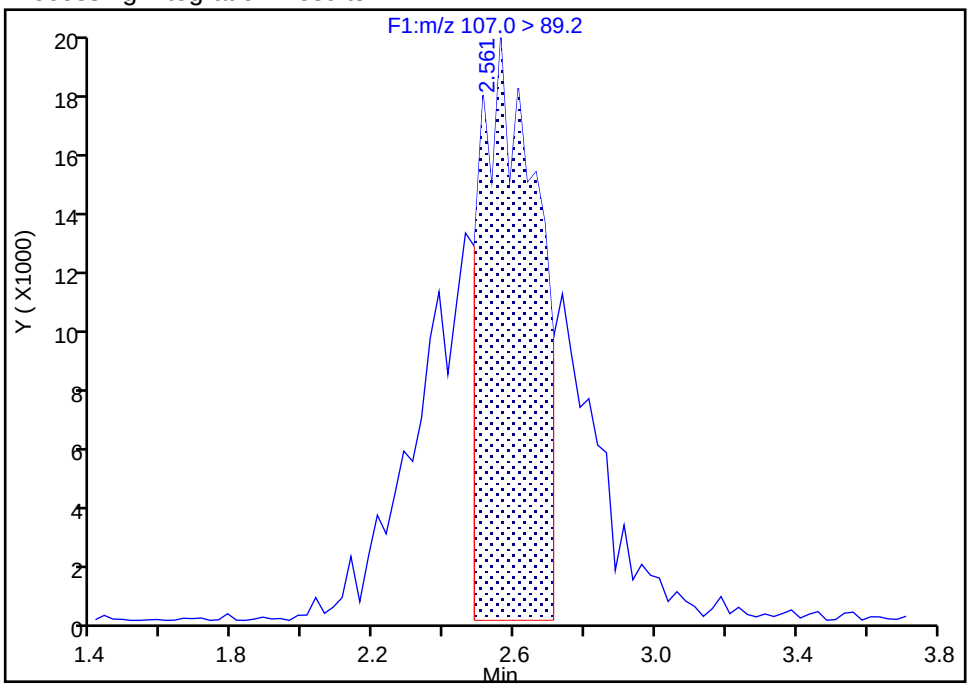
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12029.d
Injection Date: 12-Nov-2018 16:39:14 Instrument ID: LC_LCMS8
Lims ID: CCV
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

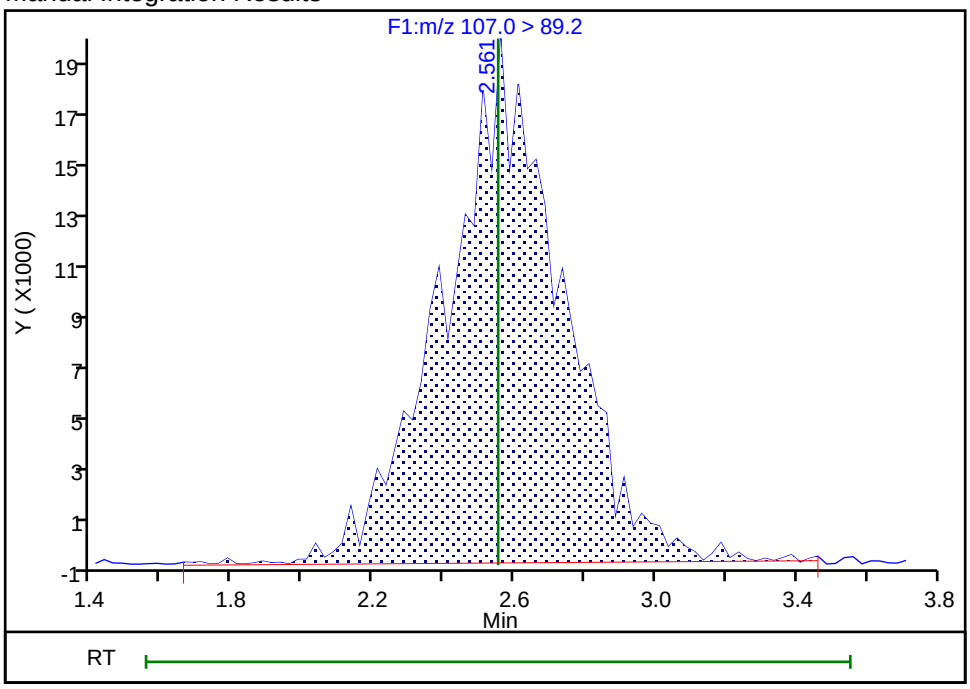
Processing Integration Results

RT: 2.56
Area: 203369
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.56
Area: 439775
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:09:06
Audit Action: Manually Integrated Audit Reason: Baseline

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: CCVL 280-437280/32 Calibration Date: 11/12/2018 16:44

Instrument ID: LC_LCMS8 Calib Start Date: 11/12/2018 14:10

GC Column: ID: Calib End Date: 11/12/2018 14:35

Lab File ID: IC818K12030.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		10.23		0.0235	0.0200	17.3	30.0

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12030.d
Lims ID: CCVL
Client ID:
Sample Type: CCVL
Inject. Date: 12-Nov-2018 16:44:25 ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: CCVL prep 11/12/18 exp 11/19/18 #1 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist: chrom-6860-LCMS8*sub1

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:15:24 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:09:21

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.515	2.553	-0.038		462154	204.0		253	M
2 Perchlorate									R
99.0 > 83.0	2.591	2.604	-0.013	1.030	463460	23.5		14.4	R
101.0 > 84.7	2.566	2.604	-0.038	1.020	382813		1.21(2.30-3.80)	15.0	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860-IS-Spike_00078 Amount Added: 50.00 Units: uL
6860CalStockW_00103 Amount Added: 100.00 Units: uL

Report Date: 13-Nov-2018 09:15:25 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12030.d

Injection Date: 12-Nov-2018 16:44:25 Instrument ID: LC_LCMS8

Lims ID: CCVL

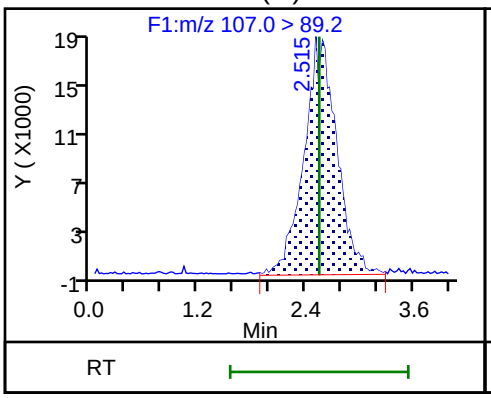
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 32

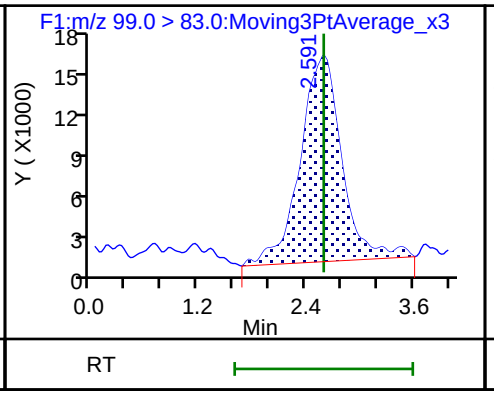
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

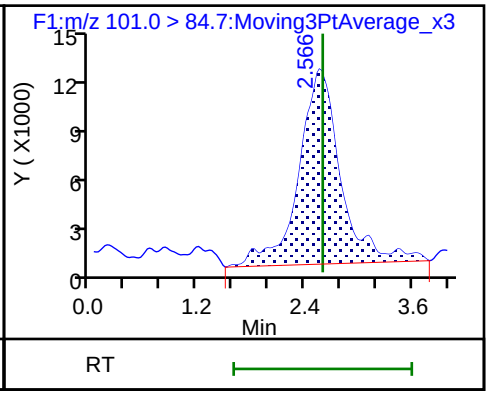
* 1 Perchlorate-18O (M)



2 Perchlorate



2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

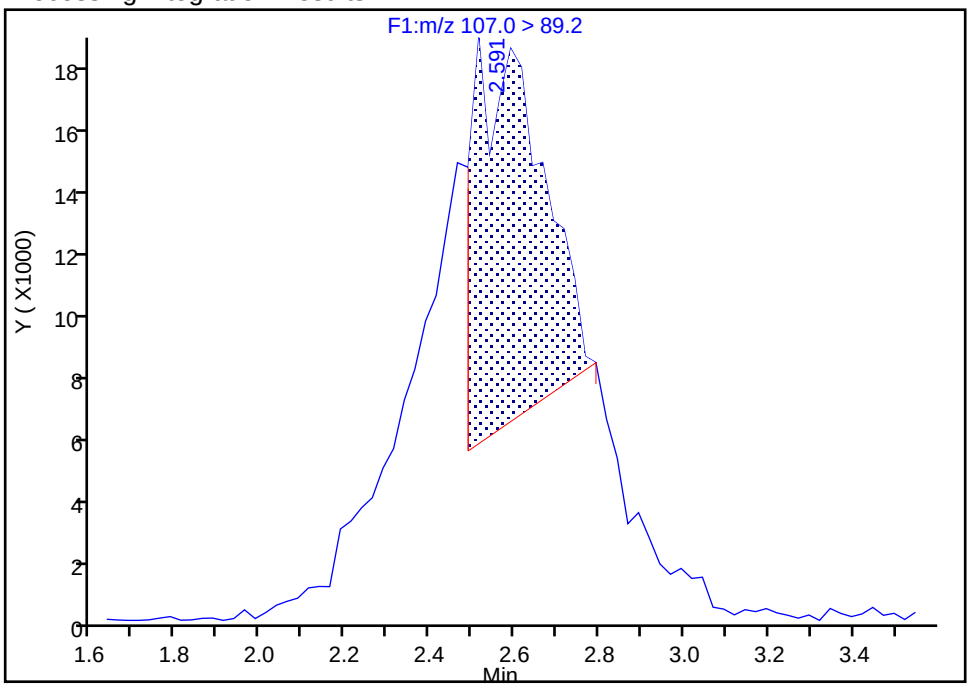
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12030.d
Injection Date: 12-Nov-2018 16:44:25 Instrument ID: LC_LCMS8
Lims ID: CCVL
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

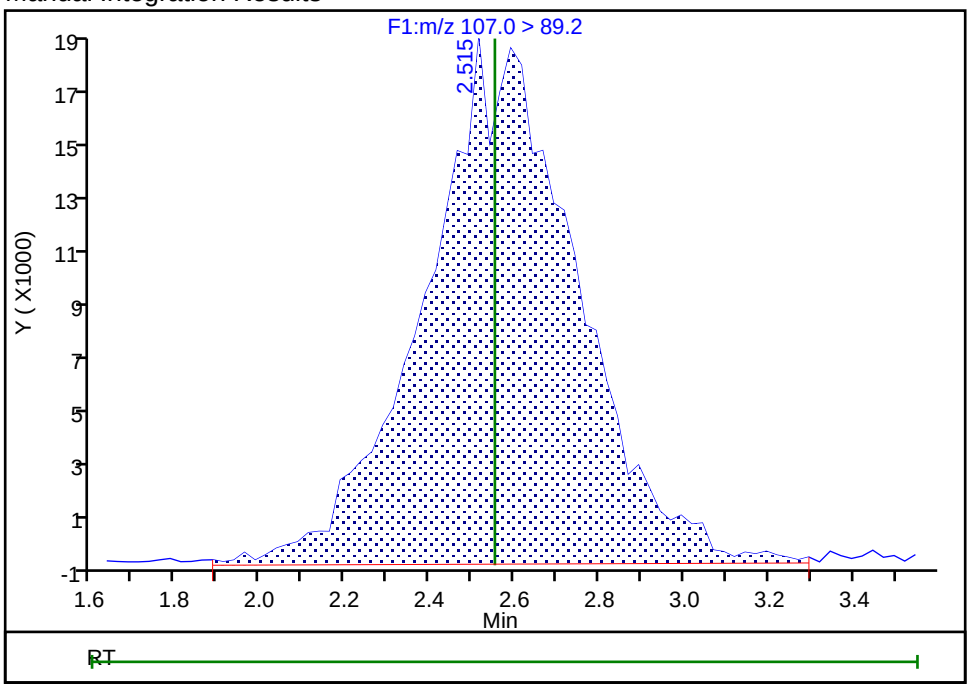
Processing Integration Results

RT: 2.59
Area: 133183
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

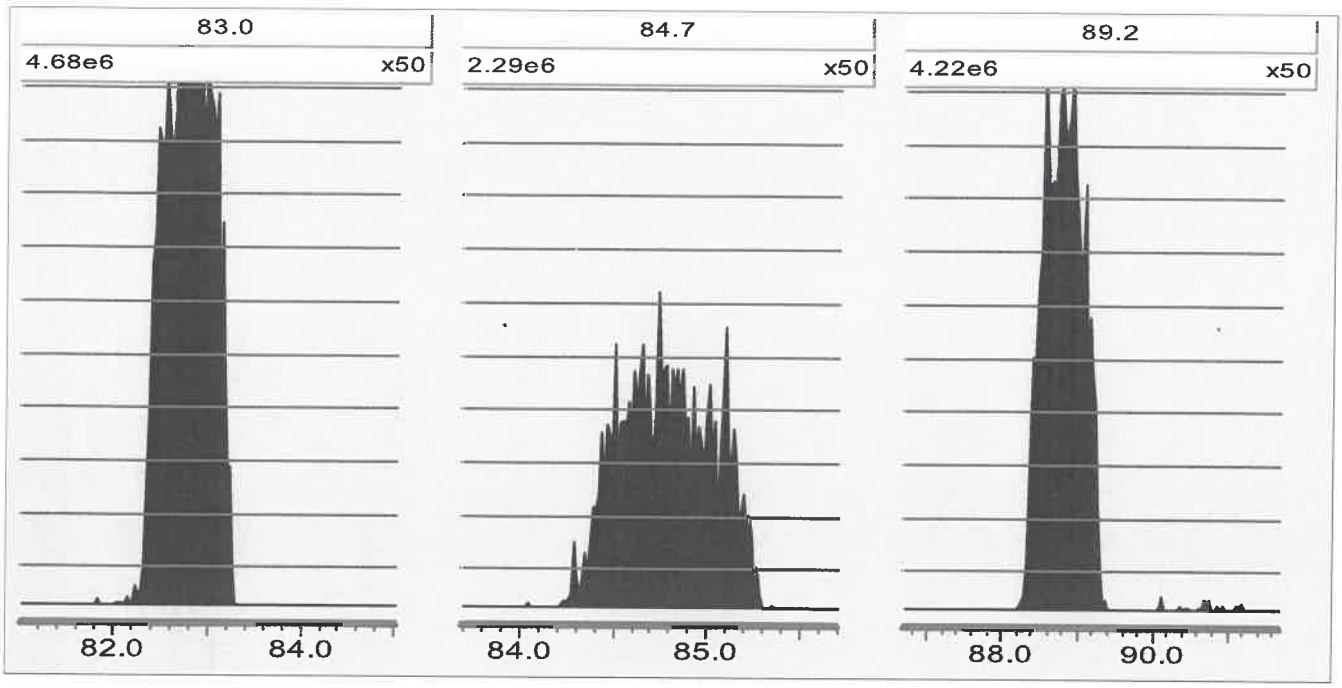
RT: 2.52
Area: 462154
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:09:18
Audit Action: Manually Integrated Audit Reason: Baseline

File: C:\MassLynx\ICPerchlorate.PRO\ACQUDB\ICPerchloate.ipr

Printed: Monday, November 12, 2018 10:25:11 Mountain Standard Time



Type	Start Mass	End Mass	Set Mass
Daughter Scan	81	85	99
Daughter Scan	84	86	101
Daughter Scan	87	92	107

Source (ES-)	Settings	Readbacks
Capillary (kV)	0.50	-0.46
Cone (V)	25	-27
Hex 1 (V)	0.5	
Aperture (V)	0.1	
Hex 2 (V)	0.5	
Source Temperature (°C)	120	122
Desolvation Temperature (°C)	450	448
Cone Gas Flow (L/Hr)	59	
Desolvation Gas Flow (L/Hr)	902	

Analyser	Settings	Readbacks
LM 1 Resolution	10.0	
HM 1 Resolution	10.0	
Ion Energy 1	1.0	
Entrance	-5	20
Collision	25	25
Exit	2	27
LM 2 Resolution	12.0	
HM 2 Resolution	14.0	
Ion Energy 2	2.0	
Multiplier (V)	650	-652

Pressure Gauges	
Collision Cell Pressure(mbar)	6.22e-3
Analyser Pressure (mbar)	OFF

MUX Configuration	
Probe	Standard

Chidanand
11/16/18.

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-437280/13

Matrix: Water Lab File ID: IC818K12011.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 11/12/2018 14:58

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 437280 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.010	U M	0.050	0.010	0.0040

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12011.d
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 12-Nov-2018 14:58:43 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: mb
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:57 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:03:04

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.603	2.553	0.050		491805	204.0		337	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:14:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12011.d

Injection Date: 12-Nov-2018 14:58:43 Instrument ID: LC_LCMS8

Lims ID: MB

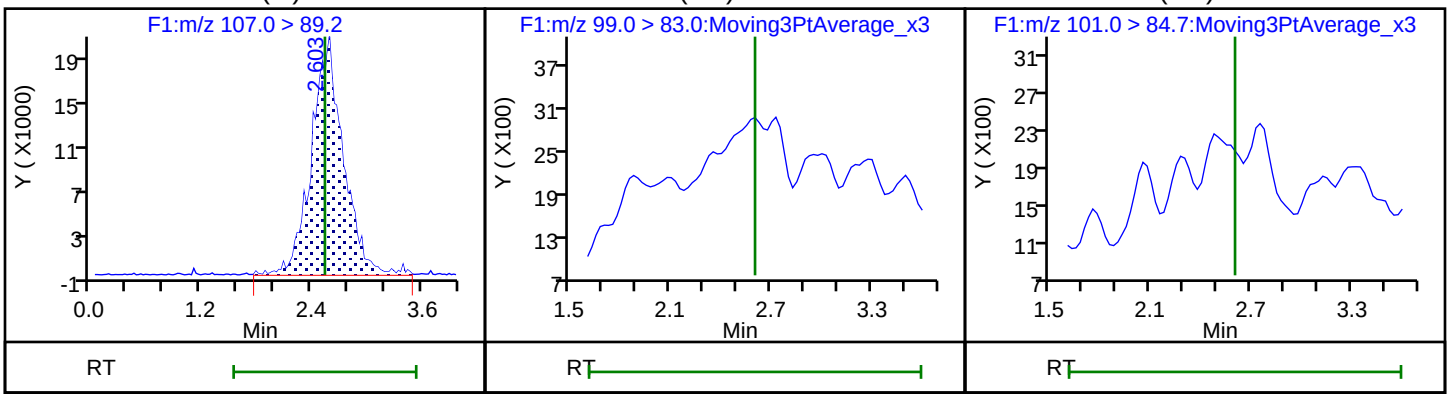
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 13

Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

* 1 Perchlorate-18O (M) 2 Perchlorate (ND) 2 Perchlorate (ND)



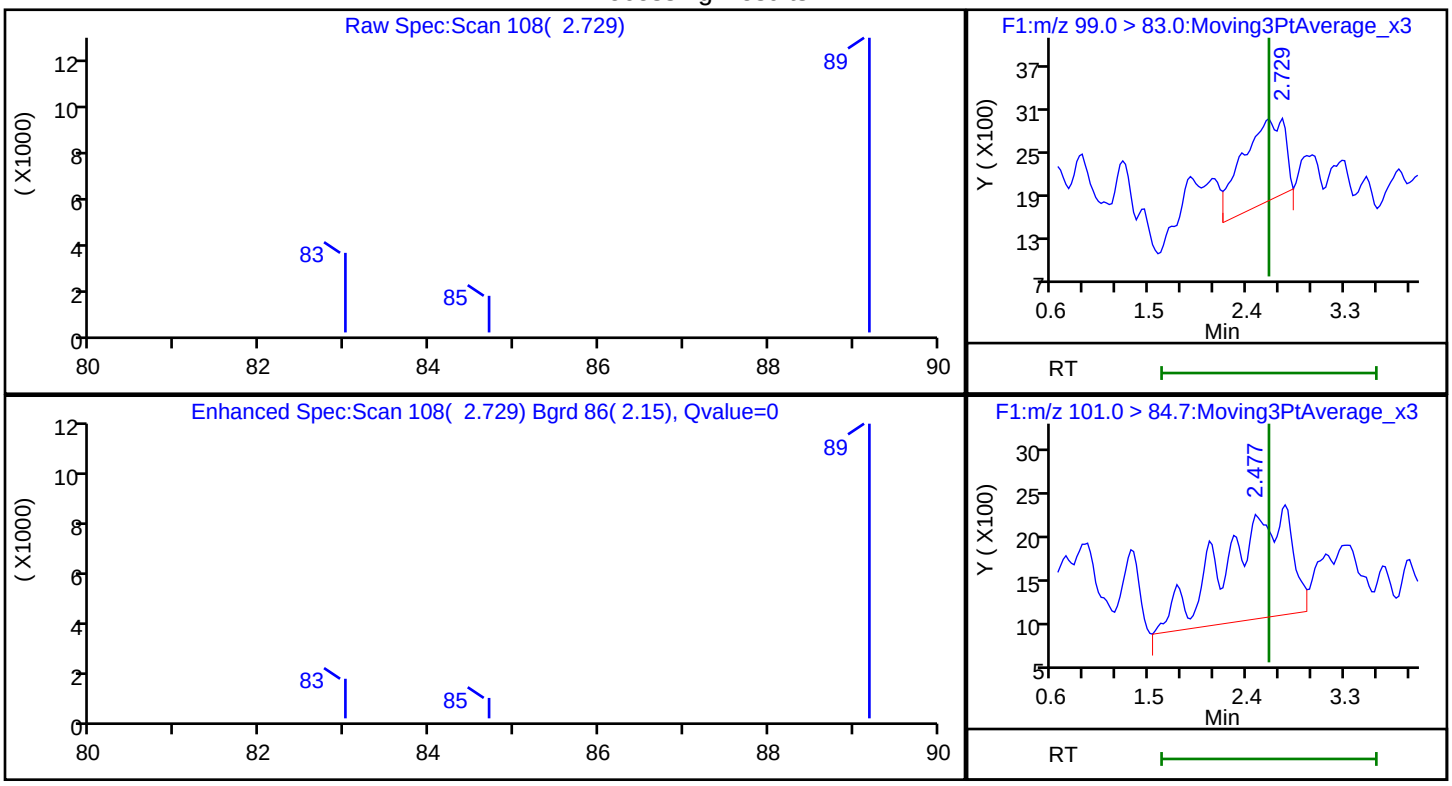
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12011.d
Injection Date: 12-Nov-2018 14:58:43 Instrument ID: LC_LCMS8
Lims ID: MB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

2 Perchlorate, CAS: 14797-73-0

Processing Results



RT	Mass	Response	Amount
2.73	82.70	31289	0.867074
2.48	84.60	53561	

Reviewer: coopert, 13-Nov-2018 09:03:04
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

TestAmerica Denver

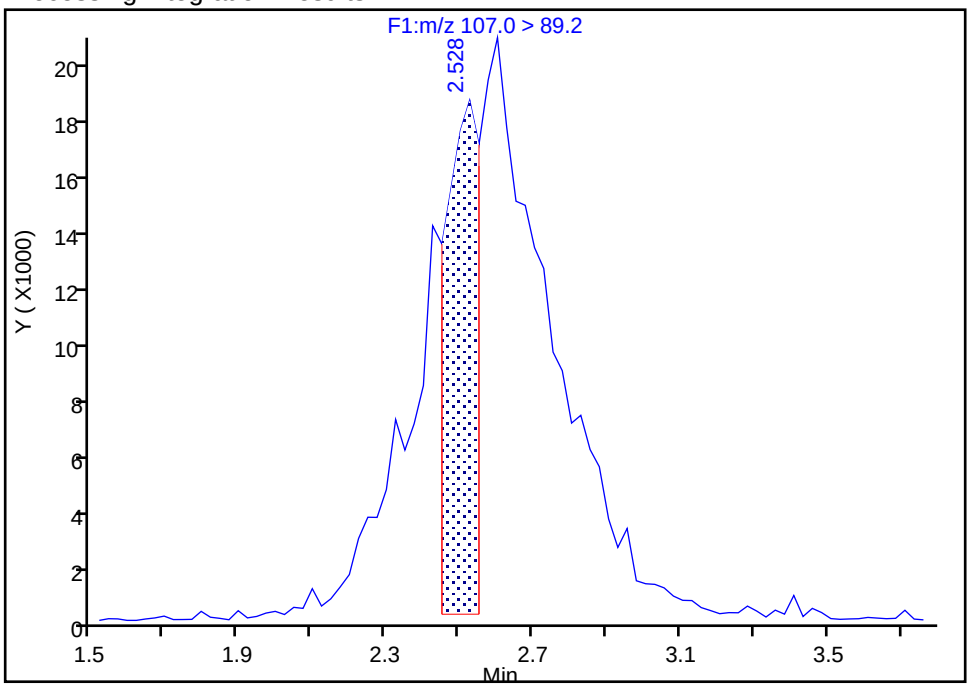
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12011.d				
Injection Date:	12-Nov-2018 14:58:43	Instrument ID:	LC_LCMS8		
Lims ID:	MB				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	13
Injection Vol:	250.0 ul	Dil. Factor:	1.0000		
Method:	6860-LCMS8	Limit Group:	LC - 6860 Perchlorate		
Column:		Detector	F1:MRM		

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

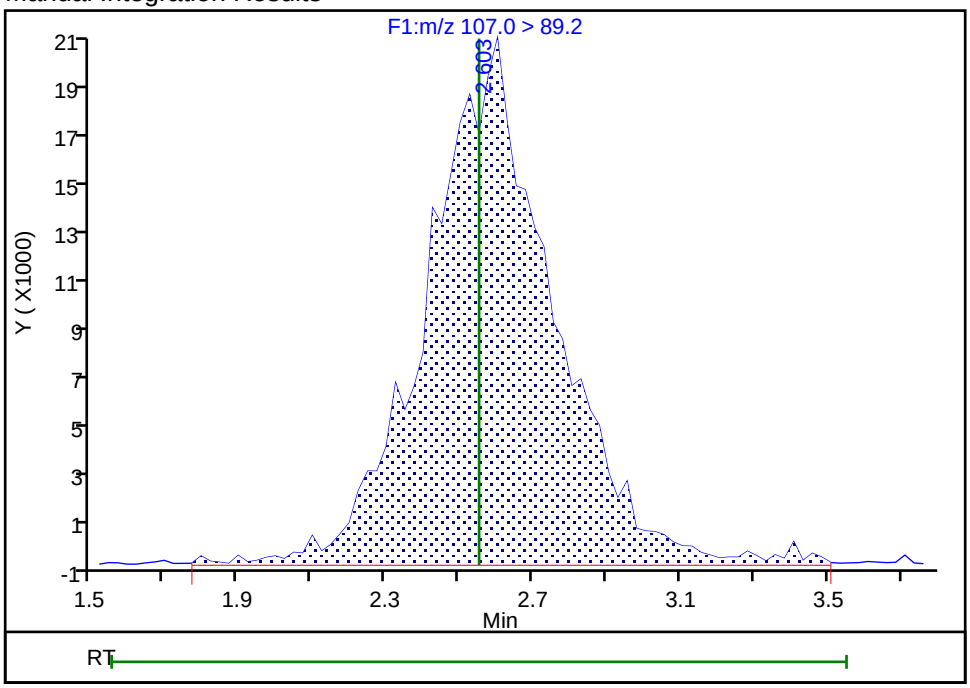
Processing Integration Results

RT: 2.53
Area: 97995
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.60
Area: 491805
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:03:00

Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: CCB 280-437280/23

Matrix: Water | Lab File ID: IC818K12021.d

Analysis Method: 6860 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 5(mL) | Date Analyzed: 11/12/2018 15:52

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 250(uL) | GC Column: ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.010	U M	0.050	0.010	0.0040

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12021.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 12-Nov-2018 15:52:03 ALS Bottle#: 0 Worklist Smp#: 23
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: CCB prep 11/12/18 exp 11/19/18 #1 inj 1
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:15:07 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:06:32

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.552	2.553	-0.001		453399	204.0		305	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:15:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12021.d

Injection Date: 12-Nov-2018 15:52:03 Instrument ID: LC_LCMS8

Lims ID: CCB

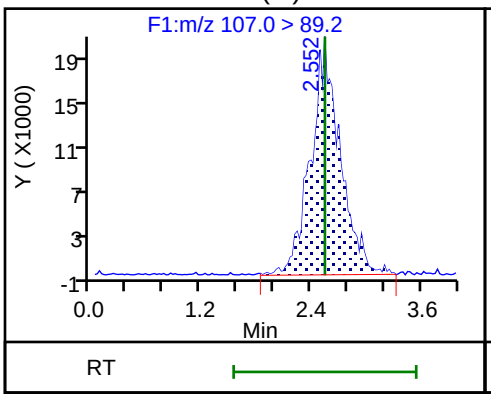
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 23

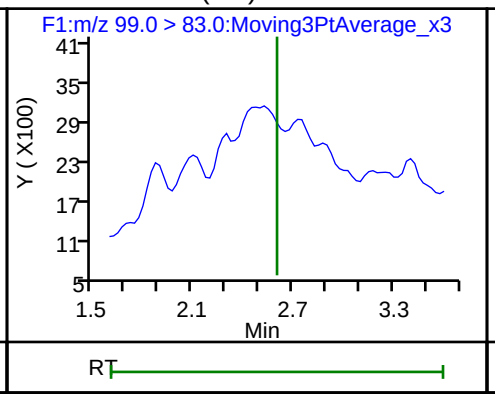
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

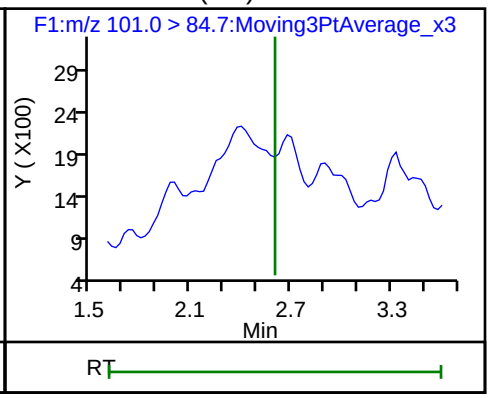
* 1 Perchlorate-18O (M)



2 Perchlorate (ND)



2 Perchlorate (ND)



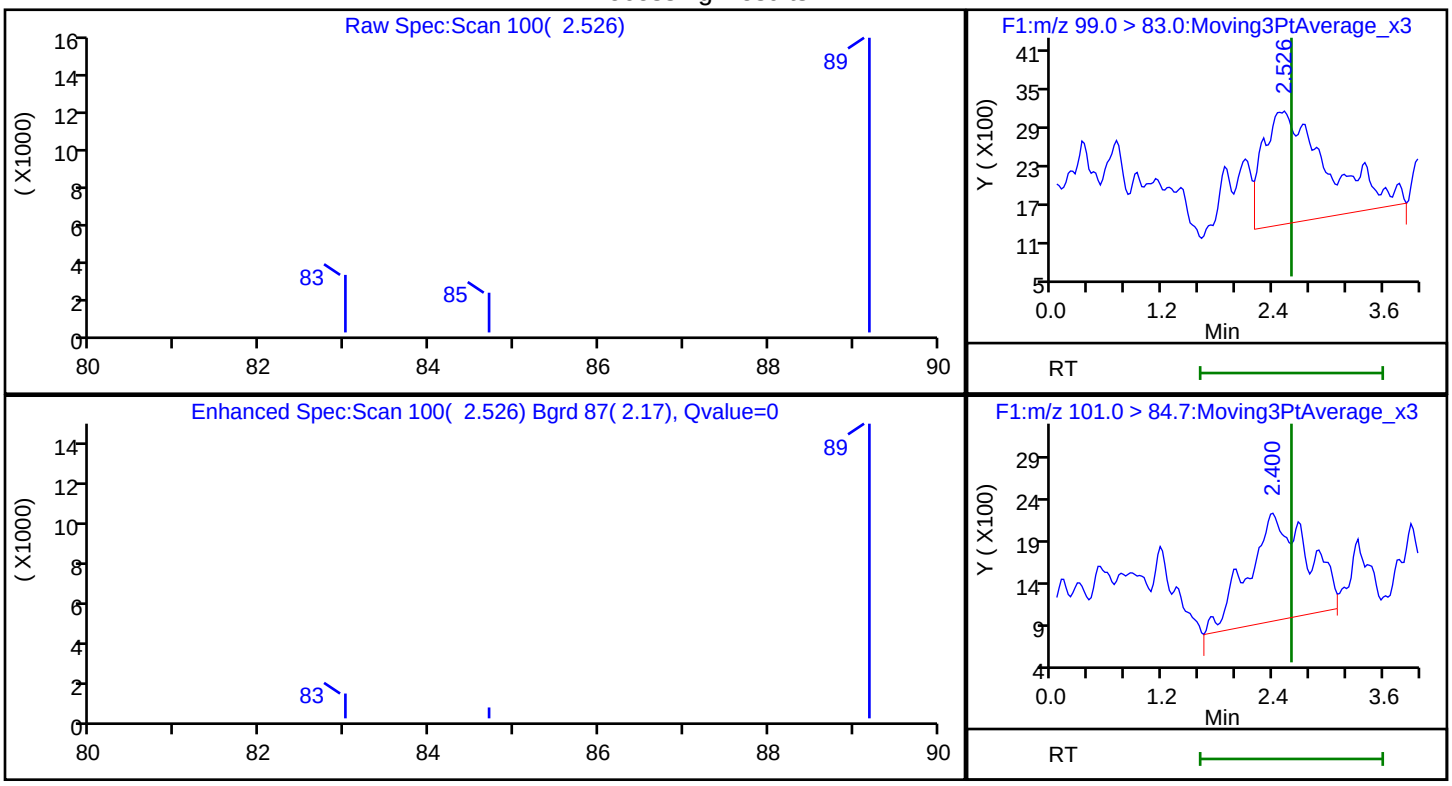
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12021.d
Injection Date: 12-Nov-2018 15:52:03 Instrument ID: LC_LCMS8
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 23
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

2 Perchlorate, CAS: 14797-73-0

Processing Results



RT	Mass	Response	Amount
2.53	82.70	84762	3.834460
2.40	84.60	57609	

Reviewer: coopert, 13-Nov-2018 09:06:31
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

TestAmerica Denver

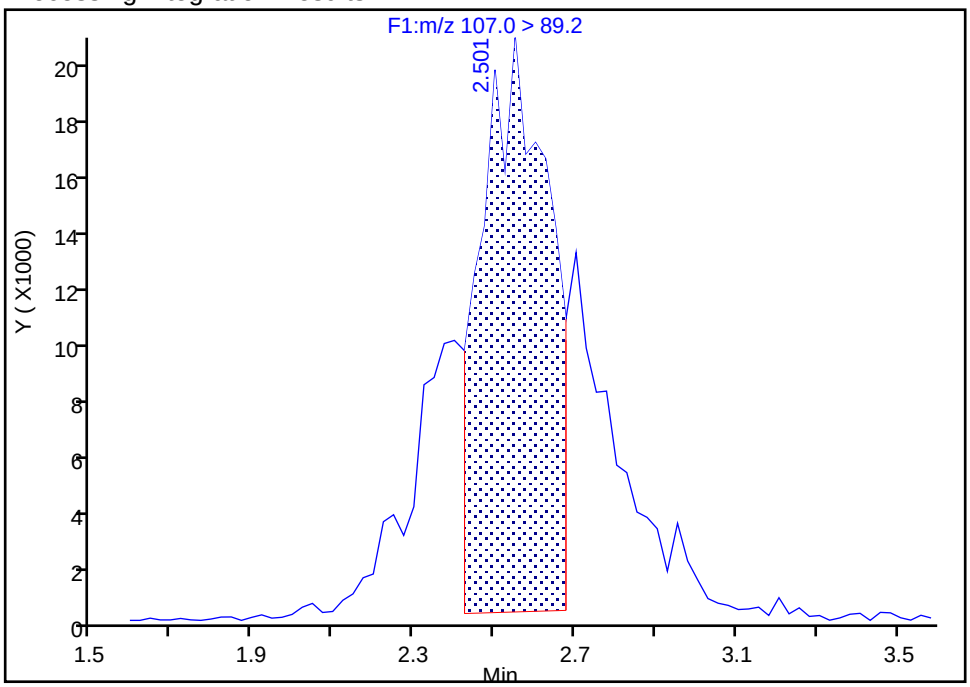
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12021.d
Injection Date: 12-Nov-2018 15:52:03 Instrument ID: LC_LCMS8
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 23
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

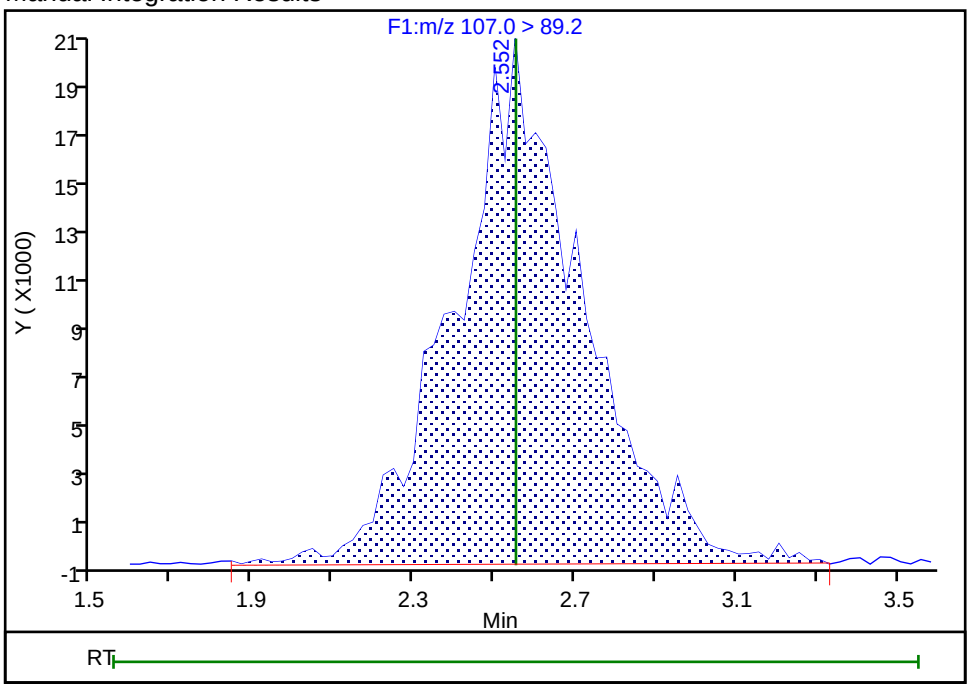
Processing Integration Results

RT: 2.50
Area: 232385
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.55
Area: 453399
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:06:28
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: CCB 280-437280/33

Matrix: Water | Lab File ID: IC818K12031.d

Analysis Method: 6860 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 5(mL) | Date Analyzed: 11/12/2018 16:49

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 250(uL) | GC Column: ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.010	U M	0.050	0.010	0.0040

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12031.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 12-Nov-2018 16:49:41 ALS Bottle#: 0 Worklist Smp#: 33
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: CCB prep 11/12/18 exp 11/19/18 #1 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:15:24 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:09:36

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.602	2.553	0.049		446873	204.0		207	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:15:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12031.d

Injection Date: 12-Nov-2018 16:49:41 Instrument ID: LC_LCMS8

Lims ID: CCB

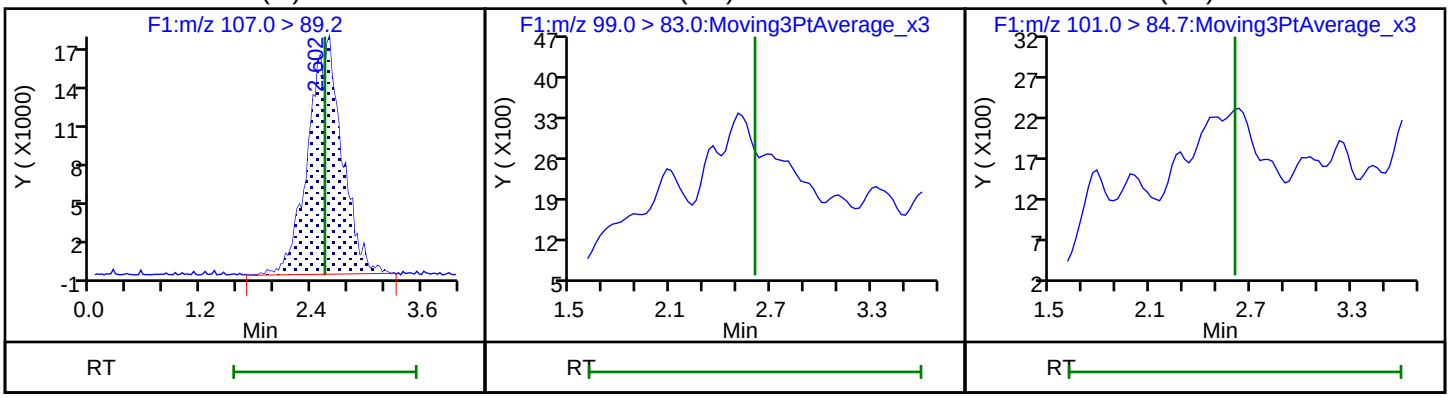
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 33

Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

* 1 Perchlorate-18O (M) 2 Perchlorate (ND) 2 Perchlorate (ND)



Report Date: 13-Nov-2018 09:15:28 Chrom Revision: 2.3 12-Oct-2018 08:24:38

User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12031.d

Injection Date: 12-Nov-2018 16:49:41 Instrument ID: LC_LCMS8

Lims ID: CCB

Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 33

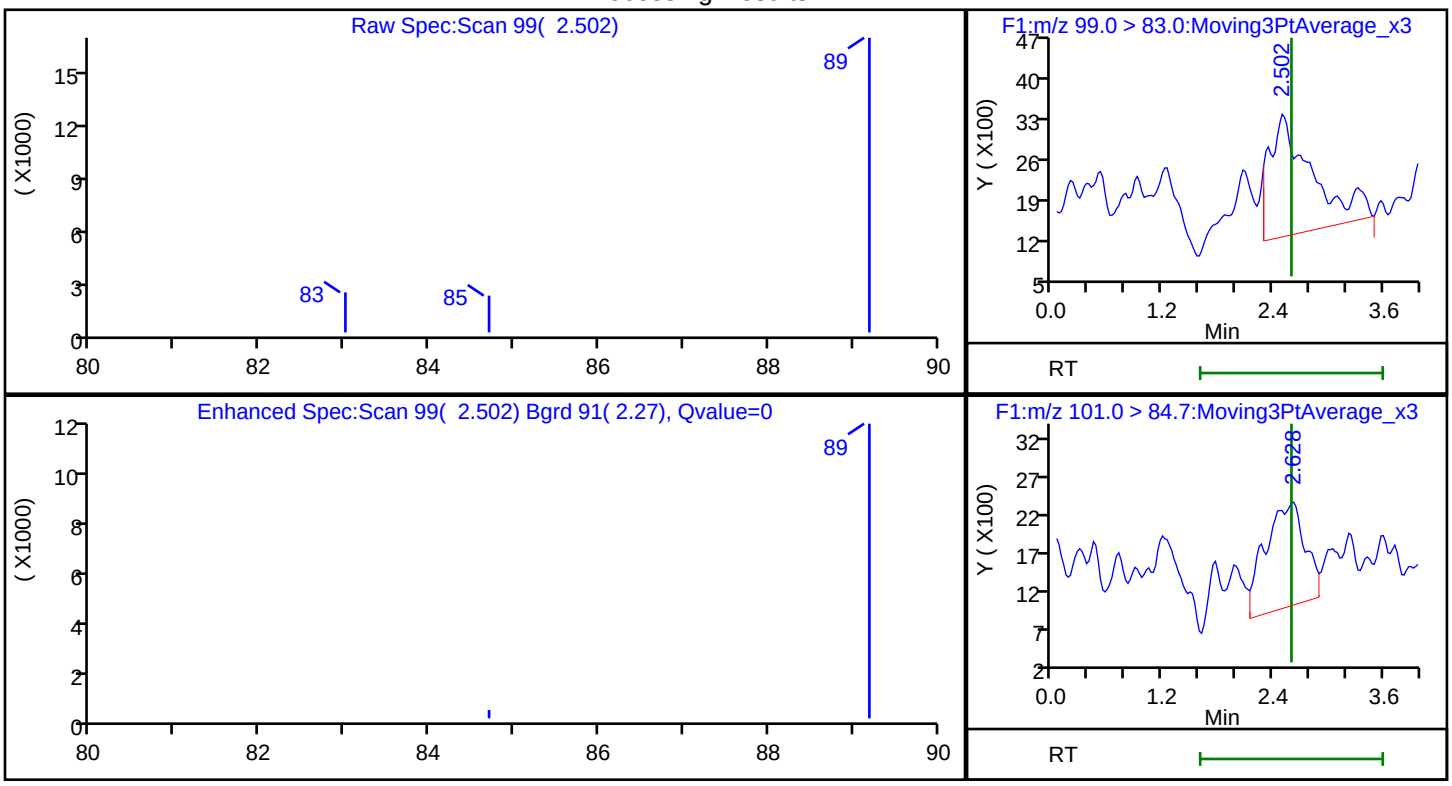
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

Column: Detector F1:MRM

2 Perchlorate, CAS: 14797-73-0

Processing Results



RT	Mass	Response	Amount
2.50	82.70	67652	2.978892
2.63	84.60	41259	

Reviewer: coopert, 13-Nov-2018 09:09:35

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

TestAmerica Denver

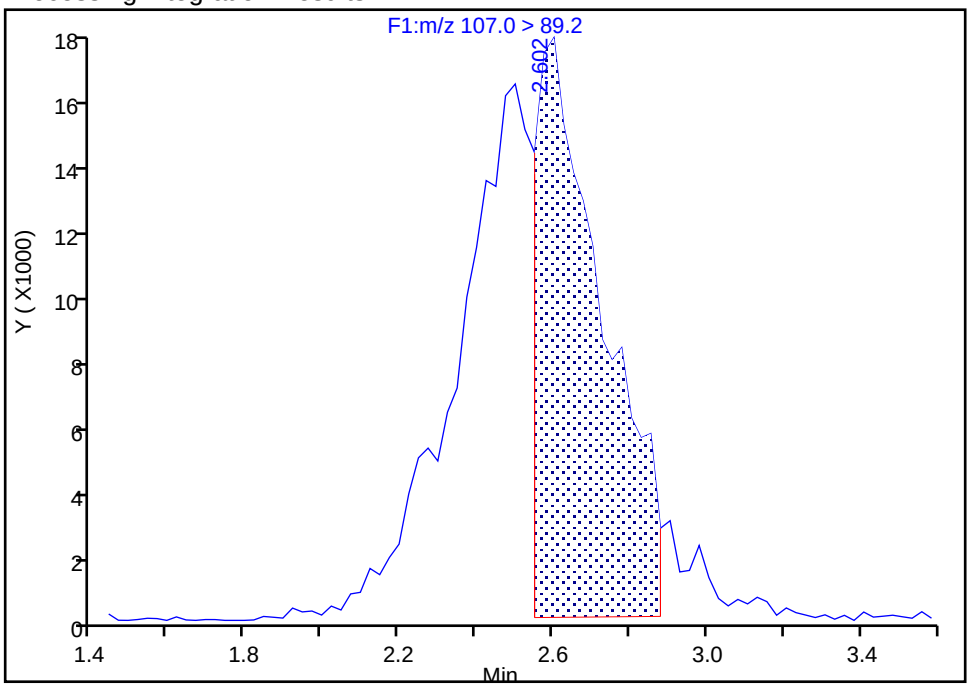
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12031.d
Injection Date: 12-Nov-2018 16:49:41 Instrument ID: LC_LCMS8
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 33
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

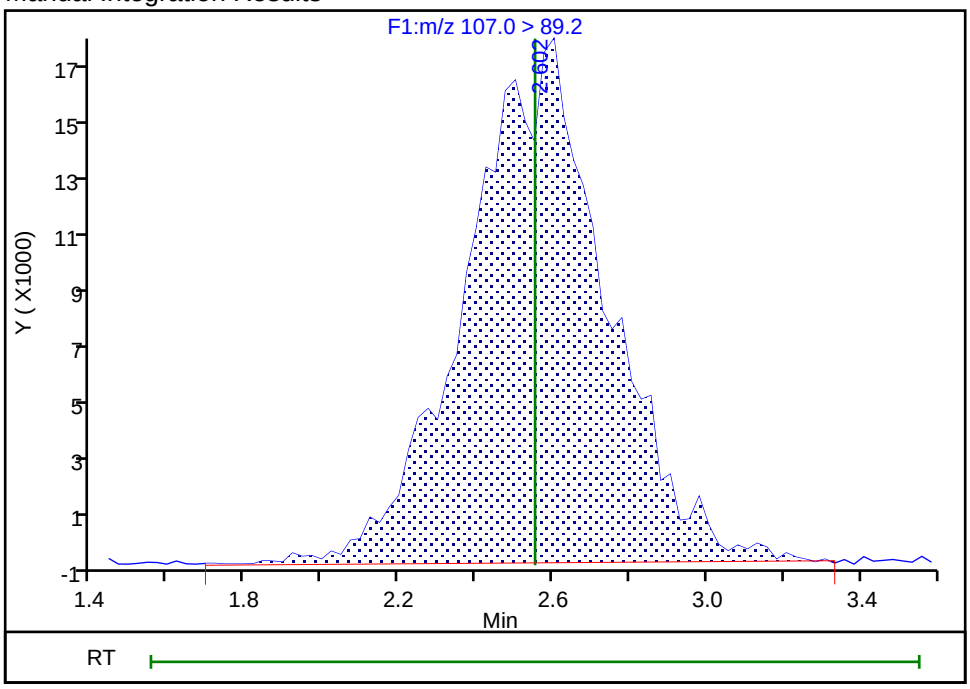
Processing Integration Results

RT: 2.60
Area: 206296
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.60
Area: 446873
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:09:32
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: ICB 280-437280/10

Matrix: Water | Lab File ID: IC818K12008.d

Analysis Method: 6860 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 5(mL) | Date Analyzed: 11/12/2018 14:41

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 250(uL) | GC Column: ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.010	U M	0.050	0.010	0.0040

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12008.d
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 12-Nov-2018 14:41:05 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: ICB prep 11/12/18 exp 11/19/18 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:55 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:01:34

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.617	2.553	0.064		468030	204.0		271	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:14:56 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12008.d

Injection Date: 12-Nov-2018 14:41:05 Instrument ID: LC_LCMS8

Lims ID: ICB

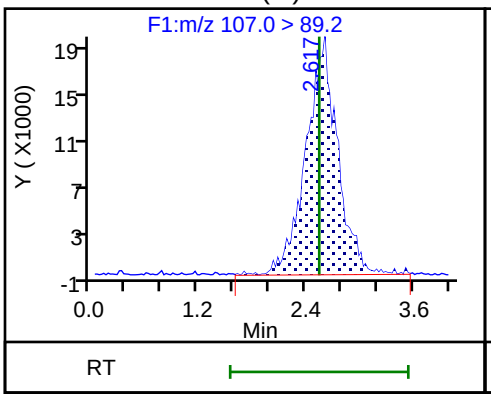
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 10

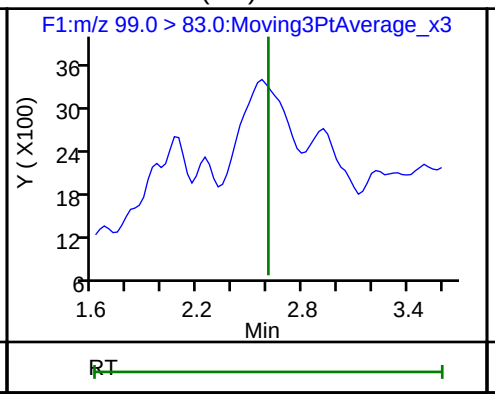
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

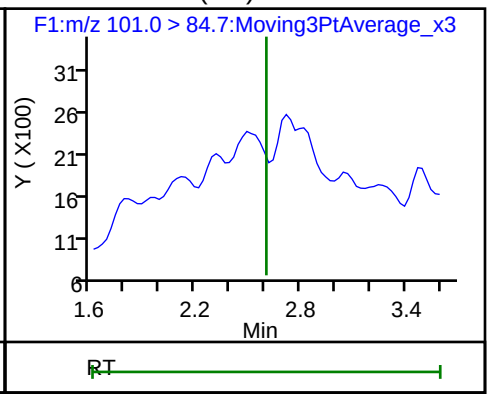
* 1 Perchlorate-18O (M)



2 Perchlorate (ND)



2 Perchlorate (ND)



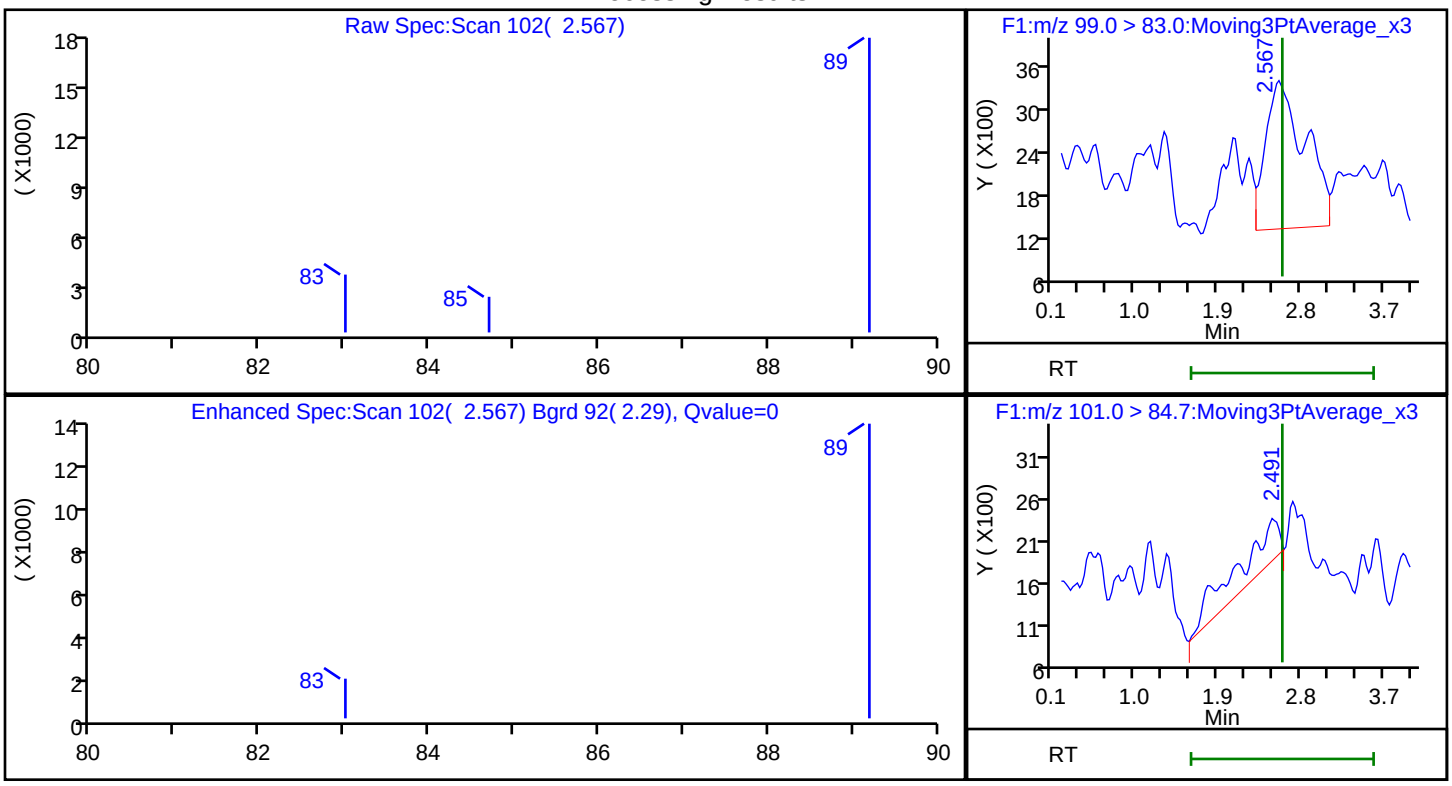
User Disabled Compound Report

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12008.d
Injection Date: 12-Nov-2018 14:41:05 Instrument ID: LC_LCMS8
Lims ID: ICB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

2 Perchlorate, CAS: 14797-73-0

Processing Results



RT	Mass	Response	Amount
2.57	82.70	61440	2.494876
2.49	84.60	17983	

Reviewer: coopert, 13-Nov-2018 09:01:33
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

TestAmerica Denver

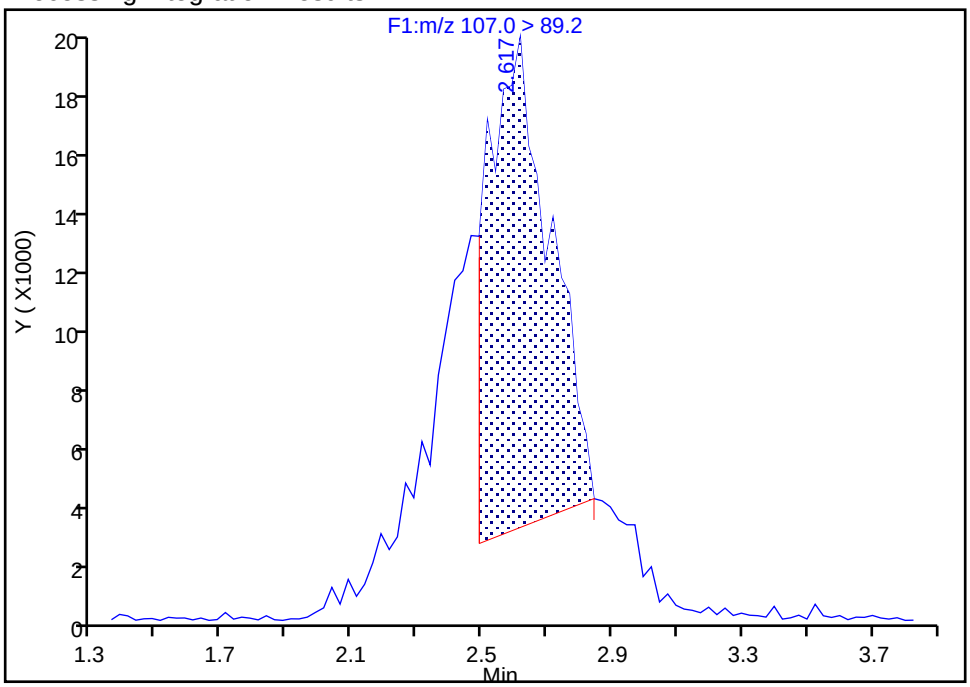
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12008.d
Injection Date: 12-Nov-2018 14:41:05 Instrument ID: LC_LCMS8
Lims ID: ICB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

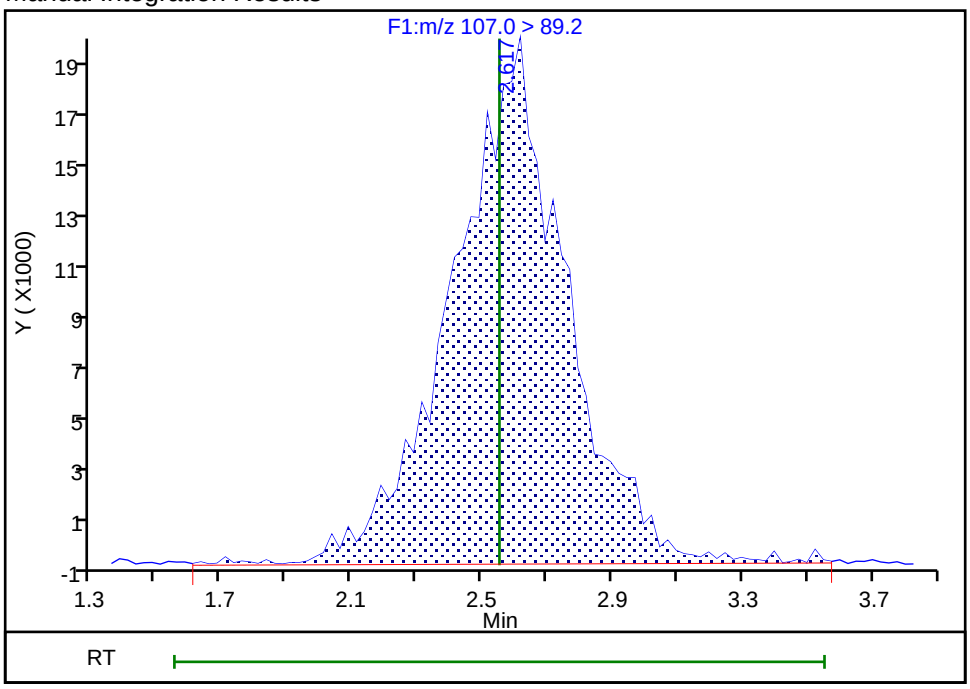
Processing Integration Results

RT: 2.62
Area: 210183
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.62
Area: 468030
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:01:09
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 280-437280/14

Matrix: Water | Lab File ID: IC818K12012.d

Analysis Method: 6860 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 5(mL) | Date Analyzed: 11/12/2018 15:04

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 250(uL) | GC Column: ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.0551	M	0.050	0.010	0.0040

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12012.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 12-Nov-2018 15:04:25 ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: lcs
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:57 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:03:38

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.541	2.553	-0.012		523290	204.0		245	M
2 Perchlorate									RM
99.0 > 83.0	2.641	2.604	0.037	1.040	1211800	55.1		55.9	RM
101.0 > 84.7	2.591	2.604	-0.013	1.020	806822		1.50(2.30-3.80)	43.9	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860LCS_00018 Amount Added: 50.00 Units: uL
6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:14:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12012.d

Injection Date: 12-Nov-2018 15:04:25 Instrument ID: LC_LCMS8

Lims ID: LCS

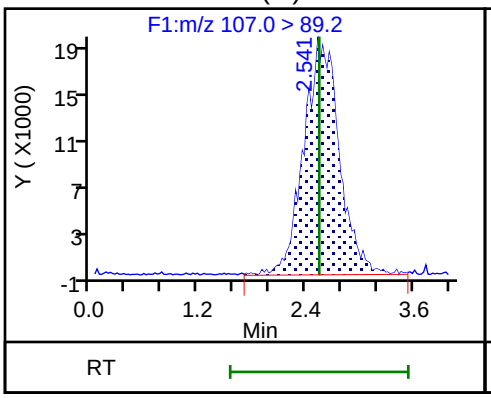
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 14

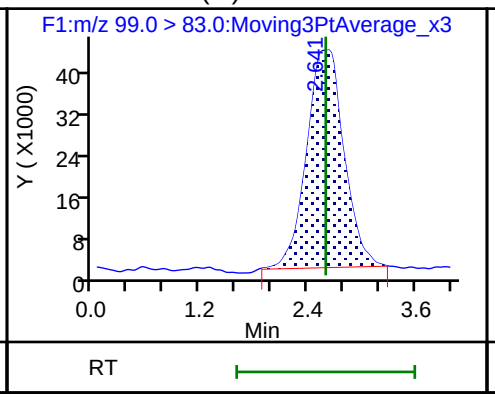
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

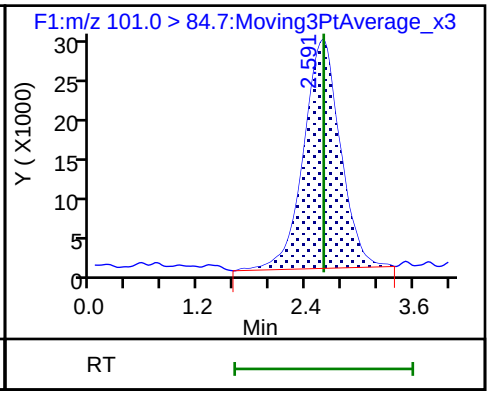
* 1 Perchlorate-18O (M)



2 Perchlorate (M)



2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

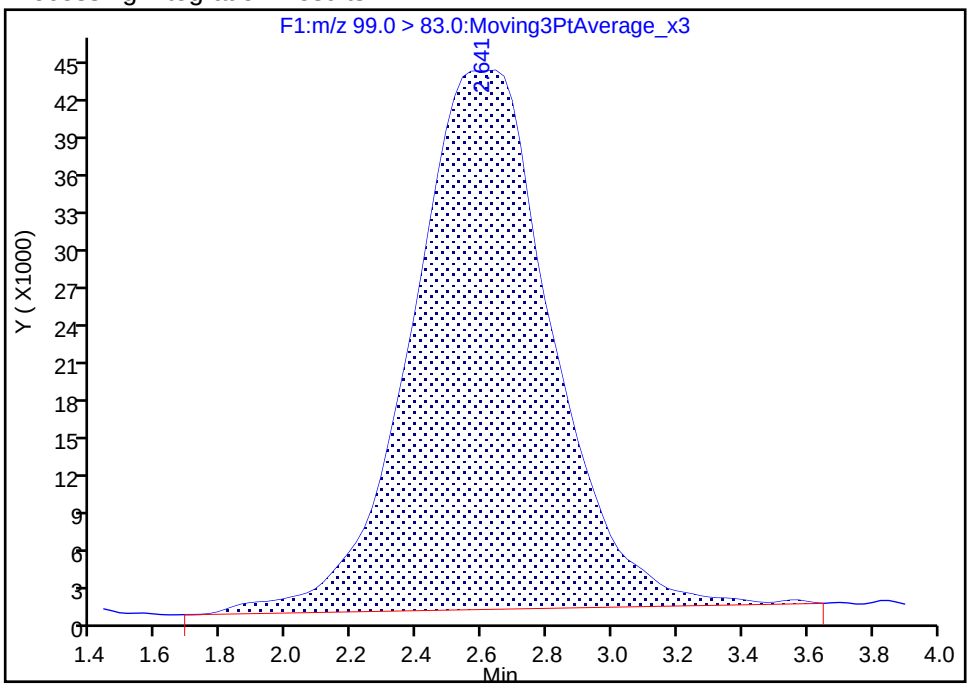
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12012.d
Injection Date: 12-Nov-2018 15:04:25 Instrument ID: LC_LCMS8
Lims ID: LCS
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

2 Perchlorate, CAS: 14797-73-0

Signal: 1

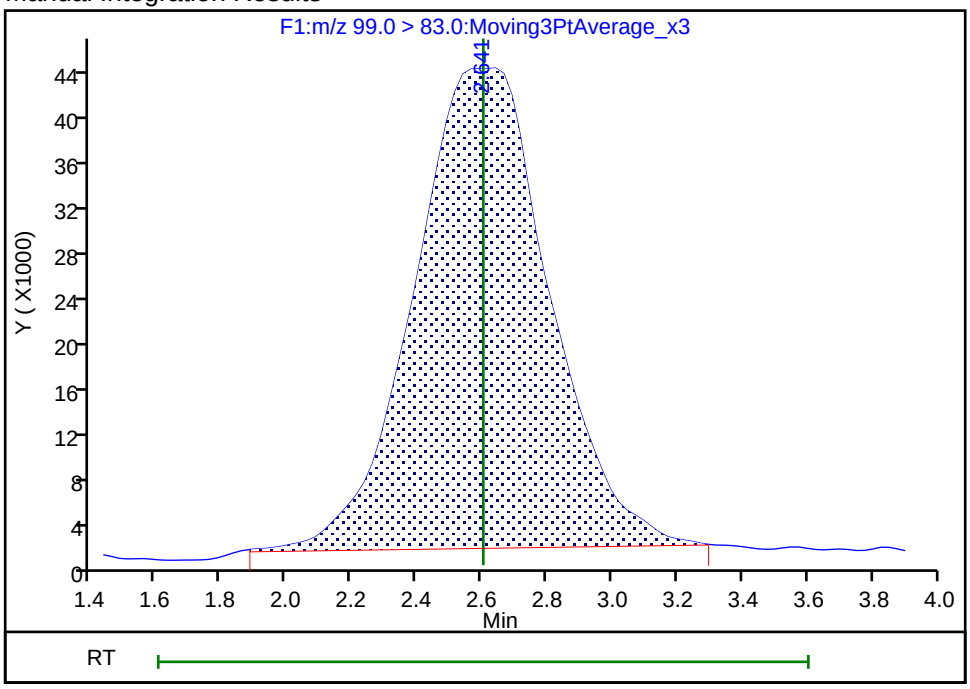
Processing Integration Results

RT: 2.64
Area: 1273417
Amount: 57.888526
Amount Units: ng/l



Manual Integration Results

RT: 2.64
Area: 1211800
Amount: 55.055351
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:03:33
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

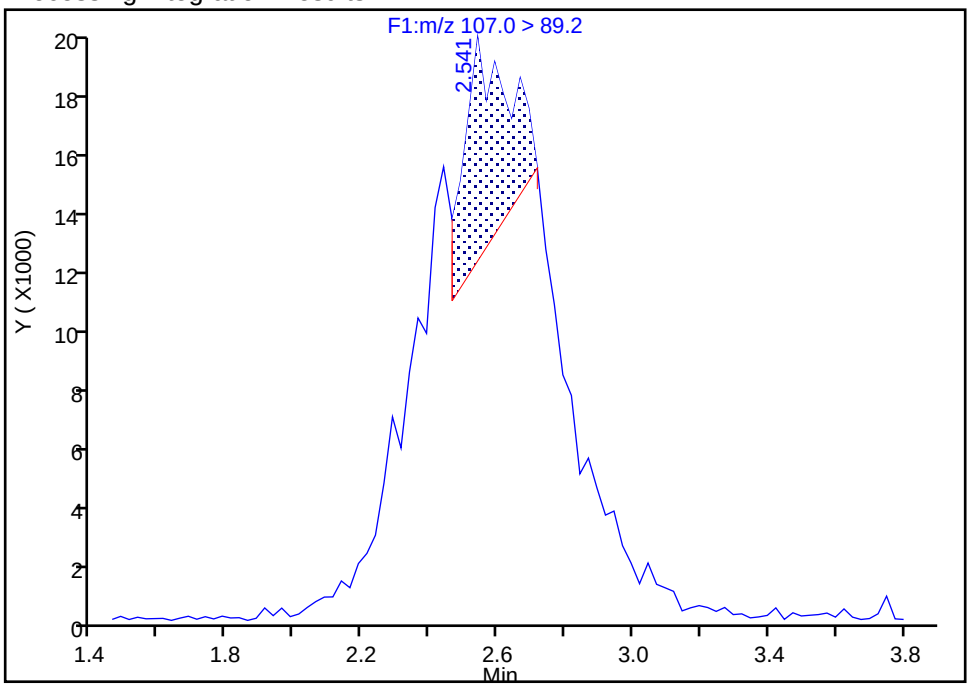
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12012.d
Injection Date: 12-Nov-2018 15:04:25 Instrument ID: LC_LCMS8
Lims ID: LCS
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 14
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

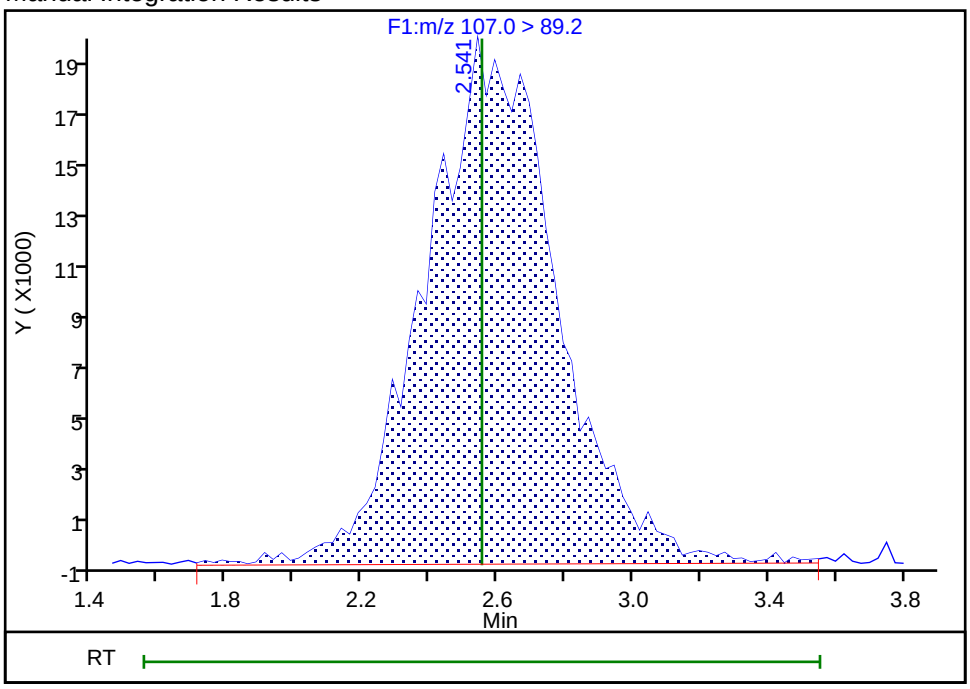
Processing Integration Results

RT: 2.54
Area: 62882
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.54
Area: 523290
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:03:24
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver | Job No.: 280-116538-1

SDG No.:

Client Sample ID: | Lab Sample ID: DLCK 280-437280/12

Matrix: Water | Lab File ID: IC818K12010.d

Analysis Method: 6860 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: 5(mL) | Date Analyzed: 11/12/2018 14:51

Con. Extract Vol.: | Dilution Factor: 1

Injection Volume: 250(uL) | GC Column: ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 437280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.0509		0.050	0.010	0.0040

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12010.d
Lims ID: DLCK
Client ID:
Sample Type: DLCK
Inject. Date: 12-Nov-2018 14:51:28 ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: DLCK prep 11/12/18 exp 11/19/18 inj 2
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:57 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 13-Nov-2018 09:02:50

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.550	2.553	-0.003		466006	204.0		292	M
2 Perchlorate									R
99.0 > 83.0	2.600	2.604	-0.004	1.020	998668	50.9		37.1	R
101.0 > 84.7	2.600	2.604	-0.004	1.020	687309		1.45(2.30-3.80)	34.2	

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860CalStockW_00103 Amount Added: 250.00 Units: uL
6860-IS-Spike_00078 Amount Added: 50.00 Units: uL

Report Date: 13-Nov-2018 09:14:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12010.d

Injection Date: 12-Nov-2018 14:51:28 Instrument ID: LC_LCMS8

Lims ID: DLCK

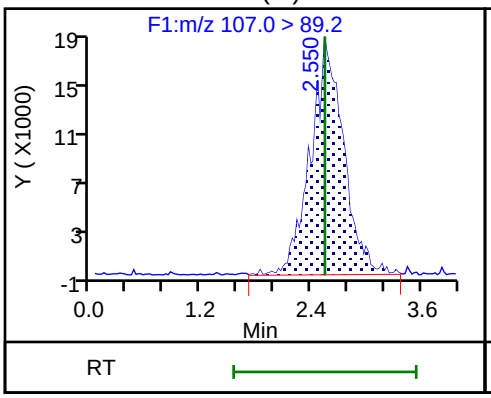
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 12

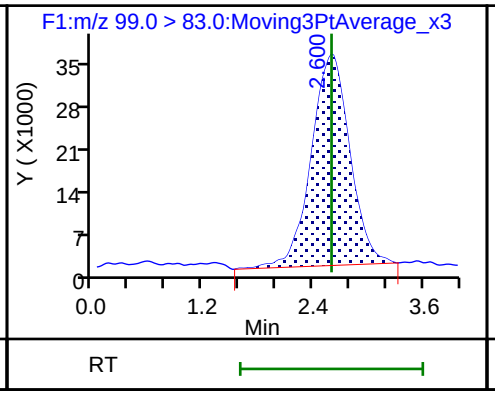
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

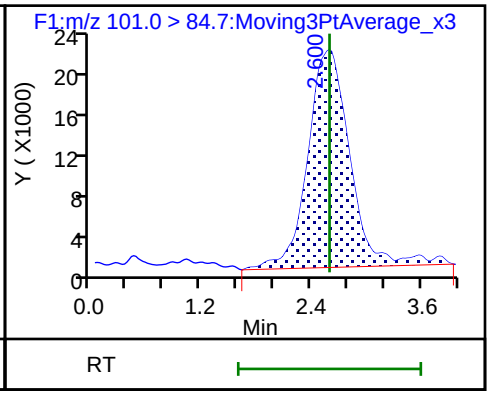
* 1 Perchlorate-18O (M)



2 Perchlorate



2 Perchlorate



Manual Integration/User Assign Peak Report

TestAmerica Denver

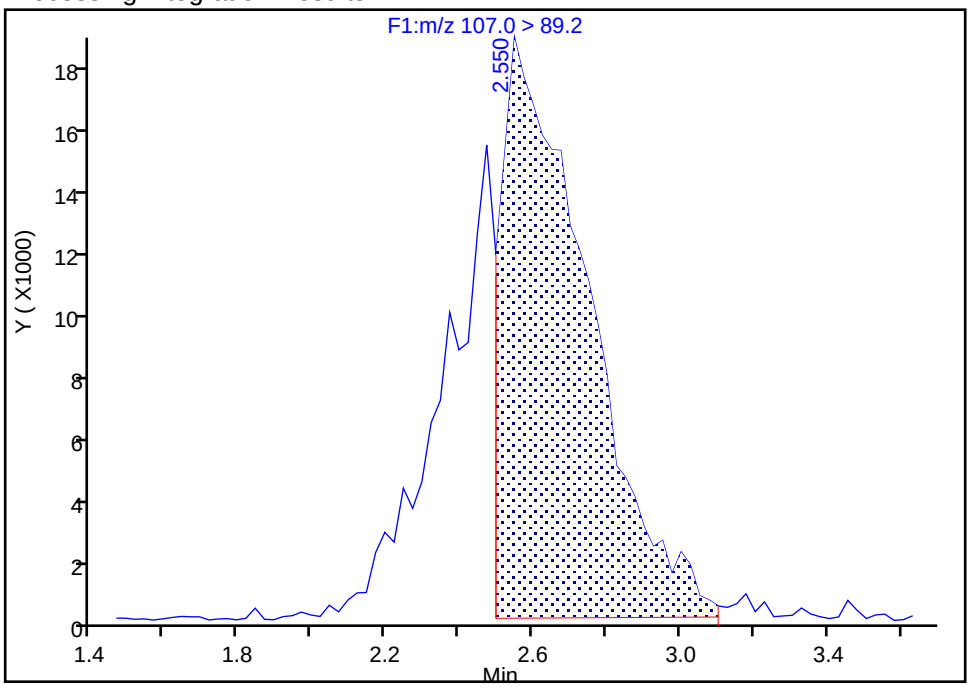
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12010.d
Injection Date: 12-Nov-2018 14:51:28 Instrument ID: LC_LCMS8
Lims ID: DLCK
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 12
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

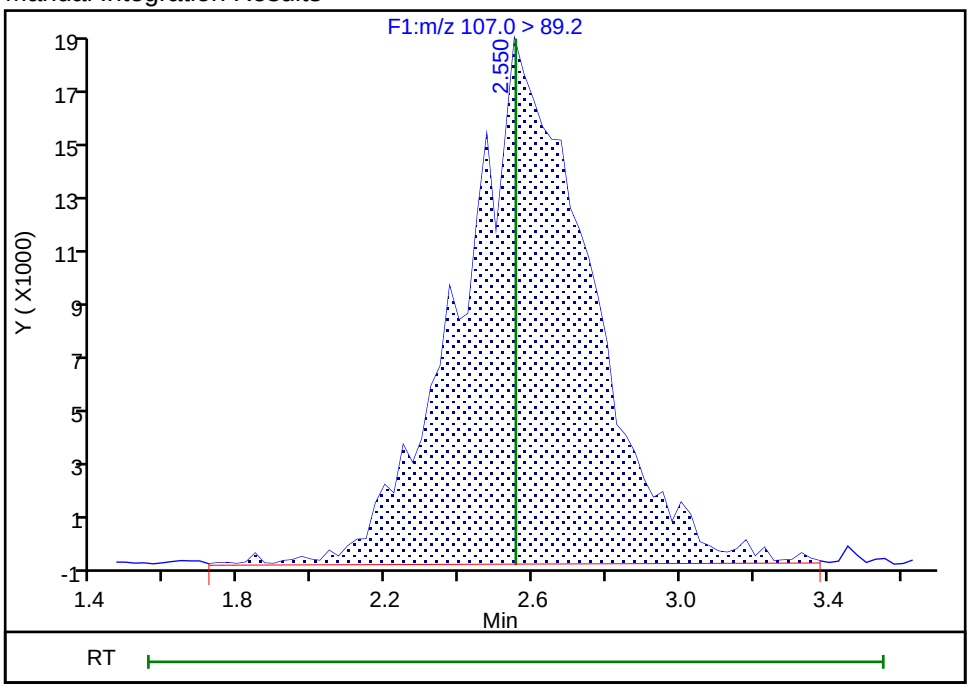
Processing Integration Results

RT: 2.55
Area: 304951
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.55
Area: 466006
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:02:39
Audit Action: Manually Integrated Audit Reason: Baseline

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Client Sample ID: Lab Sample ID: INF 280-437280/15

Matrix: Water Lab File ID: IC818K12013.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 11/12/2018 15:09

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 437280 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	LOQ	LOD	DL
14797-73-0	Perchlorate	0.0567	M	0.050	0.010	0.0040

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12013.d
Lims ID: INF
Client ID:
Sample Type: INF
Inject. Date: 12-Nov-2018 15:09:44 ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Sample Info: inf
Misc. Info.: IC818K12
Operator ID: Instrument ID: LC_LCMS8
Sublist:

Method: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\6860-LCMS8.m
Limit Group: LC - 6860 Perchlorate
Last Update: 13-Nov-2018 09:14:57 Calib Date: 12-Nov-2018 14:35:55
Integrator: Picker
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12007.d

Column 1 : Det: F1:MRM
Process Host: CTX0319

First Level Reviewer: coopert Date: 12-Nov-2018 16:33:44

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/l	Ratio(Limits)	S/N	Flags
* 1 Perchlorate-18O									M
107.0 > 89.2	2.514	2.553	-0.039		446081	204.0		250	M
2 Perchlorate									RM
99.0 > 83.0	2.589	2.604	-0.015	1.030	1063898	56.7		26.8	RM
101.0 > 84.7	2.564	2.604	-0.040	1.020	774827		1.37(2.30-3.80)	22.7	M

QC Flag Legend

Processing Flags
R - Failed Signal Ratio Test
Review Flags
M - Manually Integrated

Reagents:

6860_INF_Soln_00015	Amount Added: 4950.00	Units: uL
6860LCS_00018	Amount Added: 50.00	Units: uL
6860-IS-Spike_00078	Amount Added: 50.00	Units: uL

Report Date: 13-Nov-2018 09:15:00 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12013.d

Injection Date: 12-Nov-2018 15:09:44 Instrument ID: LC_LCMS8

Lims ID: INF

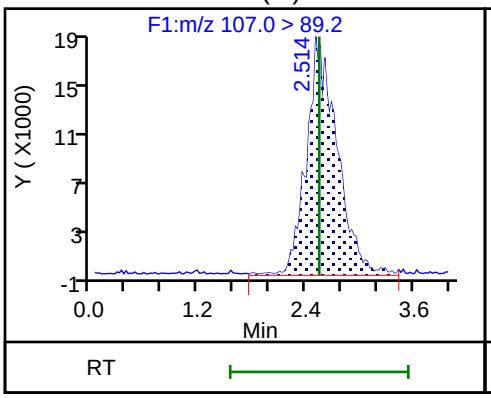
Client ID:

Operator ID: ALS Bottle#: 0 Worklist Smp#: 15

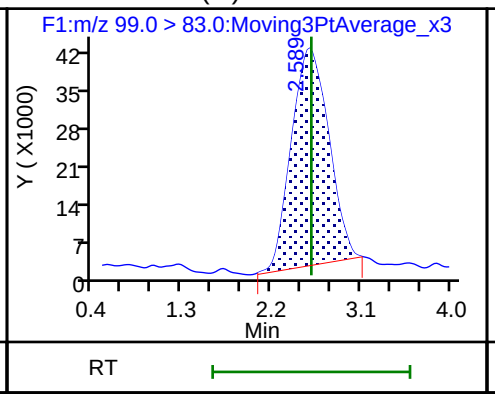
Injection Vol: 250.0 ul Dil. Factor: 1.0000

Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate

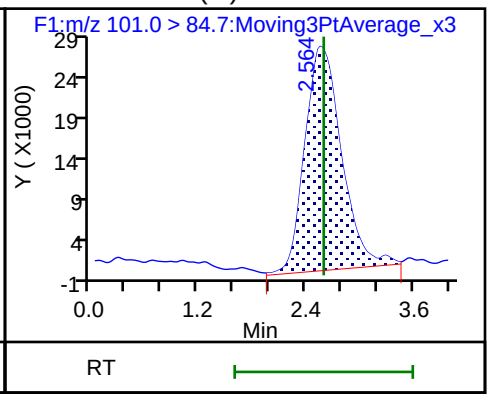
* 1 Perchlorate-18O (M)



2 Perchlorate (M)



2 Perchlorate (M)



Manual Integration/User Assign Peak Report

TestAmerica Denver

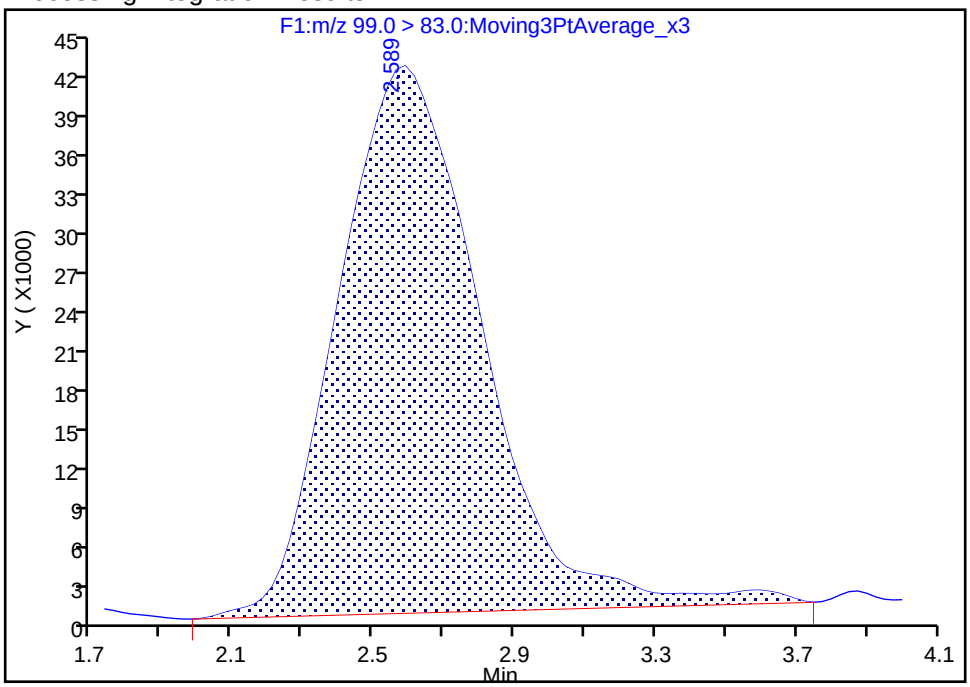
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12013.d
Injection Date: 12-Nov-2018 15:09:44 Instrument ID: LC_LCMS8
Lims ID: INF
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

2 Perchlorate, CAS: 14797-73-0

Signal: 1

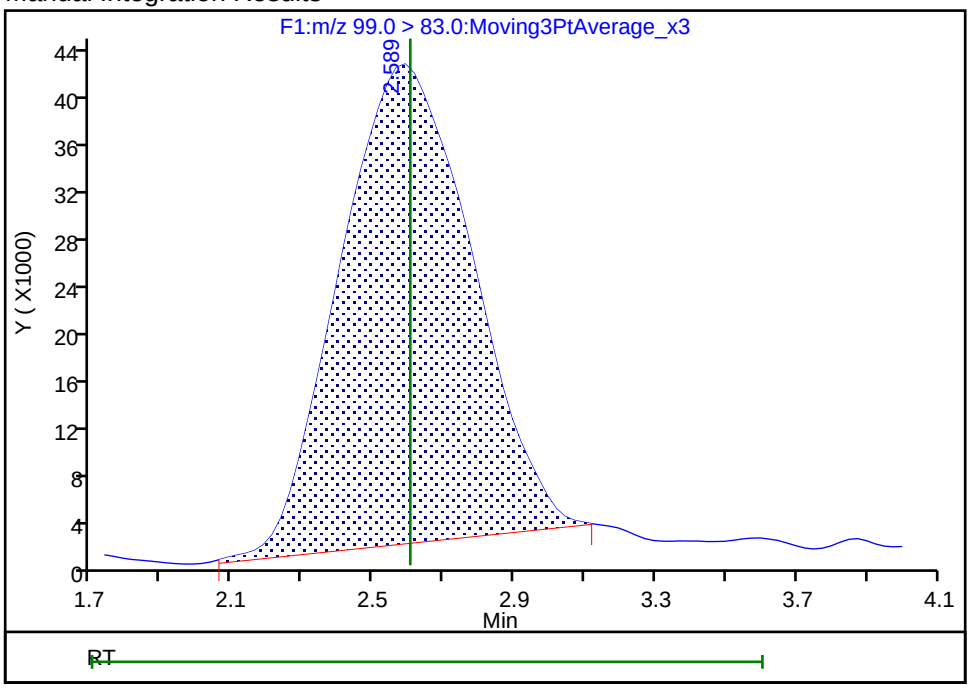
Processing Integration Results

RT: 2.59
Area: 1187361
Amount: 63.381157
Amount Units: ng/l



Manual Integration Results

RT: 2.59
Area: 1063898
Amount: 56.721707
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:03:59
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

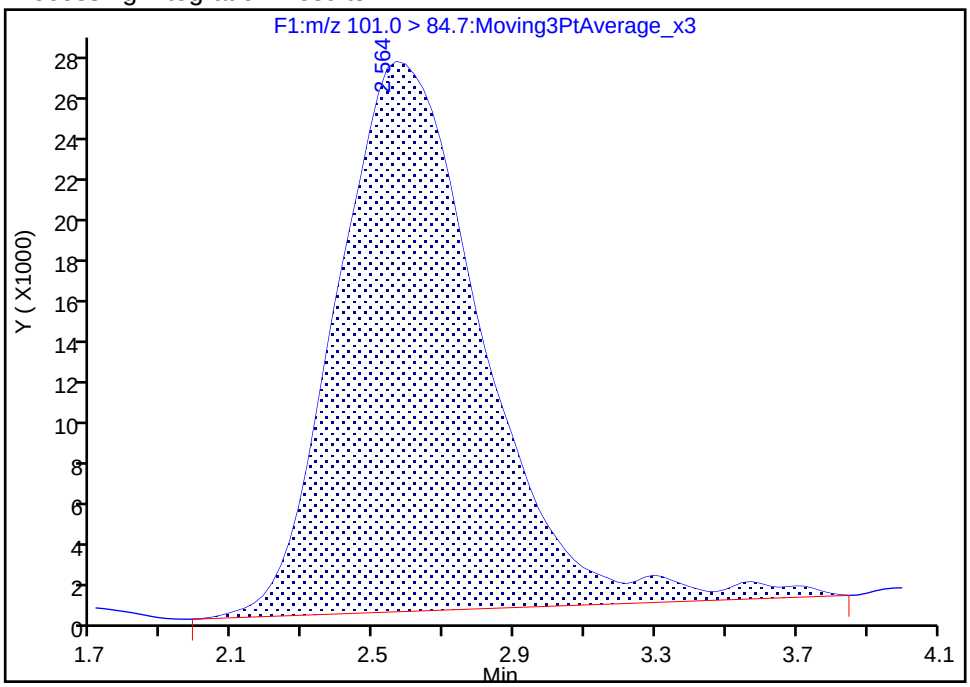
Data File: \\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12013.d
Injection Date: 12-Nov-2018 15:09:44 Instrument ID: LC_LCMS8
Lims ID: INF
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 15
Injection Vol: 250.0 ul Dil. Factor: 1.0000
Method: 6860-LCMS8 Limit Group: LC - 6860 Perchlorate
Column: Detector F1:MRM

2 Perchlorate, CAS: 14797-73-0

Signal: 2

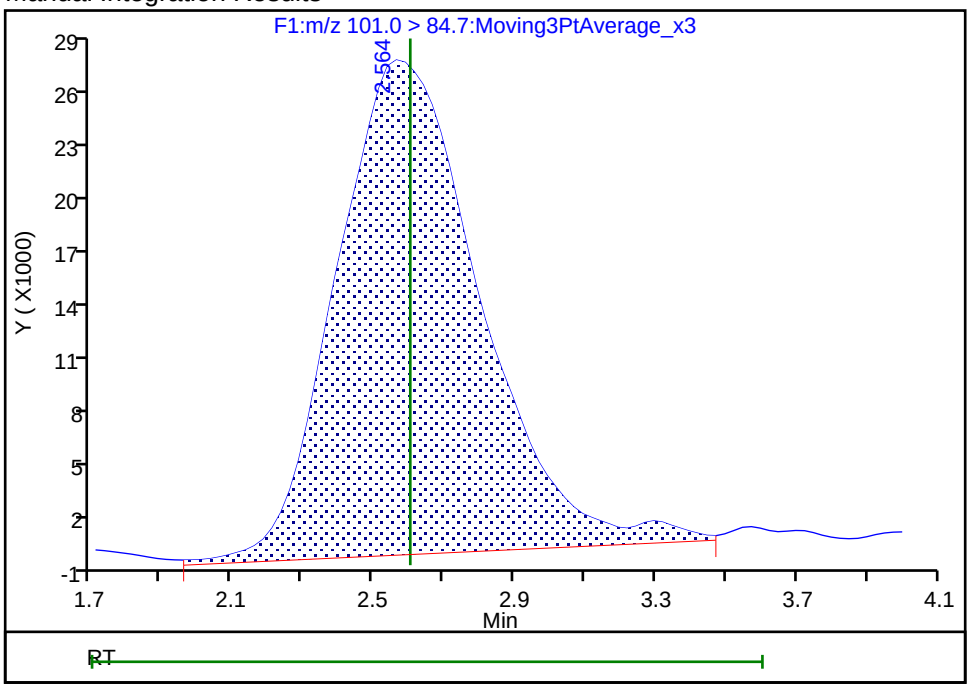
Processing Integration Results

RT: 2.56
Area: 780770
Amount: 63.381157
Amount Units: ng/l



Manual Integration Results

RT: 2.56
Area: 774827
Amount: 56.721707
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:04:06
Audit Action: Manually Integrated Audit Reason: Baseline

Manual Integration/User Assign Peak Report

TestAmerica Denver

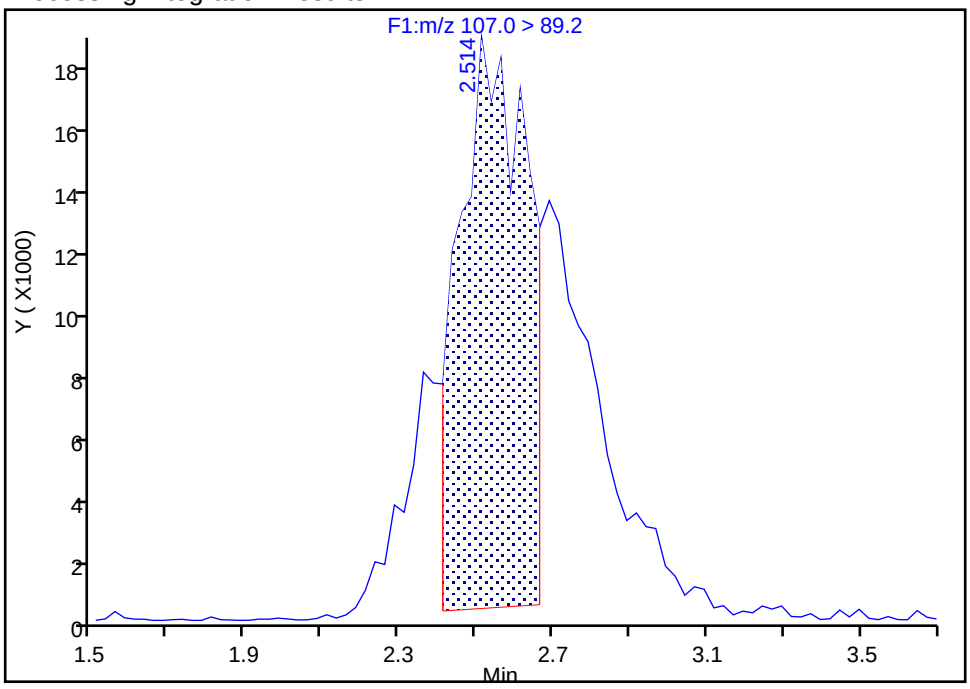
Data File:	\\ChromNA\Denver\ChromData\LC_LCMS8\20181112-76107.b\IC818K12013.d				
Injection Date:	12-Nov-2018 15:09:44	Instrument ID:	LC_LCMS8		
Lims ID:	INF				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	15
Injection Vol:	250.0 ul	Dil. Factor:	1.0000		
Method:	6860-LCMS8	Limit Group:	LC - 6860 Perchlorate		
Column:		Detector	F1:MRM		

* 1 Perchlorate-18O, CAS: STL00401

Signal: 1

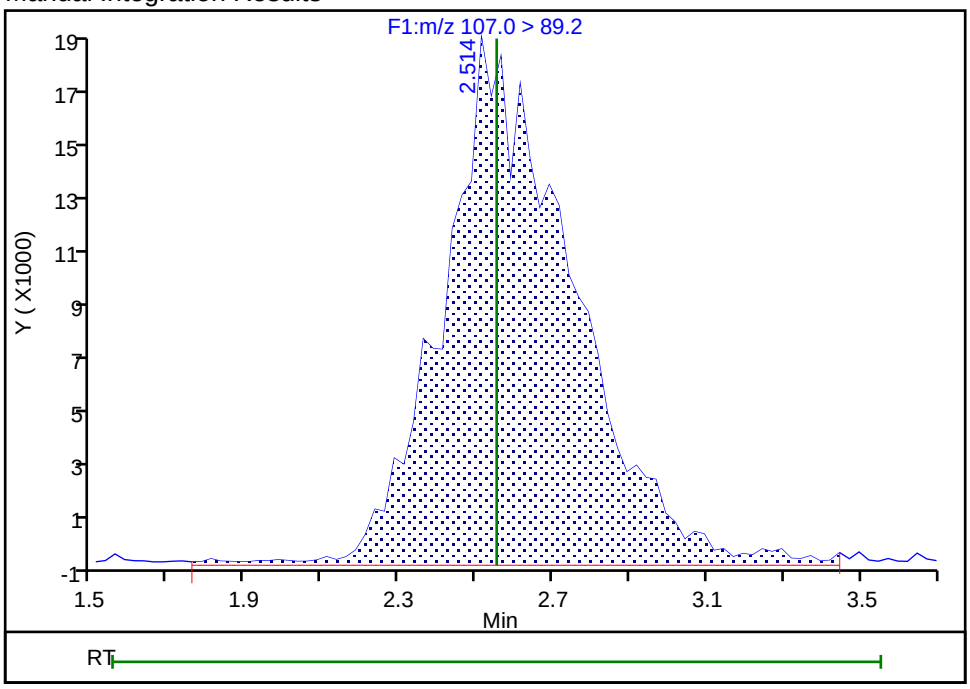
Processing Integration Results

RT: 2.51
Area: 217854
Amount: 204.0000
Amount Units: ng/l



Manual Integration Results

RT: 2.51
Area: 446081
Amount: 204.0000
Amount Units: ng/l



Reviewer: coopert, 13-Nov-2018 09:03:52

Audit Action: Manually Integrated Audit Reason: Baseline

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: LC_LCMS8 Start Date: 11/12/2018 14:10

Analysis Batch Number: 437280 End Date: 11/12/2018 17:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD020 280-437280/4 IC		11/12/2018 14:10	1	IC818K12002.d	
STD050 280-437280/5 IC		11/12/2018 14:15	1	IC818K12003.d	
STD100 280-437280/6 IC		11/12/2018 14:20	1	IC818K12004.d	
STD200 280-437280/7 ICISAV		11/12/2018 14:25	1	IC818K12005.d	
STD500 280-437280/8 IC		11/12/2018 14:30	1	IC818K12006.d	
STD1000 280-437280/9 IC		11/12/2018 14:35	1	IC818K12007.d	
ICB 280-437280/10		11/12/2018 14:41	1	IC818K12008.d	
ICV 280-437280/11		11/12/2018 14:46	1	IC818K12009.d	
DLCK 280-437280/12		11/12/2018 14:51	1	IC818K12010.d	
MB 280-437280/13		11/12/2018 14:58	1	IC818K12011.d	
LCS 280-437280/14		11/12/2018 15:04	1	IC818K12012.d	
INF 280-437280/15		11/12/2018 15:09	1	IC818K12013.d	
ZZZZZ		11/12/2018 15:15	1000000		
ZZZZZ		11/12/2018 15:20	1		
ZZZZZ		11/12/2018 15:25	1		
ZZZZZ		11/12/2018 15:31	1		
ZZZZZ		11/12/2018 15:36	1		
CCV 280-437280/21		11/12/2018 15:41	1	IC818K12019.d	
CCVL 280-437280/22		11/12/2018 15:46	1	IC818K12020.d	
CCB 280-437280/23		11/12/2018 15:52	1	IC818K12021.d	
ZZZZZ		11/12/2018 15:57	1		
ZZZZZ		11/12/2018 16:02	1		
ZZZZZ		11/12/2018 16:07	1		
ZZZZZ		11/12/2018 16:13	1		
280-116538-1		11/12/2018 16:18	1	IC818K12026.d	
280-116538-2		11/12/2018 16:23	1	IC818K12027.d	
ZZZZZ		11/12/2018 16:33	1		
CCV 280-437280/31		11/12/2018 16:39	1	IC818K12029.d	
CCVL 280-437280/32		11/12/2018 16:44	1	IC818K12030.d	
CCB 280-437280/33		11/12/2018 16:49	1	IC818K12031.d	
ZZZZZ		11/12/2018 16:54	1		
ZZZZZ		11/12/2018 17:00	10		
ZZZZZ		11/12/2018 17:05	1		
ZZZZZ		11/12/2018 17:10	1		
ZZZZZ		11/12/2018 17:15	1		
ZZZZZ		11/12/2018 17:20	1		
ZZZZZ		11/12/2018 17:26	1		
ZZZZZ		11/12/2018 17:31	1		
CCV 280-437280/42		11/12/2018 17:36	1		
CCVL 280-437280/43		11/12/2018 17:41	1		
CCB 280-437280/44		11/12/2018 17:46	1		

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437280 Batch Start Date: 11/12/18 14:10 Batch Analyst: Cooper, Taylor

Batch Method: 6860 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	6860-IS-Spike 00078	6860_INF_Soln 00015	6860CalStockW 00103	6860ICVStockW 00041	6860LCS 00018	
STD020 280-437280/4 IC		6860		50 uL		100 uL			
STD050 280-437280/5 IC		6860		50 uL		250 uL			
STD100 280-437280/6 IC		6860		50 uL		500 uL			
STD200 280-437280/7 ICISAV		6860		50 uL		1000 uL			
STD500 280-437280/8 IC		6860		50 uL		2500 uL			
STD1000 280-437280/9 IC		6860		50 uL		5000 uL			
ICB 280-437280/10		6860		50 uL					
ICV 280-437280/11		6860		50 uL			1000 uL		
DLCK 280-437280/12		6860		50 uL		250 uL			
MB 280-437280/13		6860		50 uL					
LCS 280-437280/14		6860		50 uL				50 uL	
INF 280-437280/15		6860		50 uL	4950 uL			50 uL	
CCV 280-437280/21		6860		50 uL		1000 uL			
CCVL 280-437280/22		6860		50 uL		100 uL			
CCB 280-437280/23		6860		50 uL					
280-116538-O-1	SCLmw-001-181001-GW	6860	T	50 uL					
280-116538-O-2	SCLmw-003-181001-GW	6860	T	50 uL					
CCV 280-437280/31		6860		50 uL		1000 uL			
CCVL 280-437280/32		6860		50 uL		100 uL			
CCB 280-437280/33		6860		50 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437280 Batch Start Date: 11/12/18 14:10 Batch Analyst: Cooper, Taylor

Batch Method: 6860 Batch End Date:

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG No.:

Project: Leidos RFP# 001088 - Ravenna AAP-66

Client Sample ID	Lab Sample ID
SCLmw-001-181001-GW	280-116538-1
SCLmw-003-181001-GW	280-116538-2

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SCLmw-001-181001-GW
Lab Sample ID: 280-116538-1
Lab Name: TestAmerica Denver
Job No.: 280-116538-1
SDG ID.:
Matrix: Water
Date Sampled: 11/02/2018 10:45
Reporting Basis: WET
Date Received: 11/03/2018 09:00

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Aluminum	62	300	70	18	ug/L	J		1	6010C
Calcium	170000	1000	140	35	ug/L			1	6010C
Iron	90	100	85	22	ug/L	J		1	6010C
Magnesium	32000	500	40	11	ug/L			1	6010C
Potassium	4500	3000	940	240	ug/L			1	6010C
Sodium	24000	5000	350	120	ug/L			1	6010C
Phosphorus	50	3000	50	14	ug/L	U		1	6010C
Antimony	16	6.0	1.0	0.40	ug/L			1	6020A
Arsenic	4.8	5.0	1.0	0.33	ug/L	J		1	6020A
Barium	110	3.0	0.95	0.29	ug/L			1	6020A
Beryllium	0.087	1.0	0.30	0.080	ug/L	J		1	6020A
Cadmium	0.34	1.0	1.0	0.27	ug/L	J		1	6020A
Chromium	1.8	10	1.8	0.50	ug/L	U		1	6020A
Cobalt	2.5	1.0	0.20	0.054	ug/L			1	6020A
Copper	1.7	2.0	1.8	0.56	ug/L	J		1	6020A
Lead	0.31	3.0	0.70	0.18	ug/L	J		1	6020A
Manganese	210	3.5	0.95	0.31	ug/L			1	6020A
Nickel	9.8	3.0	1.0	0.30	ug/L			1	6020A
Selenium	0.85	5.0	2.0	0.70	ug/L	J		1	6020A
Silver	0.18	5.0	0.10	0.033	ug/L	J		1	6020A
Thallium	0.20	1.0	0.20	0.050	ug/L	U		1	6020A
Vanadium	2.0	6.0	2.0	0.50	ug/L	U		1	6020A
Zinc	4.8	20	8.0	2.0	ug/L	J		1	6020A
Mercury	0.063	0.20	0.080	0.027	ug/L	J		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: SCLmw-003-181001-GW
Lab Sample ID: 280-116538-2
Lab Name: TestAmerica Denver
Job No.: 280-116538-1
SDG ID.:
Matrix: Water
Date Sampled: 11/02/2018 11:10
Reporting Basis: WET
Date Received: 11/03/2018 09:00

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Aluminum	330	300	70	18	ug/L			1	6010C
Calcium	120000	1000	140	35	ug/L			1	6010C
Iron	610	100	85	22	ug/L			1	6010C
Magnesium	51000	500	40	11	ug/L			1	6010C
Potassium	5500	3000	940	240	ug/L			1	6010C
Sodium	26000	5000	350	120	ug/L			1	6010C
Phosphorus	50	3000	50	14	ug/L	U		1	6010C
Antimony	1.4	6.0	1.0	0.40	ug/L	J		1	6020A
Arsenic	10	5.0	1.0	0.33	ug/L			1	6020A
Barium	41	3.0	0.95	0.29	ug/L			1	6020A
Beryllium	0.30	1.0	0.30	0.080	ug/L	U		1	6020A
Cadmium	1.0	1.0	1.0	0.27	ug/L	U		1	6020A
Chromium	0.86	10	1.8	0.50	ug/L	J		1	6020A
Cobalt	6.6	1.0	0.20	0.054	ug/L			1	6020A
Copper	1.3	2.0	1.8	0.56	ug/L	J		1	6020A
Lead	0.61	3.0	0.70	0.18	ug/L	J		1	6020A
Manganese	250	3.5	0.95	0.31	ug/L			1	6020A
Nickel	14	3.0	1.0	0.30	ug/L			1	6020A
Selenium	0.90	5.0	2.0	0.70	ug/L	J		1	6020A
Silver	0.10	5.0	0.10	0.033	ug/L	U		1	6020A
Thallium	0.096	1.0	0.20	0.050	ug/L	J		1	6020A
Vanadium	2.0	6.0	2.0	0.50	ug/L	U		1	6020A
Zinc	3.8	20	8.0	2.0	ug/L	J		1	6020A
Mercury	0.067	0.20	0.080	0.027	ug/L	J		1	7470A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP ICVH_00791 Concentration Units: ug/L

CCV Source: ICP CCVH_00614

Analyte	ICVH 280-436619/6 11/06/2018 13:27				ICVH 280-436619/7 11/06/2018 13:29				CCVH 280-436619/62 11/07/2018 04:36			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	38700		40000	97	39100		40000	98	249000		250000	99
Aluminum	38400		40000	96	38500		40000	96	47400		50000	95
Iron	76400		80000	96	76300		80000	95	48500		50000	97

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP ICVH_00791 Concentration Units: ug/L

CCV Source: ICP CCVH_00614

Analyte	CCVH 280-436619/76 11/07/2018 05:11				CCVH 280-436619/90 11/07/2018 05:46							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Sodium	246000		250000	98	248000		250000	99				
Aluminum	47000		50000	94	47500		50000	95				
Iron	48300		50000	97	48400		50000	97				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP ICV_00677 Concentration Units: ug/L

CCV Source: ICP CCV_00350

Analyte	ICV 280-436619/8 11/06/2018 13:39				ICV 280-436619/9 11/06/2018 13:42				CCV 280-436619/63 11/07/2018 04:38			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	2000		2000	100	2010		2000	100	4920		5000	98
Magnesium	9940		10000	99	10100		10000	101	19900		20000	99
Phosphorus	1980	J	2000	99	1950	J	2000	98	1040	J	1000	104
Potassium	19900		20000	99	20000		20000	100	50700		50000	101
Sodium	2030	J	2000	101	2050	J	2000	103	5370		5000	107
Iron	251		250	100	254		250	102	2440		2500	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP ICV_00677 Concentration Units: ug/L

CCV Source: ICP CCV_00350

Analyte	CCV 280-436619/77 11/07/2018 05:13				CCV 280-436619/91 11/07/2018 05:49							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	4900		5000	98	4920		5000	98				
Magnesium	20000		20000	100	20100		20000	100				
Phosphorus	1060	J	1000	106	1060	J	1000	106				
Potassium	50600		50000	101	50900		50000	102				
Sodium	5380		5000	108	5380		5000	108				
Iron	2430		2500	97	2440		2500	97				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP LLCCV_02393 Concentration Units: ug/L

CCV Source: ICP LLCCV_02393

Analyte	ICVL 280-436619/10 11/06/2018 13:47				CCVL 280-436619/65 11/07/2018 04:43				CCVL 280-436619/79 11/07/2018 05:18			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	196	J	200	98	199	J	200	99	198	J	200	99
Magnesium	200	J	200	100	216	J	200	108	205	J	200	102
Phosphorus	2890	J	3000	96	3000		3000	100	3000		3000	100
Potassium	2970	J	3000	99	3100		3000	103	3090		3000	103
Sodium	1030	J	1000	103	1210	J	1000	121	1200	J	1000	120
Aluminum	105	J	100	105	118	J	100	118	118	J	100	118
Iron	101		100	101	97.8	J	100	98	99.8	J	100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP LLCCV_02393 Concentration Units: ug/L

CCV Source: ICP LLCCV_02393

Analyte	CCVL 280-436619/93 11/07/2018 05:54											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	201	J	200	101								
Magnesium	204	J	200	102								
Phosphorus	3010		3000	100								
Potassium	3060		3000	102								
Sodium	1220	J	1000	122								
Aluminum	119	J	100	119								
Iron	99.5	J	100	100								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP ICVH_00792 Concentration Units: ug/L

CCV Source: ICP CCVH_00614

Analyte	ICVH 280-436768/6 11/07/2018 09:21				ICVH 280-436768/7 11/07/2018 09:23				CCVH 280-436768/24 11/07/2018 14:52			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	40000		40000	100	39700		40000	99	51500		50000	103
Iron	80200		80000	100	79200		80000	99	50200		50000	100
Sodium	42000		40000	105	40500		40000	101	253000		250000	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP ICVH_00792 Concentration Units: ug/L

CCV Source: ICP CCVH_00614

Analyte	CCVH 280-436768/38 11/07/2018 15:27				CCVH 280-436768/52 11/07/2018 16:02							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	51600		50000	103	51500		50000	103				
Iron	50600		50000	101	50000		50000	100				
Sodium	255000		250000	102	255000		250000	102				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP ICV_00678 Concentration Units: ug/L

CCV Source: ICP CCV_00350

Analyte	ICV 280-436768/9 11/07/2018 09:31				ICV 280-436768/10 11/07/2018 09:33				CCV 280-436768/25 11/07/2018 14:54			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	268	J	250	107	267	J	250	107	520		500	104
Iron	250		250	100	249		250	100	2380		2500	95
Calcium	2050		2000	103	2050		2000	103	4990		5000	100
Magnesium	10300		10000	103	10300		10000	103	19300		20000	97
Phosphorus	1970	J	2000	99	1980	J	2000	99	952	J	1000	95
Potassium	20500		20000	102	20500		20000	102	50600		50000	101
Sodium	2070	J	2000	104	2060	J	2000	103	5130		5000	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP ICV_00678 Concentration Units: ug/L

CCV Source: ICP CCV_00350

Analyte	CCV 280-436768/39 11/07/2018 15:29				CCV 280-436768/53 11/07/2018 16:05							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	522		500	104	536		500	107				
Iron	2390		2500	95	2410		2500	96				
Calcium	5020		5000	100	5060		5000	101				
Magnesium	19500		20000	97	19600		20000	98				
Phosphorus	967	J	1000	97	983	J	1000	98				
Potassium	50900		50000	102	51300		50000	103				
Sodium	5180		5000	104	5180		5000	104				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP LLCCV_02394 Concentration Units: ug/L

CCV Source: ICP LLCCV_02394

Analyte	ICVL 280-436768/11 11/07/2018 09:38				CCVL 280-436768/27 11/07/2018 14:59				CCVL 280-436768/41 11/07/2018 15:34			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	114	J	100	114	109	J	100	109	110	J	100	110
Iron	85.2	J	100	85	102		100	102	107		100	107
Calcium	169	J	200	84	208	J	200	104	212	J	200	106
Magnesium	253	J	200	126	208	J	200	104	205	J	200	103
Phosphorus	2940	J	3000	98	2840	J	3000	95	2840	J	3000	95
Potassium	2400	J	3000	80	3210		3000	107	3200		3000	107
Sodium	805	J	1000	80	1060	J	1000	106	1060	J	1000	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: ICP LLCCV_02394 Concentration Units: ug/L

CCV Source: ICP LLCCV_02394

Analyte	CCVL 280-436768/55 11/07/2018 16:10											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Aluminum	109	J	100	109								
Iron	101		100	101								
Calcium	214	J	200	107								
Magnesium	204	J	200	102								
Phosphorus	2850	J	3000	95								
Potassium	3230		3000	108								
Sodium	1070	J	1000	107								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: MS 77 ICV_01911 Concentration Units: ug/L

CCV Source: ms 77 ccv_01915

Analyte	ICV 280-437566/6 11/13/2018 12:46				ICV 280-437566/7 11/13/2018 12:51				CCV 280-437566/24 11/13/2018 22:26			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	40.6		40.0	102	41.3		40.0	103	50.0		50.0	100
Arsenic	39.3		40.0	98	38.9		40.0	97	51.9		50.0	104
Barium	38.1		40.0	95	40.4		40.0	101	50.2		50.0	100
Beryllium	40.1		40.0	100	39.3		40.0	98	52.1		50.0	104
Cadmium	38.3		40.0	96	39.8		40.0	99	49.5		50.0	99
Chromium	40.1		40.0	100	41.2		40.0	103	50.8		50.0	102
Cobalt	39.3		40.0	98	39.4		40.0	98	51.7		50.0	103
Copper	40.3		40.0	101	40.4		40.0	101	52.5		50.0	105
Lead	39.1		40.0	98	40.1		40.0	100	51.3		50.0	103
Manganese	39.3		40.0	98	40.6		40.0	101	52.1		50.0	104
Nickel	40.1		40.0	100	39.2		40.0	98	50.1		50.0	100
Selenium	38.2		40.0	95	37.7		40.0	94	52.0		50.0	104
Silver	38.5		40.0	96	38.7		40.0	97	50.0		50.0	100
Thallium	39.2		40.0	98	39.8		40.0	100	51.2		50.0	102
Vanadium	39.7		40.0	99	41.1		40.0	103	50.6		50.0	101
Zinc	35.9		40.0	90	36.8		40.0	92	51.3		50.0	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: MS 77 ICV_01911 Concentration Units: ug/L

CCV Source: ms 77 ccv_01915

Analyte	CCV 280-437566/66 11/14/2018 01:10				CCV 280-437566/77 11/14/2018 01:52				CCV 280-437566/90 11/14/2018 02:41			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	49.3		50.0	99	50.6		50.0	101	49.0		50.0	98
Arsenic	49.1		50.0	98	50.2		50.0	100	50.3		50.0	101
Barium	50.0		50.0	100	51.6		50.0	103	49.0		50.0	98
Beryllium	52.5		50.0	105	53.0		50.0	106	47.0		50.0	94
Cadmium	50.1		50.0	100	49.5		50.0	99	47.5		50.0	95
Chromium	50.4		50.0	101	49.1		50.0	98	47.6		50.0	95
Cobalt	49.3		50.0	99	48.6		50.0	97	48.2		50.0	96
Copper	50.8		50.0	102	50.1		50.0	100	47.7		50.0	95
Lead	51.1		50.0	102	51.6		50.0	103	49.7		50.0	99
Manganese	50.3		50.0	101	50.5		50.0	101	48.3		50.0	97
Nickel	48.9		50.0	98	48.6		50.0	97	48.9		50.0	98
Selenium	49.8		50.0	100	52.7		50.0	105	47.2		50.0	94
Silver	46.9		50.0	94	47.4		50.0	95	45.9		50.0	92
Thallium	50.5		50.0	101	51.4		50.0	103	50.1		50.0	100
Vanadium	49.3		50.0	99	49.8		50.0	100	48.2		50.0	96
Zinc	50.9		50.0	102	49.4		50.0	99	50.0		50.0	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: MS 77 ICV_01911 Concentration Units: ug/L

CCV Source: ms 77 ccv_01915

Analyte	CCV 280-437566/103 11/14/2018 03:30											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	53.5		50.0	107								
Arsenic	53.3		50.0	107								
Barium	52.3		50.0	105								
Beryllium	54.3		50.0	109								
Cadmium	52.7		50.0	105								
Chromium	52.2		50.0	104								
Cobalt	52.0		50.0	104								
Copper	53.4		50.0	107								
Lead	54.7		50.0	109								
Manganese												
Nickel	51.5		50.0	103								
Selenium	53.9		50.0	108								
Silver	50.5		50.0	101								
Thallium	54.6		50.0	109								
Vanadium	54.0		50.0	108								
Zinc	53.2		50.0	106								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: MS 77 LLCCV_01717 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01717

Analyte	ICVL 280-437566/9 11/13/2018 13:00				CCVL 280-437566/26 11/13/2018 22:34				CCVL 280-437566/68 11/14/2018 01:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	2.15		2.00	107	2.30		2.00	115	1.98	J	2.00	99
Arsenic	4.79	J	5.00	96	4.97	J	5.00	99	5.07		5.00	101
Barium	1.21		1.00	121	1.19		1.00	119	1.25		1.00	125
Beryllium	1.01		1.00	101	0.900	J	1.00	90	0.879	J	1.00	88
Cadmium	1.01		1.00	101	1.04		1.00	104	0.986	J	1.00	99
Chromium	1.98	J	2.00	99	2.19		2.00	109	2.11		2.00	106
Cobalt	1.07		1.00	107	1.01		1.00	101	0.990	J	1.00	99
Copper	2.17		2.00	108	2.26		2.00	113	1.97	J	2.00	99
Lead	1.02		1.00	102	1.01		1.00	101	1.05		1.00	105
Manganese	1.03		1.00	103	0.920	J	1.00	92	1.03		1.00	103
Nickel	2.05		2.00	103	1.80	J	2.00	90	1.99	J	2.00	99
Selenium	4.94	J	5.00	99	4.92	J	5.00	98	4.89	J	5.00	98
Silver	5.16		5.00	103	5.04		5.00	101	4.94	J	5.00	99
Thallium	1.02		1.00	102	1.01		1.00	101	0.982	J	1.00	98
Vanadium	5.67		5.00	113	5.17		5.00	103	5.92		5.00	118
Zinc	9.47	J	10.0	95	11.7		10.0	117	9.88	J	10.0	99

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: MS 77 LLCCV_01717 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01717

Analyte	CCVL 280-437566/79 11/14/2018 01:59				CCVL 280-437566/92 11/14/2018 02:49				CCVL 280-437566/105 11/14/2018 03:38			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	2.18		2.00	109	2.16		2.00	108	2.28		2.00	114
Arsenic	4.76	J	5.00	95	5.09		5.00	102	5.03		5.00	101
Barium	0.917	J	1.00	92	1.16		1.00	116	1.11		1.00	111
Beryllium	1.05		1.00	105	0.872	J	1.00	87	1.27		1.00	127
Cadmium	0.985	J	1.00	99	1.14		1.00	114	0.990	J	1.00	99
Chromium	1.91	J	2.00	95	2.20		2.00	110	2.05		2.00	103
Cobalt	0.977	J	1.00	98	1.08		1.00	108	1.08		1.00	108
Copper	1.96	J	2.00	98	2.12		2.00	106	2.07		2.00	103
Lead	1.10		1.00	110	1.08		1.00	108	1.11		1.00	111
Manganese	1.24		1.00	124	1.05		1.00	105				
Nickel	1.73	J	2.00	86	1.41	J	2.00	70	2.14		2.00	107
Selenium	4.84	J	5.00	97	5.03		5.00	101	5.28		5.00	106
Silver	4.96	J	5.00	99	5.23		5.00	105	5.24		5.00	105
Thallium	1.05		1.00	105	1.09		1.00	109	1.09		1.00	109
Vanadium	5.86		5.00	117	5.63		5.00	113	6.15		5.00	123
Zinc	10.7		10.0	107	11.2		10.0	112	11.1		10.0	111

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: MS 77 ICV_01912 Concentration Units: ug/L

CCV Source: ms 77 ccv_01916

Analyte	ICV 280-437702/8 11/14/2018 12:54				CCV 280-437702/39 11/14/2018 15:06				CCV 280-437702/51 11/14/2018 16:05			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Manganese	42.0		40.0	105	50.6		50.0	101	51.3		50.0	103
Antimony	41.2		40.0	103	49.3		50.0	99	49.1		50.0	98
Arsenic	38.8		40.0	97	49.8		50.0	100	48.8		50.0	98
Barium	38.1		40.0	95	49.7		50.0	99	49.0		50.0	98
Beryllium	38.5		40.0	96	46.7		50.0	93	47.8		50.0	96
Cadmium	38.3		40.0	96	49.5		50.0	99	48.1		50.0	96
Chromium	40.5		40.0	101	51.2		50.0	102	48.9		50.0	98
Cobalt	40.5		40.0	101	49.5		50.0	99	48.8		50.0	98
Copper	40.4		40.0	101	50.8		50.0	102	48.9		50.0	98
Lead	39.8		40.0	100	49.8		50.0	100	48.7		50.0	97
Nickel	40.5		40.0	101	50.2		50.0	100	49.3		50.0	99
Selenium	39.8		40.0	99	49.4		50.0	99	49.0		50.0	98
Silver	38.3		40.0	96	49.0		50.0	98	46.5		50.0	93
Thallium	39.9		40.0	100	50.0		50.0	100	49.0		50.0	98
Vanadium	40.8		40.0	102	51.6		50.0	103	52.5		50.0	105
Zn	40.8		40.0	102	50.7		50.0	101	50.8		50.0	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: MS 77 ICV_01912 Concentration Units: ug/L

CCV Source: ms 77 ccv_01916

Analyte	CCV 280-437702/62 11/14/2018 16:47											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Manganese	51.1		50.0	102								
Antimony	48.2		50.0	96								
Arsenic	49.3		50.0	99								
Barium	47.0		50.0	94								
Beryllium	48.8		50.0	98								
Cadmium	46.5		50.0	93								
Chromium	48.0		50.0	96								
Cobalt	48.3		50.0	97								
Copper	48.3		50.0	97								
Lead	48.5		50.0	97								
Nickel	48.4		50.0	97								
Selenium	50.0		50.0	100								
Silver												
Thallium	48.6		50.0	97								
Vanadium	49.5		50.0	99								
Zn	49.2		50.0	98								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: MS 77 LLCCV_01718 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01718

Analyte	ICVL 280-437702/10 11/14/2018 13:02				CCVL 280-437702/41 11/14/2018 15:14				CCVL 280-437702/53 11/14/2018 16:13			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Manganese	1.05		1.00	105	1.07		1.00	107	0.948	J	1.00	95
Antimony	2.34		2.00	117	2.29		2.00	115	1.90	J	2.00	95
Arsenic	4.39	J	5.00	88	4.77	J	5.00	95	4.57	J	5.00	91
Barium	0.861	J	1.00	86	1.02		1.00	102	0.759	J	1.00	76
Beryllium	0.991	J	1.00	99	0.789	J	1.00	79	0.922	J	1.00	92
Cadmium	0.875	J	1.00	88	1.05		1.00	105	0.906	J	1.00	91
Chromium	1.96	J	2.00	98	1.97	J	2.00	99	1.87	J	2.00	94
Cobalt	0.978	J	1.00	98	1.02		1.00	102	1.02		1.00	102
Copper	2.08		2.00	104	1.70	J	2.00	85	1.67	J	2.00	84
Lead	0.955	J	1.00	96	0.865	J	1.00	87	0.886	J	1.00	89
Nickel	2.00		2.00	100	1.92	J	2.00	96	1.89	J	2.00	94
Selenium	4.78	J	5.00	96	4.84	J	5.00	97	4.92	J	5.00	98
Silver	4.23	J	5.00	85	3.57	J	5.00	71				
Thallium	0.991	J	1.00	99	0.987	J	1.00	99	0.993	J	1.00	99
Vanadium	5.21		5.00	104								
Zn	10.8		10.0	108	9.54	J	10.0	95	10.4		10.0	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: MS 77 LLCCV_01718 Concentration Units: ug/L

CCV Source: MS 77 LLCCV_01718

Analyte	CCVL 280-437702/64 11/14/2018 16:54											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Manganese	0.937	J	1.00	94								
Antimony	2.28		2.00	114								
Arsenic	4.46	J	5.00	89								
Barium	0.864	J	1.00	86								
Beryllium	0.773	J	1.00	77								
Cadmium	0.811	J	1.00	81								
Chromium	1.87	J	2.00	94								
Cobalt	1.01		1.00	101								
Copper	1.82	J	2.00	91								
Lead	0.822	J	1.00	82								
Nickel	2.03		2.00	102								
Selenium	4.66	J	5.00	93								
Silver												
Thallium	0.947	J	1.00	95								
Vanadium	6.39		5.00	128								
Zn	11.4		10.0	114								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: Hg Biwk ICV_00261 Concentration Units: ug/L

CCV Source: Hg Daily Spk_02292

Analyte	ICV 280-437882/9-A 11/16/2018 19:09				CCV 280-437882/12-A 11/16/2018 20:15				CCV 280-437882/12-A 11/16/2018 20:42			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.02		4.00	101	5.42		5.00	108	5.50		5.00	110

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICV Source: Hg Biwk ICV_00261 Concentration Units: ug/L

CCV Source: Hg Daily Spk_02292

Analyte	CCV 280-437882/12-A 11/16/2018 21:08											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.39		5.00	108								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Method: 6010C Instrument ID: MT_025

Lab Sample ID: CRI 280-436619/14 Concentration Units: ug/L

CRQL Check Standard Source: ICP LLCCV_02393

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Aluminum	100	112	J	112	80-120
Calcium	200	211	J	106	80-120
Iron	100	106		106	80-120
Magnesium	200	200	J	100	80-120
Potassium	3000	2800	J	93	80-120
Sodium	1000	1060	J	106	80-120
Phosphorus	3000	2830	J	94	80-120

Lab Sample ID: CRI 280-436768/15 Concentration Units: ug/L

CRQL Check Standard Source: ICP LLCCV_02394

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Aluminum	100	115	J	115	80-120
Calcium	200	218	J	109	80-120
Iron	100	101		101	80-120
Magnesium	200	219	J	110	80-120
Potassium	3000	3190		106	80-120
Sodium	1000	1100	J	110	80-120
Phosphorus	3000	2910	J	97	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Method: 6020A Instrument ID: MT_077

Lab Sample ID: CRI 280-437566/10 Concentration Units: ug/L

CRQL Check Standard Source: ms 77 RL_01800

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.06	J	106	80-120
Arsenic	1.00	0.955	J	96	80-120
Beryllium	1.00	1.04		104	80-120
Cadmium	1.00	1.12		112	80-120
Chromium	1.00	1.04	J	104	80-120
Cobalt	1.00	1.02		102	80-120
Lead	1.00	0.972	J	97	80-120
Nickel	1.00	1.15	J	115	80-120
Selenium	1.00	0.890	J	89	80-120
Silver	1.00	0.995	J	100	80-120
Thallium	1.00	0.960	J	96	80-120
Zinc	1.00	8.0	U	89	80-120

Lab Sample ID: CRI 280-437566/11 Concentration Units: ug/L

CRQL Check Standard Source: ms 77 alt RL_01075

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Barium	1.00	0.874	J	87	80-120
Copper	2.00	2.07		104	80-120
Manganese	1.00	1.03		103	80-120
Vanadium	5.00	5.37		107	80-120

Lab Sample ID: CRI 280-437702/11 Concentration Units: ug/L

CRQL Check Standard Source: ms 77 RL_01801

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	1.00	1.01	J	101	80-120
Arsenic	1.00	1.06	J	106	80-120
Barium	1.00	0.905	J	91	80-120
Beryllium	1.00	0.880	J	88	80-120
Cadmium	1.00	1.03		103	80-120
Chromium	1.00	0.952	J	95	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Method: 6020A Instrument ID: MT_077

Lab Sample ID: CRI 280-437702/11 Concentration Units: ug/L

CRQL Check Standard Source: ms 77 RL_01801

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Cobalt	1.00	0.959	J	96	80-120
Copper	1.00	1.04	J	104	80-120
Lead	1.00	0.898	J	90	80-120
Manganese	1.00	0.981	J	98	80-120
Nickel	1.00	0.968	J	97	80-120
Selenium	1.00	0.991	J	99	80-120
Thallium	1.00	0.987	J	99	80-120
Zn	1.00	8.0	U	117	80-120

Lab Sample ID: CRI 280-437702/12 Concentration Units: ug/L

CRQL Check Standard Source: ms 77 alt RL_01076

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Vanadium	5.00	5.45		109	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-436619/13 11/06/2018 13:56		CCB 280-436619/64 11/07/2018 04:41		CCB 280-436619/78 11/07/2018 05:16		CCB 280-436619/92 11/07/2018 05:51	
		Found	C	Found	C	Found	C	Found	C
Calcium	1000	140	U	140	U	140	U	140	U
Magnesium	500	40	U	40	U	40	U	40	U
Phosphorus	3000	50	U	50	U	50	U	50	U
Potassium	3000	940	U	940	U	940	U	940	U
Sodium	5000	350	U	197	J	185	J	168	J
Aluminum	300	70	U	70	U	22.4	J	70	U
Iron	100	85	U	85	U	85	U	85	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-436768/14 11/07/2018 09:48		CCB 280-436768/26 11/07/2018 14:57		CCB 280-436768/40 11/07/2018 15:31		CCB 280-436768/54 11/07/2018 16:07	
		Found	C	Found	C	Found	C	Found	C
Aluminum	300	70	U	70	U	70	U	70	U
Iron	100	85	U	85	U	85	U	85	U
Calcium	1000	140	U	140	U	140	U	140	U
Magnesium	500	40	U	40	U	40	U	40	U
Phosphorus	3000	50	U	50	U	50	U	50	U
Potassium	3000	940	U	940	U	940	U	940	U
Sodium	5000	350	U	350	U	350	U	350	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-437566/8 11/13/2018 12:56		CCB 280-437566/25 11/13/2018 22:30		CCB 280-437566/67 11/14/2018 01:14		CCB 280-437566/78 11/14/2018 01:55	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	1.0	U	0.485	J	1.0	U	0.506	J
Arsenic	5.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	0.95	U	0.95	U	0.95	U	0.95	U
Beryllium	1.0	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	1.8	U	1.8	U	1.8	U	1.8	U
Cobalt	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Copper	2.0	1.8	U	1.8	U	1.8	U	1.8	U
Lead	1.0	0.70	U	0.70	U	0.70	U	0.70	U
Manganese	1.0	0.95	U	0.95	U	0.95	U	0.95	U
Nickel	2.0	1.0	U	1.0	U	1.0	U	1.0	U
Selenium	5.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	5.0	0.10	U	0.10	U	0.10	U	0.10	U
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	1.20	J	0.558	J	1.42	J	1.52	J
Zinc	10	8.0	U	8.0	U	8.0	U	8.0	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 280-437566/91 11/14/2018 02:45		CCB 280-437566/104 11/14/2018 03:34					
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.495	J	0.599	J				
Arsenic	5.0	1.0	U	1.0	U				
Barium	1.0	0.95	U	0.95	U				
Beryllium	1.0	0.30	U	0.30	U				
Cadmium	1.0	1.0	U	1.0	U				
Chromium	2.0	1.8	U	1.8	U				
Cobalt	1.0	0.20	U	0.20	U				
Copper	2.0	1.8	U	1.8	U				
Lead	1.0	0.70	U	0.70	U				
Manganese	1.0	0.95	U	0.95	U				
Nickel	2.0	1.0	U	1.0	U				
Selenium	5.0	2.0	U	2.0	U				
Silver	5.0	0.10	U	0.10	U				
Thallium	1.0	0.20	U	0.20	U				
Vanadium	5.0	1.23	J	1.62	J				
Zinc	10	8.0	U	8.0	U				

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-437702/9 11/14/2018 12:58		CCB 280-437702/40 11/14/2018 15:10		CCB 280-437702/52 11/14/2018 16:09		CCB 280-437702/63 11/14/2018 16:50	
		Found	C	Found	C	Found	C	Found	C
Manganese	1.0	0.95	U	0.95	U	0.95	U	0.95	U
Antimony	2.0	1.0	U	0.537	J	0.484	J	0.500	J
Arsenic	5.0	1.0	U	1.0	U	1.0	U	1.0	U
Barium	1.0	0.95	U	0.95	U	0.95	U	0.95	U
Beryllium	1.0	0.30	U	0.30	U	0.30	U	0.30	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	1.8	U	1.8	U	1.8	U	1.8	U
Cobalt	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Copper	2.0	1.8	U	1.8	U	1.8	U	1.8	U
Lead	1.0	0.70	U	0.70	U	0.70	U	0.70	U
Nickel	2.0	1.0	U	1.0	U	1.0	U	1.0	U
Selenium	5.0	2.0	U	2.0	U	2.0	U	2.0	U
Silver	5.0	0.10	U	0.10	U	0.10	U		
Thallium	1.0	0.20	U	0.20	U	0.20	U	0.20	U
Vanadium	5.0	0.762	J			2.33	J		
Zn	10	8.0	U	8.0	U	8.0	U	8.0	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 280-437882/10-A 11/16/2018 19:11		CCB 280-437882/13-A 11/16/2018 20:17		CCB 280-437882/13-A 11/16/2018 20:44		CCB 280-437882/13-A 11/16/2018 21:11	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.0333	J	0.0350	J	0.0317	J	0.0317	J

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-436445/1-A

Instrument Code: MT_025 Batch No.: 436619

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	140	U		6010C_DOD5
7439-95-4	Magnesium	40	U		6010C_DOD5
7440-09-7	Potassium	940	U		6010C_DOD5
7440-23-5	Sodium	129	J		6010C_DOD5
7723-14-0	Phosphorus	50	U		6010C_DOD5

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-436445/1-A

Instrument Code: MT_025 Batch No.: 436768

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	70	U		6010C_DOD5
7439-89-6	Iron	85	U		6010C_DOD5

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-437002/1-A

Instrument Code: MT_077 Batch No.: 437566

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	1.0	U		6020A_DOD5
7440-38-2	Arsenic	1.0	U		6020A_DOD5
7440-39-3	Barium	0.95	U		6020A_DOD5
7440-41-7	Beryllium	0.30	U		6020A_DOD5
7440-43-9	Cadmium	1.0	U		6020A_DOD5
7440-47-3	Chromium	1.8	U		6020A_DOD5
7440-48-4	Cobalt	0.20	U		6020A_DOD5
7440-50-8	Copper	1.8	U		6020A_DOD5
7439-92-1	Lead	0.70	U		6020A_DOD5
7439-96-5	Manganese	0.95	U	Q	6020A_DOD5
7440-02-0	Nickel	1.0	U		6020A_DOD5
7782-49-2	Selenium	2.0	U		6020A_DOD5
7440-22-4	Silver	0.10	U		6020A_DOD5
7440-28-0	Thallium	0.20	U		6020A_DOD5
7440-62-2	Vanadium	2.0	U		6020A_DOD5
7440-66-6	Zinc	2.43	J		6020A_DOD5

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 280-437885/1-A

Instrument Code: MT_034 Batch No.: 438129

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.0317	J		7470A_DOD5

FORM III-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSA 280-436619/15 Instrument ID: MT_025

Lab File ID: 25A110618c.asc ICS Source: ICP ICSA_00173

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Calcium	**500000**	**468880**	**94**
Magnesium	**500000**	**494310**	**99**
Phosphorus		**-5.91**	
Potassium		**-23.4**	
Sodium		**103**	
Aluminum	*500000*	*469280*	*94*
Antimony		*11.1*	
Arsenic		*-7.75*	
Barium		*-0.0200*	
Beryllium		*0.0200*	
Boron		*0.510*	
Chromium		*1.80*	
Cobalt		*-0.730*	
Copper		*2.94*	
Iron	*200000*	*177580*	*89*
Lead		*4.10*	
Lithium		*0.290*	
Molybdenum		*0.0600*	
Selenium		*-4.93*	
Silicon		*9.90*	
Silver		*-0.490*	
SiO2		*21.2*	
Thallium		*-1.31*	
Tin		*-1.46*	
Titanium		*1.09*	
Vanadium		*-0.520*	
Zinc		*-7.69*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSAB 280-436619/17 Instrument ID: MT_025

Lab File ID: 25A110618c.asc ICS Source: ICP ICSAB_00194

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Calcium	**500000**	**499270**	**100**
Magnesium	**500000**	**536030**	**107**
Phosphorus	**2000**	**2129**	**106**
Potassium	**50000**	**52911**	**106**
Sodium	**50000**	**51005**	**102**
Aluminum	*500000*	*502120*	*100*
Antimony	*1000*	*1066*	*107*
Arsenic	*2000*	*2157*	*108*
Barium	*500*	*517*	*103*
Beryllium	*500*	*512*	*102*
Boron	*2000*	*2016*	*101*
Cadmium	*1000*	*1064*	*106*
Chromium	*500*	*512*	*102*
Cobalt	*500*	*484*	*97*
Copper	*500*	*558*	*112*
Iron	*200000*	*188930*	*94*
Lead	*1000*	*991*	*99*
Lithium	*1000*	*1065*	*106*
Manganese	*500*	*522*	*104*
Molybdenum	*1000*	*1037*	*104*
Nickel	*1000*	*970*	*97*
Selenium	*5000*	*5166*	*103*
Silicon	*10000*	*10161*	*102*
Silver	*1000*	*1138*	*114*
SiO2	*21400*	*21745*	*102*
Strontium	*1000*	*1035*	*104*
Thallium	*10000*	*9434*	*94*
Tin	*10000*	*9980*	*100*
Titanium	*1000*	*1073*	*107*
Vanadium	*500*	*541*	*108*
Zinc	*1000*	*1022*	*102*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSA 280-436768/17 Instrument ID: MT_025

Lab File ID: 25A110718b.asc ICS Source: ICP ICSA_00173

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Aluminum	**500000**	**509290**	**102**
Iron	**200000**	**193720**	**97**
Antimony		*10.8*	
Barium		*0.370*	
Beryllium		*0.0600*	
Boron		*-1.41*	
Calcium	*500000*	*490010*	*98*
Chromium		*2.58*	
Cobalt		*-1.88*	
Copper		*0.930*	
Lead		*-1.36*	
Lithium		*0.310*	
Magnesium	*500000*	*522170*	*104*
Molybdenum		*-0.190*	
Phosphorus		*-4.24*	
Potassium		*117*	
Selenium		*-9.25*	
Silicon		*-18.9*	
Silver		*1.13*	
SiO2		*-40.4*	
Sodium		*221*	
Thallium		*-1.49*	
Tin		*-1.24*	
Titanium		*1.00*	
Vanadium		*-1.11*	
Zinc		*-7.79*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSAB 280-436768/18 Instrument ID: MT_025

Lab File ID: 25A110718b.asc ICS Source: ICP ICSAB_00194

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Aluminum	**500000**	**500400**	**100**
Iron	**200000**	**190890**	**95**
Antimony	*1000*	*978*	*98*
Arsenic	*2000*	*1997*	*100*
Barium	*500*	*499*	*100*
Beryllium	*500*	*489*	*98*
Boron	*2000*	*1889*	*94*
Cadmium	*1000*	*998*	*100*
Calcium	*500000*	*481400*	*96*
Chromium	*500*	*480*	*96*
Cobalt	*500*	*456*	*91*
Copper	*500*	*527*	*105*
Lead	*1000*	*929*	*93*
Lithium	*1000*	*1035*	*103*
Magnesium	*500000*	*518790*	*104*
Manganese	*500*	*507*	*101*
Molybdenum	*1000*	*967*	*97*
Nickel	*1000*	*917*	*92*
Phosphorus	*2000*	*1961*	*98*
Potassium	*50000*	*52315*	*105*
Selenium	*5000*	*4814*	*96*
Silicon	*10000*	*9870*	*99*
Silver	*1000*	*1097*	*110*
SiO2	*21400*	*21123*	*99*
Sodium	*50000*	*51970*	*104*
Strontium	*1000*	*1002*	*100*
Thallium	*10000*	*8727*	*87*
Tin	*10000*	*9259*	*93*
Titanium	*1000*	*1043*	*104*
Vanadium	*500*	*518*	*104*
Zinc	*1000*	*991*	*99*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSA 280-437566/13 Instrument ID: MT_077

Lab File ID: 022ICSA_li111318.D ICS Source: ms 77 icsa_00387

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.0690**	
Arsenic		**0.0970**	
Barium		**0.0450**	
Beryllium		**-0.0170**	
Cadmium		**0.325**	
Chromium		**0.222**	
Cobalt		**0.0140**	
Copper		**0.751**	
Lead		**0.121**	
Nickel		**0.407**	
Selenium		**0.0470**	
Silver		**0.0290**	
Thallium		**0.0100**	
Vanadium		**0.773**	
Zinc		**1.03**	
Molybdenum	*2000*	*2039*	*102*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSAB 280-437566/14 Instrument ID: MT_077

Lab File ID: 023ICSB_li111318.D ICS Source: ms 77 icsab_00386

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**100**	**102**	**102**
Arsenic	**100**	**91.1**	**91**
Barium	**100**	**92.4**	**92**
Beryllium	**100**	**89.8**	**90**
Cadmium	**100**	**89.1**	**89**
Chromium	**100**	**93.0**	**93**
Cobalt	**100**	**92.9**	**93**
Copper	**100**	**91.6**	**92**
Lead	**100**	**89.7**	**90**
Manganese	**100**	**92.5**	**92**
Nickel	**100**	**92.2**	**92**
Selenium	**100**	**90.6**	**91**
Silver	**100**	**89.4**	**89**
Thallium	**100**	**88.9**	**89**
Vanadium	**100**	**91.9**	**92**
Zinc	**100**	**87.8**	**88**
Molybdenum	*2100*	*2035*	*97*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSA 280-437566/39 Instrument ID: MT_077

Lab File ID: 174ICSA_li111318.D ICS Source: ms 77 icsa_00387

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.0950**	
Arsenic		**0.0810**	
Barium		**0.339**	
Beryllium		**-0.0090**	
Cadmium		**0.416**	
Chromium		**0.256**	
Cobalt		**0.0200**	
Copper		**0.710**	
Lead		**0.0970**	
Manganese		**1.49**	
Nickel		**-0.0300**	
Selenium		**0.0500**	
Silver		**0.0140**	
Thallium		**0.0120**	
Vanadium		**0.488**	
Zinc		**0.388**	
Molybdenum	*2000*	*2086*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSAB 280-437566/40 Instrument ID: MT_077

Lab File ID: 175ICSB_li111318.D ICS Source: ms 77 icsab_00386

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**100**	**100**
Arsenic	**100**	**91.1**	**91**
Barium	**100**	**93.4**	**93**
Beryllium	**100**	**94.5**	**94**
Cadmium	**100**	**94.1**	**94**
Chromium	**100**	**92.1**	**92**
Cobalt	**100**	**92.3**	**92**
Copper	**100**	**93.4**	**93**
Lead	**100**	**88.6**	**89**
Manganese	**100**	**90.3**	**90**
Nickel	**100**	**90.8**	**91**
Selenium	**100**	**92.2**	**92**
Silver	**100**	**89.2**	**89**
Thallium	**100**	**88.4**	**88**
Vanadium	**100**	**92.0**	**92**
Zinc	**100**	**96.1**	**96**
Molybdenum	*2100*	*2068*	*98*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSA 280-437702/14 Instrument ID: MT_077

Lab File ID: 014ICSA.d ICS Source: ms 77 icsa_00387

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Manganese		**0.804**	
Antimony		*0.0680*	
Arsenic		*0.112*	
Barium		*0.155*	
Beryllium		*0.0170*	
Cadmium		*0.383*	
Chromium		*0.211*	
Cobalt		*0.0070*	
Copper		*0.858*	
Lead		*0.133*	
Molybdenum	*2000*	*1982*	*99*
Nickel		*0.153*	
Selenium		*-0.0480*	
Thallium		*-0.0030*	
Vanadium		*1.10*	
Zn		*0.867*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSAB 280-437702/15 Instrument ID: MT_077

Lab File ID: 015ICSB.d ICS Source: ms 77 icsab_00386

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Manganese	**100**	**92.6**	**93**
Antimony	*100*	*99.9*	*100*
Arsenic	*100*	*87.7*	*88*
Barium	*100*	*91.7*	*92*
Beryllium	*100*	*91.0*	*91*
Cadmium	*100*	*87.2*	*87*
Chromium	*100*	*90.1*	*90*
Cobalt	*100*	*90.3*	*90*
Copper	*100*	*89.2*	*89*
Lead	*100*	*87.1*	*87*
Molybdenum	*2100*	*2027*	*97*
Nickel	*100*	*90.2*	*90*
Selenium	*100*	*91.7*	*92*
Silver	*100*	*85.8*	*86*
Thallium	*100*	*86.9*	*87*
Vanadium	*100*	*92.4*	*92*
Zn	*100*	*90.7*	*91*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSA 280-437702/127 Instrument ID: MT_077

Lab File ID: 127ICSA.d ICS Source: ms 77 icsa_00387

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Manganese		**0.704**	
Antimony		*0.107*	
Arsenic		*0.0550*	
Barium		*0.136*	
Beryllium		*0.0120*	
Cadmium		*0.340*	
Chromium		*0.203*	
Cobalt		*0.0080*	
Copper		*0.660*	
Lead		*0.0760*	
Molybdenum	*2000*	*1984*	*99*
Nickel		*0.283*	
Selenium		*0.602*	
Silver		*0.0070*	
Thallium		*-0.0050*	
Vanadium		*-0.296*	
Zn		*0.367*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Lab Sample ID: ICSAB 280-437702/128 Instrument ID: MT_077

Lab File ID: 128ICSB.d ICS Source: ms 77 icsab_00386

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Manganese	**100**	**90.4**	**90**
Antimony	*100*	*101*	*101*
Arsenic	*100*	*89.0*	*89*
Barium	*100*	*92.0*	*92*
Beryllium	*100*	*92.7*	*93*
Cadmium	*100*	*89.5*	*89*
Chromium	*100*	*89.4*	*89*
Cobalt	*100*	*90.1*	*90*
Copper	*100*	*90.3*	*90*
Lead	*100*	*87.7*	*88*
Molybdenum	*2100*	*1971*	*94*
Nickel	*100*	*89.7*	*90*
Selenium	*100*	*91.6*	*92*
Silver	*100*	*87.2*	*87*
Thallium	*100*	*86.7*	*87*
Vanadium	*100*	*88.0*	*88*
Zn	*100*	*91.9*	*92*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-436445/2-A

Lab Name: TestAmerica Denver Job No.: 280-116538-1

Sample Matrix: Water LCS Source: ICP SPK 3A_00154

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	49000		98	87	113		6010C
Magnesium	50000	48900		98	85	113		6010C
Potassium	50000	50700		101	86	114		6010C
Sodium	50000	50200		100	87	115		6010C
Phosphorus	10000	11000		110	88	113		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS

Lab ID: LCSD 280-436445/3-A

Lab Name: TestAmerica Denver Job No.: 280-116538-1

Sample Matrix: Water LCS Source: ICP SPK 3A_00154

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	49000		50000	98	87-113	0	20		6010C
Magnesium	49100		50000	98	85-113	0	20		6010C
Potassium	50800		50000	102	86-114	0	20		6010C
Sodium	50200		50000	100	87-115	0	20		6010C
Phosphorus	11000		10000	110	88-113	0	20		6010C

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-436445/2-A

Lab Name: TestAmerica Denver Job No.: 280-116538-1

Sample Matrix: Water LCS Source: ICP SPK 3A_00154

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Aluminum	2000	2010		100	86	115		6010C
Iron	1000	940		94	87	115		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS

Lab ID: LCSD 280-436445/3-A

Lab Name: TestAmerica Denver Job No.: 280-116538-1

Sample Matrix: Water LCS Source: ICP SPK 3A_00154

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Aluminum	2050		2000	103	86-115	2	20		6010C
Iron	956		1000	96	87-115	2	20		6010C

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-437002/2-A

Lab Name: TestAmerica Denver Job No.: 280-116538-1

Sample Matrix: Water LCS Source: MS spike 2_00072

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	40.0	37.4		94	85	117		6020A
Arsenic	40.0	36.7		92	84	116		6020A
Barium	40.0	40.0		100	86	114		6020A
Beryllium	40.0	39.8		100	83	121		6020A
Cadmium	40.0	37.7		94	87	115		6020A
Chromium	40.0	38.3		96	85	116		6020A
Cobalt	40.0	38.5		96	86	115		6020A
Copper	40.0	39.2		98	85	118		6020A
Lead	40.0	40.3		101	88	115		6020A
Manganese	40.0	38.6		97	87	115	Q	6020A
Nickel	40.0	38.9		97	85	117		6020A
Selenium	40.0	35.5		89	80	120		6020A
Silver	40.0	38.6		97	85	116		6020A
Thallium	40.0	39.9		100	82	116		6020A
Vanadium	40.0	37.9		95	86	115		6020A
Zinc	40.0	40.9		102	83	119		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS

Lab ID: LCSD 280-437002/3-A

Lab Name: TestAmerica Denver Job No.: 280-116538-1

Sample Matrix: Water LCS Source: MS spike 2_00072

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	38.0		40.0	95	85-117	2	20		6020A
Arsenic	37.2		40.0	93	84-116	1	20		6020A
Barium	40.2		40.0	101	86-114	1	20		6020A
Beryllium	38.1		40.0	95	83-121	4	20		6020A
Cadmium	37.3		40.0	93	87-115	1	20		6020A
Chromium	37.8		40.0	94	85-116	1	20		6020A
Cobalt	38.2		40.0	96	86-115	1	20		6020A
Copper	39.2		40.0	98	85-118	0	20		6020A
Lead	40.6		40.0	102	88-115	1	20		6020A
Manganese	39.9		40.0	100	87-115	3	20	Q	6020A
Nickel	37.7		40.0	94	85-117	3	20		6020A
Selenium	38.0		40.0	95	80-120	7	20		6020A
Silver	39.1		40.0	98	85-116	1	20		6020A
Thallium	40.2		40.0	100	82-116	1	20		6020A
Vanadium	36.2		40.0	90	86-115	5	20		6020A
Zinc	43.7		40.0	109	83-119	7	20		6020A

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 280-437885/2-A

Lab Name: TestAmerica Denver Job No.: 280-116538-1

Sample Matrix: Water LCS Source: Hg Daily Spk_02292

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.49		110	82	119		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7D-IN
LAB CONTROL SAMPLE DUPLICATE
METALS

Lab ID: LCSD 280-437885/3-A

Lab Name: TestAmerica Denver Job No.: 280-116538-1

Sample Matrix: Water LCS Source: Hg Daily Spk_02292

Analyte	(SDR)	C	Spike Added	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	5.49		5.00	110	82-119	0	20		7470A

SDR = Spike Duplicate Results
Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIID - IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: MT_025

Method: 6010C DL Date: 08/01/2018 00:00

Prep Method: 3010A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Aluminum	167	300	18
Calcium	317.9	1000	34.5
Iron	259.9	100	22
Magnesium	279	500	10.7
Phosphorus	178.2	3000	13.5
Potassium	766.4	3000	237
Sodium	589.5	5000	117

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: MT_025

Method: 6010C XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Aluminum		300	18
Calcium		1000	34.5
Iron		100	22
Magnesium		500	10.7
Phosphorus		3000	13.5
Potassium		3000	237
Sodium		5000	117

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: MT_077

Method: 6020A DL Date: 08/01/2018 00:00

Prep Method: 3020A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Antimony	121	6	0.4
Arsenic	75	5	0.33
Barium	137	3	0.29
Beryllium	9	1	0.08
Cadmium	111	1	0.265
Chromium	52	10	0.5
Cobalt	59	1	0.054
Copper	63	2	0.56
Lead	208	3	0.18
Manganese	55	3.5	0.31
Nickel	60	3	0.3
Selenium	78	5	0.7
Silver	107	5	0.033
Thallium	205	1	0.05
Vanadium	51	6	0.5
Zinc	66	20	2

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: MT_077

Method: 6020A XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony		2	0.4
Arsenic		5	0.33
Barium		1	0.29
Beryllium		1	0.08
Cadmium		1	0.265
Chromium		2	0.5
Cobalt		1	0.054
Copper		2	0.56
Lead		1	0.18
Manganese		1	0.31
Nickel		2	0.3
Selenium		5	0.7
Silver		5	0.033
Thallium		1	0.05
Vanadium		5	0.5
Zinc		10	2

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: MT_034

Method: 7470A DL Date: 08/09/2015 00:00

Prep Method: 7470A

Analyte	Wavelength/ Mass	LOQ (ug/L)	DL (ug/L)
Mercury	253.7	0.2	0.027

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: MT_034

Method: 7470A XMDL Date: 02/16/2014 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury		0.2	0.027

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG No.:

ICP-AES Instrument ID: MT_025 Date: 06/07/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Aluminum	167.079													0.001008	
Aluminum	309.271														
Antimony	206.833		0.000023						-0.000010			0.0145508		0.000024	
Arsenic	189.042		-0.000047						0.000003			0.000165		-0.000017	
Barium	455.403														
Beryllium	313.042														
Bismuth	223.061		-0.000012			-0.000360						0.001346		0.000223	
Boron	208.959														
Cadmium	228.802			0.00939373		-0.000082					0.000036				
Calcium	317.933										-0.000132				
Chromium	205.552						-0.001276								
Cobalt	228.616					0.000052						0.000001			
Copper	324.754														
Iron	259.940														
Iron	271.441										0.076500				
Lead	220.353		-0.000056					-0.000040	0.000001		-0.000504		0.000912		
Lithium	670.784								0.000009						
Magnesium	279.079													0.000221	
Manganese	257.610														
Molybdenum	202.030													-0.000006	
Nickel	231.604						-0.000094		-0.000007		-0.000384			0.000065	
Phosphorus	178.284														
Potassium	766.490														
Selenium	196.090		0.000025						-0.000023					-0.000005	
Silicon	288.158											-0.013955			
Silver	328.068														
Sodium	589.592														
Sodium	818.326														
Strontium	407.771														
Sulfur	182.034		-0.000163						0.000017						

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG No.:

ICP-AES Instrument ID: MT_025 Date: 06/07/2018

Analyte	Wave Length	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K
Thallium	190.856		-0.000009						0.000002		0.00381281	0.000274		-0.000032	
Thorium	283.730									-0.000364		-0.000133		0.000754	
Tin	189.989														
Titanium	334.904								0.000005			0.000255			
Uranium	370.152				0.001475				-0.000012			-0.001522		-0.0008058 9	
Vanadium	292.402														
Zinc	206.200		0.000014					-0.000075				-0.000208		0.000004	
Zirconium	339.198													-0.000029	

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG No.:

ICP-AES Instrument ID: MT_025 Date: 06/07/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	Pb	S	Sb	Se	Si	SiO2	Sn	Sr
Aluminum	309.271		0.001655												
Aluminum	167.079														
Antimony	206.833						-0.000251							0.000093	
Arsenic	189.042				-0.001115							-0.000100	-0.000100		
Barium	455.403														
Beryllium	313.042														
Bismuth	223.061														
Boron	208.959				0.023121										
Cadmium	228.802														
Calcium	317.933														
Chromium	205.552														
Cobalt	228.616			-0.000001	-0.001642		0.000125								
Copper	324.754				0.001137										
Iron	259.940														
Iron	271.441		0.000330												
Lead	220.353				-0.001347		0.000027					0.000437	0.0002261		
Lithium	670.784														
Magnesium	279.079			-0.004762											
Manganese	257.610														
Molybdenum	202.030														
Nickel	231.604				0.000080										
Phosphorus	178.284				-0.001297										
Potassium	766.490														
Selenium	196.090			0.000462											
Silicon	288.158				-0.001696										
Silver	328.068			0.000114	-0.000029										
Sodium	818.326														
Sodium	589.592														
Strontium	407.771														
Sulfur	182.034			-0.002604	-0.004717										

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG No.:

ICP-AES Instrument ID: MT_025 Date: 06/07/2018

Analyte	Wave Length	Li	Mg	Mn	Mo	Na	Ni	Pb	S	Sb	Se	Si	SiO2	Sn	Sr
Thallium	190.856			-0.000130											
Thorium	283.730		-0.00000173		0.000298		0.000116								
Tin	189.989														
Titanium	334.904		0.000001		0.000220										
Uranium	370.152														
Vanadium	292.402			-0.000132	-0.026729										
Zinc	206.200				0.000123										
Zirconium	339.198				0.000270										

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG No.:

ICP-AES Instrument ID: MT_025 Date: 06/07/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Aluminum	167.079														
Aluminum	309.271														
Antimony	206.833		0.000161		-0.0026793	0.000070		-0.000720							
Arsenic	189.042														
Barium	455.403							0.000631							
Beryllium	313.042		0		0.000024	0.000200									
Bismuth	223.061		-0.003027		-0.003000										
Boron	208.959														
Cadmium	228.802				-0.000172										
Calcium	317.933	-0.000543													
Chromium	205.552														
Cobalt	228.616		0.002396		0.000180										
Copper	324.754	0.002335	-0.000473		-0.000136	-0.000078		-0.003223							
Iron	259.940														
Iron	271.441					-0.209000		-0.033							
Lead	220.353		-0.000058		0.001102			-0.000169							
Lithium	670.784														
Magnesium	279.079		0.000196		0.001378										
Manganese	257.610	-0.000521			0.000099										
Molybdenum	202.030				-0.000094										
Nickel	231.604														
Phosphorus	178.284				0.000030										
Potassium	766.490														
Selenium	196.090	-0.000057			-0.000152										
Silicon	288.158														
Silver	328.068	-0.001313			0.00197826			0.009428							
Sodium	589.592														
Sodium	818.326														
Strontium	407.771														
Sulfur	182.034	0.000409				-0.001026									

X-IN

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG No.:

ICP-AES Instrument ID: MT_025 Date: 06/07/2018

Analyte	Wave Length	Th	Ti	Tl	U	V	Zn	Zr							
Thallium	190.856	-0.000005			0.000038	0.000243									
Thorium	283.730				0.021530			0.007655							
Tin	189.989	-0.000081	-0.000188		0.000171										
Titanium	334.904	0.003538			-0.000638										
Uranium	370.152	-0.003546	0.005713			0.003176		0.003798							
Vanadium	292.402	0.0028125	0.000377		-0.000269										
Zinc	206.200														
Zirconium	339.198	0.00291904			-0.000206										

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Denver Job No: 280-116538-1

SDG No.:

Instrument ID: MT_025 Date: 10/07/2018 00:00

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Aluminum		900	6010C
Calcium		900	6010C
Iron		450	6010C
Magnesium		1350	6010C
Potassium		450	6010C
Sodium		9000	6010C
Phosphorus		45	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Denver Job No: 280-116538-1

SDG No.:

Instrument ID: MT_077 Date: 10/07/2018 00:00

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony		3600	6020A
Arsenic		3600	6020A
Barium		4500	6020A
Beryllium		3600	6020A
Cadmium		3600	6020A
Chromium		4500	6020A
Cobalt		3600	6020A
Copper		4500	6020A
Lead		4500	6020A
Manganese		18000	6020A
Nickel		4500	6020A
Selenium		3600	6020A
Silver		270	6020A
Thallium		3600	6020A
Vanadium		3600	6020A
Zinc		4500	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Prep Method: 3010A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-436445/1-A	11/06/2018 16:00	436445		50	50
LCS 280-436445/2-A	11/06/2018 16:00	436445		50	50
LCSD 280-436445/3-A	11/06/2018 16:00	436445		50	50
280-116538-1	11/06/2018 16:00	436445		50	50
280-116538-2	11/06/2018 16:00	436445		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Prep Method: 3020A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-437002/1-A	11/09/2018 17:00	437002		50	50
LCS 280-437002/2-A	11/09/2018 17:00	437002		50	50
LCSD 280-437002/3-A	11/09/2018 17:00	437002		50	50
280-116538-1	11/09/2018 17:00	437002		50	50
280-116538-2	11/09/2018 17:00	437002		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-437885/1-A	11/16/2018 12:45	437885		30	50
LCS 280-437885/2-A	11/16/2018 12:45	437885		30	50
LCSD 280-437885/3-A	11/16/2018 12:45	437885		30	50
280-116538-1	11/16/2018 12:45	437885		30	50
280-116538-2	11/16/2018 12:45	437885		30	50

FORM XII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_025 Analysis Method: 6010C

Start Date: 11/06/2018 13:14 End Date: 11/07/2018 06:19

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ca	K	Mg	Na	P																					
ICIS 280-436619/1	1		13:14	X	X	X	X	X																					
IC 280-436619/2			13:17	X	X	X	X	X																					
IC 280-436619/3			13:19	X	X	X	X	X																					
ZZZZZZ			13:22																										
ZZZZZZ			13:24																										
ICVH 280-436619/6	1		13:27	X	X	X	X	X																					
ICVH 280-436619/7	1		13:29	X	X	X	X	X																					
ICV 280-436619/8	1		13:39	X	X	X	X	X																					
ICV 280-436619/9	1		13:42	X	X	X	X	X																					
ICVL 280-436619/10	1		13:47	X	X	X	X	X																					
CCVH 280-436619/11			13:51																										
CCV 280-436619/12			13:53																										
ICB 280-436619/13	1		13:56	X	X	X	X	X																					
CRI 280-436619/14	1		13:58	X	X	X	X	X																					
ICSA 280-436619/15	1		14:01	X	X	X	X	X																					
CRI 280-436619/16			14:08																										
ICSAB 280-436619/17	1		14:20	X	X	X	X	X																					
LRA 280-436619/18			14:22																										
CCVH 280-436619/19			14:25																										
CCV 280-436619/20			14:28																										
CCB 280-436619/21			14:30																										
CCVL 280-436619/22			14:33																										
CCVH 280-436619/23			02:56																										
CCV 280-436619/24			02:59																										
CCB 280-436619/25			03:01																										
CCVL 280-436619/26			03:04																										
ZZZZZZ			03:07																										
ZZZZZZ			03:09																										
ZZZZZZ			03:12																										
ZZZZZZ			03:14																										
ZZZZZZ			03:16																										
ZZZZZZ			03:19																										
ZZZZZZ			03:21																										
ZZZZZZ			03:24																										
ZZZZZZ			03:26																										
ZZZZZZ			03:29																										
CCVH 280-436619/37			03:31																										
CCV 280-436619/38			03:34																										
CCB 280-436619/39			03:36																										
CCVL 280-436619/40			03:39																										
ZZZZZZ			03:42																										
ZZZZZZ			03:44																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_025 Analysis Method: 6010C

Start Date: 11/06/2018 13:14 End Date: 11/07/2018 06:19

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ca	K	Mg	Na	P																					
ZZZZZZ			03:47																										
ZZZZZZ			03:49																										
ZZZZZZ			03:52																										
ZZZZZZ			03:55																										
ZZZZZZ			03:57																										
ZZZZZZ			04:00																										
CCVH 280-436619/49			04:02																										
CCV 280-436619/50			04:05																										
CCB 280-436619/51			04:07																										
CCVL 280-436619/52			04:10																										
ZZZZZZ			04:12																										
ZZZZZZ			04:15																										
ZZZZZZ			04:18																										
ZZZZZZ			04:20																										
ZZZZZZ			04:23																										
ZZZZZZ			04:25																										
ZZZZZZ			04:28																										
ZZZZZZ			04:31																										
ZZZZZZ			04:33																										
CCVH 280-436619/62	1		04:36	X	X	X	X	X																					
CCV 280-436619/63	1		04:38	X	X	X	X	X																					
CCB 280-436619/64	1		04:41	X	X	X	X	X																					
CCVL 280-436619/65	1		04:43	X	X	X	X	X																					
MB 280-436445/1-A	1	T	04:46	X	X	X	X	X																					
LCS 280-436445/2-A	1	T	04:48	X	X	X	X	X																					
LCSD 280-436445/3-A	1	T	04:51	X	X	X	X	X																					
ZZZZZZ			04:53																										
ZZZZZZ			04:56																										
ZZZZZZ			04:58																										
ZZZZZZ			05:01																										
ZZZZZZ			05:03																										
ZZZZZZ			05:06																										
ZZZZZZ			05:08																										
CCVH 280-436619/76	1		05:11	X	X	X	X	X																					
CCV 280-436619/77	1		05:13	X	X	X	X	X																					
CCB 280-436619/78	1		05:16	X	X	X	X	X																					
CCVL 280-436619/79	1		05:18	X	X	X	X	X																					
ZZZZZZ			05:21																										
ZZZZZZ			05:23																										
ZZZZZZ			05:26																										
ZZZZZZ			05:29																										
ZZZZZZ			05:31																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_025 Analysis Method: 6010C

Start Date: 11/06/2018 13:14 End Date: 11/07/2018 06:19

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ca	K	Mg	Na	P																					
280-116538-1	1	T	05:34	X	X	X	X	X																					
280-116538-2	1	T	05:36	X	X	X	X	X																					
ZZZZZZ			05:39																										
ZZZZZZ			05:41																										
ZZZZZZ			05:44																										
CCVH 280-436619/90	1		05:46	X	X	X	X	X																					
CCV 280-436619/91	1		05:49	X	X	X	X	X																					
CCB 280-436619/92	1		05:51	X	X	X	X	X																					
CCVL 280-436619/93	1		05:54	X	X	X	X	X																					
ZZZZZZ			05:57																										
ZZZZZZ			05:59																										
ZZZZZZ			06:01																										
ZZZZZZ			06:04																										
ZZZZZZ			06:06																										
ZZZZZZ			06:09																										
CCVH 280-436619/100			06:11																										
CCV 280-436619/101			06:14																										
CCB 280-436619/102			06:16																										
CCVL 280-436619/103			06:19																										

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_025 Analysis Method: 6010C

Start Date: 11/07/2018 09:08 End Date: 11/07/2018 19:00

Lab Sample Id	D/F	Type	Time	Analytes																									
				Al	Fe																								
ICIS 280-436768/1	1		09:08	X	X																								
IC 280-436768/2			09:11	X	X																								
IC 280-436768/3			09:13	X	X																								
ZZZZZZ			09:16																										
ZZZZZZ			09:18																										
ICVH 280-436768/6	1		09:21	X	X																								
ICVH 280-436768/7	1		09:23	X	X																								
ZZZZZZ			09:26																										
ICV 280-436768/9	1		09:31	X	X																								
ICV 280-436768/10	1		09:33	X	X																								
ICVL 280-436768/11	1		09:38	X	X																								
CCVH 280-436768/12			09:43																										
CCV 280-436768/13			09:46																										
ICB 280-436768/14	1		09:48	X	X																								
CRI 280-436768/15	1		09:51	X	X																								
CRI 280-436768/16			09:58																										
ICSA 280-436768/17	1		10:06	X	X																								
ICSAB 280-436768/18	1		10:09	X	X																								
LRA 280-436768/19			10:11																										
CCVH 280-436768/20			10:14																										
CCV 280-436768/21			10:16																										
CCB 280-436768/22			10:19																										
CCVL 280-436768/23			10:21																										
CCVH 280-436768/24	1		14:52	X	X																								
CCV 280-436768/25	1		14:54	X	X																								
CCB 280-436768/26	1		14:57	X	X																								
CCVL 280-436768/27	1		14:59	X	X																								
MB 280-436445/1-A	1	T	15:02	X	X																								
LCS 280-436445/2-A	1	T	15:05	X	X																								
LCSD 280-436445/3-A	1	T	15:07	X	X																								
ZZZZZZ			15:09																										
ZZZZZZ			15:12																										
ZZZZZZ			15:14																										
ZZZZZZ			15:17																										
ZZZZZZ			15:19																										
ZZZZZZ			15:21																										
ZZZZZZ			15:24																										
CCVH 280-436768/38	1		15:27	X	X																								
CCV 280-436768/39	1		15:29	X	X																								
CCB 280-436768/40	1		15:31	X	X																								
CCVL 280-436768/41	1		15:34	X	X																								
ZZZZZZ			15:37																										

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ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_025 Analysis Method: 6010C

Start Date: 11/07/2018 09:08 End Date: 11/07/2018 19:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				Al	Fe																							
ZZZZZZ			15:39																									
ZZZZZZ			15:42																									
ZZZZZZ			15:44																									
ZZZZZZ			15:47																									
280-116538-1	1	T	15:49	X	X																							
280-116538-2	1	T	15:52	X	X																							
ZZZZZZ			15:55																									
ZZZZZZ			15:57																									
ZZZZZZ			16:00																									
CCVH 280-436768/52	1		16:02	X	X																							
CCV 280-436768/53	1		16:05	X	X																							
CCB 280-436768/54	1		16:07	X	X																							
CCVL 280-436768/55	1		16:10	X	X																							
ZZZZZZ			16:12																									
ZZZZZZ			16:15																									
ZZZZZZ			16:17																									
ZZZZZZ			16:19																									
ZZZZZZ			16:22																									
ZZZZZZ			16:24																									
ZZZZZZ			16:27																									
ZZZZZZ			16:29																									
CCVH 280-436768/64			16:32																									
CCV 280-436768/65			16:34																									
CCB 280-436768/66			16:36																									
CCVL 280-436768/67			16:39																									
ZZZZZZ			16:42																									
ZZZZZZ			16:44																									
ZZZZZZ			16:47																									
ZZZZZZ			16:49																									
ZZZZZZ			16:51																									
ZZZZZZ			16:54																									
ZZZZZZ			16:57																									
ZZZZZZ			16:59																									
ZZZZZZ			17:02																									
ZZZZZZ			17:04																									
CCVH 280-436768/78			17:07																									
CCV 280-436768/79			17:09																									
CCB 280-436768/80			17:12																									
CCVL 280-436768/81			17:14																									
ZZZZZZ			17:17																									
ZZZZZZ			17:20																									
ZZZZZZ			17:22																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_025 Analysis Method: 6010C

Start Date: 11/07/2018 09:08 End Date: 11/07/2018 19:00

Lab Sample Id	D/F	Type	Time	Analytes																								
				Al	Fe																							
ZZZZZZ			17:25																									
ZZZZZZ			17:28																									
ZZZZZZ			17:30																									
ZZZZZZ			17:33																									
ZZZZZZ			17:35																									
ZZZZZZ			17:38																									
CCVH 280-436768/91			17:41																									
CCV 280-436768/92			17:43																									
CCB 280-436768/93			17:45																									
CCVL 280-436768/94			17:48																									
ZZZZZZ			17:51																									
ZZZZZZ			17:53																									
ZZZZZZ			17:56																									
ZZZZZZ			17:58																									
ZZZZZZ			18:01																									
ZZZZZZ			18:03																									
ZZZZZZ			18:06																									
ZZZZZZ			18:09																									
ZZZZZZ			18:12																									
ZZZZZZ			18:14																									
CCVH 280-436768/105			18:17																									
CCV 280-436768/106			18:20																									
CCB 280-436768/107			18:22																									
CCVL 280-436768/108			18:25																									
ZZZZZZ			18:27																									
ZZZZZZ			18:30																									
ZZZZZZ			18:33																									
ZZZZZZ			18:35																									
ZZZZZZ			18:38																									
ZZZZZZ			18:40																									
ZZZZZZ			18:43																									
ZZZZZZ			18:45																									
ZZZZZZ			18:48																									
ZZZZZZ			18:50																									
CCVH 280-436768/119			18:53																									
CCV 280-436768/120			18:55																									
CCB 280-436768/121			18:57																									
CCVL 280-436768/122			19:00																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/13/2018 12:27 End Date: 11/14/2018 07:03

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn									
RINSE 280-437566/1			12:27																									
RINSE 280-437566/2			12:30																									
ICIS 280-437566/3			12:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
IC 280-437566/4			12:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
ZZZZZZ			12:42																									
ICV 280-437566/6	1		12:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
ICV 280-437566/7	1		12:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
ICB 280-437566/8	1		12:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
ICVL 280-437566/9	1		13:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CRI 280-437566/10	1		13:03	X	X		X	X	X	X			X	X	X	X	X		X									
CRI 280-437566/11	1		13:12			X					X	X						X										
ZZZZZZ			13:16																									
ICSA 280-437566/13	1		13:20	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X									
ICSAB 280-437566/14	1		13:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
RINSE 280-437566/15			13:29																									
LRA 280-437566/16			13:45																									
RINSE 280-437566/17			13:48																									
CCV 280-437566/18			13:52																									
CCB 280-437566/19			13:56																									
CCVL 280-437566/20			14:00																									
RINSE 280-437566/21			22:15																									
ICIS 280-437566/22			22:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
IC 280-437566/23	1		22:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCV 280-437566/24	1		22:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCB 280-437566/25	1		22:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCVL 280-437566/26	1		22:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
ZZZZZZ			22:39																									
ZZZZZZ			22:42																									
RINSE 280-437566/29			22:46																									
ZZZZZZ			22:51																									
RINSE 280-437566/31			22:57																									
RINSE 280-437566/32			23:00																									
RINSE 280-437566/33			23:04																									
RINSE 280-437566/34			23:08																									
RINSE 280-437566/35			23:12																									
RINSE 280-437566/36			23:16																									
CCV 280-437566/37			23:19																									
CCB 280-437566/38			23:23																									
ICSA 280-437566/39	1		23:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
ICSAB 280-437566/40	1		23:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
RINSE 280-437566/41			23:34																									
CCV 280-437566/42			23:38																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/13/2018 12:27 End Date: 11/14/2018 07:03

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn									
CCB 280-437566/43			23:42																									
CCVL 280-437566/44			23:46																									
ZZZZZZ			23:50																									
ZZZZZZ			23:53																									
ZZZZZZ			23:57																									
ZZZZZZ			00:01																									
ZZZZZZ			00:05																									
ZZZZZZ			00:09																									
ZZZZZZ			00:12																									
ZZZZZZ			00:16																									
CCV 280-437566/53			00:20																									
CCB 280-437566/54			00:24																									
CCVL 280-437566/55			00:28																									
ZZZZZZ			00:32																									
ZZZZZZ			00:35																									
ZZZZZZ			00:39																									
ZZZZZZ			00:43																									
ZZZZZZ			00:47																									
ZZZZZZ			00:51																									
ZZZZZZ			00:55																									
ZZZZZZ			00:58																									
ZZZZZZ			01:02																									
ZZZZZZ			01:06																									
CCV 280-437566/66	1		01:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCB 280-437566/67	1		01:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCVL 280-437566/68	1		01:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
MB 280-437002/1-A	1	T	01:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
LCS 280-437002/2-A	1	T	01:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
LCSD 280-437002/3-A	1	T	01:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
ZZZZZZ			01:33																									
ZZZZZZ			01:36																									
ZZZZZZ			01:40																									
ZZZZZZ			01:44																									
ZZZZZZ			01:48																									
CCV 280-437566/77	1		01:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCB 280-437566/78	1		01:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCVL 280-437566/79	1		01:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
ZZZZZZ			02:03																									
ZZZZZZ			02:07																									
ZZZZZZ			02:11																									
ZZZZZZ			02:14																									
ZZZZZZ			02:18																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/13/2018 12:27 End Date: 11/14/2018 07:03

Lab Sample Id	D/F	Type	Time	Analytes																							
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn								
ZZZZZZ			02:22																								
ZZZZZZ			02:26																								
ZZZZZZ			02:30																								
ZZZZZZ			02:33																								
ZZZZZZ			02:37																								
CCV 280-437566/90	1		02:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCB 280-437566/91	1		02:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCVL 280-437566/92	1		02:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
ZZZZZZ			02:52																								
ZZZZZZ			02:56																								
ZZZZZZ			03:00																								
ZZZZZZ			03:04																								
ZZZZZZ			03:07																								
ZZZZZZ			03:11																								
ZZZZZZ			03:15																								
280-116538-1	1	T	03:19	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X								
280-116538-2	1	T	03:23	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X								
ZZZZZZ			03:26																								
CCV 280-437566/103	1		03:30	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X								
CCB 280-437566/104	1		03:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
CCVL 280-437566/105	1		03:38	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X								
ZZZZZZ			03:42																								
ZZZZZZ			03:45																								
ZZZZZZ			03:49																								
ZZZZZZ			03:53																								
ZZZZZZ			03:57																								
ZZZZZZ			04:01																								
ZZZZZZ			04:05																								
ZZZZZZ			04:08																								
ZZZZZZ			04:12																								
CCV 280-437566/115			04:16																								
CCB 280-437566/116			04:20																								
ZZZZZZ			04:24																								
ZZZZZZ			04:27																								
ZZZZZZ			04:31																								
ZZZZZZ			04:35																								
ZZZZZZ			04:39																								
ZZZZZZ			04:43																								
ZZZZZZ			04:47																								
ZZZZZZ			04:50																								
ZZZZZZ			04:54																								
CCV 280-437566/126			04:58																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/13/2018 12:27 End Date: 11/14/2018 07:03

Lab Sample Id	D/F	Type	Time	Analytes																								
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mn	Ni	Pb	Sb	Se	Tl	V	Zn									
CCB 280-437566/127			05:02																									
RINSE 280-437566/128			05:05																									
RINSE 280-437566/129			05:09																									
RINSE 280-437566/130			05:13																									
RINSE 280-437566/131			05:17																									
ICIS 280-437566/132			05:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
IC 280-437566/133			05:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
CCV 280-437566/134			05:28																									
CCB 280-437566/135			05:32																									
CCVL 280-437566/136			05:36																									
ZZZZZZ			05:40																									
ZZZZZZ			05:43																									
ZZZZZZ			05:47																									
ZZZZZZ			05:51																									
ZZZZZZ			05:55																									
ZZZZZZ			05:59																									
ZZZZZZ			06:02																									
ZZZZZZ			06:06																									
ZZZZZZ			06:10																									
CCV 280-437566/146			06:14																									
CCB 280-437566/147			06:17																									
CCVL 280-437566/148			06:21																									
ZZZZZZ			06:25																									
ZZZZZZ			06:29																									
ZZZZZZ			06:33																									
ZZZZZZ			06:36																									
ZZZZZZ			06:40																									
ZZZZZZ			06:44																									
ZZZZZZ			06:48																									
ZZZZZZ			06:52																									
CCV 280-437566/157			06:55																									
CCB 280-437566/158			06:59																									
CCVL 280-437566/159			07:03																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/14/2018 12:28 End Date: 11/14/2018 21:19

Lab Sample Id	D/F	Type	Time	Analytes																								
				Mn																								
RINSE 280-437702/1			12:28																									
RINSE 280-437702/2			12:32																									
RINSE 280-437702/3			12:35																									
RINSE 280-437702/4			12:39																									
RINSE 280-437702/5			12:43																									
ICIS 280-437702/6			12:47	X																								
IC 280-437702/7	1		12:51	X																								
ICV 280-437702/8	1		12:54	X																								
ICB 280-437702/9	1		12:58	X																								
ICVL 280-437702/10	1		13:02	X																								
CRI 280-437702/11	1		13:07	X																								
CRI 280-437702/12	1		13:16																									
ZZZZZZ			13:20																									
ICSA 280-437702/14	1		13:24	X																								
ICSAB 280-437702/15	1		13:28	X																								
RINSE 280-437702/16			13:32																									
LRA 280-437702/17			13:35																									
RINSE 280-437702/18			13:39																									
CCV 280-437702/19			13:43																									
CCB 280-437702/20			13:47																									
CCVL 280-437702/21			13:50																									
ZZZZZZ			13:54																									
ZZZZZZ			13:58																									
ZZZZZZ			14:02																									
ZZZZZZ			14:06																									
CCV 280-437702/26			14:10																									
CCB 280-437702/27			14:13																									
CCVL 280-437702/28			14:17																									
ZZZZZZ			14:21																									
ZZZZZZ			14:25																									
ZZZZZZ			14:28																									
ZZZZZZ			14:32																									
ZZZZZZ			14:36																									
ZZZZZZ			14:45																									
ZZZZZZ			14:49																									
ZZZZZZ			14:53																									
ZZZZZZ			14:56																									
ZZZZZZ			15:02																									
CCV 280-437702/39	1		15:06	X																								
CCB 280-437702/40	1		15:10	X																								
CCVL 280-437702/41	1		15:14	X																								
ZZZZZZ			15:18																									

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/14/2018 12:28 End Date: 11/14/2018 21:19

Lab Sample Id	D/F	Type	Time	Analytes
				Mn
ZZZZZZ			15:22	
ZZZZZZ			15:26	
ZZZZZZ			15:30	
ZZZZZZ			15:33	
ZZZZZZ			15:37	
ZZZZZZ			15:41	
ZZZZZZ			15:45	
280-116538-2	1	T	16:01	X
CCV 280-437702/51	1		16:05	X
CCB 280-437702/52	1		16:09	X
CCVL 280-437702/53	1		16:13	X
ZZZZZZ			16:16	
ZZZZZZ			16:20	
ZZZZZZ			16:24	
ZZZZZZ			16:28	
ZZZZZZ			16:31	
ZZZZZZ			16:35	
ZZZZZZ			16:39	
280-116538-1	1	T	16:43	X
CCV 280-437702/62	1		16:47	X
CCB 280-437702/63	1		16:50	X
CCVL 280-437702/64	1		16:54	X
ZZZZZZ			17:05	
ZZZZZZ			17:09	
ZZZZZZ			17:13	
ZZZZZZ			17:17	
ZZZZZZ			17:20	
ZZZZZZ			17:24	
ZZZZZZ			17:28	
ZZZZZZ			17:32	
ZZZZZZ			17:35	
CCV 280-437702/74			17:39	
CCB 280-437702/75			17:43	
CCVL 280-437702/76			17:47	
ZZZZZZ			17:51	
ZZZZZZ			17:55	
ZZZZZZ			17:58	
ZZZZZZ			18:02	
ZZZZZZ			18:06	
ZZZZZZ			18:10	
ZZZZZZ			18:14	
ZZZZZZ			18:17	

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13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/14/2018 12:28 End Date: 11/14/2018 21:19

Lab Sample Id	D/F	Type	Time	Analytes																								
				Mn																								
ZZZZZZ			18:21																									
CCV 280-437702/86			18:25																									
CCB 280-437702/87			18:29																									
CCVL 280-437702/88			18:32																									
ZZZZZZ			18:36																									
ZZZZZZ			18:40																									
ZZZZZZ			18:44																									
ZZZZZZ			18:48																									
ZZZZZZ			18:51																									
ZZZZZZ			18:55																									
ZZZZZZ			18:59																									
ZZZZZZ			19:03																									
ZZZZZZ			19:07																									
CCV 280-437702/98			19:10																									
CCB 280-437702/99			19:14																									
CCVL 280-437702/100			19:18																									
ZZZZZZ			19:22																									
ZZZZZZ			19:26																									
ZZZZZZ			19:29																									
ZZZZZZ			19:33																									
ZZZZZZ			19:37																									
ZZZZZZ			19:41																									
ZZZZZZ			19:45																									
CCV 280-437702/108			19:48																									
CCB 280-437702/109			19:52																									
ZZZZZZ			19:56																									
ZZZZZZ			20:00																									
ZZZZZZ			20:04																									
ZZZZZZ			20:07																									
ZZZZZZ			20:11																									
CCV 280-437702/115			20:15																									
CCB 280-437702/116			20:19																									
RINSE 280-437702/117			20:23																									
RINSE 280-437702/118			20:26																									
RINSE 280-437702/119			20:30																									
RINSE 280-437702/120			20:34																									
ICIS 280-437702/121			20:38	X																								
IC 280-437702/122			20:42	X																								
CCV 280-437702/123			20:45																									
CCB 280-437702/124			20:49																									
CCVL 280-437702/125			20:53																									
CRI 280-437702/126			20:57																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_077 Analysis Method: 6020A

Start Date: 11/14/2018 12:28 End Date: 11/14/2018 21:19

Lab Sample Id	D/F	Type	Time	Analytes																								
				Mn																								
ICSA 280-437702/127	1		21:00	X																								
ICSAB 280-437702/128	1		21:04	X																								
RINSE 280-437702/129			21:08																									
CCV 280-437702/130			21:12																									
CCB 280-437702/131			21:16																									
CCVL 280-437702/132			21:19																									

Prep Types:
T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_034 Analysis Method: 7470A

Start Date: 11/16/2018 18:50 End Date: 11/17/2018 00:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
IC 280-437882/1-A			18:50	X																								
IC 280-437882/2-A			18:52	X																								
IC 280-437882/3-A			18:54	X																								
IC 280-437882/4-A			18:57	X																								
IC 280-437882/5-A			18:59	X																								
IC 280-437882/6-A			19:01	X																								
IC 280-437882/7-A			19:03	X																								
IC 280-437882/8-A			19:06	X																								
ICV 280-437882/9-A	1		19:09	X																								
ICB 280-437882/10-A	1		19:11	X																								
CRA 280-437882/11-A			19:13																									
CCV 280-437882/12-A			19:15																									
CCB 280-437882/13-A			19:17																									
ZZZZZZ			19:20																									
ZZZZZZ			19:22																									
ZZZZZZ			19:24																									
ZZZZZZ			19:26																									
ZZZZZZ			19:29																									
ZZZZZZ			19:31																									
ZZZZZZ			19:33																									
ZZZZZZ			19:35																									
ZZZZZZ			19:37																									
ZZZZZZ			19:40																									
CCV 280-437882/12-A			19:42																									
CCB 280-437882/13-A			19:44																									
ZZZZZZ			19:46																									
ZZZZZZ			19:49																									
ZZZZZZ			19:51																									
ZZZZZZ			19:59																									
ZZZZZZ			20:02																									
ZZZZZZ			20:04																									
ZZZZZZ			20:06																									
ZZZZZZ			20:08																									
ZZZZZZ			20:10																									
ZZZZZZ			20:13																									
CCV 280-437882/12-A	1		20:15	X																								
CCB 280-437882/13-A	1		20:17	X																								
ZZZZZZ			20:19																									
ZZZZZZ			20:22																									
ZZZZZZ			20:24																									
ZZZZZZ			20:26																									
ZZZZZZ			20:28																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_034 Analysis Method: 7470A

Start Date: 11/16/2018 18:50 End Date: 11/17/2018 00:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
ZZZZZZ			20:31																									
MB 280-437885/1-A	1	T	20:33	X																								
LCS 280-437885/2-A	1	T	20:35	X																								
LCSD 280-437885/3-A	1	T	20:37	X																								
ZZZZZZ			20:39																									
CCV 280-437882/12-A	1		20:42	X																								
CCB 280-437882/13-A	1		20:44	X																								
ZZZZZZ			20:46																									
ZZZZZZ			20:48																									
ZZZZZZ			20:51																									
ZZZZZZ			20:53																									
ZZZZZZ			20:55																									
ZZZZZZ			20:57																									
ZZZZZZ			20:59																									
280-116538-1	1	T	21:02	X																								
280-116538-2	1	T	21:04	X																								
ZZZZZZ			21:06																									
CCV 280-437882/12-A	1		21:08	X																								
CCB 280-437882/13-A	1		21:11	X																								
ZZZZZZ			21:13																									
ZZZZZZ			21:15																									
ZZZZZZ			21:17																									
ZZZZZZ			21:19																									
ZZZZZZ			21:22																									
ZZZZZZ			21:24																									
ZZZZZZ			21:26																									
ZZZZZZ			21:28																									
ZZZZZZ			21:31																									
ZZZZZZ			21:33																									
CCV 280-437882/12-A			21:35																									
CCB 280-437882/13-A			21:37																									
ZZZZZZ			21:39																									
ZZZZZZ			21:42																									
ZZZZZZ			21:44																									
ZZZZZZ			21:46																									
ZZZZZZ			21:48																									
ZZZZZZ			21:51																									
ZZZZZZ			21:53																									
ZZZZZZ			21:55																									
ZZZZZZ			21:57																									
ZZZZZZ			22:00																									
CCV 280-437882/12-A			22:02																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_034 Analysis Method: 7470A

Start Date: 11/16/2018 18:50 End Date: 11/17/2018 00:27

Lab Sample Id	D/F	Type	Time	Analytes																								
				Hg																								
CCB 280-437882/13-A			22:04																									
ZZZZZZ			22:06																									
ZZZZZZ			22:08																									
ZZZZZZ			22:11																									
ZZZZZZ			22:13																									
ZZZZZZ			22:15																									
ZZZZZZ			22:17																									
ZZZZZZ			22:20																									
ZZZZZZ			22:22																									
ZZZZZZ			22:24																									
ZZZZZZ			22:26																									
CCV 280-437882/12-A			22:28																									
CCB 280-437882/13-A			22:31																									
ZZZZZZ			22:33																									
ZZZZZZ			22:35																									
ZZZZZZ			22:37																									
ZZZZZZ			22:40																									
ZZZZZZ			22:42																									
ZZZZZZ			22:44																									
ZZZZZZ			22:46																									
ZZZZZZ			22:49																									
ZZZZZZ			22:51																									
ZZZZZZ			22:53																									
CCV 280-437882/12-A			22:55																									
CCB 280-437882/13-A			22:57																									
ZZZZZZ			23:00																									
ZZZZZZ			23:02																									
ZZZZZZ			23:04																									
ZZZZZZ			23:06																									
ZZZZZZ			23:09																									
ZZZZZZ			23:11																									
ZZZZZZ			23:13																									
ZZZZZZ			23:15																									
ZZZZZZ			23:18																									
ZZZZZZ			23:20																									
CCV 280-437882/12-A			23:22																									
CCB 280-437882/13-A			23:24																									
ZZZZZZ			23:26																									
ZZZZZZ			23:29																									
ZZZZZZ			23:31																									
ZZZZZZ			23:33																									
ZZZZZZ			23:35																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: MT_034 Analysis Method: 7470A

Start Date: 11/16/2018 18:50 End Date: 11/17/2018 00:27

Lab Sample Id	D/F	Type	Time	Analytes
				Hg
ZZZZZZ			23:38	
ZZZZZZ			23:40	
ZZZZZZ			23:42	
ZZZZZZ			23:44	
ZZZZZZ			23:47	
CCV 280-437882/12-A			23:49	
CCB 280-437882/13-A			23:51	
ZZZZZZ			23:53	
ZZZZZZ			23:55	
ZZZZZZ			23:58	
ZZZZZZ			00:00	
ZZZZZZ			00:02	
ZZZZZZ			00:04	
ZZZZZZ			00:07	
ZZZZZZ			00:09	
ZZZZZZ			00:11	
ZZZZZZ			00:13	
CCV 280-437882/12-A			00:16	
CCB 280-437882/13-A			00:18	
ZZZZZZ			00:20	
ZZZZZZ			00:22	
CCV 280-437882/12-A			00:25	
CCB 280-437882/13-A			00:27	

Prep Types:
T = Total/NA

FORM XIII-IN

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICP Instrument ID: MT_025 Start Date: 11/06/2018 End Date: 11/07/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Y 224.306	Q	Element Y 360.073	Q	Element Y 377.433	Q	Element	Q	Element	Q
ICIS 280-436619/1	13:14										
ICVH 280-436619/6	13:27	111		110		113					
ICVH 280-436619/7	13:29	111		112		115					
ICV 280-436619/8	13:39	109		109		110					
ICV 280-436619/9	13:42	110		109		112					
ICVL 280-436619/10	13:47	110		112		112					
ICB 280-436619/13	13:56	107		108		109					
CRI 280-436619/14	13:58	111		112		111					
ICSA 280-436619/15	14:01	101		97		112					
ICSAB 280-436619/17	14:20	89		85		98					
CCVH 280-436619/62	04:36	109		106		110					
CCV 280-436619/63	04:38	110		108		109					
CCB 280-436619/64	04:41	113		111		108					
CCVL 280-436619/65	04:43	114		114		113					
MB 280-436445/1-A	04:46	115		115		113					
LCS 280-436445/2-A	04:48	111		109		111					
LCSD 280-436445/3-A	04:51	111		110		113					
CCVH 280-436619/76	05:11	111		109		112					
CCV 280-436619/77	05:13	112		110		112					
CCB 280-436619/78	05:16	111		109		108					
CCVL 280-436619/79	05:18	114		113		112					
280-116538-1	05:34	110		110		110					
280-116538-2	05:36	111		110		113					
CCVH 280-436619/90	05:46	108		105		109					
CCV 280-436619/91	05:49	112		109		110					
CCB 280-436619/92	05:51	112		111		110					
CCVL 280-436619/93	05:54	114		113		112					

15-IN
ICP INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICP Instrument ID: MT_025 Start Date: 11/07/2018 End Date: 11/07/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Y 224.306	Q	Element Y 360.073	Q	Element Y 377.433	Q	Element	Q	Element	Q
ICIS 280-436768/1	09:08										
ICVH 280-436768/6	09:21	102		100		103					
ICVH 280-436768/7	09:23	102		101		104					
ICV 280-436768/9	09:31	102		102		104					
ICV 280-436768/10	09:33	101		101		103					
ICVL 280-436768/11	09:38	99		100		102					
ICB 280-436768/14	09:48	99		100		103					
CRI 280-436768/15	09:51	98		98		98					
ICSA 280-436768/17	10:06	89		86		99					
ICSAB 280-436768/18	10:09	90		85		98					
CCVH 280-436768/24	14:52	100		100		102					
CCV 280-436768/25	14:54	101		103		102					
CCB 280-436768/26	14:57	102		105		103					
CCVL 280-436768/27	14:59	103		104		102					
MB 280-436445/1-A	15:02	102		105		102					
LCS 280-436445/2-A	15:05	99		100		101					
LCSD 280-436445/3-A	15:07	99		100		101					
CCVH 280-436768/38	15:27	100		101		103					
CCV 280-436768/39	15:29	102		103		103					
CCB 280-436768/40	15:31	102		104		102					
CCVL 280-436768/41	15:34	103		106		104					
280-116538-1	15:49	100		101		102					
280-116538-2	15:52	102		102		103					
CCVH 280-436768/52	16:02	101		102		103					
CCV 280-436768/53	16:05	103		104		104					
CCB 280-436768/54	16:07	102		105		104					
CCVL 280-436768/55	16:10	103		106		104					

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 11/13/2018 End Date: 11/14/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q
ICV 280-437566/6	12:46	100		96		97		98		92	
ICV 280-437566/7	12:51	100		95		97		99		91	
ICB 280-437566/8	12:56	101		96		98		100		93	
ICVL 280-437566/9	13:00	101		100		98		99		94	
CRI 280-437566/10	13:03	97		99		98		99		94	
CRI 280-437566/11	13:12	99		98		101		103		93	
ICSA 280-437566/13	13:20	93		90		89		90		88	
ICSAB 280-437566/14	13:24	88		88		88		87		88	
IC 280-437566/23	22:22	95		101		99		100		100	
CCV 280-437566/24	22:26	97		100		100		100		101	
CCB 280-437566/25	22:30	100		102		101		101		102	
CCVL 280-437566/26	22:34	100		100		100		101		102	
ICSA 280-437566/39	23:27	95		96		100		97		101	
ICSAB 280-437566/40	23:31	88		91		97		94		98	
CCV 280-437566/66	01:10	69		69		80		82		73	
CCB 280-437566/67	01:14	70		70		79		83		73	
CCVL 280-437566/68	01:17	71		71		80		83		74	
MB 280-437002/1-A	01:21	67		69		77		83		71	
LCS 280-437002/2-A	01:25	68		69		78		83		72	
LCSD 280-437002/3-A	01:29	68		71		78		83		71	
CCV 280-437566/77	01:52	72		74		79		84		76	
CCB 280-437566/78	01:55	74		75		80		85		78	
CCVL 280-437566/79	01:59	75		75		82		85		71	
CCV 280-437566/90	02:41	80		79		88		90		83	
CCB 280-437566/91	02:45	80		79		85		88		86	
CCVL 280-437566/92	02:49	80		80		86		88		87	
280-116538-1	03:19	67		69		78		81		76	
280-116538-2	03:23	67		66		77		81		75	
CCV 280-437566/103	03:30	72		74		81		85		82	
CCB 280-437566/104	03:34	75		71		83		83		82	
CCVL 280-437566/105	03:38	75		75		84		86		86	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 11/13/2018 End Date: 11/14/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/1	Q	Element Ge/2	Q	Element In	Q	Element Ho-165	Q	Element	Q
ICV 280-437566/6	12:46	96		97		98		100			
ICV 280-437566/7	12:51	97		99		99		99			
ICB 280-437566/8	12:56	99		100		102		101			
ICVL 280-437566/9	13:00	98		100		101		101			
CRI 280-437566/10	13:03	98		99		100		100			
CRI 280-437566/11	13:12	100		102		103		100			
ICSA 280-437566/13	13:20	87		88		88		93			
ICSAB 280-437566/14	13:24	86		87		87		92			
IC 280-437566/23	22:22	99		100		98		100			
CCV 280-437566/24	22:26	100		100		101		100			
CCB 280-437566/25	22:30	101		101		101		100			
CCVL 280-437566/26	22:34	101		101		101		100			
ICSA 280-437566/39	23:27	98		95		94		97			
ICSAB 280-437566/40	23:31	96		93		91		95			
CCV 280-437566/66	01:10	80		84		89		90			
CCB 280-437566/67	01:14	80		85		90		89			
CCVL 280-437566/68	01:17	80		86		91		90			
MB 280-437002/1-A	01:21	77		84		89		90			
LCS 280-437002/2-A	01:25	78		85		91		90			
LCSD 280-437002/3-A	01:29	78		85		91		90			
CCV 280-437566/77	01:52	80		87		90		91			
CCB 280-437566/78	01:55	82		86		91		91			
CCVL 280-437566/79	01:59	82		87		92		91			
CCV 280-437566/90	02:41	88		91		96		96			
CCB 280-437566/91	02:45	87		90		94		95			
CCVL 280-437566/92	02:49	87		91		95		94			
280-116538-1	03:19	79		84		89		89			
280-116538-2	03:23	79		84		90		90			
CCV 280-437566/103	03:30	82		87		92		92			
CCB 280-437566/104	03:34	84		86		92		90			
CCVL 280-437566/105	03:38	85		89		95		93			

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 11/14/2018 End Date: 11/14/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6/1	Q	Element Li-6/2	Q	Element Sc/1	Q	Element Sc/2	Q	Element Sc/3	Q
IC 280-437702/7	12:51	94		100		99		99		97	
ICV 280-437702/8	12:54	95		100		99		100		97	
ICB 280-437702/9	12:58	99		101		101		103		98	
ICVL 280-437702/10	13:02	100		102		102		104		101	
CRI 280-437702/11	13:07	101		104		103		106		100	
CRI 280-437702/12	13:16	100		103		104		109		99	
ICSA 280-437702/14	13:24	92		95		95		97		92	
ICSAB 280-437702/15	13:28	89		95		95		96		93	
CCV 280-437702/39	15:06	99		102		101		98		102	
CCB 280-437702/40	15:10	100		104		99		97		103	
CCVL 280-437702/41	15:14	99		102		100		97		102	
280-116538-2	16:01	94		94		97		102		99	
CCV 280-437702/51	16:05	96		97		99		98		97	
CCB 280-437702/52	16:09	98		97		98		97		100	
CCVL 280-437702/53	16:13	96		97		97		96		99	
280-116538-1	16:43	89		86		92		94		93	
CCV 280-437702/62	16:47	90		89		93		94		91	
CCB 280-437702/63	16:50	92		89		93		94		91	
CCVL 280-437702/64	16:54	92		88		92		95		91	
ICSA 280-437702/127	21:00	94		94		95		94		94	
ICSAB 280-437702/128	21:04	90		92		94		95		96	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

ICP-MS Instrument ID: MT_077 Start Date: 11/14/2018 End Date: 11/14/2018

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/1	Q	Element Ge/2	Q	Element In	Q	Element Ho-165	Q	Element	Q
IC 280-437702/7	12:51	99		99		97		100			
ICV 280-437702/8	12:54	99		100		101		101			
ICB 280-437702/9	12:58	101		103		104		102			
ICVL 280-437702/10	13:02	102		104		104		103			
CRI 280-437702/11	13:07	103		105		106		105			
CRI 280-437702/12	13:16	103		108		109		103			
ICSA 280-437702/14	13:24	92		95		94		97			
ICSAB 280-437702/15	13:28	93		95		92		96			
CCV 280-437702/39	15:06	99		96		92		93			
CCB 280-437702/40	15:10	98		95		93		94			
CCVL 280-437702/41	15:14	98		95		94		93			
280-116538-2	16:01	94		99		99		95			
CCV 280-437702/51	16:05	96		96		95		95			
CCB 280-437702/52	16:09	96		95		96		95			
CCVL 280-437702/53	16:13	96		94		96		94			
280-116538-1	16:43	91		93		94		94			
CCV 280-437702/62	16:47	92		93		95		96			
CCB 280-437702/63	16:50	91		94		96		96			
CCVL 280-437702/64	16:54	91		94		96		95			
ICSA 280-437702/127	21:00	93		91		90		96			
ICSAB 280-437702/128	21:04	93		94		92		97			

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436445 Batch Start Date: 11/06/18 16:00 Batch Analyst: Lodl, Dagmara A

Batch Method: 3010A Batch End Date: 11/06/18 22:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	ICP SPK 2B 00082	ICP SPK 3A 00154	
MB 280-436445/1		3010A, 6010C			50 mL	50 mL			
LCS 280-436445/2		3010A, 6010C			50 mL	50 mL	0.5 mL	0.5 mL	
LCSD 280-436445/3		3010A, 6010C			50 mL	50 mL	0.5 mL	0.5 mL	
280-116538-J-1	SCLmw-001-181001-GW	3010A, 6010C	T	<2 SU	50 mL	50 mL			
280-116538-J-2	SCLmw-003-181001-GW	3010A, 6010C	T	<2 SU	50 mL	50 mL			

Batch Notes	
Temperature - Corrected - End	94 Degrees C
Temperature - Corrected - Start	94 Degrees C
Digestion End Time	11/06/2018 22:00
Digestion Start Time	11/06/2018 16:00
Digestion Unit ID	03
Hydrochloric Acid ID	0000201226-03/23
Nitric Acid ID	0000200458-05/23
Pipette/Syringe/Dispenser ID	MET-109
Thermometer ID	908002329
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	94 Degrees C
Temperature - Uncorrected - Start	94 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437002 Batch Start Date: 11/09/18 17:00 Batch Analyst: Lodl, Dagmara A

Batch Method: 3020A Batch End Date: 11/09/18 22:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	MS CALSTD-1 00133	MS spike 2 00072	
MB 280-437002/1		3020A, 6020A			50 mL	50 mL			
LCS 280-437002/2		3020A, 6020A			50 mL	50 mL	0.1 mL	0.1 mL	
LCSD 280-437002/3		3020A, 6020A			50 mL	50 mL	0.1 mL	0.1 mL	
280-116538-J-1	SCLmw-001-181001-GW	3020A, 6020A	T	<2	50 mL	50 mL			
280-116538-J-2	SCLmw-003-181001-GW	3020A, 6020A	T	<2	50 mL	50 mL			

Batch Notes	
Temperature - Corrected - End	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Digestion End Time	2230
Digestion Start Time	17:00
Digestion Unit ID	04
Lot # of Nitric Acid	0000200458-05/23
Pipette/Syringe/Dispenser ID	MET-88
Thermometer ID	QA-46
Digestion Tube/Cup ID	1803402
Temperature - Uncorrected - End	96 Degrees C
Temperature - Uncorrected - Start	96 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437882 Batch Start Date: 11/16/18 12:45 Batch Analyst: Perry, Tara H

Batch Method: 245.1 Batch End Date: 11/16/18 14:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg Biwk ICV 00261	Hg Daily Spk 02292	
ICV 280-437882/9		245.1, 7470A		<2	30 mL	50 mL	0.3 mL		
ICB 280-437882/10		245.1, 7470A		<2	30 mL	50 mL			
CCV 280-437882/12		245.1, 7470A		<2	30 mL	50 mL		1.5 mL	
CCB 280-437882/13		245.1, 7470A		<2	30 mL	50 mL			

Batch Notes	
Batch Comment	DV-MT-001
Temperature - Corrected - End	92 Degrees C
Temperature - Corrected - Start	90 Degrees C
Digestion End Time	11/16/2018 14:45
Digestion Start Time	11/16/2018 12:45
Digestion Unit ID	12
Sulfuric Acid Lot Number	184525-11/13/19
Nitric Acid ID	200458-10/22/19
Hydroxylamine ID	166725A-11/12/19
Potassium Persulfate ID	178262-11/03/19
Potassium Permanganate ID	207042-11/15/19
Pipette/Syringe/Dispenser ID	MET-114
Analyst ID - Spike Analyst	TP
Sufficient Volume for Batch QC	yes
Thermometer ID	QA-6
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	91 Degrees C
Temperature - Uncorrected - Start	89 Degrees C

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437885 Batch Start Date: 11/16/18 12:45 Batch Analyst: Perry, Tara H

Batch Method: 7470A Batch End Date: 11/16/18 14:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	InitialAmount	FinalAmount	Hg Daily Spk 02292		
MB 280-437885/1		7470A, 7470A		<2 SU	30 mL	50 mL			
LCS 280-437885/2		7470A, 7470A		<2 SU	30 mL	50 mL	1.5 mL		
LCSD 280-437885/3		7470A, 7470A		<2 SU	30 mL	50 mL	1.5 mL		
280-116538-J-1	SCLmw-001-181001-GW	7470A, 7470A	T	<2 SU	30 mL	50 mL			
280-116538-J-2	SCLmw-003-181001-GW	7470A, 7470A	T	<2 SU	30 mL	50 mL			

Batch Notes	
Batch Comment	DV-MT-0017
Temperature - Corrected - End	93 Degrees C
Temperature - Corrected - Start	90 Degrees C
Digestion End Time	1445
Digestion Start Time	1245
Digestion Unit ID	13
Sulfuric Acid ID	184525-11/13/19
Nitric Acid ID	200458-10/22/19
Hydroxylamine ID	166725A-11/12/19
Potassium Persulfate ID	178262-11/03/19
Potassium Permanganate ID	207042-11/15/19
Pipette/Syringe/Dispenser ID	MET-114
Analyst ID - Spike Analyst	TP
Sufficient Volume for Batch QC	yes
Thermometer ID	QA-8
Digestion Tube/Cup ID	1807160
Temperature - Uncorrected - End	92 Degrees C
Temperature - Uncorrected - Start	89 Degrees C

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Sample Name: ICIS Acquired: 11/6/2018 13:14:33 Type: Cal
Method: 6500_025 Mode: IR Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00152**	**.00161**	**.00861**	**-.00096**	**.00089**	**-.01145**	**-.00531**	**-.00425**	**.01012**	**.00187**	**-.00119**	**-.00051**
Stddev	.00015	.00018	.00033	.00022	.00011	.00037	.00082	.00043	.00059	.00006	.00015	.00031
%RSD	9.9271	11.461	3.8166	23.078	12.265	3.1997	15.462	9.9922	5.8629	3.3775	12.530	60.831
#1	-.00141	.00148	.00838	-.00112	.00081	-.01119	-.00473	-.00456	.01054	.00183	-.00129	-.00073
#2	-.00163	.00174	.00885	-.00081	.00097	-.01171	-.00589	-.00395	.00971	.00192	-.00108	-.00029

Elem	Cu3247	Fe2599	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Na8183	Ni2316	P_1782
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00524**	**.00063**	**.00022**	**.01085**	**.01340**	**.00044**	**.00007**	**.00070**	**-.01836**	**-.01259**	**.00055**	**.00026**
Stddev	.00006	.00008	.00033	.00353	.00361	.00009	.00004	.00031	.00312	.00158	.00024	.00004
%RSD	1.1832	12.155	148.91	32.579	26.948	20.990	53.691	44.110	17.002	12.546	44.007	16.576
#1	.00528	.00058	-.00001	.00835	.01085	.00037	.00004	.00048	-.02057	-.01147	.00073	.00029
#2	.00519	.00069	.00046	.01335	.01595	.00050	.00009	.00092	-.01616	-.01371	.00038	.00023

Elem	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00089**	**.00154**	**.00144**	**.00030**	**.00070**	**.00070**	**.00048**	**.00671**	**-.00027**	**-.00087**	**-.00078**	**-.00130**
Stddev	.00022	.00003	.00012	.00010	.00019	.00019	.00005	.00082	.00010	.00017	.00035	.00036
%RSD	24.255	2.0861	8.0831	33.179	27.612	27.612	10.370	12.255	37.111	19.714	45.570	27.565
#1	.00074	.00151	.00153	.00023	.00084	.00084	.00045	.00612	-.00020	-.00099	-.00053	-.00105
#2	.00104	.00156	.00136	.00037	.00056	.00056	.00052	.00729	-.00035	-.00074	-.00103	-.00156

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**-.00093**	**.00021**	**-.00956**
Stddev	.00001	.00002	.00209
%RSD	.71297	8.4571	21.825
#1	-.00093	.00023	-.01104
#2	-.00092	.00020	-.00809

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3070.5**	**37570.**	**2637.0**
Stddev	30.1	3.	12.2
%RSD	.97992	.00686	.46334
#1	3049.2	37569.	2628.4
#2	3091.7	37572.	2645.6

Sample Name: ICAL1 Acquired: 11/6/2018 13:17:11 Type: Cal
Method: 6500_025 Mode: IR Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.22568**	**.15790**	**.06293**	**.22701**	**5.7870**	**4.3258**	**1.5678**	**1.4893**	**.85914**	**.82575**	**.29998**	**.59032**	**3.5511**
Stddev	.00072	.00101	.00050	.00107	.0124	.0057	.0014	.0097	.00707	.00552	.00028	.00252	.0039
%RSD	.31949	.64011	.79123	.46959	.21428	.13288	.08865	.64812	.82273	.66891	.09396	.42662	.10970
#1	.22517	.15862	.06328	.22776	5.7958	4.3299	1.5687	1.4962	.86414	.82965	.29978	.58854	3.5483
#2	.22619	.15719	.06258	.22625	5.7783	4.3217	1.5668	1.4825	.85415	.82184	.30018	.59211	3.5538

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2881	SiO2	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.5882**	**.95047**	**1.1449**	**.45229**	**1.6292**	**.67891**	**.08954**	**.43257**	**.15440**	**.05729**	**.23222**	**.23222**	**.19307**
Stddev	.0003	.00142	.0026	.00358	.0031	.00418	.00033	.00141	.00113	.00018	.00158	.00158	.00079
%RSD	.01880	.14898	.22241	.79254	.18801	.61498	.36711	.32632	.73193	.30959	.68209	.68209	.41083
#1	1.5880	.94947	1.1431	.45483	1.6270	.68186	.08977	.43357	.15520	.05742	.23110	.23110	.19363
#2	1.5884	.95147	1.1467	.44976	1.6313	.67596	.08930	.43158	.15360	.05717	.23334	.23334	.19251

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**8.0800**	**.26679**	**.15995**	**.22315**	**.02724**	**.31391**
Stddev	.0089	.00028	.00032	.00174	.00028	.00144
%RSD	.10994	.10435	.20218	.77772	1.0228	.45765
#1	8.0863	.26659	.16018	.22192	.02704	.31492
#2	8.0737	.26699	.15972	.22438	.02743	.31289

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3019.1**	**36857.**	**2663.7**
Stddev	2.7	422.	11.0
%RSD	.09059	1.1451	.41146
#1	3017.1	37156.	2671.5
#2	3021.0	36559.	2656.0

Sample Name: ICAL2 Acquired: 11/6/2018 13:19:34 Type: Cal
Method: 6500_025 Mode: IR Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Al3092	Bi2230	Fe2714	Na8183	S_1820	Th2837	U_3701
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4.4158**	**.17093**	**.48638**	**2.2491**	**.25922**	**.43916**	**.10733**
Stddev	.0127	.00220	.00030	.0034	.00402	.00000	.00020
%RSD	.28775	1.2882	.06156	.15202	1.5503	.00044	.18312
#1	4.4248	.17249	.48616	2.2515	.26206	.43916	.10747
#2	4.4068	.16938	.48659	2.2467	.25638	.43916	.10719

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**2869.8**	**35161.**	**2709.0**
Stddev	26.7	41.	38.9
%RSD	.93139	.11546	1.4352
#1	2888.7	35190.	2736.5
#2	2850.9	35132.	2681.5

Sample Name: S1-5407545 Acquired: 11/6/2018 13:22:07 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.98532**	**1.0137**	**1.9822**	**.99271**	**.98244**	**.98063**	**-.00297**	**9.7864**	**.98830**	**.98486**	**.98498**	**.98962**	**4.8751**
Stddev	.00054	.0010	.0202	.00423	.00125	.00082	.00435	.0141	.00698	.00757	.00753	.00018	.0119
%RSD	.05465	.09433	1.0201	.42600	.12745	.08407	146.57	.14354	.70667	.76863	.76398	.01860	.24487
#1	.98494	1.0144	1.9965	.99571	.98155	.98122	-.00604	9.7765	.99324	.99021	.99030	.98975	4.8835
#2	.98570	1.0131	1.9679	.98972	.98332	.98005	.00011	9.7963	.98336	.97951	.97966	.98949	4.8666
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**97.892**	**1.9541**	**39.259**	**.97685**	**.98440**	**9.8435**	**.98318**	**1.9847**	**1.9678**	**-.00516**	**1.9815**	**1.9887**	**9.7314**
Stddev	.382	.0056	.016	.00185	.01062	.0332	.00723	.0148	.0187	.00658	.0132	.0119	.0137
%RSD	.39064	.28903	.04104	.18894	1.0792	.33737	.73503	.74405	.95276	127.60	.66450	.59967	.14048
#1	97.622	1.9501	39.248	.97554	.99191	9.8200	.98829	1.9951	1.9811	-.00981	1.9908	1.9971	9.7218
#2	98.162	1.9581	39.271	.97815	.97689	9.8670	.97807	1.9742	1.9546	-.00050	1.9722	1.9803	9.7411
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.825**	**1.9778**	**.98075**	**.01589**	**.97543**	**1.9780**	**.01663**	**.98572**	**.97393**	**.97576**
Stddev	.029	.0163	.00224	.00011	.00321	.0157	.01388	.00093	.00183	.00082
%RSD	.14048	.82146	.22821	.70540	.32955	.79243	83.443	.09408	.18830	.08435
#1	20.805	1.9893	.97916	.01581	.97315	1.9891	.00682	.98637	.97264	.97634
#2	20.846	1.9663	.98233	.01597	.97770	1.9669	.02644	.98506	.97523	.97518
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3068.0**	**37833.**	**2866.1**
Stddev	20.0	106.	95.5
%RSD	.65150	.28030	3.3329
#1	3082.1	37908.	2933.7
#2	3053.8	37758.	2798.6

Sample Name: S2-5408054 Acquired: 11/6/2018 13:24:30 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00576**	**95.586**	**-.00949**	**.00506**	**.00034**	**.00031**	**1.9040**	**.01030**	**-.00051**	**.00356**	**.00090**	**-.00071**
Stddev	.00027	.001	.00606	.00102	.00006	.00001	.0214	.00537	.00008	.00078	.00018	.00020
%RSD	4.6672	.00079	63.828	20.122	19.004	4.4919	1.1227	52.175	15.386	21.902	19.578	28.090
#1	-.00557	95.587	-.00521	.00578	.00029	.00030	1.9191	.01410	-.00046	.00411	.00102	-.00057
#2	-.00595	95.586	-.01378	.00434	.00039	.00032	1.8889	.00650	-.00057	.00301	.00077	-.00085
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None
Value												
Range												

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **94.926**	**-.08898**	**.00559**	**-.15000**	**.00507**	**.00050**	**478.78**	**.00686**	**.00439**	**-.00154**	**9.7047**	**.01126**
Stddev	.129	.05825	.00042	.00649	.00006	.00073	.23	.00044	.00089	.00019	.0714	.00209
%RSD	.13576	65.462	7.5388	4.3275	1.1671	144.63	.04765	6.4156	20.191	12.202	.73543	18.572
#1	95.017	-.13017	.00589	-.14541	.00503	-.00001	478.61	.00654	.00502	-.00168	9.7552	.01274
#2	94.834	-.04779	.00529	-.15459	.00511	.00102	478.94	.00717	.00376	-.00141	9.6542	.00979
Check ?	Chk Fail	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None
Value	100.00											
Range	-5.0000%											

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01348**	**-.01585**	**-.03391**	**-.00036**	**.00133**	F **9.4518**	**.03790**	**.00112**	**19.115**	**-.01958**	**.00109**	**.15356**
Stddev	.00128	.02213	.04737	.00044	.00033	.0212	.00144	.00049	.203	.00217	.00060	.00179
%RSD	9.5218	139.67	139.67	121.09	24.689	.22473	3.8009	43.963	1.0614	11.093	55.039	1.1653
#1	.01257	-.00020	-.00042	-.00005	.00110	9.4668	.03892	.00147	19.259	-.02111	.00151	.15230
#2	.01439	-.03150	-.06741	-.00068	.00157	9.4368	.03688	.00077	18.972	-.01804	.00066	.15483
Check ?	None	None	None	None	None	Chk Fail	None	None	Chk Pass	None	None	None
Value						10.000						
Range						-5.0000%						

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**2979.0**	**35782.**	**2680.5**
Stddev	9.4	208.	4.6
%RSD	.31548	.58224	.17244
#1	2972.4	35635.	2683.8
#2	2985.7	35929.	2677.3

Sample Name: ICVH-5413452 Acquired: 11/6/2018 13:27:02 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00127**	**38.378**	**.00365**	**.00168**	**-.00026**	**.00012**	W **.54639**	**-.00715**	**.00018**	**.00011**	**.00050**	**.00253**
Stddev	.00054	.101	.00585	.00017	.00011	.00003	.00520	.00453	.00018	.00007	.00006	.00015
%RSD	42.443	.26414	160.23	10.170	40.392	22.382	.95175	63.385	101.73	69.662	11.680	5.8482
#1	-.00089	38.306	.00779	.00156	-.00034	.00013	.55007	-.00395	.00005	.00005	.00054	.00243
#2	-.00165	38.450	-.00049	.00180	-.00019	.00010	.54272	-.01035	.00030	.00016	.00046	.00263
Check ?	None	Chk Pass	None	None	None	None	Chk Warn	None	None	None	None	None
Value							.50000					
Range							5.4900%					

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**76.438**	**-.13913**	**-.00304**	**-.05111**	**.00203**	**-.00042**	**38.705**	**.00196**	**-.00019**	**-.00096**	**3.8850**	**.00601**
Stddev	.085	.00630	.00158	.00381	.00017	.00015	.561	.00020	.00563	.00050	.0008	.00588
%RSD	.11058	4.5300	52.055	7.4517	8.5774	34.703	1.4497	10.409	3021.7	52.162	.02157	97.752
#1	76.378	-.14358	-.00415	-.05380	.00216	-.00052	38.308	.00211	-.00417	-.00132	3.8856	.00186
#2	76.498	-.13467	-.00192	-.04841	.00191	-.00032	39.102	.00182	.00380	-.00061	3.8844	.01017
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00636**	**.04831**	**.10338**	**-.00172**	**.00026**	W **2.8042**	**.01160**	**-.00064**	**4.9602**	**-.00425**	**-.00045**	**.05264**
Stddev	.00329	.03079	.06588	.00086	.00021	.0087	.00047	.00200	.0421	.00043	.00004	.00090
%RSD	51.795	63.728	63.728	50.156	80.920	.31061	4.0397	311.93	.84876	10.178	8.2285	1.7031
#1	-.00403	.07008	.14996	-.00233	.00041	2.7981	.01193	-.00206	4.9304	-.00394	-.00043	.05328
#2	-.00869	.02654	.05679	-.00111	.00011	2.8104	.01126	.00077	4.9900	-.00455	-.00048	.05201
Check ?	None	None	None	None	None	Chk Warn	None	None	Chk Pass	None	None	None
Value						3.0000						
Range						-5.4900%						

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3422.2**	**41457.**	**2978.8**
Stddev	14.1	138.	6.8
%RSD	.41058	.33225	.22688
#1	3412.3	41360.	2983.6
#2	3432.1	41555.	2974.1

Sample Name: ICVH-5413452 Acquired: 11/6/2018 13:29:36 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00143**	**38.458**	**-.00117**	**.00197**	**.00026**	**.00011**	W **.54395**	**-.00770**	**-.00024**	**-.00019**	**.00059**	**.00100**
Stddev	.00049	.285	.00586	.00092	.00026	.00012	.00587	.00061	.00028	.00040	.00015	.00040
%RSD	34.088	.74013	502.72	46.607	98.986	109.47	1.0795	7.9615	114.50	207.90	24.586	40.151
#1	-.00178	38.660	-.00531	.00132	.00044	.00003	.53980	-.00813	-.00044	-.00048	.00070	.00072
#2	-.00109	38.257	.00298	.00261	.00008	.00020	.54810	-.00726	-.00005	.00009	.00049	.00129
Check ?	None	Chk Pass	None	None	None	None	Chk Warn	None	None	None	None	None
Value							.50000					
Range							5.4900%					

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**76.272**	**-.06607**	**-.00304**	**-.03572**	**.00212**	**-.00089**	**39.078**	**.00196**	**.00086**	**-.00176**	**3.8554**	**.00135**
Stddev	.580	.16424	.00474	.00112	.00019	.00050	.219	.00054	.00202	.00182	.0499	.00234
%RSD	.76062	248.59	156.07	3.1263	8.9280	55.752	.56167	27.714	234.20	103.29	1.2938	173.04
#1	76.682	-.18220	.00031	-.03651	.00198	-.00124	38.923	.00235	-.00057	-.00048	3.8907	.00301
#2	75.861	.05007	-.00639	-.03493	.00225	-.00054	39.233	.00158	.00230	-.00305	3.8201	-.00030
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00011**	**.00915**	**.01958**	**-.00080**	**.00033**	W **2.7908**	**.01241**	**.00052**	**4.9486**	**-.00484**	**-.00007**	**.04760**
Stddev	.00494	.03892	.08329	.00133	.00001	.0139	.00065	.00339	.0072	.00033	.00011	.00131
%RSD	4637.1	425.34	425.34	165.70	3.4474	.49821	5.1981	647.13	.14439	6.7692	157.28	2.7546
#1	-.00339	-.01837	-.03931	.00014	.00034	2.8006	.01286	.00292	4.9536	-.00461	-.00014	.04668
#2	.00360	.03667	.07848	-.00175	.00032	2.7810	.01195	-.00187	4.9435	-.00507	.00001	.04853
Check ?	None	None	None	None	None	Chk Warn	None	None	Chk Pass	None	None	None
Value						3.0000						
Range						-5.4900%						

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3413.2**	**42000.**	**3040.1**
Stddev	6.0	31.	4.4
%RSD	.17473	.07297	.14588
#1	3417.5	42022.	3043.2
#2	3409.0	41978.	3036.9

Sample Name: ICV-5413453 Acquired: 11/6/2018 13:39:49 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25221**	W **.26521**	**.25835**	**.25351**	**.25024**	**.24361**	**-.00058**	**1.9963**	**.25207**	**.25223**	**.25019**	**.25347**
Stddev	.00058	.00052	.00310	.00101	.00214	.00105	.00480	.0071	.00013	.00067	.00074	.00011
%RSD	.23114	.19535	1.1995	.39804	.85423	.42921	823.75	.35677	.05337	.26365	.29492	.04302
#1	.25179	.26484	.26054	.25280	.24873	.24287	.00281	1.9912	.25198	.25270	.24967	.25339
#2	.25262	.26557	.25616	.25422	.25175	.24435	-.00397	2.0013	.25217	.25176	.25071	.25355
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.25000										
Range		5.4900%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25087**	**19.869**	**.25284**	**9.9362**	**.25173**	**.24632**	**2.0259**	**.25111**	**1.9849**	**.25654**	**-.00869**	**.25334**
Stddev	.00740	.036	.00045	.0382	.00077	.00038	.0213	.00029	.0031	.00333	.00495	.00741
%RSD	2.9496	.17884	.17960	.38413	.30560	.15364	1.0519	.11500	.15747	1.2976	56.945	2.9251
#1	.24564	19.844	.25316	9.9092	.25119	.24605	2.0108	.25132	1.9871	.25419	-.00519	.24810
#2	.25610	19.894	.25252	9.9632	.25227	.24659	2.0410	.25091	1.9827	.25889	-.01220	.25859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50195**	**1.9595**	**4.1932**	**.50388**	**.25052**	**.00507**	**.24123**	W **.53438**	**-.01031**	**.24357**	**.24055**	**.24645**
Stddev	.00270	.0102	.0218	.00149	.00095	.00070	.00010	.00034	.03452	.00126	.00156	.00151
%RSD	.53861	.52000	.52000	.29545	.38060	13.799	.03971	.06327	334.84	.51858	.64980	.61296
#1	.50386	1.9522	4.1778	.50493	.24984	.00457	.24129	.53462	.01410	.24267	.23945	.24752
#2	.50004	1.9667	4.2086	.50282	.25119	.00556	.24116	.53414	-.03472	.24446	.24166	.24538
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Warn	None	Chk Pass	Chk Pass	Chk Pass
Value								.50000				
Range								5.4900%				

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3338.5**	**40843.**	**2890.2**
Stddev	4.1	182.	12.7
%RSD	.12143	.44520	.43837
#1	3341.3	40971.	2899.1
#2	3335.6	40714.	2881.2

Sample Name: ICV-5413453 Acquired: 11/6/2018 13:42:23 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25493**	**.25803**	**.25106**	**.24971**	**.25195**	**.24571**	**.00489**	**2.0059**	**.24687**	**.24630**	**.24460**	**.25545**	**.25424**
Stddev	.00042	.00172	.00864	.00088	.00150	.00189	.00425	.0034	.00187	.00110	.00204	.00082	.00210
%RSD	.16561	.66628	3.4427	.35387	.59491	.76720	86.876	.17167	.75879	.44687	.83283	.32030	.82424
#1	.25523	.25924	.25717	.25033	.25089	.24438	.00189	2.0035	.24820	.24707	.24604	.25603	.25573
#2	.25463	.25681	.24495	.24908	.25301	.24704	.00789	2.0084	.24555	.24552	.24316	.25488	.25276
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.047**	**.25119**	**10.061**	**.25546**	**.24227**	**2.0506**	**.24665**	**1.9507**	**.25141**	**-.00719**	**.25182**	**.49140**	**1.9622**
Stddev	.215	.00417	.000	.00057	.00187	.0107	.00158	.0132	.00292	.00015	.00042	.01529	.0464
%RSD	1.0738	1.6608	.00085	.22263	.77135	.52220	.64044	.67693	1.1607	2.0818	.16857	3.1119	2.3673
#1	19.895	.24824	10.061	.25586	.24359	2.0430	.24777	1.9600	.25347	-.00729	.25152	.50222	1.9951
#2	20.199	.25414	10.060	.25505	.24095	2.0581	.24553	1.9414	.24934	-.00708	.25213	.48059	1.9294
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.1992**	**.49285**	**.25214**	**.00433**	**.24371**	**.52516**	**-.01483**	**.24652**	**.24574**	**.25031**
Stddev	.0994	.00409	.00209	.00043	.00069	.00125	.01748	.00045	.00026	.00600
%RSD	2.3673	.83026	.82773	10.005	.28126	.23849	117.86	.18326	.10567	2.3972
#1	4.2695	.49575	.25067	.00463	.24323	.52605	-.02720	.24620	.24556	.24606
#2	4.1289	.48996	.25362	.00402	.24420	.52428	-.00247	.24684	.24593	.25455
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3365.1**	**40995.**	**2940.7**
Stddev	8.2	66.	14.8
%RSD	.24325	.16052	.50476
#1	3370.9	40949.	2951.2
#2	3359.4	41042.	2930.2

Sample Name: ICVL-5413446 Acquired: 11/6/2018 13:47:08 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00893**	**.10460**	**.01160**	**.09970**	**.01026**	**.00102**	**.10395**	**.19558**	**.00442**	**.01038**	**.00999**	**.01480**
Stddev	.00055	.00083	.00943	.00072	.00079	.00004	.00167	.00327	.00015	.00019	.00025	.00046
%RSD	6.1607	.78910	81.304	.71758	7.6593	4.2750	1.6110	1.6743	3.4969	1.8243	2.5400	3.1378
#1	.00854	.10519	.00493	.09919	.00970	.00099	.10276	.19327	.00431	.01051	.00981	.01447
#2	.00931	.10402	.01828	.10020	.01082	.00105	.10513	.19790	.00453	.01024	.01017	.01513
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10110**	**2.9692**	**.01794**	**.20009**	**.01018**	**.01957**	**1.0305**	**.04066**	**2.8893**	**.00919**	**.08158**	**.01940**
Stddev	.00318	.0489	.00136	.00364	.00005	.00006	.0123	.00034	.0004	.00115	.01604	.00132
%RSD	3.1423	1.6470	7.5617	1.8216	.50458	.30537	1.1891	.83472	.01328	12.544	19.658	6.8084
#1	.10335	2.9346	.01698	.19752	.01014	.01961	1.0392	.04090	2.8891	.00838	.09292	.01847
#2	.09885	3.0038	.01890	.20267	.01022	.01952	1.0218	.04042	2.8896	.01001	.07024	.02033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.01178**	**.51276**	**1.0973**	**.09991**	**.01000**	**.01417**	**.01037**	**.01791**	**.04432**	**.01012**	**.02062**	**.01648**
Stddev	.00105	.04156	.0889	.00163	.00005	.00121	.00057	.00138	.09407	.00010	.00020	.00027
%RSD	8.8924	8.1053	8.1053	1.6324	.45709	8.5656	5.5256	7.7079	212.24	.96886	.94865	1.6226
#1	.01104	.48337	1.0344	.10107	.01003	.01502	.00997	.01693	-.02220	.01019	.02075	.01666
#2	.01252	.54215	1.1602	.09876	.00997	.01331	.01078	.01888	.11084	.01005	.02048	.01629
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.02000											
Range	-30.000%											

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3367.2**	**41918.**	**2952.4**
Stddev	4.9	155.	.8
%RSD	.14438	.37028	.02582
#1	3370.6	42027.	2952.9
#2	3363.8	41808.	2951.8

Sample Name: CCVH-5408055 Acquired: 11/6/2018 13:51:11 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00267**	W **47.315**	**-.00476**	**.00141**	**-.00038**	**-.00036**	**.96960**	**-.00244**	**-.00046**	**.00218**	**.00113**	**.00041**
Stddev	.00098	.119	.00013	.00181	.00043	.00013	.00231	.00034	.00014	.00019	.00051	.00068
%RSD	36.722	.25141	2.6317	128.23	111.79	36.743	.23776	13.719	29.461	8.5351	44.757	166.71
#1	-.00197	47.399	-.00467	.00269	-.00008	-.00027	.97123	-.00268	-.00056	.00231	.00149	.00089
#2	-.00336	47.231	-.00485	.00013	-.00069	-.00045	.96797	-.00221	-.00037	.00205	.00078	-.00007
Check ?	None	Chk Warn	None	None	None	None	Chk Pass	None	None	None	None	None
Value		50.000										
Range		-5.0000%										

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **47.130**	**-.15422**	**-.00076**	**-.07103**	**.00237**	**-.00070**	W **235.79**	**.00309**	**.00510**	**-.00244**	W **4.7304**	**.00294**
Stddev	.388	.00500	.00303	.00103	.00017	.00014	.35	.00010	.00119	.00225	.0038	.00721
%RSD	.82293	3.2410	398.41	1.4505	7.1668	20.211	.14899	3.3706	23.283	92.381	.07978	245.59
#1	47.404	-.15775	.00138	-.07176	.00249	-.00060	236.04	.00301	.00594	-.00403	4.7331	.00804
#2	46.856	-.15068	-.00290	-.07030	.00225	-.00080	235.54	.00316	.00426	-.00085	4.7277	-.00216
Check ?	Chk Warn	None	None	None	None	None	Chk Warn	None	None	None	Chk Warn	None
Value	50.000						250.00				5.0000	
Range	-5.0000%						-5.0000%				-5.0000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00173**	**-.01019**	**-.02182**	**-.00172**	**.00045**	W **4.6424**	**.01866**	**.00310**	**9.5205**	**-.00951**	**-.00008**	**.07791**
Stddev	.00348	.00628	.01344	.00107	.00007	.0068	.00139	.00152	.1533	.00012	.00003	.00148
%RSD	201.89	61.610	61.610	62.297	15.009	.14732	7.4334	48.839	1.6103	1.2648	30.992	1.9035
#1	-.00074	-.00575	-.01231	-.00096	.00050	4.6473	.01768	.00418	9.4121	-.00942	-.00010	.07896
#2	.00419	-.01464	-.03132	-.00248	.00040	4.6376	.01964	.00203	9.6289	-.00959	-.00006	.07686
Check ?	None	None	None	None	None	Chk Warn	None	None	Chk Pass	None	None	None
Value						5.0000						
Range						-5.0000%						

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3203.0**	**38882.**	**2845.7**
Stddev	2.7	117.	23.0
%RSD	.08495	.30133	.80884
#1	3205.0	38965.	2829.4
#2	3201.1	38800.	2862.0

Sample Name: CCV-5407546 Acquired: 11/6/2018 13:53:42 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49167**	**.50853**	**.97032**	**.48551**	**.49817**	**.49180**	**.00472**	**4.9225**	**.48516**	**.48619**	**.48290**	**.49772**	**2.4487**
Stddev	.00424	.01125	.01220	.00786	.00193	.00231	.00428	.0301	.00843	.00904	.01001	.00025	.0115
%RSD	.86331	2.2117	1.2568	1.6195	.38802	.47027	90.697	.61103	1.7373	1.8604	2.0729	.04998	.46778
#1	.49467	.51648	.97894	.49107	.49954	.49343	.00169	4.9438	.49112	.49259	.48998	.49789	2.4568
#2	.48866	.50057	.96170	.47995	.49681	.49016	.00774	4.9013	.47920	.47980	.47583	.49754	2.4406
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.320**	**.99571**	**19.612**	**.48595**	**.48251**	**5.0169**	**.48537**	**.97297**	**.97449**	**-.00279**	**.97842**	**.97615**	**4.8923**
Stddev	.052	.00732	.125	.00282	.00961	.0179	.00971	.00960	.01707	.00490	.02656	.01890	.0134
%RSD	.10634	.73493	.63595	.57950	1.9913	.35687	2.0001	.98675	1.7513	175.68	2.7148	1.9367	.27387
#1	49.357	1.0009	19.700	.48795	.48930	5.0295	.49224	.97976	.98655	-.00626	.99720	.98952	4.9018
#2	49.283	.99054	19.523	.48396	.47571	5.0042	.47851	.96619	.96242	.00068	.95964	.96278	4.8828
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.470**	**.97154**	**.49447**	**.01128**	**.48110**	**.99638**	**-.00369**	**.48717**	**.48253**	**.49386**
Stddev	.029	.01411	.00195	.00083	.00284	.01018	.05735	.00022	.00370	.00147
%RSD	.27387	1.4523	.39364	7.3734	.59011	1.0218	1556.1	.04587	.76615	.29826
#1	10.490	.98152	.49584	.01069	.48311	1.0036	.03687	.48701	.48515	.49490
#2	10.449	.96156	.49309	.01187	.47910	.98918	-.04424	.48733	.47992	.49282
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3278.4**	**39747.**	**2850.7**
Stddev	5.5	41.	26.3
%RSD	.16648	.10346	.92133
#1	3274.5	39776.	2832.1
#2	3282.2	39718.	2869.2

Sample Name: ICB Acquired: 11/6/2018 13:56:07 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00049**	**.00001**	**.00443**	**.00101**	**-.00059**	**.00016**	**.00193**	**-.00329**	**-.00025**	**.00046**	**-.00021**	**-.00040**	**.00106**
Stddev	.00025	.00102	.00192	.00111	.00009	.00005	.00296	.00930	.00017	.00029	.00040	.00017	.00210
%RSD	49.986	7118.3	43.353	110.90	14.680	29.264	153.15	282.83	66.712	62.951	190.18	41.789	198.31
#1	-.00032	.00074	.00579	.00179	-.00065	.00019	-.00016	-.00986	-.00013	.00066	.00007	-.00028	-.00043
#2	-.00066	-.00071	.00308	.00022	-.00053	.00013	.00403	.00329	-.00037	.00025	-.00050	-.00052	.00255
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.10588**	**-.00089**	**.00498**	**.00012**	**.00099**	**.03382**	**-.00020**	**-.00007**	**-.00052**	**-.01120**	**.00243**	**-.00601**	**.03541**
Stddev	.00269	.00305	.00535	.00002	.00068	.00983	.00064	.00166	.00431	.00408	.00213	.00638	.02458
%RSD	2.5376	343.43	107.28	18.963	69.217	29.067	328.41	2527.2	827.96	36.447	87.754	106.25	69.417
#1	-.10778	.00127	.00876	.00010	.00050	.02687	-.00065	.00111	.00253	-.00831	.00393	-.00149	.01803
#2	-.10398	-.00304	.00120	.00013	.00147	.04077	.00026	-.00124	-.00357	-.01408	.00092	-.01052	.05280
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07579**	**-.00141**	**.00024**	**.00148**	**.00074**	**.00133**	**.05424**	**.00011**	**-.00054**	**.00094**
Stddev	.05261	.00192	.00009	.00020	.00041	.00372	.02014	.00040	.00044	.00285
%RSD	69.417	136.23	36.951	13.214	55.433	279.25	37.124	383.55	80.694	302.52
#1	.03859	-.00277	.00030	.00134	.00045	.00396	.04000	.00039	-.00023	.00296
#2	.11299	-.00005	.00017	.00162	.00103	-.00130	.06848	-.00018	-.00085	-.00107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3299.0**	**40742.**	**2874.5**
Stddev	9.8	9.	7.4
%RSD	.29750	.02310	.25711
#1	3305.9	40736.	2879.7
#2	3292.0	40749.	2869.2

Sample Name: CRI-5413446 Acquired: 11/6/2018 13:58:43 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00876**	**.11229**	F **.02500**	**.09591**	**.00973**	**.00094**	**.10908**	**.21127**	**.00455**	**.01041**	**.00991**	**.01494**
Stddev	.00014	.00720	.00884	.00095	.00005	.00019	.00470	.01216	.00001	.00065	.00023	.00011
%RSD	1.6485	6.4157	35.362	.99243	.54933	19.792	4.3102	5.7554	.12782	6.2852	2.2844	.70537
#1	.00886	.11738	.01875	.09658	.00970	.00108	.11241	.21986	.00455	.01087	.01007	.01502
#2	.00866	.10719	.03126	.09524	.00977	.00081	.10576	.20267	.00456	.00995	.00975	.01487
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			50.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10583**	**2.8016**	**.01879**	**.19956**	**.00998**	**.01875**	**1.0565**	**.03951**	**2.8282**	**.00883**	W **.07941**	**.01849**
Stddev	.00048	.0007	.00389	.01158	.00006	.00027	.0108	.00016	.0499	.00048	.01342	.00471
%RSD	.45396	.02529	20.725	5.8025	.57887	1.4469	1.0242	.40612	1.7631	5.4270	16.903	25.456
#1	.10617	2.8011	.01604	.19137	.01002	.01894	1.0642	.03962	2.8635	.00849	.08891	.01516
#2	.10549	2.8021	.02154	.20774	.00994	.01856	1.0489	.03939	2.7930	.00916	.06992	.02181
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
Value											.10000	
Range											-20.490%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.01507**	**.51590**	**1.1040**	**.09705**	**.01011**	**.01580**	**.00984**	**.01696**	F **.13263**	**.01018**	**.02146**	W **.01956**
Stddev	.00456	.03580	.0766	.00309	.00020	.00100	.00054	.00123	.06482	.00135	.00098	.00149
%RSD	30.245	6.9385	6.9385	3.1829	2.0230	6.3040	5.5388	7.2535	48.871	13.246	4.5774	7.6246
#1	.01185	.49059	1.0499	.09923	.01026	.01651	.01022	.01783	.08680	.01113	.02077	.01850
#2	.01829	.54122	1.1582	.09486	.00997	.01510	.00945	.01609	.17846	.00923	.02216	.02061
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Warn
Value	.02000								.06000			.01500
Range	-20.490%								50.000%			20.490%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3406.0**	**42037.**	**2923.8**
Stddev	32.6	163.	.8
%RSD	.95663	.38787	.02872
#1	3382.9	42152.	2923.2
#2	3429.0	41922.	2924.4

Sample Name: ICSA-5374484 Acquired: 11/6/2018 14:01:17 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00049**	**469.28**	**-.00775**	**.00051**	**-.00002**	**.00002**	F **.11442**	**468.88**	W **.00244**	**-.00073**	**.00180**	**.00294**
Stddev	.00082	1.09	.00403	.00087	.00061	.00019	.00983	1.75	.00032	.00001	.00011	.00083
%RSD	166.50	.23289	52.012	170.28	3388.8	880.87	8.5899	.37255	13.250	.85099	6.3148	28.157
#1	.00009	468.51	-.00490	-.00010	.00041	-.00011	.12137	467.65	.00267	-.00073	.00188	.00236
#2	-.00107	470.05	-.01060	.00112	-.00045	.00016	.10747	470.12	.00221	-.00072	.00172	.00353
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass
High Limit							.10000		.00180			
Low Limit							-.10000		-.00180			

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **177.58**	**-.02338**	**.00029**	**494.31**	W **.00108**	**.00006**	**.10264**	W **.00654**	**-.00591**	**.00410**	**.05907**	**.01108**
Stddev	.65	.05723	.00070	3.36	.00001	.00041	.00192	.00063	.00383	.00350	.00250	.00560
%RSD	.36648	244.74	238.27	.68020	.86347	663.45	1.8725	9.6947	64.745	85.348	4.2362	50.535
#1	177.12	-.06385	.00079	491.93	.00108	.00035	.10128	.00699	-.00321	.00163	.06083	.01504
#2	178.04	.01708	-.00020	496.69	.00107	-.00023	.10400	.00609	-.00862	.00657	.05730	.00712
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	220.00				.00100			.00500				
Low Limit	180.00				-.00100			-.00500				

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00493**	**.00990**	**.02119**	**-.00146**	W **.00423**	**.00294**	**.00109**	**-.00131**	**.21858**	**-.00052**	**-.00769**	**.00453**
Stddev	.00503	.02913	.06235	.00072	.00027	.00504	.00006	.00085	.02442	.00012	.00117	.00170
%RSD	101.98	294.24	294.24	48.952	6.2733	171.41	5.9211	64.847	11.171	24.106	15.240	37.408
#1	-.00137	.03050	.06528	-.00096	.00442	.00651	.00113	-.00071	.20132	-.00060	-.00852	.00333
#2	-.00848	-.01070	-.02290	-.00197	.00404	-.00062	.00104	-.00192	.23585	-.00043	-.00686	.00573
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					.00120							
Low Limit					-.00120							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3102.9**	**36411.**	**2949.2**
Stddev	2.1	65.	22.1
%RSD	.06822	.17846	.74875
#1	3101.5	36457.	2964.9
#2	3104.4	36365.	2933.6

Sample Name: alt Acquired: 11/6/2018 14:08:12 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.00107**	F **.00125**	W **.01885**	F **-.00029**	F **.00010**	F **.00016**	F **.00353**	F **.02206**	F **-.00040**	F **.00049**	F **.00024**	F **.00233**
Stddev	.00256	.00092	.00293	.00138	.00049	.00002	.00444	.00650	.00007	.00041	.00058	.00289
%RSD	240.15	74.064	15.531	473.45	470.59	12.143	126.02	29.445	18.948	83.216	241.23	124.06
#1	.00288	.00190	.02092	-.00127	-.00024	.00015	.00667	.02665	-.00045	.00020	-.00017	.00437
#2	-.00074	.00059	.01678	.00068	.00045	.00017	.00038	.01747	-.00034	.00078	.00065	.00029
Check ?	Chk Fail	Chk Fail	Chk Warn	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.01000	.10000	.01500	.10000	.01000	.00100	.10000	.20000	.00500	.01000	.01000	.01500
Range	-50.000%	-50.000%	20.490%	-50.000%	-50.000%	-50.000%	-50.000%	-50.000%	-50.000%	-50.000%	-50.000%	-50.000%

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.00771**	F **-.14178**	F **-.00700**	F **1.8038**	F **.00161**	F **-.00025**	F **.02163**	F **.00023**	F **.00213**	F **-.00261**	F **.00016**	F **.00311**
Stddev	.00213	.07478	.00313	2.5223	.00219	.00002	.01639	.00000	.00303	.00192	.00435	.00279
%RSD	27.622	52.742	44.709	139.83	135.95	6.3010	75.755	.10348	142.09	73.403	2748.0	89.834
#1	.00921	-.19465	-.00921	3.5874	.00316	-.00026	.01004	.00023	.00427	-.00397	.00324	.00113
#2	.00620	-.08890	-.00479	.02027	.00006	-.00024	.03322	.00023	-.00001	-.00126	-.00292	.00508
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail
Value	.10000	3.0000	.02000	.20000	.01000	.02000	1.0000	.04000	3.0000	.00900	.10000	.02000
Range	-50.000%	-50.000%	-50.000%	50.000%	-50.000%	-50.000%	-50.000%	-50.000%	-50.000%	-50.000%	-50.000%	-50.000%

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.00052**	F **.01698**	F **.03634**	F **-.00277**	F **.00024**	W **.00863**	F **.00142**	F **.00083**	**.06756**	F **.00086**	F **.00113**	F **.00219**
Stddev	.00244	.02155	.04612	.00151	.00013	.01433	.00181	.00257	.02737	.00185	.00121	.00755
%RSD	472.66	126.92	126.92	54.345	52.385	166.00	127.26	308.57	40.520	213.53	107.23	345.27
#1	-.00224	.03222	.06896	-.00171	.00033	.01877	.00270	-.00098	.08691	.00217	.00198	-.00315
#2	.00121	.00174	.00373	-.00384	.00015	-.00150	.00014	.00265	.04820	-.00044	.00027	.00752
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Fail	Chk Warn	Chk Fail	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Fail
Value	.02000	.50000	1.0700	.10000	.01000	.01500	.01000	.01500		.01000	.02000	.01500
Range	-50.000%	-50.000%	-50.000%	-50.000%	-50.000%	-20.490%	-50.000%	-50.000%		-50.000%	-50.000%	-50.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3269.4**	**41548.**	**2836.7**
Stddev	6.8	1547.	10.6
%RSD	.20710	3.7243	.37308
#1	3274.1	42642.	2829.2
#2	3264.6	40454.	2844.2

Sample Name: ICSAB-5408059 Acquired: 11/6/2018 14:20:30 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.1376**	**502.12**	**2.1570**	**2.0160**	**.51655**	**.51189**	**1.1165**	**499.27**	**1.0637**	**.48367**	**.51173**	**.55815**	**188.93**	**52.911**
Stddev	.0025	2.52	.0040	.0013	.00442	.00106	.0017	2.65	.0012	.00123	.00006	.00326	1.21	.216
%RSD	.22362	.50181	.18579	.06325	.85631	.20766	.15263	.53108	.11605	.25473	.01174	.58383	.64113	.40761
#1	1.1394	500.34	2.1542	2.0151	.51342	.51114	1.1177	497.40	1.0628	.48455	.51177	.56045	188.07	52.758
#2	1.1358	503.90	2.1599	2.0169	.51968	.51264	1.1153	501.15	1.0646	.48280	.51168	.55585	189.79	53.063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value														
Range														

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0648**	**536.03**	**.52163**	**1.0369**	**51.005**	**.97041**	**2.1291**	**.99062**	**1.0592**	**1.0655**	**5.1662**	**10.161**	**21.745**	**9.9804**
Stddev	.0052	9.61	.00076	.0040	.582	.00062	.0033	.00284	.0068	.0042	.0020	.022	.046	.0161
%RSD	.49036	1.7931	.14664	.38602	1.1412	.06440	.15637	.28693	.64332	.39590	.03958	.21344	.21344	.16154
#1	1.0611	542.83	.52217	1.0397	51.416	.96997	2.1267	.98861	1.0544	1.0685	5.1677	10.146	21.712	9.9918
#2	1.0685	529.24	.52109	1.0340	50.593	.97085	2.1314	.99263	1.0640	1.0625	5.1648	10.176	21.777	9.9690
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value														
Range														

Elem	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0353**	**2.0138**	**1.0728**	**9.4336**	**.31965**	**.54101**	**1.0216**	**1.0327**
Stddev	.0057	.0022	.0006	.0112	.01105	.00082	.0038	.0040
%RSD	.55556	.10654	.05937	.11881	3.4578	.15165	.36930	.39074
#1	1.0313	2.0153	1.0732	9.4256	.32747	.54043	1.0189	1.0299
#2	1.0394	2.0123	1.0723	9.4415	.31184	.54159	1.0243	1.0356
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**2745.5**	**32009.**	**2576.9**
Stddev	5.4	30.	13.5
%RSD	.19653	.09333	.52209
#1	2749.3	32031.	2586.5
#2	2741.7	31988.	2567.4

Sample Name: LRA-5413489 Acquired: 11/6/2018 14:22:53 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00060**	**-.23350**	**10.057**	**9.7228**	**12.474**	**-.00129**	**.31610**	**.08965**	**1.9716**	**5.0003**	**10.038**	**10.652**	**490.61**
Stddev	.00001	.04163	.187	.1674	.101	.00001	.00773	.06506	.0354	.0929	.198	.014	4.64
%RSD	1.6684	17.830	1.8639	1.7221	.81207	.98721	2.4459	72.571	1.7958	1.8583	1.9730	.13100	.94584
#1	.00061	-.20406	10.190	9.8412	12.546	-.00128	.32157	.13566	1.9967	5.0660	10.178	10.642	493.89
#2	.00059	-.26293	9.9244	9.6044	12.402	-.00130	.31063	.04365	1.9466	4.9346	9.8982	10.661	487.33
Check ?	None	None	Chk Pass	Chk Pass	Chk Pass	None	None	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.27301**	**-.00621**	**-.00598**	**9.7878**	**4.9262**	**.00237**	**10.071**	**-.01723**	**10.319**	**.02656**	**-.04691**	**5.0044**	**47.713**
Stddev	.02406	.00081	.00172	.0296	.1021	.00702	.188	.00012	.197	.00141	.00240	.0690	.114
%RSD	8.8133	13.084	28.722	.30201	2.0717	295.86	1.8660	.67087	1.9101	5.3075	5.1173	1.3789	.23963
#1	-.25600	-.00678	-.00720	9.8087	4.9984	.00734	10.203	-.01731	10.458	.02756	-.04521	5.0532	47.794
#2	-.29003	-.00563	-.00477	9.7669	4.8540	-.00259	9.9377	-.01715	10.179	.02556	-.04861	4.9557	47.632
Check ?	None	None	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**102.11**	**-.00429**	**10.320**	**.01927**	**9.7564**	**5.2053**	**.59468**	**9.8649**	**9.6561**	**.00716**
Stddev	.24	.00254	.113	.00433	.0249	.0796	.06645	.0126	.0010	.00002
%RSD	.23963	59.254	1.0992	22.460	.25497	1.5298	11.174	.12795	.01050	.24550
#1	102.28	-.00249	10.400	.02233	9.7740	5.2616	.54769	9.8559	9.6554	.00718
#2	101.93	-.00608	10.239	.01621	9.7388	5.1490	.64166	9.8738	9.6568	.00715
Check ?	None	None	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**2995.0**	**37445.**	**2643.2**
Stddev	1.4	106.	31.6
%RSD	.04572	.28185	1.1955
#1	2995.9	37520.	2620.9
#2	2994.0	37370.	2665.6

Sample Name: CCVH-5408055 Acquired: 11/6/2018 14:25:26 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00258**	**47.507**	**.00407**	**.02663**	**.00075**	**-.00026**	**.95381**	**.02050**	**.00002**	**.00281**	**.00239**	**.00033**	**47.366**
Stddev	.00041	.053	.00169	.00189	.00055	.00023	.02313	.01096	.00012	.00075	.00138	.00039	.105
%RSD	15.900	.11110	41.410	7.1163	73.292	85.514	2.4247	53.486	671.43	26.777	58.041	117.39	.22082
#1	-.00287	47.470	.00288	.02797	.00114	-.00042	.97017	.02825	-.00007	.00228	.00141	.00006	47.292
#2	-.00229	47.545	.00527	.02529	.00036	-.00010	.93746	.01275	.00010	.00334	.00337	.00061	47.440
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.14901**	**.00197**	**-.06535**	**.00294**	**.00672**	**235.55**	**.00425**	**.00212**	**.00001**	**4.6626**	**.00299**	**.00478**	**.04996**
Stddev	.14128	.00158	.00052	.00005	.00159	.95	.00184	.00121	.00392	.1135	.00171	.00808	.06874
%RSD	94.806	80.472	.79149	1.6919	23.669	.40190	43.455	56.843	70112.	2.4351	57.131	169.03	137.59
#1	-.24891	.00085	-.06499	.00297	.00560	236.22	.00294	.00298	-.00277	4.7429	.00419	-.00093	.09857
#2	-.04912	.00309	-.06572	.00290	.00785	234.88	.00555	.00127	.00278	4.5823	.00178	.01049	.00135
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10692**	**-.00004**	**.00148**	**4.5765**	**.02066**	**.00225**	**9.4620**	**-.00905**	**.00163**	**.07976**
Stddev	.14711	.00173	.00021	.0099	.00057	.00060	.0844	.00108	.00032	.00022
%RSD	137.59	3938.8	13.968	.21630	2.7709	26.763	.89240	11.899	19.775	.27148
#1	.21094	-.00127	.00162	4.5695	.02026	.00183	9.4023	-.00981	.00140	.07992
#2	.00289	.00118	.00133	4.5835	.02107	.00268	9.5218	-.00829	.00185	.07961
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3254.0**	**39346.**	**2884.1**
Stddev	19.2	452.	4.1
%RSD	.58938	1.1492	.14277
#1	3240.4	39665.	2887.0
#2	3267.5	39026.	2881.2

Sample Name: CCV-5407546 Acquired: 11/6/2018 14:28:00 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49061**	**.52946**	**.99903**	**.49877**	**.49581**	**.49270**	**.00622**	**4.9005**	**.48895**	**.49111**	**.49081**	**.49851**	**2.4237**
Stddev	.00213	.00356	.00414	.00636	.00079	.00034	.00229	.0124	.00282	.00357	.00263	.00099	.0011
%RSD	.43474	.67263	.41466	1.2755	.15916	.06962	36.779	.25198	.57687	.72630	.53556	.19788	.04632
#1	.49212	.53198	1.0020	.50327	.49525	.49246	.00784	4.9093	.49095	.49363	.49267	.49921	2.4245
#2	.48910	.52694	.99610	.49427	.49636	.49294	.00460	4.8918	.48696	.48859	.48895	.49782	2.4229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.094**	**.99330**	**19.515**	**.47993**	**.48915**	**4.9226**	**.49014**	**.99075**	**.98842**	**.00218**	**.98321**	**.98939**	**4.7826**
Stddev	.023	.00390	.029	.00008	.00125	.0007	.00386	.00674	.00608	.00082	.00298	.00755	.0301
%RSD	.04746	.39228	.14927	.01706	.25608	.01481	.78771	.68061	.61487	37.443	.30333	.76298	.62915
#1	49.110	.99605	19.535	.47999	.49004	4.9231	.49287	.99551	.99272	.00276	.98532	.99473	4.7613
#2	49.077	.99054	19.494	.47987	.48827	4.9221	.48741	.98598	.98413	.00161	.98110	.98405	4.8039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.235**	**.98484**	**.49211**	**.01068**	**.47402**	**1.0144**	**-.00713**	**.48310**	**.47761**	**.48286**
Stddev	.064	.00375	.00031	.00170	.00168	.0032	.03224	.00121	.00023	.00249
%RSD	.62915	.38073	.06287	15.877	.35512	.31710	452.28	.24970	.04917	.51655
#1	10.189	.98749	.49233	.01188	.47283	1.0166	-.02992	.48396	.47744	.48110
#2	10.280	.98219	.49189	.00948	.47522	1.0121	.01567	.48225	.47778	.48463
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3329.8**	**40547.**	**2898.8**
Stddev	2.7	131.	6.7
%RSD	.08084	.32297	.23241
#1	3327.9	40639.	2894.0
#2	3331.7	40454.	2903.5

Sample Name: CCB Acquired: 11/6/2018 14:30:28 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00057**	**.00030**	**.00731**	**.00999**	**.00014**	**.00015**	**-.00158**	**-.00350**	**-.00048**	**.00076**	**.00011**	**.00056**	**.00236**
Stddev	.00120	.00045	.00238	.00100	.00069	.00000	.00014	.00132	.00024	.00022	.00022	.00060	.00256
%RSD	210.19	151.78	32.508	10.026	493.25	2.1171	8.8136	37.624	49.808	29.498	190.38	108.35	108.49
#1	.00028	.00061	.00563	.01069	.00063	.00015	-.00168	-.00443	-.00065	.00060	.00027	.00013	.00417
#2	-.00142	-.00002	.00899	.00928	-.00035	.00015	-.00148	-.00257	-.00031	.00091	-.00004	.00099	.00055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.22464**	**-.00256**	**.00847**	**.00009**	**.00170**	**-.00280**	**-.00039**	**-.00034**	**-.00042**	**-.00741**	**.00054**	**-.00342**	**.01538**
Stddev	.12076	.00445	.00112	.00003	.00122	.01880	.00043	.00243	.00013	.00715	.00359	.00013	.00206
%RSD	53.757	173.42	13.196	36.091	71.753	672.35	111.76	710.81	30.951	96.447	668.46	3.8851	13.364
#1	-.31003	-.00571	.00926	.00007	.00084	.01050	-.00008	-.00206	-.00033	-.01247	.00307	-.00352	.01683
#2	-.13925	.00058	.00768	.00012	.00256	-.01609	-.00070	.00138	-.00051	-.00236	-.00200	-.00333	.01393
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03291**	**-.00319**	**.00000**	**.00142**	**.00038**	**.00027**	**.02167**	**-.00023**	**.00030**	**.00382**
Stddev	.00440	.00120	.00029	.00203	.00053	.00007	.02699	.00075	.00032	.00216
%RSD	13.364	37.604	97295.	142.66	141.46	27.340	124.57	330.42	106.68	56.616
#1	.03602	-.00234	-.00021	-.00001	.00076	.00022	.04075	.00030	.00007	.00229
#2	.02980	-.00403	.00021	.00285	-.00000	.00032	.00258	-.00076	.00053	.00534
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3314.6**	**40821.**	**2859.9**
Stddev	4.8	107.	10.5
%RSD	.14487	.26333	.36619
#1	3311.2	40745.	2867.3
#2	3318.0	40897.	2852.5

Sample Name: ccvl-5413446 Acquired: 11/6/2018 14:33:03 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00886**	**.11060**	**.01649**	**.10230**	**.00948**	**.00118**	**.10562**	**.19575**	**.00471**	**.01002**	**.00978**	**.01544**
Stddev	.00066	.00420	.00312	.00433	.00036	.00013	.00217	.00314	.00045	.00055	.00046	.00053
%RSD	7.4960	3.7993	18.900	4.2312	3.8001	11.148	2.0545	1.6038	9.5861	5.4930	4.7271	3.4379
#1	.00933	.11357	.01429	.10537	.00923	.00108	.10715	.19797	.00503	.01041	.00945	.01581
#2	.00839	.10763	.01870	.09924	.00974	.00127	.10408	.19353	.00439	.00964	.01011	.01506
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10190**	**2.9621**	**.02286**	**.20373**	**.00988**	**.01910**	**1.0371**	**.03955**	**2.8210**	**.00895**	**.08158**	**.01740**
Stddev	.00195	.0248	.00008	.00179	.00014	.00014	.0141	.00148	.0967	.00201	.00633	.00691
%RSD	1.9122	.83668	.35016	.87827	1.4380	.75774	1.3606	3.7540	3.4280	22.432	7.7630	39.691
#1	.10328	2.9446	.02280	.20499	.00978	.01900	1.0471	.04060	2.8894	.00753	.07710	.02229
#2	.10052	2.9796	.02291	.20246	.00998	.01920	1.0271	.03850	2.7527	.01036	.08606	.01252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02418**	**.50725**	**1.0855**	**.09610**	**.01026**	**.01608**	**.00940**	**.01770**	F **.08627**	**.00925**	**.02028**	**.01874**
Stddev	.00102	.00006	.0001	.00263	.00026	.00262	.00028	.00165	.02464	.00019	.00009	.00347
%RSD	4.2075	.01088	.01088	2.7379	2.4903	16.272	3.0018	9.3096	28.561	2.0208	.42666	18.494
#1	.02346	.50721	1.0854	.09796	.01045	.01793	.00920	.01653	.06884	.00912	.02022	.02120
#2	.02490	.50729	1.0856	.09424	.01008	.01423	.00960	.01886	.10369	.00938	.02034	.01629
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3246.9**	**41692.**	**2804.5**
Stddev	36.7	281.	16.9
%RSD	1.1289	.67415	.60228
#1	3221.0	41891.	2792.6
#2	3272.9	41494.	2816.5

Sample Name: 280-115907-A-46-A Acquired: 11/6/2018 14:44:23 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 10/31 Custom ID2: Custom ID3:
Comment: 434922 6010c s

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00404**	**127.44**	**.04152**	**.03209**	**.78518**	**.00520**	**.12697**	**16.420**	**.00239**
Stddev	.00004	.24	.00494	.00011	.00238	.00017	.00535	.074	.00014
%RSD	1.0797	.19053	11.894	.34787	.30338	3.3480	4.2151	.45138	5.9876
#1	-.00400	127.27	.04501	.03216	.78350	.00508	.12318	16.367	.00229
#2	-.00407	127.61	.03803	.03201	.78687	.00533	.13075	16.472	.00249
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10237**	**.14101**	**.19733**	**178.57**	**9.5394**	**.12845**	**28.869**	**9.3416**	**.00329**
Stddev	.00074	.00035	.00258	.06	.0553	.00185	.214	.0365	.00067
%RSD	.72198	.24862	1.3069	.03124	.57939	1.4434	.74052	.39098	20.375
#1	.10184	.14077	.19915	178.61	9.5785	.12714	29.020	9.3674	.00376
#2	.10289	.14126	.19551	178.53	9.5003	.12977	28.718	9.3158	.00281
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.68046**	**.14958**	**3.9537**	**.05919**	**.27098**	**-.00432**	**.00239**	**5.6150**	**12.016**
Stddev	.04889	.00062	.0040	.00108	.00119	.00217	.00946	.2102	.450
%RSD	7.1847	.41504	.09981	1.8190	.43844	50.269	395.73	3.7426	3.7426
#1	.71503	.14914	3.9509	.05843	.27182	-.00585	.00908	5.7636	12.334
#2	.64589	.15002	3.9565	.05995	.27014	-.00278	-.00430	5.4664	11.698
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00991**	**.09380**	**.04697**	**1.5008**	**.00827**	**.19758**	**.24496**	**.32749**	**.08214**
Stddev	.00123	.00061	.00099	.0162	.00073	.02502	.00196	.00250	.00243
%RSD	12.417	.65117	2.1133	1.0820	8.8276	12.664	.79815	.76400	2.9609
#1	.01078	.09423	.04767	1.5123	.00775	.21527	.24634	.32926	.08042
#2	.00904	.09337	.04627	1.4893	.00878	.17989	.24357	.32572	.08386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3838.6**	**44720.**	**3330.2**
Stddev	40.2	19.	3.3
%RSD	1.0471	.04221	.09901
#1	3810.2	44707.	3332.5
#2	3867.0	44733.	3327.9

Sample Name: 280-116251-C-2-C Acquired: 11/6/2018 14:46:56 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/2 Custom ID2: Custom ID3:
Comment: 435261 6010b

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00130**	**.00981**	**.00280**	**.02686**	**.10488**	**.00030**	**-.00388**	**21.481**	**.00018**
Stddev	.00041	.00228	.00037	.00197	.00131	.00018	.00351	.112	.00001
%RSD	31.215	23.201	13.126	7.3268	1.2530	58.871	90.396	.52091	7.8182
#1	-.00158	.00820	.00254	.02825	.10395	.00017	-.00140	21.402	.00017
#2	-.00101	.01141	.00306	.02547	.10581	.00042	-.00636	21.560	.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00079**	**.00035**	**.00188**	**.04520**	**1.4081**	**.00965**	**4.4016**	**.23858**	**-.00040**
Stddev	.00014	.00042	.00109	.04004	.1459	.00052	.0042	.00022	.00074
%RSD	18.161	121.80	57.911	88.580	10.364	5.4273	.09636	.09132	182.38
#1	.00068	.00065	.00265	.07352	1.3049	.00928	4.3986	.23842	.00012
#2	.00089	.00005	.00111	.01689	1.5113	.01002	4.4046	.23873	-.00093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.948**	**.00083**	**.01427**	**-.00320**	**1.1131**	**.00186**	**-.00347**	**8.9623**	**19.179**
Stddev	.341	.00004	.00231	.00126	.0192	.00391	.00641	.1158	.248
%RSD	1.1796	4.9642	16.171	39.465	1.7282	210.49	184.95	1.2922	1.2922
#1	28.707	.00080	.01264	-.00409	1.1267	.00463	.00107	8.8804	19.004
#2	29.190	.00086	.01590	-.00231	1.0995	-.00091	-.00800	9.0442	19.355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00256**	**.10090**	**-.00079**	**.00072**	**-.00010**	**.02576**	**-.00073**	**.00395**	**.00213**
Stddev	.00135	.00023	.00162	.00064	.00222	.03692	.00071	.00047	.00216
%RSD	52.930	.22781	206.08	88.983	2177.0	143.30	97.208	12.009	101.22
#1	-.00160	.10073	-.00194	.00118	-.00167	.05187	-.00123	.00429	.00366
#2	-.00351	.10106	.00036	.00027	.00147	-.00034	-.00023	.00362	.00061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3145.4**	**38321.**	**2753.7**
Stddev	14.1	205.	70.4
%RSD	.44812	.53623	2.5583
#1	3155.4	38176.	2803.5
#2	3135.4	38467.	2703.9

Sample Name: 280-116251-C-2-Csd@5 Acquired: 11/6/2018 14:49:30 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435261 6010b

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00234**	**-.00078**	**.00731**	**.02421**	**.00002**	**.00279**	**4.9657**	**-.00025**
Stddev	.00057	.00004	.00635	.00023	.00055	.00027	.00637	.1046	.00020
%RSD	642.30	1.7379	813.62	3.0830	2.2863	1333.1	228.19	2.1055	79.721
#1	.00050	.00236	.00371	.00715	.02382	-.00017	-.00171	5.0396	-.00039
#2	-.00032	.00231	-.00527	.00747	.02461	.00021	.00729	4.8918	-.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.00032**	**-.00027**	**.01161**	**.19272**	**-.00036**	**.97186**	**.05231**	**.00011**
Stddev	.00010	.00025	.00073	.00068	.04431	.00486	.01501	.00093	.00015
%RSD	41.985	78.178	270.89	5.8654	22.994	1368.1	1.5449	1.7713	129.93
#1	.00017	.00014	-.00079	.01209	.22405	.00308	.98247	.05297	.00022
#2	.00032	.00050	.00025	.01113	.16138	-.00379	.96124	.05166	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.8816**	**-.00029**	**.00272**	**-.00152**	**.20351**	**.00074**	**-.00144**	**2.0528**	**4.3930**
Stddev	.1343	.00048	.00382	.00152	.01270	.00212	.00492	.0448	.0958
%RSD	1.9514	165.12	140.23	100.08	6.2382	287.04	340.92	2.1804	2.1804
#1	6.9766	.00005	.00542	-.00045	.21248	.00223	.00204	2.0845	4.4607
#2	6.7866	-.00063	.00002	-.00260	.19453	-.00076	-.00493	2.0212	4.3253
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00216**	**.02317**	**-.00028**	**.00021**	**.00320**	**.01212**	**.00040**	**.00065**	**.00288**
Stddev	.00127	.00009	.00182	.00046	.00533	.02946	.00018	.00061	.00574
%RSD	58.730	.39335	648.23	222.30	166.91	243.02	45.609	93.800	199.37
#1	-.00306	.02323	.00101	.00053	.00697	-.00871	.00027	.00022	-.00118
#2	-.00126	.02310	-.00157	-.00012	-.00058	.03295	.00053	.00109	.00693
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3060.4**	**38168.**	**2717.2**
Stddev	5.3	229.	34.5
%RSD	.17305	.59914	1.2685
#1	3064.1	38329.	2741.6
#2	3056.6	38006.	2692.8

Sample Name: 280-116251-C-2-D MS Acquired: 11/6/2018 14:52:05 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435261 6010b

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04723**	**2.0413**	**.97758**	**1.0227**	**2.1075**	**.04980**	**1.8878**	**69.754**	**.09282**
Stddev	.00094	.0391	.01433	.0169	.0012	.00010	.0337	.002	.00207
%RSD	1.9960	1.9159	1.4656	1.6479	.05809	.20760	1.7842	.00308	2.2297
#1	.04656	2.0689	.98771	1.0346	2.1084	.04973	1.9117	69.752	.09428
#2	.04790	2.0136	.96745	1.0108	2.1067	.04987	1.8640	69.755	.09135
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47282**	**.19269**	**.24911**	**.97455**	**51.514**	**.99933**	**52.128**	**.70498**	**.99148**
Stddev	.01000	.00418	.00047	.01055	.069	.00221	.062	.00054	.02135
%RSD	2.1149	2.1697	.18725	1.0824	.13410	.22131	.11862	.07720	2.1532
#1	.47990	.19564	.24944	.96709	51.465	.99777	52.172	.70536	1.0066
#2	.46575	.18973	.24878	.98200	51.563	1.0009	52.084	.70459	.97639
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**76.123**	**.46797**	**10.132**	**.47534**	**3.0098**	**.49673**	**1.9860**	**18.646**	**39.903**
Stddev	.493	.00921	.192	.00708	.0622	.01061	.0510	.032	.068
%RSD	.64819	1.9682	1.8905	1.4904	2.0663	2.1366	2.5697	.17038	.17038
#1	75.774	.47448	10.267	.48035	3.0538	.50423	2.0221	18.624	39.855
#2	76.472	.46146	9.9964	.47033	2.9658	.48922	1.9500	18.669	39.951
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9651**	**1.0928**	**.94348**	**.97336**	**1.9494**	**1.9212**	**.50170**	**.48487**	**.51239**
Stddev	.0348	.0010	.00439	.00080	.0331	.0757	.00010	.00072	.00494
%RSD	1.7682	.09219	.46550	.08256	1.6967	3.9430	.02047	.14819	.96374
#1	1.9896	1.0936	.94658	.97393	1.9728	1.9748	.50177	.48538	.50890
#2	1.9405	1.0921	.94037	.97280	1.9260	1.8676	.50162	.48436	.51588
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3050.4**	**37121.**	**2711.2**
Stddev	.7	97.	20.4
%RSD	.02336	.26251	.75428
#1	3049.9	37052.	2725.7
#2	3050.9	37190.	2696.8

Sample Name: 280-116251-C-2-E MSD Acquired: 11/6/2018 14:54:26 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435261 6010b

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04831**	**2.0972**	**1.0044**	**1.0361**	**2.1660**	**.05129**	**1.9190**	**70.924**	**.09493**
Stddev	.00046	.0371	.0091	.0199	.0049	.00043	.0342	.259	.00212
%RSD	.95530	1.7682	.90104	1.9235	.22459	.83294	1.7836	.36531	2.2337
#1	.04799	2.1234	1.0108	1.0502	2.1694	.05159	1.9432	71.108	.09643
#2	.04864	2.0710	.99798	1.0220	2.1626	.05099	1.8948	70.741	.09343
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48319**	**.19790**	**.25211**	**1.0185**	**52.790**	**1.0291**	**52.721**	**.71083**	**1.0082**
Stddev	.00761	.00453	.00060	.0029	.215	.0048	.076	.00070	.0199
%RSD	1.5752	2.2898	.23701	.28474	.40741	.46767	.14340	.09876	1.9688
#1	.48857	.20110	.25168	1.0206	52.943	1.0325	52.774	.71133	1.0223
#2	.47780	.19469	.25253	1.0165	52.638	1.0257	52.667	.71034	.99418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**77.467**	**.47861**	**10.299**	**.48467**	**3.0103**	**.50030**	**2.0143**	**18.862**	**40.364**
Stddev	1.179	.00847	.186	.00590	.0374	.01100	.0370	.111	.238
%RSD	1.5221	1.7706	1.8050	1.2174	1.2421	2.1992	1.8348	.58957	.58957
#1	78.301	.48461	10.430	.48884	3.0367	.50808	2.0404	18.940	40.532
#2	76.633	.47262	10.167	.48050	2.9838	.49252	1.9882	18.783	40.196
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9914**	**1.1213**	**.95792**	**.98219**	**1.9808**	**1.9238**	**.51034**	**.49079**	**.52005**
Stddev	.0346	.0051	.00814	.00220	.0324	.1398	.00064	.00212	.00159
%RSD	1.7373	.45713	.84951	.22407	1.6369	7.2685	.12639	.43175	.30534
#1	2.0158	1.1249	.96368	.98374	2.0038	2.0227	.51079	.49229	.52118
#2	1.9669	1.1177	.95217	.98063	1.9579	1.8249	.50988	.48929	.51893
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2971.0**	**36287.**	**2600.3**
Stddev	.7	109.	6.3
%RSD	.02286	.30142	.24271
#1	2970.5	36364.	2604.8
#2	2971.4	36210.	2595.8

Sample Name: MB 280-435443/1-A Acquired: 11/6/2018 14:56:47 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/2 Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00047**	**.03734**	**.00364**	**.00481**	**.00043**	**-.00021**	**.00223**	**.01381**	**-.00009**
Stddev	.00117	.03398	.00734	.00021	.00018	.00006	.00108	.00495	.00021
%RSD	246.81	91.001	201.49	4.3377	41.489	30.147	48.412	35.873	251.83
#1	-.00130	.01331	-.00155	.00466	.00056	-.00026	.00146	.01031	-.00024
#2	.00035	.06136	.00884	.00496	.00030	-.00017	.00299	.01731	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00114**	**.00045**	**-.00092**	**.01316**	**-.12135**	**-.00442**	**.01624**	**.00108**	**.00277**
Stddev	.00099	.00053	.00004	.00760	.14078	.00061	.00703	.00008	.00133
%RSD	86.907	116.56	4.6637	57.725	116.01	13.874	43.287	7.8477	48.227
#1	.00044	.00008	-.00089	.00779	-.22089	-.00485	.02122	.00102	.00182
#2	.00185	.00083	-.00095	.01853	-.02180	-.00398	.01127	.00114	.00371
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01691**	**.00030**	**.01427**	**-.00158**	**-.00596**	**.00296**	W **-.00843**	**.01740**	**.03725**
Stddev	.01140	.00081	.00757	.00192	.00766	.00293	.01128	.00405	.00866
%RSD	67.404	273.23	53.062	121.67	128.56	99.057	133.81	23.262	23.262
#1	.00885	-.00028	.00891	-.00022	-.01137	.00503	-.01640	.01454	.03112
#2	.02497	.00087	.01962	-.00293	-.00054	.00089	-.00045	.02027	.04337
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	None
High Limit							.00750		
Low Limit							-.00750		

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00048**	**.00028**	**.00093**	**.00089**	**.00224**	**-.01325**	**.00015**	**.00039**	**.00420**
Stddev	.00132	.00013	.00277	.00002	.00773	.04426	.00069	.00053	.00258
%RSD	275.41	46.266	298.36	2.0265	345.76	333.92	473.99	134.46	61.510
#1	-.00045	.00019	-.00103	.00088	-.00323	.01804	.00064	.00002	.00602
#2	.00141	.00037	.00289	.00091	.00770	-.04455	-.00034	.00077	.00237
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3139.6**	**38758.**	**2721.7**
Stddev	9.3	103.	44.2
%RSD	.29599	.26601	1.6224
#1	3146.2	38685.	2752.9
#2	3133.1	38831.	2690.5

Sample Name: LCS 280-435443/2-A Acquired: 11/6/2018 14:59:23 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04785**	**2.0915**	**.99586**	**1.0095**	**2.0389**	**.05034**	**1.9231**	**49.623**	**.09393**
Stddev	.00071	.0353	.01337	.0176	.0133	.00021	.0305	.196	.00136
%RSD	1.4780	1.6858	1.3427	1.7437	.65126	.42676	1.5882	.39451	1.4519
#1	.04735	2.1165	1.0053	1.0219	2.0295	.05019	1.9447	49.484	.09490
#2	.04835	2.0666	.98641	.99704	2.0483	.05049	1.9015	49.761	.09297
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48259**	**.19717**	**.24984**	**.99271**	**50.720**	**1.0181**	**48.395**	**.48194**	**1.0033**
Stddev	.00821	.00387	.00017	.00316	.315	.0080	.171	.00248	.0206
%RSD	1.7008	1.9609	.06886	.31844	.62168	.78802	.35365	.51421	2.0541
#1	.48839	.19991	.24972	.99048	50.497	1.0124	48.516	.48369	1.0179
#2	.47679	.19444	.24996	.99495	50.943	1.0237	48.274	.48019	.98871
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.882**	**.47862**	**10.251**	**.49208**	**1.8986**	**.49631**	**2.0100**	**9.8821**	**21.148**
Stddev	.546	.00839	.229	.01069	.0382	.00863	.0477	.0187	.040
%RSD	1.0947	1.7519	2.2329	2.1724	2.0119	1.7380	2.3719	.18950	.18950
#1	49.496	.48455	10.413	.49964	1.9256	.50241	2.0437	9.8953	21.176
#2	50.268	.47270	10.089	.48452	1.8716	.49021	1.9762	9.8688	21.119
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9843**	**1.0115**	**.94789**	**.97192**	**2.0043**	**1.9412**	**.50527**	**.48729**	**.51863**
Stddev	.0423	.0047	.00699	.00366	.0360	.1265	.00149	.00245	.00035
%RSD	2.1290	.46886	.73732	.37672	1.7964	6.5169	.29421	.50366	.06699
#1	2.0142	1.0081	.94295	.97451	2.0298	2.0306	.50633	.48902	.51887
#2	1.9545	1.0148	.95283	.96933	1.9789	1.8517	.50422	.48555	.51838
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3001.5**	**37176.**	**2708.9**
Stddev	12.9	32.	60.3
%RSD	.43081	.08548	2.2252
#1	3010.7	37199.	2751.5
#2	2992.4	37154.	2666.3

Sample Name: 280-116176-A-1-A Acquired: 11/6/2018 15:01:44 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00144**	**.00192**	**.00210**	**.44695**	**.87908**	**.00019**	**-.00323**	**67.319**	**.00017**
Stddev	.00050	.00249	.00358	.00410	.00110	.00022	.00288	.100	.00016
%RSD	34.581	129.82	170.27	.91836	.12533	119.26	89.206	.14922	95.475
#1	-.00179	.00368	.00463	.44985	.87986	.00035	-.00119	67.390	.00028
#2	-.00109	.00016	-.00043	.44404	.87830	.00003	-.00526	67.248	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00072**	**.00045**	**.00168**	**2.6491**	**1.3947**	**.00673**	**41.752**	**1.6790**	**.00279**
Stddev	.00028	.00009	.00134	.0060	.0639	.00348	.037	.0020	.00074
%RSD	38.833	19.286	79.666	.22643	4.5787	51.729	.08928	.11666	26.470
#1	.00092	.00039	.00073	2.6533	1.3496	.00427	41.726	1.6776	.00227
#2	.00052	.00051	.00262	2.6448	1.4399	.00919	41.778	1.6804	.00332
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**78.401**	**.00644**	**.02419**	**-.00708**	**2.3470**	**.00528**	**.00158**	**13.363**	**28.596**
Stddev	.235	.00060	.00584	.00349	.0362	.00069	.00290	.065	.139
%RSD	.29933	9.3417	24.134	49.284	1.5414	13.135	183.86	.48713	.48713
#1	78.567	.00687	.02831	-.00461	2.3726	.00479	.00363	13.409	28.695
#2	78.235	.00602	.02006	-.00954	2.3214	.00578	-.00047	13.317	28.498
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**1.0629**	**.00293**	**.00027**	**.00358**	**.00888**	**-.00039**	**.05397**	**.00284**
Stddev	.00081	.0010	.00345	.00007	.00419	.07132	.00122	.00198	.00178
%RSD	246.67	.09798	117.61	24.827	117.11	803.38	311.17	3.6668	62.678
#1	.00090	1.0637	.00537	.00031	.00654	-.04155	-.00126	.05537	.00158
#2	-.00024	1.0622	.00049	.00022	.00062	.05931	.00047	.05257	.00410
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3027.6**	**37269.**	**2655.8**
Stddev	2.8	204.	8.9
%RSD	.09355	.54859	.33478
#1	3025.6	37414.	2662.1
#2	3029.6	37125.	2649.5

Sample Name: 280-116176-A-2-A Acquired: 11/6/2018 15:04:16 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00081**	**.02078**	**.00534**	**.35561**	**.59028**	**-.00027**	**-.00121**	**69.954**	**-.00003**
Stddev	.00107	.00041	.00211	.00786	.00285	.00004	.00266	.361	.00037
%RSD	131.26	1.9601	39.564	2.2099	.48310	13.625	219.86	.51573	1446.0
#1	-.00006	.02049	.00385	.36117	.59229	-.00030	.00067	70.209	.00024
#2	-.00157	.02107	.00684	.35005	.58826	-.00024	-.00309	69.699	-.00029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00461**	**.00091**	**.06487**	**.07188**	**.75443**	**.01393**	**30.930**	**.38486**	**.00117**
Stddev	.00005	.00038	.00001	.00430	.08186	.00903	.064	.00119	.00026
%RSD	1.0436	42.396	.01819	5.9834	10.850	64.826	.20827	.30988	22.305
#1	.00465	.00064	.06488	.07493	.81231	.00754	30.975	.38570	.00136
#2	.00458	.00118	.06486	.06884	.69655	.02031	30.884	.38401	.00099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**67.335**	**.06567**	**.04489**	**-.00427**	**11.953**	**-.00001**	**.00260**	**13.107**	**28.048**
Stddev	.180	.00197	.00160	.00097	.360	.00676	.00049	.045	.097
%RSD	.26807	2.9958	3.5687	22.634	3.0119	101490.	18.986	.34430	.34430
#1	67.207	.06706	.04602	-.00495	12.208	-.00478	.00295	13.139	28.116
#2	67.462	.06428	.04376	-.00359	11.699	.00477	.00225	13.075	27.980
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00128**	**.87586**	**.00254**	**.00067**	**.00042**	**.01074**	**.00078**	**6.6385**	**.00346**
Stddev	.00184	.00426	.00002	.00004	.00027	.07228	.00040	.0067	.00345
%RSD	144.17	.48673	.66140	5.6099	62.700	673.29	51.582	.10074	99.697
#1	.00002	.87887	.00255	.00064	.00024	-.04038	.00049	6.6432	.00102
#2	-.00258	.87284	.00253	.00070	.00061	.06185	.00106	6.6337	.00590
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3141.9**	**37938.**	**2686.5**
Stddev	.7	138.	40.2
%RSD	.02238	.36415	1.4947
#1	3141.5	37840.	2658.1
#2	3142.4	38035.	2714.9

Sample Name: CCVH-5408055 Acquired: 11/6/2018 15:06:47 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00352**	**47.379**	**-.00264**	**.00492**	**.00074**	**-.00007**	**.94043**	**.04323**	**-.00030**	**.00206**	**.00058**	**.00025**	**47.477**
Stddev	.00029	.047	.01727	.00055	.00036	.00008	.00963	.00500	.00019	.00026	.00011	.00031	.001
%RSD	8.2859	.09995	655.03	11.104	49.244	113.99	1.0235	11.576	63.521	12.564	18.792	121.95	.00207
#1	-.00373	47.346	-.01485	.00453	.00048	-.00012	.94723	.03969	-.00017	.00224	.00066	.00047	47.478
#2	-.00332	47.413	.00958	.00530	.00099	-.00001	.93362	.04677	-.00044	.00187	.00051	.00003	47.476
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02607**	**-.00437**	**-.04749**	**.00299**	**-.00016**	**236.77**	**.00309**	**.00509**	**-.00115**	**4.6075**	**.00561**	**.00705**	**-.00420**
Stddev	.12047	.00429	.00626	.00011	.00056	.87	.00049	.00172	.00265	.1088	.00446	.00036	.03517
%RSD	462.18	98.059	13.177	3.5159	337.71	.36550	15.930	33.723	230.97	2.3606	79.424	5.0914	837.56
#1	-.11125	-.00134	-.05191	.00292	-.00056	236.16	.00344	.00631	-.00302	4.6845	.00246	.00731	-.02907
#2	.05912	-.00741	-.04306	.00306	.00023	237.38	.00274	.00388	.00073	4.5306	.00877	.00680	.02067
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00899**	**-.00203**	**.00099**	**4.5505**	**.01982**	**.00198**	**9.4910**	**-.00939**	**.00331**	**.07772**
Stddev	.07526	.00011	.00016	.0063	.00034	.00060	.0504	.00008	.00068	.00303
%RSD	837.56	5.2954	16.455	.13943	1.7252	30.253	.53106	.85596	20.489	3.8981
#1	-.06220	-.00195	.00087	4.5460	.01958	.00156	9.4553	-.00934	.00283	.07987
#2	.04423	-.00210	.00110	4.5550	.02006	.00241	9.5266	-.00945	.00378	.07558
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3191.4**	**39751.**	**2878.8**
Stddev	24.2	85.	18.1
%RSD	.75957	.21494	.62822
#1	3208.6	39691.	2866.1
#2	3174.3	39812.	2891.6

Sample Name: CCV-5407546 Acquired: 11/6/2018 15:09:21 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49981**	F **.55301**	**1.0197**	**.50216**	**.51761**	**.50992**	**.00161**	**5.0524**	**.50005**	**.50149**	**.50326**	**.51249**
Stddev	.00029	.00608	.0208	.00302	.00212	.00179	.00146	.0245	.00321	.00456	.00589	.00066
%RSD	.05817	1.0986	2.0348	.60214	.40967	.35057	90.526	.48486	.64204	.90975	1.1712	.12911
#1	.49960	.55731	1.0344	.50430	.51911	.51119	.00058	5.0698	.50232	.50472	.50743	.51296
#2	.50001	.54872	1.0050	.50003	.51611	.50866	.00265	5.0351	.49778	.49826	.49910	.51203
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4793**	**50.757**	**1.0328**	**19.909**	**.49103**	**.50057**	**5.1857**	**.49918**	**1.0127**	**1.0073**	**-.01624**	**1.0056**
Stddev	.0148	.323	.0013	.015	.00111	.00516	.0355	.00493	.0133	.0099	.01082	.0089
%RSD	.59825	.63627	.12647	.07386	.22578	1.0315	.68509	.98811	1.3155	.98349	66.596	.88724
#1	2.4897	50.985	1.0318	19.919	.49182	.50423	5.1606	.50267	1.0222	1.0143	-.02389	1.0119
#2	2.4688	50.528	1.0337	19.898	.49025	.49692	5.2109	.49570	1.0033	1.0003	-.00859	.99928
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0104**	**4.9737**	**10.644**	**1.0107**	**.51136**	**.00704**	**.48432**	**1.0348**	**.04188**	**.50000**	**.48893**	**.50480**
Stddev	.0013	.0227	.049	.0133	.00173	.00218	.00046	.0102	.00651	.00051	.00035	.00008
%RSD	.12453	.45725	.45725	1.3147	.33891	30.931	.09470	.98866	15.554	.10282	.07099	.01525
#1	1.0113	4.9897	10.678	1.0201	.51259	.00550	.48464	1.0420	.04649	.49964	.48869	.50474
#2	1.0095	4.9576	10.609	1.0013	.51013	.00858	.48399	1.0275	.03728	.50037	.48918	.50485
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3256.6**	**39671.**	**2796.6**
Stddev	2.6	301.	3.2
%RSD	.08027	.75907	.11304
#1	3254.7	39459.	2794.3
#2	3258.4	39884.	2798.8

Sample Name: CCB Acquired: 11/6/2018 15:11:46 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00116**	**-.00014**	**.00150**	**.00326**	**-.00065**	**-.00035**	**.00016**	**.00123**	**-.00024**	**.00019**	**.00039**	**-.00004**	**.00013**
Stddev	.00066	.00031	.00100	.00070	.00028	.00025	.00222	.00898	.00027	.00038	.00050	.00050	.00156
%RSD	56.681	220.73	66.621	21.355	43.014	71.181	1385.3	731.09	110.18	205.27	130.05	1363.4	1158.3
#1	-.00163	-.00036	.00221	.00376	-.00045	-.00017	.00173	.00758	-.00043	-.00008	.00074	-.00039	.00124
#2	-.00070	.00008	.00079	.00277	-.00085	-.00052	-.00141	-.00512	-.00005	.00045	.00003	.00032	-.00097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.07478**	**-.00074**	**.00319**	**.00019**	**.00088**	**.01347**	**-.00018**	**.00107**	**-.00198**	**-.00991**	**.00531**	**-.00803**	**.04035**
Stddev	.04079	.00521	.00260	.00000	.00010	.00143	.00011	.00041	.00122	.00984	.00078	.00303	.01123
%RSD	54.549	707.69	81.282	2.0867	11.516	10.582	62.196	38.081	61.512	99.268	14.746	37.796	27.829
#1	-.10363	.00295	.00136	.00018	.00095	.01448	-.00010	.00078	-.00112	-.01687	.00587	-.01017	.04829
#2	-.04594	-.00442	.00503	.00019	.00081	.01246	-.00026	.00136	-.00284	-.00295	.00476	-.00588	.03241
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08634**	**-.00321**	**.00020**	**.00351**	**-.00009**	**-.00134**	**.02014**	**-.00037**	**-.00027**	**.00144**
Stddev	.02403	.00061	.00004	.00488	.00068	.00151	.02880	.00006	.00006	.00659
%RSD	27.829	19.009	18.521	139.01	744.72	112.85	143.03	15.095	21.428	457.73
#1	.10333	-.00364	.00017	.00696	.00039	-.00027	.04050	-.00033	-.00023	.00610
#2	.06935	-.00278	.00022	.00006	-.00057	-.00240	-.00023	-.00041	-.00031	-.00322
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3062.3**	**37012.**	**2547.4**
Stddev	1.0	102.	9.0
%RSD	.03390	.27483	.35343
#1	3061.6	36940.	2553.8
#2	3063.0	37084.	2541.1

Sample Name: ccvl-5413446 Acquired: 11/6/2018 15:14:23 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00943**	**.10806**	F **.02285**	**.09864**	**.00968**	**.00080**	**.10143**	**.22371**	**.00434**	**.01067**	**.01006**	**.01558**
Stddev	.00072	.00305	.00906	.00135	.00034	.00008	.00238	.00154	.00003	.00057	.00037	.00061
%RSD	7.5972	2.8259	39.627	1.3639	3.5608	10.343	2.3457	.68934	.63077	5.3827	3.6522	3.9081
#1	.00994	.11022	.02926	.09959	.00992	.00074	.10311	.22480	.00432	.01108	.01031	.01601
#2	.00892	.10590	.01645	.09768	.00943	.00085	.09975	.22261	.00436	.01027	.00980	.01515
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10205**	**2.9759**	**.01885**	**.20605**	**.01005**	**.01930**	**1.0623**	**.03852**	**2.8422**	F **.00520**	**.07684**	**.02083**
Stddev	.01040	.0084	.00612	.00519	.00003	.00094	.0146	.00073	.0647	.00056	.00353	.00392
%RSD	10.187	.28165	32.442	2.5166	.33115	4.8726	1.3754	1.9018	2.2770	10.739	4.5888	18.817
#1	.10940	2.9700	.02317	.20972	.01007	.01996	1.0520	.03904	2.8879	.00559	.07435	.02360
#2	.09470	2.9819	.01453	.20239	.01002	.01863	1.0727	.03800	2.7964	.00480	.07933	.01806
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value										.00900		
Range										-30.000%		

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02176**	**.49883**	**1.0675**	**.09565**	**.01038**	F **.01966**	**.00971**	**.01622**	F **.09870**	**.01053**	F **.02631**	**.01796**
Stddev	.00096	.03201	.0685	.00412	.00012	.00585	.00002	.00243	.03489	.00022	.00093	.00215
%RSD	4.4261	6.4174	6.4174	4.3060	1.1602	29.754	.19975	15.000	35.353	2.0839	3.5164	12.001
#1	.02108	.47619	1.0191	.09856	.01046	.01552	.00973	.01794	.12338	.01038	.02697	.01948
#2	.02244	.52147	1.1159	.09273	.01029	.02380	.00970	.01450	.07403	.01069	.02566	.01643
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass
Value						.01500			.06000		.02000	
Range						30.000%			30.000%		30.000%	

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3128.6**	**38661.**	**2658.6**
Stddev	21.6	151.	11.4
%RSD	.69032	.39049	.42882
#1	3143.9	38554.	2650.5
#2	3113.3	38768.	2666.7

Sample Name: 280-116176-A-3-A Acquired: 11/6/2018 15:16:56 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.00860**	**.00676**	**.34292**	**.34308**	**.00007**	**-.00427**	**79.755**	**.00008**
Stddev	.00094	.00023	.00211	.00738	.00001	.00027	.00167	.091	.00041
%RSD	258.00	2.7109	31.297	2.1529	.00239	403.28	39.137	.11431	506.95
#1	-.00103	.00876	.00825	.34814	.34308	-.00012	-.00545	79.691	-.00021
#2	.00030	.00843	.00526	.33770	.34307	.00025	-.00309	79.820	.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00104**	**.00367**	**.01223**	**.04128**	**.10755**	**.03164**	**46.005**	**.08261**	**.00040**
Stddev	.00038	.00035	.00012	.00271	.04793	.00569	.227	.00059	.00009
%RSD	36.277	9.4548	.94522	6.5582	44.565	17.978	.49439	.71037	22.532
#1	.00077	.00391	.01215	.03937	.14144	.03567	46.166	.08302	.00033
#2	.00131	.00342	.01231	.04320	.07366	.02762	45.845	.08219	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**101.05**	**.04594**	**.06750**	**-.00526**	**13.363**	**-.00214**	**.00090**	**16.250**	**34.775**
Stddev	.10	.00099	.00117	.00024	.326	.00056	.00758	.002	.004
%RSD	.10131	2.1555	1.7331	4.5789	2.4366	26.113	842.90	.01279	.01279
#1	100.98	.04664	.06667	-.00543	13.594	-.00254	-.00446	16.249	34.772
#2	101.12	.04524	.06832	-.00509	13.133	-.00175	.00626	16.251	34.778
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00280**	**1.1182**	**-.00398**	**.00128**	**.00054**	**.08404**	**.00078**	**.11498**	**.00003**
Stddev	.00085	.0023	.00097	.00010	.00139	.00751	.00072	.00186	.00123
%RSD	30.523	.20833	24.286	7.6924	258.08	8.9316	92.376	1.6143	3690.3
#1	-.00219	1.1166	-.00330	.00135	-.00045	.07874	.00027	.11629	-.00084
#2	-.00340	1.1199	-.00467	.00121	.00153	.08935	.00129	.11367	.00090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3070.7**	**37413.**	**2685.7**
Stddev	3.7	159.	15.7
%RSD	.11891	.42616	.58341
#1	3073.3	37300.	2696.8
#2	3068.2	37526.	2674.6

Sample Name: 280-116176-A-4-A Acquired: 11/6/2018 15:19:28 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00074**	**.00233**	**.00109**	**.40578**	**.51760**	**-.00030**	**.00048**	**62.976**	**.00042**
Stddev	.00029	.00061	.00892	.01077	.00077	.00010	.00447	.174	.00014
%RSD	39.371	26.108	820.25	2.6536	.14800	34.955	930.69	.27605	32.007
#1	-.00053	.00190	.00739	.41339	.51706	-.00037	.00364	62.853	.00033
#2	-.00094	.00276	-.00522	.39816	.51814	-.00022	-.00268	63.099	.00052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00392**	**.00019**	**.00383**	**1.5849**	**.39305**	**.03058**	**38.023**	**1.5519**	**.00091**
Stddev	.00060	.00007	.00151	.0043	.01069	.00130	.148	.0076	.00057
%RSD	15.282	33.960	39.288	.27434	2.7209	4.2648	.39019	.49097	62.625
#1	.00434	.00015	.00490	1.5818	.38548	.02966	38.128	1.5573	.00051
#2	.00349	.00024	.00277	1.5880	.40061	.03151	37.918	1.5465	.00131
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**112.04**	**.01960**	**.19150**	**-.00308**	**5.9592**	**-.00057**	**-.00314**	**14.238**	**30.469**
Stddev	.21	.00069	.00443	.00105	.1643	.00298	.00311	.001	.003
%RSD	.18741	3.5138	2.3147	34.113	2.7562	521.32	99.194	.00870	.00870
#1	112.19	.02008	.19463	-.00234	6.0754	.00154	-.00534	14.239	30.471
#2	111.89	.01911	.18837	-.00383	5.8431	-.00268	-.00094	14.237	30.467
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00347**	**1.0188**	**-.00057**	**.00064**	**.00167**	**-.01867**	**.00025**	**.47707**	**.00150**
Stddev	.00030	.0010	.00038	.00042	.00018	.07915	.00020	.00326	.00049
%RSD	8.5411	.09480	66.307	66.602	10.610	423.89	81.902	.68385	32.875
#1	-.00368	1.0181	-.00030	.00034	.00154	-.07464	.00010	.47938	.00115
#2	-.00326	1.0195	-.00084	.00093	.00179	.03730	.00039	.47476	.00184
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3052.2**	**37441.**	**2698.5**
Stddev	9.0	99.	17.8
%RSD	.29458	.26560	.66009
#1	3058.5	37370.	2711.1
#2	3045.8	37511.	2686.0

Sample Name: 280-116176-A-5-A Acquired: 11/6/2018 15:22:01 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00084**	**.00562**	**.00364**	**.32503**	**.07451**	**.00000**	**.00222**	**116.09**	**.00043**
Stddev	.00114	.00069	.00238	.00538	.00177	.00010	.00317	.62	.00010
%RSD	135.67	12.269	65.343	1.6553	2.3719	4062.7	143.31	.53810	23.629
#1	-.00164	.00611	.00532	.32883	.07576	.00007	.00446	116.53	.00036
#2	-.00003	.00513	.00196	.32122	.07326	-.00007	-.00003	115.64	.00050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00019**	**.00226**	**.00294**	**6.0998**	**2.0729**	**.05242**	**44.545**	**.10566**	**-.00005**
Stddev	.00025	.00013	.00057	.0238	.0632	.00137	.110	.00010	.00014
%RSD	132.54	5.6665	19.399	.38941	3.0468	2.6187	.24593	.09728	282.97
#1	.00001	.00217	.00335	6.1166	2.0283	.05145	44.622	.10574	-.00015
#2	.00036	.00236	.00254	6.0830	2.1176	.05339	44.467	.10559	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**167.94**	**.00603**	**.19774**	**-.00428**	**40.074**	**.00354**	**-.00453**	**20.919**	**44.768**
Stddev	1.50	.00065	.00178	.00185	.810	.00249	.00097	.003	.007
%RSD	.89580	10.792	.89973	43.095	2.0218	70.306	21.305	.01632	.01632
#1	169.00	.00648	.19900	-.00559	40.646	.00178	-.00385	20.917	44.762
#2	166.88	.00557	.19649	-.00298	39.501	.00529	-.00522	20.922	44.773
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00174**	**1.1742**	**.00126**	**.00083**	**-.00008**	**.06418**	**-.00072**	**.69909**	**-.00045**
Stddev	.00150	.0043	.00103	.00046	.00220	.00054	.00107	.00101	.00152
%RSD	86.438	.36182	82.172	55.786	2641.4	.84827	148.28	.14473	338.35
#1	-.00068	1.1772	.00053	.00115	.00147	.06457	-.00148	.69981	-.00153
#2	-.00280	1.1712	.00199	.00050	-.00164	.06380	.00003	.69838	.00063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2944.7**	**36036.**	**2600.2**
Stddev	16.5	161.	6.7
%RSD	.55929	.44815	.25902
#1	2956.4	35922.	2595.4
#2	2933.1	36150.	2605.0

Sample Name: 280-116176-A-6-A Acquired: 11/6/2018 15:24:33 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00038**	**3.9206**	**.00485**	**1.1189**	**.22190**	**.00011**	**-.00276**	**97.580**	**.00036**
Stddev	.00145	.0734	.00278	.0236	.00053	.00021	.00729	.144	.00015
%RSD	385.73	1.8713	57.407	2.1066	.23993	188.65	263.91	.14793	40.257
#1	-.00065	3.8687	.00681	1.1356	.22228	.00026	-.00791	97.682	.00026
#2	.00140	3.9725	.00288	1.1022	.22153	-.00004	.00239	97.478	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00351**	**.00560**	**.00802**	**2.6199**	**.46129**	**.04575**	**32.195**	**.12884**	**.00005**
Stddev	.00011	.00029	.00033	.0149	.01932	.00675	.066	.00044	.00031
%RSD	3.1590	5.2127	4.1692	.56733	4.1893	14.760	.20494	.33969	682.60
#1	.00343	.00581	.00826	2.6094	.44762	.04097	32.241	.12915	-.00018
#2	.00359	.00539	.00778	2.6304	.47495	.05052	32.148	.12854	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**135.13**	**.01207**	**.18106**	**-.00586**	**34.991**	**.00623**	**.00402**	**24.971**	**53.438**
Stddev	.84	.00039	.00264	.00005	.778	.00106	.00030	.191	.408
%RSD	.62161	3.1905	1.4583	.83687	2.2235	17.074	7.4318	.76403	.76403
#1	135.72	.01235	.18292	-.00589	35.541	.00698	.00423	24.836	53.149
#2	134.54	.01180	.17919	-.00582	34.440	.00547	.00381	25.106	53.726
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00260**	**.96091**	**.00214**	**.06917**	**.00220**	**-.01873**	**.00578**	**.05034**	**.00548**
Stddev	.00136	.00260	.00499	.00225	.00010	.05691	.00130	.00085	.00109
%RSD	52.230	.27025	232.80	3.2464	4.3353	303.80	22.443	1.6981	19.940
#1	-.00357	.96275	.00567	.06758	.00213	.02151	.00669	.05095	.00471
#2	-.00164	.95908	-.00139	.07076	.00226	-.05897	.00486	.04974	.00626
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3028.5**	**36518.**	**2619.9**
Stddev	1.3	22.	19.3
%RSD	.04136	.05990	.73646
#1	3027.6	36502.	2633.5
#2	3029.4	36533.	2606.3

Sample Name: 280-116176-A-7-A Acquired: 11/6/2018 15:27:03 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**8.1912**	**.00958**	**1.1093**	**.31525**	**.00048**	**.00334**	**101.50**	**.00088**
Stddev	.00121	.1193	.00544	.0207	.00051	.00013	.00576	.14	.00065
%RSD	3894.9	1.4564	56.765	1.8618	.16286	27.641	172.62	.13952	73.745
#1	-.00088	8.1068	.01342	1.1239	.31489	.00058	.00742	101.60	.00134
#2	.00082	8.2756	.00573	1.0947	.31561	.00039	-.00074	101.40	.00042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00990**	**.01501**	**.02037**	**7.6212**	**.81342**	**.05293**	**35.708**	**.42341**	**.00123**
Stddev	.00078	.00158	.00081	.0246	.16484	.00313	.096	.00008	.00056
%RSD	7.8855	10.544	3.9684	.32319	20.265	5.9064	.26763	.01857	45.648
#1	.01046	.01613	.02094	7.6037	.92998	.05072	35.775	.42336	.00162
#2	.00935	.01389	.01980	7.6386	.69686	.05514	35.640	.42347	.00083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**135.69**	**.03773**	**.40134**	**-.00636**	**34.824**	**-.00005**	**-.00215**	**33.793**	**72.318**
Stddev	.04	.00206	.01585	.00287	.842	.00087	.00665	.528	1.131
%RSD	.03199	5.4554	3.9480	45.173	2.4171	1740.3	309.25	1.5637	1.5637
#1	135.72	.03918	.41255	-.00433	35.419	.00056	.00255	33.420	71.518
#2	135.66	.03627	.39014	-.00839	34.229	-.00066	-.00686	34.167	73.117
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.99786**	**-.00023**	**.14035**	**-.00317**	**.06044**	**.01419**	**.14963**	**.00412**
Stddev	.00096	.00191	.00202	.00249	.00351	.01459	.00010	.00030	.00293
%RSD	3609.7	.19145	879.09	1.7758	110.60	24.148	.73522	.20174	71.161
#1	.00071	.99921	-.00166	.14211	-.00069	.07076	.01412	.14984	.00205
#2	-.00065	.99650	.00120	.13858	-.00566	.05012	.01426	.14941	.00619
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3022.9**	**36965.**	**2662.0**
Stddev	10.6	95.	14.1
%RSD	.35105	.25796	.53098
#1	3030.4	36897.	2672.0
#2	3015.4	37032.	2652.0

Sample Name: 280-116176-A-9-A Acquired: 11/6/2018 15:29:32 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**-.00144**	**.00621**	**.93276**	**.01928**	**-.00015**	**-.00333**	W **564.53**	**.00010**
Stddev	.00096	.00098	.00524	.01100	.00003	.00029	.00965	.52	.00001
%RSD	1241.7	68.358	84.383	1.1791	.14354	197.94	289.93	.09150	12.593
#1	-.00076	-.00214	.00250	.94054	.01926	-.00035	-.01015	564.89	.00009
#2	.00060	-.00074	.00991	.92498	.01930	.00006	.00350	564.16	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00107**	**.00067**	**.00517**	**.00534**	**2.3628**	**.14858**	**107.66**	**.26812**	**.00116**
Stddev	.00004	.00071	.00100	.00090	.0863	.00244	.22	.00023	.00100
%RSD	3.8091	105.62	19.336	16.791	3.6517	1.6397	.20810	.08430	86.212
#1	.00110	.00017	.00446	.00598	2.4238	.15031	107.82	.26828	.00045
#2	.00104	.00117	.00588	.00471	2.3018	.14686	107.50	.26796	.00187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**415.39**	**.01096**	**.12926**	**-.00902**	F **653.75**	**.00751**	**-.00769**	**24.396**	**52.207**
Stddev	2.01	.00008	.00102	.00049	10.83	.00223	.00873	.009	.018
%RSD	.48501	.77122	.79050	5.4755	1.6565	29.715	113.48	.03508	.03508
#1	416.81	.01102	.12998	-.00937	661.41	.00908	-.01386	24.402	52.220
#2	413.96	.01090	.12853	-.00867	646.09	.00593	-.00152	24.390	52.194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00331**	**2.8425**	**-.00117**	**.00002**	**-.00073**	**-.04255**	**.00135**	**.00579**	**-.00185**
Stddev	.00041	.0007	.00036	.00096	.00315	.04140	.00030	.00165	.00564
%RSD	12.381	.02581	30.980	4665.4	429.31	97.306	22.428	28.455	305.79
#1	-.00360	2.8420	-.00091	-.00066	-.00296	-.07183	.00114	.00695	-.00584
#2	-.00302	2.8430	-.00142	.00070	.00149	-.01327	.00157	.00462	.00214
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2862.6**	**34456.**	**2542.2**
Stddev	2.6	59.	2.9
%RSD	.09237	.17264	.11554
#1	2860.8	34414.	2544.2
#2	2864.5	34498.	2540.1

Sample Name: 280-116176-A-10-A Acquired: 11/6/2018 15:32:04 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00028**	**.01141**	**.00054**	**.69337**	**.02106**	**-.00003**	**-.00924**	W **640.48**	**.00034**
Stddev	.00069	.00014	.00134	.01044	.00108	.00035	.00001	3.64	.00002
%RSD	245.43	1.1989	250.06	1.5053	5.1401	1349.1	.06697	.56768	6.8257
#1	-.00077	.01151	-.00041	.70075	.02029	.00022	-.00924	637.91	.00036
#2	.00021	.01132	.00148	.68599	.02182	-.00027	-.00923	643.05	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**.00085**	**.00665**	**.02281**	**3.0279**	**.20500**	**117.65**	**.04564**	**.00007**
Stddev	.00004	.00038	.00044	.00047	.0347	.00268	.65	.00020	.00036
%RSD	81.944	45.364	6.5833	2.0697	1.1470	1.3058	.55320	.42738	486.22
#1	-.00008	.00112	.00696	.02314	3.0033	.20689	118.11	.04578	.00032
#2	-.00002	.00057	.00634	.02247	3.0524	.20311	117.19	.04550	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**463.58**	**.00829**	**.10569**	**-.00695**	F **706.62**	**.00376**	**.00521**	**22.901**	**49.007**
Stddev	3.92	.00027	.00420	.00079	11.90	.00064	.01938	.194	.415
%RSD	.84637	3.2851	3.9706	11.400	1.6846	16.956	372.10	.84759	.84759
#1	460.80	.00848	.10866	-.00751	715.03	.00331	.01891	22.763	48.713
#2	466.35	.00810	.10272	-.00639	698.20	.00421	-.00850	23.038	49.301
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00416**	**2.8298**	**.00139**	**.00104**	**.00073**	**-.10848**	**.00058**	**.01002**	**.00209**
Stddev	.00055	.0163	.00210	.00157	.00177	.04966	.00029	.00001	.00102
%RSD	13.297	.57746	151.12	150.28	240.74	45.778	49.010	.07735	48.870
#1	-.00377	2.8183	.00288	-.00007	-.00052	-.07337	.00078	.01001	.00281
#2	-.00456	2.8414	-.00010	.00215	.00198	-.14360	.00038	.01002	.00137
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2865.5**	**34641.**	**2589.7**
Stddev	4.8	37.	36.1
%RSD	.16880	.10819	1.3950
#1	2862.1	34615.	2615.3
#2	2868.9	34668.	2564.2

Sample Name: 116176-A-10-Asd@5 Acquired: 11/6/2018 15:34:36 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00073**	**.00133**	**.00342**	**.13795**	**.00355**	**-.00035**	**.00158**	**121.63**	**-.00009**
Stddev	.00102	.00089	.01010	.00380	.00018	.00013	.00237	.50	.00000
%RSD	139.86	66.957	295.61	2.7513	5.0402	37.837	150.36	.41329	4.7545
#1	-.00145	.00070	.01056	.14063	.00343	-.00044	-.00010	121.98	-.00009
#2	-.00001	.00196	-.00373	.13527	.00368	-.00026	.00325	121.27	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00020**	**.00029**	**.00173**	**.00322**	**.63321**	**.03701**	**22.476**	**.00881**	**-.00011**
Stddev	.00006	.00003	.00042	.00563	.12876	.00153	.035	.00011	.00023
%RSD	30.710	9.3131	24.586	174.97	20.334	4.1426	.15794	1.2166	202.69
#1	.00025	.00031	.00143	.00720	.72426	.03810	22.451	.00874	.00005
#2	.00016	.00027	.00203	-.00076	.54217	.03593	22.501	.00889	-.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**88.348**	**.00056**	**.01898**	**-.00002**	**130.52**	**.00241**	**-.00074**	**4.2528**	**9.1009**
Stddev	.677	.00073	.00366	.00030	2.51	.00181	.00172	.0443	.0948
%RSD	.76657	130.47	19.307	1360.3	1.9209	75.134	230.72	1.0414	1.0414
#1	88.826	.00004	.01639	-.00024	132.29	.00369	-.00196	4.2841	9.1680
#2	87.869	.00107	.02157	.00019	128.74	.00113	.00047	4.2215	9.0339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00230**	**.52775**	**.00668**	**-.00043**	**.00178**	**-.05101**	**-.00100**	**.00196**	**-.00123**
Stddev	.00174	.00089	.00265	.00021	.00130	.05087	.00143	.00180	.00275
%RSD	75.773	.16840	39.679	47.977	73.134	99.728	142.52	91.482	224.62
#1	-.00353	.52838	.00855	-.00029	.00086	-.01504	-.00201	.00069	-.00317
#2	-.00107	.52713	.00481	-.00058	.00270	-.08698	.00001	.00324	.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2979.7**	**36591.**	**2634.7**
Stddev	11.7	221.	25.1
%RSD	.39380	.60481	.95268
#1	2971.4	36747.	2616.9
#2	2988.0	36435.	2652.4

Sample Name: 280-116176-A-10-B MS Acquired: 11/6/2018 15:37:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04830**	**1.9890**	**1.0223**	**1.6275**	**2.1038**	**.05093**	**1.8608**	W **675.21**	**.09297**
Stddev	.00166	.0517	.0325	.0434	.0045	.00022	.0382	7.10	.00224
%RSD	3.4410	2.5982	3.1742	2.6650	.21347	.42267	2.0522	1.0519	2.4138
#1	.04947	2.0255	1.0453	1.6582	2.1070	.05078	1.8878	680.23	.09456
#2	.04712	1.9524	.99940	1.5968	2.1006	.05108	1.8338	670.19	.09138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46224**	**.19211**	**.25681**	**1.0145**	**55.666**	**1.2381**	**162.66**	**.52138**	**.99530**
Stddev	.01196	.00519	.00076	.0025	.260	.0055	.07	.00000	.03120
%RSD	2.5870	2.7017	.29422	.24408	.46757	.44471	.04230	.00004	3.1350
#1	.47069	.19578	.25628	1.0163	55.850	1.2420	162.71	.52138	1.0174
#2	.45378	.18844	.25735	1.0128	55.482	1.2342	162.62	.52138	.97323
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **503.83**	**.46409**	**10.915**	**.44841**	F **684.25**	**.49668**	**2.0323**	**32.638**	**69.845**
Stddev	.66	.01274	.311	.01457	17.74	.01583	.0527	.179	.384
%RSD	.13094	2.7453	2.8489	3.2491	2.5926	3.1869	2.5938	.54927	.54927
#1	504.30	.47310	11.135	.45871	696.79	.50787	2.0696	32.764	70.116
#2	503.37	.45508	10.695	.43811	671.70	.48549	1.9950	32.511	69.573
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9167**	**3.8297**	**.95995**	**.98163**	**1.7475**	**1.9640**	**.51692**	**.48770**	**.51813**
Stddev	.0489	.0168	.00644	.00189	.0478	.0183	.00464	.00031	.00587
%RSD	2.5520	.43759	.67096	.19222	2.7333	.93011	.89774	.06265	1.1323
#1	1.9513	3.8416	.96450	.98296	1.7812	1.9511	.52021	.48749	.52228
#2	1.8821	3.8179	.95539	.98029	1.7137	1.9769	.51364	.48792	.51398
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2791.4**	**33976.**	**2541.2**
Stddev	2.4	18.	.9
%RSD	.08636	.05376	.03646
#1	2789.7	33963.	2541.9
#2	2793.1	33989.	2540.5

Sample Name: 280-116176-A-10-C MS Acquired: 11/6/2018 15:39:32 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04900**	**1.9820**	**1.0396**	**1.6412**	**2.0788**	**.05041**	**1.8616**	W **672.39**	**.09300**
Stddev	.00162	.0847	.0429	.0606	.0112	.00082	.0689	1.13	.00366
%RSD	3.3017	4.2729	4.1263	3.6912	.53897	1.6188	3.7041	.16763	3.9305
#1	.05015	2.0419	1.0699	1.6840	2.0709	.04984	1.9103	673.19	.09558
#2	.04786	1.9221	1.0092	1.5984	2.0867	.05099	1.8128	671.60	.09041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46048**	**.19121**	**.25648**	**1.0055**	**55.018**	**1.2203**	**164.61**	**.52112**	**1.0004**
Stddev	.01959	.00847	.00015	.0053	.353	.0045	.28	.00108	.0439
%RSD	4.2535	4.4308	.05889	.52468	.64086	.36435	.16759	.20788	4.3874
#1	.47433	.19720	.25658	1.0092	54.769	1.2171	164.81	.52188	1.0315
#2	.44663	.18522	.25637	1.0018	55.267	1.2234	164.42	.52035	.96941
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **502.94**	**.46216**	**10.903**	**.44553**	F **699.16**	**.50910**	**2.0324**	**32.533**	**69.621**
Stddev	3.67	.01926	.433	.02251	27.30	.02085	.0748	.027	.058
%RSD	.73021	4.1685	3.9749	5.0534	3.9043	4.0946	3.6822	.08278	.08278
#1	500.34	.47578	11.209	.46145	718.46	.52384	2.0853	32.514	69.581
#2	505.53	.44853	10.596	.42961	679.86	.49436	1.9795	32.552	69.662
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9220**	**3.8302**	**.96261**	**.99122**	**1.7370**	**1.9556**	**.51617**	**.48720**	**.52481**
Stddev	.0839	.0131	.00413	.00020	.0684	.0425	.00175	.00116	.00539
%RSD	4.3678	.34217	.42926	.02054	3.9377	2.1744	.33960	.23880	1.0268
#1	1.9814	3.8209	.96554	.99107	1.7854	1.9256	.51741	.48802	.52100
#2	1.8627	3.8395	.95969	.99136	1.6886	1.9857	.51494	.48638	.52863
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2946.7**	**35546.**	**2681.4**
Stddev	48.0	2.	3.6
%RSD	1.6299	.00634	.13392
#1	2912.8	35547.	2678.9
#2	2980.7	35544.	2683.9

Sample Name: CCVH-5408055 Acquired: 11/6/2018 15:41:58 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00399**	**47.788**	**.00423**	**.00752**	**.00018**	**-.00018**	**.96470**	**.12615**	**-.00059**	**.00185**	**.00105**	**-.00065**	**47.571**
Stddev	.00003	.402	.00192	.00033	.00042	.00002	.01493	.02599	.00020	.00001	.00021	.00018	.191
%RSD	.69392	.84071	45.291	4.3956	228.18	11.394	1.5474	20.603	33.308	.29409	20.272	27.679	.40231
#1	-.00397	48.072	.00558	.00729	.00048	-.00016	.97526	.14453	-.00045	.00185	.00120	-.00053	47.706
#2	-.00401	47.504	.00287	.00775	-.00011	-.00019	.95415	.10777	-.00073	.00184	.00090	-.00078	47.436
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.06750**	**-.00131**	**-.03571**	**.00240**	**.00116**	**237.74**	**.00312**	**.00571**	**-.00252**	**5.0587**	**.00399**	**.00033**	**.03749**
Stddev	.02815	.00214	.01563	.00003	.00033	1.97	.00051	.00464	.00048	.2373	.00052	.00333	.02075
%RSD	41.704	163.01	43.767	1.1633	28.230	.83052	16.293	81.171	18.923	4.6915	12.940	1017.2	55.352
#1	-.04760	.00020	-.04676	.00238	.00093	239.13	.00276	.00899	-.00218	5.2265	.00362	.00268	.02282
#2	-.08741	-.00282	-.02466	.00242	.00140	236.34	.00348	.00243	-.00286	4.8909	.00435	-.00203	.05217
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08023**	**-.00187**	**.00114**	**4.5557**	**.02018**	**.00222**	**9.5262**	**-.00884**	**.00016**	**.07434**
Stddev	.04441	.00034	.00003	.0361	.00090	.00275	.0288	.00036	.00005	.00238
%RSD	55.352	18.049	2.4013	.79305	4.4352	123.61	.30178	4.0966	32.658	3.2064
#1	.04883	-.00211	.00112	4.5813	.01955	.00028	9.5465	-.00859	.00020	.07265
#2	.11164	-.00163	.00116	4.5302	.02081	.00416	9.5058	-.00910	.00012	.07602
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3238.5**	**39226.**	**2806.0**
Stddev	4.6	601.	2.2
%RSD	.14200	1.5315	.07906
#1	3241.7	38801.	2804.4
#2	3235.2	39651.	2807.6

Sample Name: CCV-5407546 Acquired: 11/6/2018 15:44:30 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48858**	**.53612**	**.98272**	**.48622**	**.50335**	**.49898**	**.00259**	**4.9263**	**.48280**	**.48167**	**.48255**	**.50255**	**2.4174**	**49.387**
Stddev	.00155	.01068	.02240	.01097	.00191	.00119	.00411	.0049	.01009	.00952	.00936	.00013	.0043	.006
%RSD	.31624	1.9912	2.2794	2.2556	.38036	.23907	158.72	.09863	2.0904	1.9760	1.9394	.02644	.17653	.01296
#1	.48967	.54367	.99856	.49397	.50199	.49814	.00549	4.9297	.48993	.48840	.48917	.50245	2.4144	49.382
#2	.48748	.52857	.96688	.47846	.50470	.49983	-.00032	4.9228	.47566	.47494	.47593	.50264	2.4204	49.391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value														
Range														

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0085**	**19.304**	**.47581**	**.48056**	**5.2353**	**.47974**	**.98896**	**.97218**	**.17401**	**.96921**	**.98873**	**4.8569**	**10.394**	**.97261**
Stddev	.0089	.034	.00093	.01017	.0211	.01041	.02070	.02191	.00658	.01828	.01240	.0075	.016	.02504
%RSD	.88302	.17820	.19519	2.1171	.40329	2.1696	2.0933	2.2532	3.7836	1.8863	1.2539	.15403	.15403	2.5741
#1	1.0148	19.328	.47646	.48776	5.2502	.48709	1.0036	.98767	.17867	.98214	.99750	4.8516	10.382	.99031
#2	1.0022	19.279	.47515	.47337	5.2204	.47238	.97432	.95669	.16936	.95628	.97996	4.8622	10.405	.95491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value														
Range														

Elem	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49881**	**.00956**	**.47110**	**1.0032**	**.06360**	**.48457**	**.47018**	**.49646**
Stddev	.00142	.00162	.00082	.0116	.01318	.00207	.00159	.00292
%RSD	.28514	16.917	.17466	1.1587	20.722	.42725	.33741	.58857
#1	.49781	.00842	.47168	1.0114	.05428	.48604	.46906	.49439
#2	.49982	.01070	.47052	.99500	.07292	.48311	.47130	.49853
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3350.3**	**41336.**	**2922.4**
Stddev	2.7	254.	3.4
%RSD	.07971	.61338	.11619
#1	3348.4	41156.	2924.8
#2	3352.2	41515.	2920.0

Sample Name: CCB Acquired: 11/6/2018 15:46:58 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00112**	**-.00004**	**-.00145**	**.00458**	**.00018**	**.00014**	**-.00369**	**.00380**	**-.00003**	**.00059**	**.00023**	**.00009**
Stddev	.00075	.00018	.00407	.00094	.00003	.00002	.00010	.00323	.00018	.00061	.00005	.00029
%RSD	66.677	477.23	281.18	20.560	17.389	16.207	2.6090	84.933	687.75	103.36	21.430	307.41
#1	-.00165	-.00016	-.00433	.00525	.00016	.00016	-.00362	.00608	-.00015	.00016	.00027	-.00011
#2	-.00059	.00009	.00143	.00392	.00020	.00012	-.00376	.00152	.00010	.00102	.00020	.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**-.16538**	**-.00517**	**.00075**	**.00006**	**.00049**	**.19508**	**-.00052**	**-.00003**	**-.00030**	F **.14684**	**-.00124**
Stddev	.00319	.01922	.00567	.00294	.00000	.00039	.01109	.00046	.00636	.00240	.01248	.00555
%RSD	979.54	11.623	109.68	393.95	2.1569	78.171	5.6869	87.661	23409.	804.07	8.5018	445.43
#1	-.00193	-.15179	-.00918	-.00133	.00006	.00022	.20292	-.00020	-.00453	-.00200	.15567	.00268
#2	.00258	-.17898	-.00116	.00282	.00006	.00077	.18723	-.00084	.00447	.00140	.13802	-.00517
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit											.10000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00046**	**.04714**	**.10087**	**-.00189**	**.00008**	**.00082**	**.00098**	**.00024**	**.09347**	**-.00009**	**.00012**	**.00401**
Stddev	.00212	.03246	.06947	.00059	.00030	.00091	.00064	.00156	.03588	.00043	.00037	.00160
%RSD	457.84	68.866	68.866	31.287	350.96	111.30	65.329	659.79	38.384	476.45	305.64	39.885
#1	.00104	.02418	.05175	-.00231	-.00012	.00017	.00143	.00134	.11884	-.00039	-.00014	.00514
#2	-.00196	.07009	.14999	-.00147	.00029	.00146	.00053	-.00087	.06810	.00021	.00038	.00288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3316.9**	**41303.**	**2878.8**
Stddev	3.7	312.	15.5
%RSD	.11241	.75653	.53800
#1	3314.2	41082.	2867.9
#2	3319.5	41524.	2889.8

Sample Name: ccvl-5413446 Acquired: 11/6/2018 15:49:34 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01000**	**.10887**	F **.02185**	**.09931**	**.00974**	**.00111**	**.10891**	**.20328**	**.00465**	**.01065**	**.01002**	**.01537**
Stddev	.00035	.00323	.00049	.00178	.00043	.00007	.00030	.00606	.00042	.00021	.00020	.00022
%RSD	3.4532	2.9672	2.2606	1.7969	4.3833	6.0611	.27097	2.9810	8.9560	1.9545	1.9641	1.4628
#1	.00976	.11116	.02150	.10057	.01004	.00107	.10870	.20757	.00494	.01080	.01016	.01521
#2	.01025	.10659	.02220	.09805	.00943	.00116	.10911	.19900	.00435	.01051	.00988	.01553
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10106**	**2.9361**	**.01877**	**.20673**	**.00981**	**.01903**	**1.1654**	**.03931**	**2.8692**	**.00791**	F **.20294**	**.02158**
Stddev	.00684	.1524	.00627	.00128	.00001	.00080	.0137	.00043	.0715	.00273	.01058	.00384
%RSD	6.7713	5.1919	33.437	.61860	.14657	4.2031	1.1763	1.1064	2.4910	34.557	5.2158	17.809
#1	.10590	3.0439	.02320	.20583	.00980	.01960	1.1557	.03962	2.9197	.00598	.21042	.02430
#2	.09622	2.8283	.01433	.20764	.00982	.01846	1.1750	.03901	2.8187	.00985	.19545	.01886
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value											.10000	
Range											30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01853**	**.54287**	**1.1617**	**.09610**	**.01004**	**.01574**	**.00966**	**.01848**	**.05714**	**.00972**	**.01951**	F **.02296**
Stddev	.00366	.02069	.0443	.00366	.00022	.00076	.00063	.00293	.06178	.00009	.00056	.00289
%RSD	19.754	3.8104	3.8104	3.8125	2.1574	4.8225	6.4934	15.861	108.12	.91806	2.8758	12.584
#1	.02112	.55749	1.1930	.09869	.00989	.01628	.00922	.01640	.10083	.00965	.01911	.02500
#2	.01594	.52824	1.1304	.09351	.01020	.01521	.01011	.02055	.01346	.00978	.01991	.02092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value												.01500
Range												30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3402.5**	**42171.**	**2949.6**
Stddev	9.7	1.	6.6
%RSD	.28422	.00241	.22435
#1	3409.3	42171.	2954.3
#2	3395.7	42172.	2944.9

Sample Name: 280-116176-A-11-A Acquired: 11/6/2018 15:52:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00076**	**.02213**	**.00572**	**1.0044**	**.01375**	**.00036**	**-.00316**	W **643.58**	**-.00013**
Stddev	.00003	.00550	.00259	.0423	.00079	.00037	.00377	1.57	.00022
%RSD	3.9003	24.865	45.280	4.2144	5.7547	103.94	119.20	.24326	173.36
#1	-.00079	.02602	.00755	1.0343	.01431	.00062	-.00583	642.48	-.00029
#2	-.00074	.01824	.00389	.97445	.01319	.00010	-.00050	644.69	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00163**	**.00035**	**.00182**	**.23855**	**5.3770**	**.29166**	**110.47**	**.14477**	**.00087**
Stddev	.00019	.00000	.00064	.00250	.0163	.00153	.38	.00073	.00023
%RSD	11.912	.59590	35.430	1.0490	.30355	.52442	.33953	.50706	26.009
#1	.00177	.00034	.00136	.23678	5.3655	.29058	110.73	.14529	.00103
#2	.00150	.00035	.00227	.24032	5.3886	.29274	110.20	.14426	.00071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**431.83**	**.01255**	**.18910**	**-.00874**	F **719.99**	**.00487**	**-.00644**	**21.549**	**46.114**
Stddev	1.15	.00064	.00653	.00173	29.28	.00319	.00094	.100	.215
%RSD	.26682	5.1133	3.4517	19.755	4.0668	65.428	14.651	.46517	.46517
#1	431.02	.01210	.19371	-.00997	740.69	.00712	-.00577	21.478	45.963
#2	432.65	.01301	.18448	-.00752	699.28	.00262	-.00711	21.620	46.266
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00245**	**3.2221**	**-.00293**	**.00119**	**-.00116**	**.06621**	**-.00045**	**.00451**	**.00832**
Stddev	.00181	.0019	.00529	.00014	.00218	.03639	.00034	.00039	.00310
%RSD	74.002	.05817	180.76	11.672	188.25	54.964	75.805	8.5919	37.290
#1	-.00373	3.2208	-.00667	.00129	-.00270	.09195	-.00069	.00479	.00612
#2	-.00117	3.2235	.00081	.00109	.00038	.04048	-.00021	.00424	.01051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2985.2**	**38051.**	**2919.9**
Stddev	75.0	119.	27.4
%RSD	2.5139	.31310	.93781
#1	2932.1	37967.	2939.3
#2	3038.2	38135.	2900.6

Sample Name: 280-116176-A-12-A Acquired: 11/6/2018 15:54:46 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435443 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00024**	**.00558**	**-.00262**	**1.3008**	**.01374**	**-.00013**	**-.00333**	**472.99**	**.00107**
Stddev	.00028	.00117	.00384	.0306	.00049	.00003	.00004	.87	.00005
%RSD	115.96	20.945	146.30	2.3496	3.5739	21.331	1.2109	.18391	5.1236
#1	-.00044	.00475	-.00533	1.3224	.01339	-.00015	-.00336	473.60	.00103
#2	-.00004	.00641	.00009	1.2791	.01409	-.00011	-.00330	472.37	.00111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.00043**	**.00529**	**.06106**	**10.360**	**.39756**	**215.88**	**.26516**	**-.00066**
Stddev	.00037	.00006	.00049	.00064	.098	.00668	.17	.00012	.00007
%RSD	105.55	14.466	9.2576	1.0472	.94643	1.6809	.07718	.04414	10.783
#1	.00061	.00047	.00494	.06151	10.430	.40228	216.00	.26524	-.00061
#2	.00009	.00039	.00563	.06061	10.291	.39283	215.76	.26507	-.00071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **839.64**	**.00651**	**.07733**	**-.00897**	F **1021.4**	**.00453**	**.00314**	**25.245**	**54.025**
Stddev	2.24	.00021	.00392	.00124	26.4	.00565	.00153	.045	.097
%RSD	.26719	3.2927	5.0727	13.773	2.5814	124.55	48.720	.17923	.17923
#1	841.23	.00636	.08010	-.00985	1040.0	.00054	.00423	25.277	54.093
#2	838.06	.00667	.07456	-.00810	1002.7	.00853	.00206	25.213	53.956
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00606**	**3.3434**	**-.00115**	**.00081**	**-.00027**	**-.02031**	**-.00115**	**.00466**	**.00407**
Stddev	.00071	.0073	.00161	.00019	.00258	.05441	.00002	.00041	.00248
%RSD	11.695	.21747	140.11	23.303	958.73	267.90	1.7437	8.8042	60.887
#1	-.00556	3.3485	-.00001	.00094	-.00209	-.05878	-.00114	.00495	.00582
#2	-.00657	3.3382	-.00229	.00067	.00155	.01816	-.00117	.00437	.00232
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2879.1**	**34811.**	**2665.1**
Stddev	.3	143.	18.6
%RSD	.01145	.41137	.69849
#1	2879.3	34912.	2652.0
#2	2878.9	34709.	2678.3

Sample Name: MB 280-435482/1-A Acquired: 11/6/2018 15:57:24 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/1 Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00090**	**.00836**	W **.00804**	**.00608**	**.00002**	**-.00012**	**-.00094**	**.05264**	**-.00021**
Stddev	.00026	.00067	.00069	.00202	.00023	.00012	.00549	.00452	.00011
%RSD	29.100	7.9955	8.6023	33.158	1143.5	100.65	583.44	8.5841	53.173
#1	-.00108	.00883	.00756	.00750	.00018	-.00003	-.00482	.05584	-.00029
#2	-.00071	.00788	.00853	.00465	-.00014	-.00020	.00294	.04945	-.00013
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.00750						
Low Limit			-.00750						

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00084**	**.00056**	**-.00042**	**.01022**	**.04516**	W **-.00672**	**.01106**	**.00028**	**.00026**
Stddev	.00019	.00005	.00064	.00108	.07545	.00259	.00848	.00011	.00011
%RSD	22.954	9.1919	151.91	10.582	167.06	38.639	76.633	37.049	41.599
#1	.00098	.00059	.00003	.00945	-.00819	-.00488	.00507	.00036	.00018
#2	.00071	.00052	-.00087	.01098	.09851	-.00855	.01705	.00021	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass
High Limit						.00500			
Low Limit						-.00500			

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.67251**	**-.00093**	**.00508**	**-.00058**	F **1.0150**	**.00078**	**-.00680**	**.03272**	**.07001**
Stddev	.03662	.00064	.00242	.00144	.5866	.00061	.00439	.01174	.02512
%RSD	5.4460	69.071	47.606	247.39	57.789	78.718	64.654	35.880	35.880
#1	.69841	-.00047	.00337	-.00160	1.4298	.00034	-.00369	.02442	.05225
#2	.64661	-.00138	.00679	.00044	.60027	.00121	-.00990	.04102	.08778
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None
High Limit	.50000				.10000				
Low Limit	-.50000				-.10000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00224**	**.00032**	**.00060**	**.00082**	**.00069**	**.03395**	**.00051**	**-.00009**	**.00230**
Stddev	.00107	.00010	.00393	.00003	.00188	.05075	.00019	.00084	.00114
%RSD	47.844	31.225	653.47	4.1854	271.25	149.48	38.021	968.47	49.857
#1	-.00148	.00039	.00338	.00080	.00202	-.00193	.00037	-.00068	.00149
#2	-.00300	.00025	-.00218	.00085	-.00064	.06984	.00065	.00051	.00311
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3438.1**	**42571.**	**2978.0**
Stddev	4.0	171.	9.8
%RSD	.11637	.40196	.32756
#1	3440.9	42450.	2971.1
#2	3435.3	42692.	2984.9

Sample Name: LCS 280-435482/2-A Acquired: 11/6/2018 15:59:59 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04576**	**2.0994**	**.97943**	**.99208**	**2.0288**	**.04980**	**1.9188**	**49.068**	**.09191**
Stddev	.00047	.0434	.01374	.01533	.0140	.00006	.0218	.179	.00259
%RSD	1.0176	2.0674	1.4031	1.5455	.68743	.11071	1.1346	.36524	2.8202
#1	.04609	2.1301	.98914	1.0029	2.0387	.04976	1.9342	49.195	.09375
#2	.04543	2.0687	.96971	.98123	2.0190	.04984	1.9034	48.942	.09008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47436**	**.19307**	**.24889**	**.98514**	**50.021**	**1.0067**	**47.458**	**.47215**	**.98364**
Stddev	.00888	.00378	.00011	.00043	.131	.0007	.032	.00032	.01864
%RSD	1.8720	1.9567	.04343	.04401	.26123	.06653	.06691	.06709	1.8945
#1	.48064	.19574	.24881	.98484	50.114	1.0072	47.481	.47237	.99681
#2	.46808	.19040	.24896	.98545	49.929	1.0063	47.436	.47192	.97046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.796**	**.46967**	**10.189**	**.48308**	**2.0981**	**.49069**	**1.9916**	**9.7533**	**20.872**
Stddev	.787	.00896	.202	.00826	.0425	.01186	.0367	.0164	.035
%RSD	1.5804	1.9080	1.9871	1.7106	2.0262	2.4178	1.8447	.16858	.16858
#1	49.240	.47601	10.332	.48892	2.1281	.49908	2.0176	9.7649	20.897
#2	50.353	.46333	10.046	.47724	2.0680	.48230	1.9656	9.7417	20.847
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9460**	**1.0057**	**.93120**	**.94731**	**1.9675**	**1.9287**	**.49791**	**.47319**	**.50828**
Stddev	.0354	.0047	.00024	.00002	.0390	.0139	.00158	.00037	.00026
%RSD	1.8180	.46423	.02603	.00224	1.9804	.71924	.31666	.07888	.05021
#1	1.9710	1.0090	.93103	.94730	1.9950	1.9385	.49902	.47292	.50846
#2	1.9210	1.0024	.93137	.94733	1.9399	1.9189	.49679	.47345	.50810
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3336.0**	**40980.**	**2936.2**
Stddev	2.9	114.	5.9
%RSD	.08796	.27727	.20035
#1	3333.9	40899.	2940.4
#2	3338.1	41060.	2932.1

Sample Name: LCSD 280-435482/3-A Acquired: 11/6/2018 16:02:20 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04674**	**2.1154**	**.99353**	**.99605**	**2.0140**	**.05018**	**1.9242**	**48.910**	**.09310**
Stddev	.00010	.0323	.01031	.01003	.0078	.00002	.0211	.053	.00123
%RSD	.20828	1.5248	1.0380	1.0075	.38719	.04332	1.0976	.10873	1.3185
#1	.04681	2.1382	1.0008	1.0031	2.0195	.05020	1.9392	48.947	.09396
#2	.04667	2.0926	.98624	.98895	2.0085	.05017	1.9093	48.872	.09223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47898**	**.19554**	**.25038**	**.97648**	**49.739**	**1.0068**	**47.682**	**.47521**	**.99108**
Stddev	.00518	.00170	.00135	.00533	.282	.0022	.099	.00177	.01492
%RSD	1.0813	.87188	.53981	.54541	.56696	.22344	.20763	.37230	1.5052
#1	.48264	.19674	.25134	.97271	49.938	1.0083	47.752	.47647	1.0016
#2	.47532	.19433	.24943	.98025	49.539	1.0052	47.612	.47396	.98053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**48.419**	**.47354**	**10.307**	**.48625**	**2.0691**	**.49568**	**1.9968**	**9.6125**	**20.571**
Stddev	.811	.00541	.108	.00361	.0394	.00596	.0249	.1076	.230
%RSD	1.6743	1.1433	1.0475	.74250	1.9018	1.2024	1.2453	1.1191	1.1191
#1	47.846	.47737	10.383	.48880	2.0969	.49989	2.0143	9.6886	20.734
#2	48.992	.46971	10.231	.48370	2.0412	.49146	1.9792	9.5365	20.408
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9576**	**1.0000**	**.94120**	**.95131**	**1.9946**	**2.0093**	**.49950**	**.47749**	**.50612**
Stddev	.0230	.0020	.00768	.00363	.0301	.0876	.00083	.00715	.00523
%RSD	1.1742	.19732	.81607	.38119	1.5083	4.3592	.16628	1.4977	1.0334
#1	1.9738	1.0014	.94663	.95388	2.0159	1.9474	.50009	.48255	.50981
#2	1.9413	.99862	.93577	.94875	1.9733	2.0713	.49891	.47244	.50242
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3300.3**	**40847.**	**2991.6**
Stddev	3.9	76.	16.1
%RSD	.11829	.18484	.53861
#1	3303.1	40794.	2980.2
#2	3297.6	40901.	3002.9

Sample Name: 280-116085-A-1-A Acquired: 11/6/2018 16:04:41 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00116**	**.05610**	**.00891**	**.00888**	**.03072**	**.00035**	**.00293**	**3.2495**	**-.00010**
Stddev	.00046	.00197	.00113	.00056	.00043	.00036	.00526	.0046	.00019
%RSD	39.402	3.5058	12.718	6.2726	1.4059	101.28	179.44	.14189	186.03
#1	-.00084	.05749	.00971	.00927	.03102	.00010	.00665	3.2527	-.00024
#2	-.00148	.05471	.00811	.00849	.03041	.00061	-.00079	3.2462	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00252**	**.00048**	**-.00086**	**1.9470**	**1.0758**	**.00547**	**1.0892**	**.04450**	**.00142**
Stddev	.00030	.00026	.00046	.0052	.0501	.00258	.0046	.00046	.00032
%RSD	11.982	53.033	53.519	.26686	4.6530	47.252	.42544	1.0231	22.506
#1	.00273	.00030	-.00053	1.9433	1.0404	.00364	1.0924	.04483	.00120
#2	.00231	.00066	-.00119	1.9507	1.1112	.00730	1.0859	.04418	.00165
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.8600**	**.00369**	**.01772**	**-.00384**	**1.2373**	**.00007**	**.00237**	**8.5626**	**18.324**
Stddev	.0265	.00027	.00437	.00098	.0511	.00254	.00239	.0265	.057
%RSD	.29922	7.2200	24.662	25.563	4.1295	3443.8	101.09	.30899	.30899
#1	8.8788	.00388	.02081	-.00315	1.2734	-.00172	.00406	8.5813	18.364
#2	8.8413	.00350	.01463	-.00454	1.2012	.00187	.00068	8.5439	18.284
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00125**	**.02364**	**.00211**	**.00066**	**.00126**	**.06326**	**.00069**	**.18361**	**.00449**
Stddev	.00030	.00037	.00148	.00029	.00050	.03132	.00090	.00052	.00131
%RSD	23.588	1.5689	70.279	44.225	40.081	49.513	131.02	.28073	29.166
#1	-.00146	.02337	.00106	.00046	.00161	.08540	.00005	.18397	.00357
#2	-.00104	.02390	.00316	.00087	.00090	.04111	.00133	.18325	.00542
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3389.1**	**42037.**	**2962.7**
Stddev	1.3	384.	10.7
%RSD	.03827	.91364	.36271
#1	3388.1	41765.	2955.1
#2	3390.0	42309.	2970.3

Sample Name: 280-116085-A-2-A Acquired: 11/6/2018 16:07:15 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00085**	**.16889**	**.00204**	**.03040**	**.05455**	**.00022**	**.00236**	**26.293**	**-.00004**
Stddev	.00117	.00218	.00372	.00118	.00003	.00001	.00612	.008	.00044
%RSD	138.64	1.2908	181.88	3.8698	.04792	3.6831	259.59	.03082	1189.6
#1	-.00002	.17043	.00467	.03123	.05456	.00022	.00669	26.287	-.00035
#2	-.00168	.16735	-.00058	.02957	.05453	.00023	-.00197	26.298	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00121**	**.00342**	**.00286**	**.45346**	**2.9081**	**.00435**	**3.1351**	**.01487**	**.00187**
Stddev	.00016	.00019	.00052	.00008	.0491	.00517	.0107	.00012	.00037
%RSD	13.630	5.5952	18.257	.01715	1.6876	118.86	.34214	.83136	19.519
#1	.00109	.00328	.00323	.45340	2.8734	.00069	3.1427	.01496	.00213
#2	.00132	.00355	.00249	.45351	2.9428	.00800	3.1275	.01478	.00162
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**47.794**	**.00176**	**.02856**	**-.00454**	**4.0853**	**.00121**	**-.00368**	**8.6477**	**18.506**
Stddev	.046	.00008	.00252	.00041	.0566	.00428	.00239	.0364	.078
%RSD	.09659	4.5537	8.8192	9.0816	1.3845	353.10	64.766	.42033	.42033
#1	47.761	.00171	.02677	-.00425	4.1253	-.00181	-.00200	8.6220	18.451
#2	47.826	.00182	.03034	-.00483	4.0453	.00424	-.00537	8.6734	18.561
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00268**	**.21583**	**.00098**	**.00259**	**.00143**	**.03213**	**.00580**	**.15968**	**.00458**
Stddev	.00160	.00011	.00194	.00087	.00071	.01426	.00015	.00033	.00151
%RSD	59.882	.05243	197.66	33.490	49.921	44.392	2.6229	.20355	32.989
#1	-.00155	.21591	.00236	.00198	.00092	.02204	.00570	.15945	.00564
#2	-.00381	.21575	-.00039	.00320	.00193	.04221	.00591	.15991	.00351
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3334.0**	**41076.**	**2918.4**
Stddev	6.7	120.	2.9
%RSD	.20148	.29116	.10043
#1	3338.8	41161.	2920.5
#2	3329.3	40992.	2916.4

Sample Name: 280-116085-A-2-Asd@5 Acquired: 11/6/2018 16:09:48 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00103**	**.03666**	**.00435**	**.00923**	**.01140**	**-.00011**	**.00429**	**5.3838**	**-.00048**
Stddev	.00028	.00287	.00226	.00227	.00063	.00034	.00426	.0407	.00028
%RSD	27.156	7.8322	51.910	24.634	5.4869	299.00	99.471	.75644	57.894
#1	-.00083	.03869	.00275	.01084	.01096	-.00035	.00127	5.3550	-.00028
#2	-.00123	.03463	.00595	.00762	.01184	.00013	.00730	5.4126	-.00067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00087**	**.00104**	**-.00108**	**.09270**	**.64278**	**-.00554**	**.66826**	**.00334**	**.00198**
Stddev	.00037	.00032	.00019	.00505	.04027	.00344	.00119	.00004	.00128
%RSD	42.672	30.708	17.693	5.4449	6.2648	62.199	.17737	1.1687	64.508
#1	.00113	.00126	-.00121	.08913	.61431	-.00310	.66742	.00331	.00289
#2	.00061	.00081	-.00094	.09627	.67125	-.00797	.66910	.00337	.00108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Line	589.592 { 57}	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.143**	**11.048**	**.00008**	**.00821**	**-.00062**	**1.1402**	**.00061**	**.00861**	**1.7601**
Stddev	.057	1.047	.00019	.00484	.00059	.3315	.00438	.00004	.0505
%RSD	.56542	9.4763	232.37	58.940	95.389	29.072	712.51	.47416	2.8668
#1	10.103	10.307	.00022	.01163	-.00020	1.3746	-.00248	.00864	1.7958
#2	10.184	11.788	-.00005	.00479	-.00104	.90583	.00371	.00858	1.7244
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062
Line	288.158 {117}2	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.7666**	**-.00157**	**.04406**	**-.00183**	**.00075**	**.00251**	**.03154**	**.00084**	**.03351**
Stddev	.1080	.00083	.00021	.00220	.00040	.00071	.00466	.00048	.00018
%RSD	2.8668	52.973	.48781	120.15	53.828	28.232	14.787	56.421	.53425
#1	3.8430	-.00098	.04391	-.00339	.00046	.00301	.03484	.00051	.03338
#2	3.6903	-.00216	.04422	-.00028	.00103	.00201	.02825	.00118	.03364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Zr3391
Line	339.198 { 99}
Units	ppm
Avg	**.00238**
Stddev	.00339
%RSD	142.28
#1	.00478
#2	-.00001
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: 280-116085-A-2-Asd@5 Acquired: 11/6/2018 16:09:48 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3364.4**	**41314.**	**2908.3**
Stddev	.6	16.	16.1
%RSD	.01757	.03808	.55264
#1	3364.8	41303.	2919.7
#2	3364.0	41325.	2897.0

Sample Name: 280-116085-A-2-B MS Acquired: 11/6/2018 16:12:23 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04588**	**2.2474**	**.99089**	**1.0030**	**2.0925**	**.05068**	**1.8908**	**72.990**	**.09185**
Stddev	.00074	.0466	.02695	.0161	.0121	.00020	.0288	.348	.00190
%RSD	1.6183	2.0718	2.7195	1.6016	.57748	.40169	1.5234	.47703	2.0726
#1	.04641	2.2804	1.0099	1.0144	2.1010	.05083	1.9112	73.236	.09320
#2	.04536	2.2145	.97184	.99165	2.0839	.05054	1.8705	72.744	.09051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47527**	**.19561**	**.25077**	**1.4022**	**52.571**	**1.0021**	**50.577**	**.48941**	**.99233**
Stddev	.00879	.00319	.00123	.0014	.356	.0005	.197	.00183	.02222
%RSD	1.8497	1.6310	.49120	.10367	.67777	.04677	.39013	.37326	2.2388
#1	.48149	.19787	.25164	1.4032	52.823	1.0025	50.717	.49070	1.0080
#2	.46906	.19336	.24990	1.4012	52.319	1.0018	50.438	.48812	.97662
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**107.29**	**.46965**	**10.286**	**.47368**	**5.2227**	**.49600**	**1.8966**	**18.397**	**39.370**
Stddev	1.01	.00846	.190	.00840	.0791	.01010	.0417	.026	.056
%RSD	.93765	1.8023	1.8499	1.7741	1.5152	2.0371	2.1967	.14249	.14249
#1	108.00	.47564	10.421	.47962	5.2787	.50314	1.9260	18.416	39.410
#2	106.58	.46367	10.151	.46774	5.1668	.48885	1.8671	18.379	39.331
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9479**	**1.1993**	**.93353**	**.95821**	**1.9253**	**1.9521**	**.50397**	**.59872**	**.51489**
Stddev	.0387	.0061	.00798	.00286	.0296	.0394	.00217	.00451	.00113
%RSD	1.9878	.51125	.85434	.29861	1.5384	2.0167	.43010	.75274	.21961
#1	1.9753	1.2036	.93917	.96023	1.9462	1.9242	.50550	.60191	.51409
#2	1.9205	1.1950	.92789	.95619	1.9043	1.9799	.50244	.59553	.51569
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3305.3**	**40310.**	**2906.0**
Stddev	4.0	403.	22.4
%RSD	.11977	.99929	.77227
#1	3302.5	40025.	2890.1
#2	3308.1	40595.	2921.9

Sample Name: 280-116085-A-2-C MSD Acquired: 11/6/2018 16:14:43 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04656**	**2.2524**	**.98655**	**1.0062**	**2.0773**	**.05043**	**1.8748**	**73.396**	**.09144**
Stddev	.00027	.0381	.01631	.0185	.0019	.00084	.0313	.200	.00286
%RSD	.59015	1.6916	1.6534	1.8412	.09055	1.6652	1.6710	.27181	3.1313
#1	.04675	2.2794	.99808	1.0193	2.0787	.05103	1.8969	73.537	.09346
#2	.04636	2.2255	.97501	.99309	2.0760	.04984	1.8526	73.255	.08941
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47289**	**.19502**	**.24924**	**1.3966**	**52.352**	**.99292**	**50.498**	**.49003**	**.98822**
Stddev	.00943	.00371	.00039	.0078	.000	.00067	.175	.00171	.02065
%RSD	1.9936	1.9018	.15481	.55917	.00009	.06763	.34641	.34885	2.0893
#1	.47956	.19764	.24951	1.3911	52.352	.99339	50.621	.49124	1.0028
#2	.46622	.19239	.24897	1.4021	52.352	.99244	50.374	.48882	.97362
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**107.48**	**.46853**	**10.259**	**.47349**	**5.3532**	**.48691**	**1.8795**	**18.497**	**39.583**
Stddev	.94	.01060	.212	.00772	.1144	.00826	.0346	.029	.062
%RSD	.87019	2.2629	2.0711	1.6312	2.1375	1.6971	1.8427	.15766	.15766
#1	106.82	.47602	10.409	.47895	5.4342	.49275	1.9040	18.517	39.627
#2	108.14	.46103	10.109	.46803	5.2723	.48107	1.8550	18.476	39.539
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9410**	**1.2003**	**.92848**	**.96031**	**1.9128**	**1.9490**	**.50325**	**.60233**	**.50799**
Stddev	.0443	.0036	.00627	.00449	.0385	.0245	.00406	.00355	.00105
%RSD	2.2845	.30037	.67535	.46753	2.0122	1.2578	.80752	.58970	.20629
#1	1.9723	1.2029	.93292	.96349	1.9400	1.9663	.50612	.60484	.50725
#2	1.9096	1.1978	.92405	.95714	1.8855	1.9317	.50037	.59982	.50873
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3260.5**	**40102.**	**2938.2**
Stddev	8.9	28.	5.3
%RSD	.27178	.07105	.18151
#1	3254.2	40082.	2942.0
#2	3266.8	40122.	2934.5

Sample Name: CCVH-5408055 Acquired: 11/6/2018 16:17:02 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00373**	**47.696**	**-.00733**	**.00636**	**.00033**	**.00010**	**.95267**	**.01282**	**-.00019**	**.00175**	**.00072**	**-.00120**	**47.202**
Stddev	.00023	.151	.00597	.00006	.00026	.00004	.02301	.01207	.00017	.00008	.00008	.00037	.357
%RSD	6.0543	.31623	81.457	1.0011	79.471	37.041	2.4148	94.144	88.262	4.5257	11.671	30.547	.75704
#1	-.00357	47.802	-.01155	.00631	.00014	.00008	.96894	.02135	-.00007	.00180	.00078	-.00146	47.455
#2	-.00389	47.589	-.00311	.00640	.00051	.00013	.93640	.00429	-.00032	.00169	.00066	-.00094	46.950
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.14046**	**.00229**	**-.06634**	**.00232**	**.00059**	**238.65**	**.00311**	**.00456**	**-.00090**	**4.7504**	**.00087**	**.00349**	**-.04060**
Stddev	.00965	.00318	.00547	.00012	.00015	.37	.00021	.00127	.00055	.0841	.00333	.00312	.01032
%RSD	6.8674	138.72	8.2442	5.0525	25.653	.15643	6.7970	27.763	60.859	1.7711	384.14	89.450	25.423
#1	-.14728	.00453	-.07021	.00224	.00070	238.38	.00326	.00545	-.00051	4.8099	-.00149	.00570	-.03330
#2	-.13364	.00004	-.06247	.00240	.00048	238.91	.00296	.00366	-.00129	4.6909	.00322	.00128	-.04790
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.08689**	**-.00192**	**.00071**	**4.5694**	**.01926**	**-.00026**	**9.5621**	**-.00981**	**-.00039**	**.07690**
Stddev	.02209	.00021	.00011	.0122	.00020	.00349	.0197	.00048	.00101	.00777
%RSD	25.423	11.169	15.154	.26690	1.0203	1365.1	.20610	4.8642	260.54	10.107
#1	-.07127	-.00177	.00064	4.5608	.01940	-.00272	9.5760	-.00947	.00033	.07140
#2	-.10251	-.00207	.00079	4.5780	.01912	.00221	9.5481	-.01015	-.00110	.08239
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3243.7**	**39460.**	**2853.5**
Stddev	7.3	240.	5.1
%RSD	.22478	.60709	.17750
#1	3248.8	39629.	2849.9
#2	3238.5	39290.	2857.1

Sample Name: CCV-5407546 Acquired: 11/6/2018 16:19:34 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48285**	**.53880**	**.97332**	**.48062**	**.50025**	**.49390**	**.00517**	**4.8993**	**.47618**	**.47604**	**.47782**	**.49446**	**2.4203**
Stddev	.00033	.01735	.01797	.00821	.00193	.00050	.00501	.0198	.01106	.01124	.01043	.00149	.0053
%RSD	.06847	3.2202	1.8464	1.7088	.38502	.10151	96.861	.40506	2.3217	2.3606	2.1837	.30234	.21785
#1	.48262	.55106	.98603	.48642	.49889	.49425	.00872	4.9133	.48400	.48399	.48520	.49340	2.4166
#2	.48309	.52653	.96061	.47481	.50161	.49354	.00163	4.8852	.46837	.46810	.47044	.49552	2.4240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.277**	**1.0037**	**19.177**	**.47316**	**.47619**	**5.2267**	**.47523**	**.97689**	**.96051**	**.06757**	**.95328**	**.95785**	**4.8529**
Stddev	.161	.0012	.074	.00089	.01197	.0172	.01066	.02351	.02225	.01321	.02907	.02704	.0276
%RSD	.32765	.11991	.38550	.18890	2.5130	.32934	2.2423	2.4067	2.3164	19.547	3.0492	2.8235	.56778
#1	49.391	1.0046	19.230	.47379	.48465	5.2388	.48277	.99352	.97624	.07691	.97384	.97697	4.8723
#2	49.162	1.0029	19.125	.47253	.46773	5.2145	.46770	.96027	.94477	.05823	.93273	.93872	4.8334
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.385**	**.96304**	**.49468**	**.01533**	**.46789**	**.99103**	**-.00826**	**.48106**	**.47163**	**.49202**
Stddev	.059	.02243	.00056	.00348	.00243	.01612	.02880	.00179	.00125	.00091
%RSD	.56778	2.3290	.11280	22.670	.52000	1.6261	348.75	.37266	.26544	.18519
#1	10.427	.97890	.49428	.01779	.46961	1.0024	.01211	.48233	.47074	.49266
#2	10.343	.94718	.49507	.01287	.46617	.97964	-.02862	.47979	.47251	.49137
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3304.1**	**40560.**	**2863.6**
Stddev	3.5	87.	5.1
%RSD	.10652	.21498	.17684
#1	3301.6	40622.	2867.1
#2	3306.5	40498.	2860.0

Sample Name: CCB Acquired: 11/6/2018 16:22:00 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00086**	**-.00031**	**.00363**	**.00313**	**.00007**	**-.00033**	**-.00258**	**.00851**	**-.00017**	**-.00011**	**.00032**	**-.00087**
Stddev	.00029	.00015	.00589	.00058	.00021	.00047	.00145	.00202	.00030	.00055	.00009	.00065
%RSD	34.073	47.099	162.27	18.437	287.52	143.59	56.139	23.773	175.29	484.19	27.427	74.903
#1	-.00106	-.00041	-.00054	.00353	-.00007	-.00066	-.00360	.00708	.00004	-.00050	.00026	-.00133
#2	-.00065	-.00021	.00780	.00272	.00022	.00001	-.00155	.00994	-.00038	.00028	.00038	-.00041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**-.01479**	**-.00469**	**.00514**	**.00006**	**.00104**	**.16297**	**-.00038**	**.00034**	**-.00285**	W **.05259**	**.00429**
Stddev	.00144	.02934	.00450	.00326	.00020	.00019	.00553	.00002	.00085	.00087	.00040	.00636
%RSD	285.92	198.36	96.129	63.448	361.83	17.991	3.3925	4.7567	248.02	30.511	.75765	148.47
#1	-.00052	.00596	-.00787	.00283	.00020	.00117	.16688	-.00039	-.00026	-.00224	.05287	-.00021
#2	.00153	-.03554	-.00150	.00744	-.00009	.00091	.15907	-.00037	.00095	-.00347	.05231	.00878
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit											.05000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00139**	**.04047**	**.08662**	**-.00277**	**-.00007**	**.00373**	**.00087**	**-.00045**	**.05987**	**.00004**	**-.00033**	**.00418**
Stddev	.00875	.02904	.06214	.00051	.00008	.00208	.00111	.00291	.02437	.00023	.00046	.00436
%RSD	631.59	71.741	71.741	18.544	114.64	55.755	126.82	645.48	40.713	516.39	142.18	104.15
#1	-.00758	.01994	.04268	-.00314	-.00001	.00520	.00009	.00161	.04263	.00020	-.00065	.00726
#2	.00480	.06101	.13055	-.00241	-.00012	.00226	.00165	-.00251	.07710	-.00012	.00000	.00110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3289.4**	**40930.**	**2841.8**
Stddev	2.1	43.	12.6
%RSD	.06359	.10621	.44316
#1	3290.9	40899.	2850.7
#2	3287.9	40960.	2832.9

Sample Name: ccvl-5413446 Acquired: 11/6/2018 16:24:35 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00885**	**.11926**	F **.01992**	**.09575**	**.01017**	**.00094**	**.10378**	**.18958**	**.00412**	**.01043**	**.00997**	**.01518**
Stddev	.00122	.00340	.00288	.00300	.00024	.00029	.00250	.01242	.00050	.00003	.00034	.00016
%RSD	13.762	2.8534	14.439	3.1293	2.3291	31.369	2.4055	6.5490	12.257	.33111	3.4133	1.0478
#1	.00799	.12167	.02196	.09787	.01034	.00114	.10555	.19836	.00447	.01040	.01021	.01529
#2	.00971	.11686	.01789	.09363	.01000	.00073	.10202	.18080	.00376	.01045	.00973	.01506
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09524**	**2.9853**	**.01592**	**.20073**	**.00979**	**.01873**	**1.1799**	**.03869**	**2.8131**	**.01007**	F **.13839**	**.02132**
Stddev	.00218	.1165	.00527	.00037	.00017	.00026	.0112	.00141	.1004	.00010	.01186	.00289
%RSD	2.2926	3.9020	33.094	.18593	1.7366	1.4064	.95008	3.6359	3.5699	1.0270	8.5670	13.562
#1	.09370	2.9029	.01220	.20046	.00967	.01891	1.1878	.03969	2.8841	.01014	.14678	.02337
#2	.09678	3.0676	.01965	.20099	.00991	.01854	1.1719	.03770	2.7421	.01000	.13001	.01928
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value											.10000	
Range											30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02347**	**.49881**	**1.0675**	**.09397**	**.01017**	**.01520**	**.01008**	**.01789**	F **.10893**	**.00954**	**.01929**	**.01948**
Stddev	.00777	.00956	.0205	.00338	.00017	.00101	.00000	.00158	.03322	.00038	.00073	.00128
%RSD	33.132	1.9166	1.9166	3.6010	1.6475	6.6099	.02013	8.8143	30.498	3.9353	3.7612	6.5646
#1	.01797	.50557	1.0819	.09636	.01029	.01592	.01008	.01900	.13242	.00928	.01981	.01858
#2	.02896	.49205	1.0530	.09158	.01005	.01449	.01008	.01677	.08544	.00981	.01878	.02039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3335.3**	**41505.**	**2870.9**
Stddev	1.2	218.	4.6
%RSD	.03531	.52539	.15969
#1	3334.5	41659.	2874.2
#2	3336.2	41350.	2867.7

Sample Name: 280-116085-A-2-Apds Acquired: 11/6/2018 16:27:11 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03500**	**.95419**	**.14013**	**.07809**	**.14047**	**.04398**	**-.00208**	**42.602**	**.03336**
Stddev	.00186	.04448	.00702	.00389	.00281	.00204	.00013	.689	.00150
%RSD	5.3194	4.6619	5.0084	4.9797	1.9989	4.6299	6.4223	1.6166	4.5070
#1	.03632	.98564	.13517	.08084	.14245	.04542	-.00217	43.089	.03443
#2	.03369	.92273	.14509	.07534	.13848	.04254	-.00198	42.115	.03230
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03458**	**.03918**	**.04376**	**1.3053**	**19.113**	**.08357**	**18.004**	**.05235**	**.03066**
Stddev	.00136	.00164	.00016	.0224	.929	.00437	.418	.00131	.00220
%RSD	3.9413	4.1914	.36405	1.7132	4.8612	5.2265	2.3236	2.5056	7.1779
#1	.03554	.04034	.04387	1.3212	19.770	.08666	18.299	.05328	.03222
#2	.03361	.03802	.04364	1.2895	18.456	.08048	17.708	.05142	.02911
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**63.057**	**.03528**	**1.4280**	**.06093**	**3.9545**	**.05471**	**.12640**	**12.218**	**26.147**
Stddev	.860	.00230	.0793	.00507	.0749	.00482	.00689	.260	.557
%RSD	1.3638	6.5285	5.5559	8.3206	1.8936	8.8171	5.4527	2.1289	2.1289
#1	63.665	.03691	1.4841	.06451	4.0074	.05812	.13127	12.402	26.540
#2	62.449	.03365	1.3719	.05734	3.9015	.05130	.12152	12.034	25.753
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05779**	**.25502**	**.14967**	**.03515**	**.12607**	**.39393**	**.04362**	**.30603**	**.04762**
Stddev	.00634	.00213	.00206	.00166	.00898	.02095	.00083	.00382	.00571
%RSD	10.977	.83506	1.3778	4.7331	7.1200	5.3188	1.9061	1.2481	11.996
#1	.06228	.25652	.15113	.03632	.13242	.37911	.04421	.30873	.05166
#2	.05331	.25351	.14822	.03397	.11972	.40874	.04303	.30333	.04358
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3274.2**	**40360.**	**2869.3**
Stddev	1.8	167.	9.7
%RSD	.05389	.41438	.33938
#1	3272.9	40478.	2862.5
#2	3275.4	40242.	2876.2

Sample Name: 280-116085-A-3-A Acquired: 11/6/2018 16:29:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **-.00118**	k **.27904**	k **.00633**	**.00997**	**.05754**	k **.00018**	k **.03666**	**11.441**	k **-.00011**
Stddev	.00168	.01248	.00233	.00141	.00035	.00035	.01268	.033	.00029
%RSD	141.77	4.4729	36.905	14.153	.60349	195.63	34.589	.29117	257.49
#1	-.00237	.27021	.00468	.01097	.05779	-.00007	.02769	11.465	-.00032
#2	k .00000	k .28786	k .00798	.00897	.05730	k .00043	k .04563	11.418	k .00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00558**	k **.00101**	k **.00088**	**45.127**	**.80844**	**-.00286**	k **5.0079**	k **.14799**	k **-.00017**
Stddev	.00002	.00024	.00008	.298	.07216	.01029	.0021	.00016	.00075
%RSD	.27262	23.330	9.4555	.66000	8.9255	360.14	.04186	.10549	445.73
#1	.00557	.00085	.00094	45.337	.85946	-.01013	5.0064	.14810	.00036
#2	k .00559	k .00118	k .00082	44.916	.75742	.00442	k 5.0094	k .14788	k -.00069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.316**	k **.00644**	**.03057**	k **-.00003**	k **2.8913**	k **.00121**	k **.00571**	**3.7254**	**7.9723**
Stddev	1.414	.00023	.00016	.00048	.0490	.00150	.00034	.0191	.0408
%RSD	2.7037	3.6223	.52035	1520.2	1.6946	123.60	5.9969	.51187	.51187
#1	53.317	.00661	.03045	.00031	2.9260	.00227	.00547	3.7389	8.0012
#2	51.316	k .00628	.03068	k -.00037	k 2.8567	k .00015	k .00595	3.7119	7.9435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **-.00338**	**.07585**	k **.02276**	k **.00552**	k **.00336**	k **.07626**	k **.00046**	k **.01438**	k **.00212**
Stddev	.00037	.00035	.02435	.00026	.00006	.02583	.00053	.00064	.00077
%RSD	10.863	.45536	107.01	4.7622	1.7685	33.875	116.27	4.4702	36.420
#1	-.00312	.07609	.00554	.00533	.00341	.09453	.00083	.01392	.00266
#2	k -.00364	.07560	k .03997	k .00571	k .00332	k .05799	k .00008	k .01483	k .00157
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3277.4**	**40735.**	**2866.1**
Stddev	25.8	352.	10.1
%RSD	.78779	.86513	.35174
#1	3295.7	40985.	2859.0
#2	3259.2	40486.	2873.2

Sample Name: 280-116085-A-4-A Acquired: 11/6/2018 16:32:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00041**	**.54851**	**.00417**	**.00775**	**.14875**	**.00046**	**-.00110**	**13.106**	**.00015**
Stddev	.00046	.01863	.00166	.00056	.00061	.00044	.00299	.002	.00011
%RSD	113.17	3.3972	39.774	7.2384	.40901	97.027	271.05	.01820	77.215
#1	-.00073	.56168	.00299	.00735	.14918	.00014	.00101	13.105	.00023
#2	-.00008	.53533	.00534	.00814	.14832	.00077	-.00322	13.108	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00466**	**.00045**	**.00147**	**.03556**	**.93571**	**-.00397**	**6.3091**	**.07476**	**-.00001**
Stddev	.00009	.00065	.00063	.01570	.03852	.00148	.0017	.00006	.00024
%RSD	1.9460	142.66	42.944	44.165	4.1169	37.250	.02737	.08216	1891.9
#1	.00473	.00091	.00192	.02445	.90847	-.00502	6.3103	.07480	.00016
#2	.00460	-.00000	.00102	.04666	.96295	-.00293	6.3079	.07472	-.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**81.114**	**.00667**	**.00822**	**-.00340**	**4.8478**	**.00382**	**-.00113**	**8.3661**	**17.904**
Stddev	.232	.00034	.00043	.00398	.1318	.00279	.01015	.0241	.052
%RSD	.28585	5.1481	5.2070	116.84	2.7191	72.979	895.80	.28830	.28830
#1	81.278	.00692	.00852	-.00059	4.9410	.00185	-.00831	8.3491	17.867
#2	80.950	.00643	.00792	-.00621	4.7546	.00580	.00604	8.3832	17.940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00225**	**.08282**	**.00087**	**.00065**	**.00010**	**.01648**	**-.00034**	**.00821**	**.00111**
Stddev	.00074	.00026	.00293	.00026	.00162	.04579	.00011	.00055	.00143
%RSD	32.912	.30924	336.57	40.498	1639.6	277.88	31.141	6.6486	128.23
#1	-.00173	.08301	.00294	.00084	-.00104	-.01590	-.00041	.00859	.00212
#2	-.00278	.08264	-.00120	.00047	.00124	.04886	-.00027	.00782	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3294.9**	**39946.**	**2795.8**
Stddev	17.4	657.	17.4
%RSD	.52954	1.6437	.62224
#1	3282.6	39482.	2808.1
#2	3307.2	40410.	2783.5

Sample Name: 280-116085-A-5-A Acquired: 11/6/2018 16:34:48 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00186**	**.24366**	**.00650**	**.00845**	**.04889**	**-.00015**	**.00714**	**8.3904**	**-.00029**
Stddev	.00007	.00560	.00166	.00042	.00006	.00005	.00286	.0312	.00049
%RSD	3.5688	2.2963	25.511	5.0159	.13146	33.624	40.029	.37181	167.06
#1	-.00191	.24761	.00767	.00875	.04884	-.00011	.00512	8.4124	-.00064
#2	-.00181	.23970	.00533	.00815	.04893	-.00018	.00916	8.3683	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00169**	**.00073**	**-.00041**	**4.3821**	**1.1340**	**-.00121**	**2.6554**	**.03183**	**-.00035**
Stddev	.00017	.00004	.00049	.0096	.0339	.00300	.0380	.00053	.00016
%RSD	10.171	5.1547	121.72	.21871	2.9891	248.39	1.4314	1.6686	45.251
#1	.00181	.00075	-.00075	4.3889	1.1100	-.00333	2.6823	.03220	-.00024
#2	.00157	.00070	-.00006	4.3753	1.1579	.00091	2.6285	.03145	-.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.747**	**.00088**	**.00663**	**.00015**	**9.3287**	**-.00205**	**.00201**	**2.9793**	**6.3757**
Stddev	.792	.00022	.00402	.00061	.1850	.00021	.00713	.0373	.0799
%RSD	3.2016	24.764	60.622	419.69	1.9825	10.336	354.43	1.2532	1.2532
#1	25.307	.00103	.00379	-.00029	9.4595	-.00190	.00705	3.0057	6.4322
#2	24.187	.00072	.00947	.00058	9.1980	-.00221	-.00303	2.9529	6.3192
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00145**	**.03283**	**.00060**	**.00058**	**.00185**	**.02759**	**.00095**	**.00416**	**.00263**
Stddev	.00211	.00047	.00389	.00132	.00100	.12058	.00024	.00065	.00293
%RSD	145.40	1.4456	644.73	226.89	54.001	437.10	25.054	15.564	111.75
#1	-.00294	.03316	.00336	-.00035	.00256	-.05768	.00078	.00462	.00055
#2	.00004	.03249	-.00215	.00151	.00114	.11285	.00112	.00370	.00470
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3423.8**	**42383.**	**2974.9**
Stddev	2.5	505.	7.6
%RSD	.07347	1.1914	.25589
#1	3425.6	42026.	2969.5
#2	3422.0	42741.	2980.3

Sample Name: 280-116085-A-6-A Acquired: 11/6/2018 16:37:20 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00027**	**.24419**	**.00541**	**.00824**	**.05003**	**.00007**	**.00499**	**8.3789**	**-.00005**
Stddev	.00038	.01010	.00016	.00053	.00001	.00014	.00072	.0561	.00018
%RSD	139.33	4.1367	3.0306	6.3891	.02819	196.94	14.392	.66924	352.70
#1	-.00054	.25133	.00552	.00861	.05002	.00017	.00550	8.4186	-.00018
#2	-.00000	.23705	.00529	.00787	.05004	-.00003	.00448	8.3393	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00153**	**.00032**	**.00014**	**4.1209**	**1.0950**	**-.00416**	**2.6447**	**.03085**	**-.00036**
Stddev	.00014	.00022	.00053	.0113	.1572	.00534	.0097	.00010	.00042
%RSD	8.8597	67.099	368.57	.27418	14.352	128.35	.36750	.30810	116.38
#1	.00162	.00047	.00052	4.1130	.98388	-.00038	2.6516	.03078	-.00066
#2	.00143	.00017	-.00023	4.1289	1.2061	-.00793	2.6378	.03091	-.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.656**	**.00132**	**.00822**	**-.00172**	**9.4424**	**-.00294**	**-.00537**	**3.0449**	**6.5161**
Stddev	.162	.00001	.00002	.00042	.2446	.00408	.00288	.0227	.0485
%RSD	.68665	.55279	.27222	24.566	2.5905	138.81	53.664	.74487	.74487
#1	23.541	.00132	.00821	-.00202	9.6154	-.00005	-.00333	3.0289	6.4818
#2	23.770	.00131	.00824	-.00142	9.2695	-.00583	-.00741	3.0610	6.5504
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00277**	**.03252**	**-.00075**	**.00138**	**.00129**	**.06927**	**.00069**	**.00401**	**.00388**
Stddev	.00064	.00014	.00054	.00049	.00348	.03956	.00022	.00016	.00243
%RSD	23.035	.41831	72.853	35.678	270.39	57.104	32.396	4.0910	62.660
#1	-.00232	.03261	-.00036	.00103	-.00117	.04130	.00085	.00389	.00216
#2	-.00322	.03242	-.00113	.00172	.00375	.09724	.00053	.00412	.00559
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3421.5**	**41960.**	**2963.6**
Stddev	3.6	33.	11.9
%RSD	.10422	.07790	.40189
#1	3419.0	41983.	2955.2
#2	3424.0	41936.	2972.1

Sample Name: 280-116200-A-1-A Acquired: 11/6/2018 16:39:53 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00131**	**.03212**	**-.00164**	**.03458**	**.02206**	**.00025**	**.00346**	**2.5952**	**-.00009**
Stddev	.00085	.00085	.00568	.00076	.00058	.00009	.00047	.0016	.00007
%RSD	64.877	2.6404	347.18	2.1884	2.6203	36.025	13.550	.06096	71.635
#1	-.00071	.03272	.00238	.03512	.02247	.00019	.00379	2.5941	-.00004
#2	-.00192	.03152	-.00565	.03405	.02166	.00032	.00313	2.5964	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00111**	**.00037**	**.00024**	**.10292**	**.50301**	**-.00189**	**.92232**	**.01809**	**-.00027**
Stddev	.00032	.00015	.00013	.00087	.03167	.00611	.00272	.00010	.00014
%RSD	28.712	40.900	54.441	.84931	6.2963	323.78	.29466	.53185	51.908
#1	.00089	.00026	.00033	.10353	.52540	-.00620	.92040	.01802	-.00017
#2	.00134	.00048	.00015	.10230	.48061	.00243	.92424	.01816	-.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.4885**	**.00225**	**.01293**	**-.00481**	**.13850**	**.00155**	**.00014**	**7.5070**	**16.065**
Stddev	.0214	.00017	.00517	.00148	.00791	.00085	.00171	.0162	.035
%RSD	.25174	7.6848	39.962	30.734	5.7103	54.729	1245.9	.21615	.21615
#1	8.5036	.00212	.00927	-.00377	.14409	.00215	-.00107	7.5184	16.089
#2	8.4734	.00237	.01658	-.00586	.13291	.00095	.00135	7.4955	16.040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00269**	**.01404**	**.00303**	**.00029**	**-.00204**	**.03787**	**.00106**	**.00678**	**.00514**
Stddev	.00238	.00013	.00067	.00033	.00207	.02703	.00042	.00137	.00054
%RSD	88.207	.91925	22.247	113.15	101.60	71.377	39.397	20.157	10.600
#1	-.00437	.01413	.00351	.00053	-.00350	.01876	.00076	.00775	.00552
#2	-.00101	.01395	.00255	.00006	-.00057	.05699	.00135	.00582	.00475
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3419.3**	**42496.**	**2988.8**
Stddev	12.7	154.	4.9
%RSD	.37043	.36348	.16355
#1	3428.3	42605.	2992.3
#2	3410.4	42387.	2985.4

Sample Name: 280-116200-A-6-A Acquired: 11/6/2018 16:42:26 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00119**	**.08372**	**.00398**	**.00441**	**.06792**	**.00012**	**.00344**	**5.8928**	**.00011**
Stddev	.00028	.00370	.00663	.00094	.00021	.00000	.00082	.0099	.00007
%RSD	23.364	4.4187	166.29	21.240	.30262	3.0886	23.966	.16859	64.649
#1	-.00139	.08633	-.00070	.00507	.06778	.00012	.00286	5.8858	.00016
#2	-.00099	.08110	.00867	.00374	.06807	.00012	.00402	5.8998	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00180**	**.00032**	**.00083**	**.03476**	**.66140**	**-.00361**	**2.6312**	**.04366**	**-.00020**
Stddev	.00042	.00009	.00020	.00082	.10541	.00306	.0037	.00013	.00006
%RSD	23.091	29.104	24.001	2.3619	15.938	84.788	.14001	.30123	28.017
#1	.00209	.00025	.00069	.03418	.58686	-.00578	2.6338	.04356	-.00016
#2	.00151	.00038	.00097	.03534	.73594	-.00145	2.6286	.04375	-.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.132**	**.00246**	**.01589**	**-.00393**	**.29746**	**-.00176**	**-.00066**	**8.6237**	**18.455**
Stddev	.205	.00024	.00121	.00195	.01202	.00150	.00214	.0207	.044
%RSD	.39294	9.6564	7.5876	49.602	4.0421	85.039	325.24	.24033	.24033
#1	51.987	.00229	.01674	-.00255	.30596	-.00282	.00085	8.6091	18.423
#2	52.277	.00263	.01504	-.00531	.28896	-.00070	-.00217	8.6384	18.486
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00314**	**.04111**	**.00032**	**.00078**	**.00070**	**.00620**	**.00026**	**.00490**	**.00466**
Stddev	.00077	.00019	.00209	.00053	.00042	.02945	.00094	.00006	.00513
%RSD	24.674	.45503	647.10	67.508	59.410	475.12	366.75	1.1955	110.02
#1	-.00259	.04124	.00180	.00041	.00041	-.01462	-.00041	.00494	.00104
#2	-.00369	.04097	-.00116	.00116	.00100	.02702	.00093	.00485	.00829
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3389.1**	**41664.**	**2969.2**
Stddev	19.7	43.	31.9
%RSD	.58172	.10212	1.0750
#1	3375.2	41634.	2946.7
#2	3403.1	41694.	2991.8

Sample Name: 280-116200-A-7-A Acquired: 11/6/2018 16:45:00 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00103**	**.19878**	**-.00028**	**.01387**	**.16051**	**-.00006**	**.01711**	**27.076**	**-.00033**
Stddev	.00012	.00853	.00379	.00167	.00001	.00046	.00106	.017	.00014
%RSD	11.546	4.2890	1367.8	12.043	.00334	774.83	6.2137	.06334	41.421
#1	-.00095	.20481	-.00296	.01269	.16052	.00027	.01636	27.088	-.00023
#2	-.00112	.19275	.00240	.01505	.16051	-.00038	.01786	27.064	-.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00636**	**.00089**	**.00256**	**27.583**	**1.6793**	**-.00265**	**6.0529**	**.77715**	**-.00068**
Stddev	.00036	.00041	.00008	.140	.0271	.00150	.0202	.00266	.00057
%RSD	5.6812	46.054	3.2724	.50574	1.6149	56.588	.33299	.34208	84.044
#1	.00662	.00117	.00262	27.681	1.6984	-.00159	6.0672	.77903	-.00027
#2	.00611	.00060	.00250	27.484	1.6601	-.00371	6.0387	.77527	-.00108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**105.70**	**.00263**	**.02621**	**.00086**	**1.1564**	**-.00373**	**-.00819**	**2.4200**	**5.1787**
Stddev	.02	.00048	.00066	.00162	.0304	.00277	.00161	.0220	.0471
%RSD	.01990	18.101	2.5215	188.16	2.6269	74.224	19.712	.90944	.90944
#1	105.68	.00230	.02667	-.00028	1.1778	-.00569	-.00705	2.4044	5.1454
#2	105.71	.00297	.02574	.00201	1.1349	-.00177	-.00933	2.4355	5.2120
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00217**	**.27159**	**.00199**	**.00710**	**.00064**	**.09562**	**.00085**	**.03936**	**.00481**
Stddev	.00060	.00039	.00019	.00056	.00290	.01412	.00033	.00012	.00046
%RSD	27.416	.14519	9.7259	7.8338	452.74	14.768	38.401	.30046	9.5816
#1	-.00175	.27131	.00185	.00671	-.00141	.08563	.00062	.03928	.00514
#2	-.00259	.27187	.00212	.00749	.00269	.10560	.00108	.03944	.00448
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3337.1**	**40922.**	**2941.7**
Stddev	1.8	57.	8.9
%RSD	.05325	.13821	.30356
#1	3335.9	40962.	2935.4
#2	3338.4	40882.	2948.0

Sample Name: 280-116258-A-3-A Acquired: 11/6/2018 16:47:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00084**	**.55507**	**.00415**	**.00570**	**.03588**	**.00023**	**-.00411**	**10.498**	**-.00043**
Stddev	.00019	.00995	.00377	.00063	.00040	.00003	.00762	.007	.00001
%RSD	22.728	1.7932	90.874	11.082	1.1243	13.944	185.41	.07111	2.7165
#1	-.00070	.56211	.00681	.00525	.03559	.00021	.00128	10.503	-.00044
#2	-.00097	.54803	.00148	.00615	.03616	.00025	-.00950	10.493	-.00042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00155**	**.00192**	**.00021**	**.54683**	**1.1795**	**-.00264**	**2.2175**	**.05401**	**-.00055**
Stddev	.00014	.00003	.00018	.00226	.0209	.00224	.0021	.00027	.00023
%RSD	8.9408	1.7537	86.931	.41416	1.7712	85.066	.09268	.50889	41.763
#1	.00145	.00195	.00008	.54843	1.1943	-.00422	2.2189	.05421	-.00038
#2	.00165	.00190	.00034	.54523	1.1647	-.00105	2.2160	.05382	-.00071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.044**	**.00103**	**.01795**	**-.00399**	**1.3357**	**-.00314**	**-.00280**	**7.0395**	**15.065**
Stddev	.536	.00024	.00473	.00116	.0081	.00430	.00149	.0354	.076
%RSD	3.3418	23.267	26.320	29.104	.60531	136.97	53.240	.50277	.50277
#1	16.424	.00086	.02130	-.00317	1.3414	-.00619	-.00386	7.0645	15.118
#2	15.665	.00120	.01461	-.00481	1.3300	-.00010	-.00175	7.0145	15.011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00035**	**.08943**	**.00325**	**.00946**	**.00055**	**.04170**	**.00127**	**.00740**	**.00534**
Stddev	.00023	.00022	.00287	.00027	.00046	.04422	.00032	.00044	.00093
%RSD	67.746	.24792	88.448	2.8279	84.121	106.04	24.809	5.9190	17.427
#1	-.00051	.08958	.00527	.00965	.00022	.01043	.00105	.00771	.00600
#2	-.00018	.08927	.00122	.00927	.00088	.07297	.00149	.00709	.00468
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3439.6**	**42112.**	**2975.1**
Stddev	6.4	67.	17.1
%RSD	.18596	.15986	.57449
#1	3435.1	42065.	2963.0
#2	3444.1	42160.	2987.2

Sample Name: 280-116258-A-5-A Acquired: 11/6/2018 16:50:08 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00155**	**.36308**	**.00805**	**.01340**	**.24698**	**.00042**	**.00031**	**15.279**	**.00056**
Stddev	.00021	.01113	.00659	.00015	.00006	.00021	.00287	.009	.00002
%RSD	13.798	3.0642	81.940	1.1493	.02443	50.568	914.65	.05889	2.8635
#1	-.00140	.37095	.01271	.01350	.24702	.00057	-.00171	15.285	.00057
#2	-.00170	.35522	.00338	.01329	.24693	.00027	.00234	15.273	.00054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01315**	**.00111**	**.00159**	**1.0197**	**2.9933**	**.00143**	**10.313**	**.59144**	**-.00000**
Stddev	.00090	.00035	.00075	.0161	.1771	.00412	.241	.01392	.00015
%RSD	6.8676	31.990	47.014	1.5826	5.9158	288.42	2.3399	2.3544	3145.6
#1	.01379	.00136	.00212	1.0083	2.8681	-.00149	10.483	.60129	-.00011
#2	.01251	.00086	.00106	1.0311	3.1186	.00434	10.142	.58159	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**86.720**	**.01917**	**.01744**	**-.00107**	**.36544**	**.00069**	**-.00087**	**6.7313**	**14.405**
Stddev	.210	.00097	.00147	.00160	.01986	.00318	.00097	.0563	.120
%RSD	.24183	5.0701	8.4370	149.56	5.4334	461.99	111.85	.83619	.83619
#1	86.572	.01986	.01640	-.00220	.37948	.00294	-.00156	6.6915	14.320
#2	86.869	.01849	.01848	.00006	.35140	-.00156	-.00018	6.7711	14.490
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00374**	**.16274**	**-.00077**	**.00121**	**.00176**	**.06144**	**.00015**	**.02443**	**.00373**
Stddev	.00104	.00099	.00043	.00026	.00144	.04024	.00028	.00082	.00518
%RSD	27.721	.60751	55.217	21.224	81.567	65.500	180.59	3.3600	138.93
#1	-.00300	.16204	-.00107	.00139	.00075	.03298	.00035	.02501	.00007
#2	-.00447	.16344	-.00047	.00103	.00278	.08989	-.00004	.02385	.00739
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3398.5**	**41751.**	**2967.6**
Stddev	23.3	555.	11.9
%RSD	.68694	1.3296	.40004
#1	3415.0	41358.	2976.0
#2	3382.0	42143.	2959.2

Sample Name: CCVH-5408055 Acquired: 11/6/2018 16:52:42 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00322**	**47.568**	**-.00859**	**.00189**	**-.00004**	**.00002**	**.96590**	**-.00892**	**-.00022**	**.00181**	**.00053**	**-.00063**	**47.348**
Stddev	.00054	.311	.00666	.00082	.00006	.00024	.01743	.00243	.00034	.00019	.00063	.00005	.385
%RSD	16.919	.65482	77.540	43.437	153.39	1474.7	1.8048	27.291	154.49	10.498	118.61	7.4574	.81230
#1	-.00360	47.788	-.01330	.00131	-.00008	-.00016	.97823	-.00720	.00002	.00195	.00009	-.00066	47.620
#2	-.00283	47.348	-.00388	.00247	.00000	.00019	.95357	-.01064	-.00046	.00168	.00098	-.00060	47.076
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.10938**	**-.00406**	**-.07068**	**.00235**	**-.00088**	**237.50**	**.00270**	**.00247**	**-.00069**	**4.7518**	**.00123**	**.01091**	**.04767**
Stddev	.10330	.00018	.00872	.00004	.00021	.75	.00009	.00336	.00214	.0791	.00259	.00295	.02407
%RSD	94.444	4.5409	12.337	1.8149	24.199	.31715	3.4469	135.64	311.00	1.6652	210.85	27.059	50.487
#1	-.18242	-.00419	-.06451	.00232	-.00103	238.03	.00263	.00010	-.00220	4.8077	-.00060	.01299	.06469
#2	-.03633	-.00393	-.07684	.00238	-.00073	236.96	.00276	.00485	.00082	4.6958	.00306	.00882	.03065
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10202**	**-.00202**	**.00025**	**4.5629**	**.01901**	**-.00010**	**9.5562**	**-.00959**	**.00050**	**.07708**
Stddev	.05151	.00092	.00006	.0212	.00034	.00203	.0462	.00026	.00067	.00449
%RSD	50.487	45.785	23.132	.46412	1.7711	1935.6	.48399	2.7159	132.80	5.8214
#1	.13844	-.00136	.00030	4.5779	.01925	-.00154	9.5889	-.00977	.00003	.07390
#2	.06560	-.00267	.00021	4.5480	.01877	.00133	9.5235	-.00940	.00098	.08025
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3306.7**	**40380.**	**2931.7**
Stddev	.1	121.	5.8
%RSD	.00308	.29844	.19649
#1	3306.7	40295.	2927.6
#2	3306.6	40466.	2935.7

Sample Name: CCV-5407546 Acquired: 11/6/2018 16:55:13 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48927**	**.54435**	**.98270**	**.47996**	**.50644**	**.49959**	**.00281**	**4.9280**	**.47899**	**.47791**	**.47990**	**.50094**	**2.4386**	**49.801**
Stddev	.00022	.01518	.01386	.01214	.00032	.00081	.00267	.0213	.01277	.01290	.01323	.00287	.0316	.067
%RSD	.04485	2.7884	1.4104	2.5285	.06313	.16297	95.205	.43261	2.6665	2.7003	2.7561	.57207	1.2964	.13517
#1	.48942	.55508	.99250	.48855	.50621	.49901	.00470	4.9431	.48802	.48704	.48926	.50296	2.4610	49.754
#2	.48911	.53362	.97289	.47138	.50666	.50016	.00092	4.9130	.46996	.46879	.47055	.49891	2.4163	49.849
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value														
Range														

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0149**	**19.306**	**.47568**	**.47768**	**5.2296**	**.47682**	**.98982**	**.96355**	**.01214**	**.95731**	**.96631**	**4.8472**	**10.373**	**.96509**
Stddev	.0037	.008	.00013	.01300	.0512	.01128	.02627	.02022	.00126	.02400	.02256	.0145	.031	.02713
%RSD	.36997	.03996	.02708	2.7205	.97916	2.3657	2.6539	2.0986	10.385	2.5073	2.3351	.29865	.29865	2.8107
#1	1.0123	19.312	.47577	.48687	5.2658	.48480	1.0084	.97784	.01303	.97428	.98227	4.8574	10.395	.98427
#2	1.0176	19.301	.47559	.46849	5.1934	.46885	.97124	.94925	.01125	.94034	.95036	4.8370	10.351	.94591
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value														
Range														

Elem	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49921**	**.00950**	**.47048**	**.99786**	**.02167**	**.48492**	**.47326**	**.49747**
Stddev	.00080	.00012	.00153	.02229	.03538	.00144	.00030	.00057
%RSD	.16069	1.2943	.32595	2.2335	163.25	.29732	.06413	.11500
#1	.49864	.00958	.47157	1.0136	.04669	.48594	.47305	.49788
#2	.49978	.00941	.46940	.98210	-.00335	.48390	.47348	.49707
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3329.8**	**40934.**	**2856.2**
Stddev	.3	27.	3.7
%RSD	.00766	.06649	.13102
#1	3329.6	40954.	2853.6
#2	3329.9	40915.	2858.9

Sample Name: CCB Acquired: 11/6/2018 16:57:38 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00083**	**-.00171**	**.00235**	**.00125**	**.00011**	**-.00010**	**.00258**	**-.00884**	**-.00029**	**.00023**	**.00021**	**-.00029**	**.00184**
Stddev	.00103	.00005	.00364	.00173	.00015	.00003	.00266	.01493	.00009	.00013	.00022	.00102	.00377
%RSD	124.77	2.9190	154.68	138.98	132.06	30.775	103.25	168.80	30.497	54.243	100.72	346.25	205.12
#1	-.00156	-.00167	.00492	.00247	.00001	-.00012	.00070	.00171	-.00022	.00032	.00006	.00043	-.00083
#2	-.00010	-.00174	-.00022	.00002	.00021	-.00008	.00446	-.01940	-.00035	.00014	.00037	-.00101	.00451
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.06698**	**-.00090**	**-.00305**	**.00011**	**.00082**	**.12953**	**.00007**	**-.00193**	**-.00241**	**.01279**	**-.00031**	**-.00128**	**.05429**
Stddev	.12214	.00646	.00175	.00007	.00029	.01353	.00002	.00062	.00107	.00759	.00156	.00867	.04458
%RSD	182.36	714.64	57.523	65.090	35.907	10.447	34.628	31.890	44.490	59.376	497.64	677.47	82.099
#1	.01939	-.00548	-.00429	.00006	.00061	.11996	.00005	-.00237	-.00166	.01816	-.00141	-.00741	.02278
#2	-.15334	.00367	-.00181	.00017	.00102	.13910	.00008	-.00150	-.00317	.00742	.00079	.00485	.08581
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.11619**	**-.00173**	**-.00009**	**.00192**	**.00055**	**.00187**	**.02249**	**.00049**	**-.00095**	**-.00039**
Stddev	.09539	.00082	.00002	.00451	.00005	.00036	.06799	.00076	.00022	.00731
%RSD	82.099	47.282	20.860	234.43	8.3007	19.256	302.34	154.75	23.347	1861.3
#1	.04874	-.00231	-.00008	-.00126	.00059	.00162	.07056	.00103	-.00080	.00478
#2	.18364	-.00115	-.00010	.00511	.00052	.00212	-.02559	-.00005	-.00111	-.00556
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3331.2**	**41499.**	**2895.4**
Stddev	4.4	26.	8.7
%RSD	.13122	.06220	.30218
#1	3328.1	41480.	2901.6
#2	3334.3	41517.	2889.2

Sample Name: ccvl-5413446 Acquired: 11/6/2018 17:00:14 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00886**	**.11061**	F **.02145**	**.09503**	**.01034**	**.00105**	**.10001**	**.19025**	**.00452**	**.01029**	**.00975**	**.01533**
Stddev	.00010	.00383	.00281	.00296	.00076	.00024	.00408	.00079	.00003	.00094	.00026	.00064
%RSD	1.1475	3.4645	13.090	3.1115	7.4016	22.390	4.0819	.41639	.58887	9.1385	2.7039	4.1548
#1	.00878	.11332	.02343	.09712	.00979	.00122	.09712	.18969	.00454	.01095	.00994	.01578
#2	.00893	.10790	.01946	.09294	.01088	.00088	.10290	.19081	.00451	.00962	.00956	.01488
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09845**	**2.8851**	**.02248**	**.19636**	**.00974**	**.01867**	**1.1267**	**.03843**	**2.8446**	**.00756**	**.10261**	**.01796**
Stddev	.01001	.0512	.00037	.00101	.00000	.00025	.0008	.00109	.0863	.00265	.00443	.00146
%RSD	10.171	1.7740	1.6366	.51513	.03637	1.3394	.06756	2.8469	3.0339	35.120	4.3154	8.1328
#1	.10554	2.9213	.02275	.19564	.00974	.01884	1.1273	.03921	2.9057	.00568	.09947	.01899
#2	.09137	2.8489	.02222	.19707	.00974	.01849	1.1262	.03766	2.7836	.00943	.10574	.01692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01951**	**.52704**	**1.1279**	**.09551**	**.01014**	**.01555**	**.00958**	**.01635**	**.05185**	**.00957**	**.02005**	**.01821**
Stddev	.01152	.04456	.0954	.00393	.00040	.00025	.00103	.00259	.00314	.00088	.00010	.00260
%RSD	59.021	8.4541	8.4541	4.1124	3.9605	1.5941	10.735	15.860	6.0573	9.1518	.50696	14.266
#1	.02766	.49554	1.0604	.09829	.01042	.01573	.00885	.01452	.05408	.01019	.01998	.02004
#2	.01137	.55855	1.1953	.09274	.00985	.01538	.01030	.01818	.04963	.00895	.02012	.01637
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3345.1**	**41508.**	**2903.1**
Stddev	1.0	120.	23.8
%RSD	.03081	.28847	.81890
#1	3345.8	41593.	2886.3
#2	3344.4	41424.	2919.9

Sample Name: 280-116258-A-6-A Acquired: 11/6/2018 17:02:49 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482 6010c dod

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00034**	**.38229**	**.00475**	**.01381**	**.25465**	**.00065**	**.00316**	**15.494**	**.00105**
Stddev	.00024	.01193	.00146	.00016	.00104	.00006	.00307	.026	.00009
%RSD	69.877	3.1218	30.738	1.1414	.40883	8.5259	97.298	.17018	8.6099
#1	-.00017	.39073	.00578	.01370	.25538	.00061	.00098	15.512	.00099
#2	-.00050	.37385	.00372	.01392	.25391	.00069	.00533	15.475	.00112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01416**	**.00099**	**-.00016**	**.98772**	**3.0199**	**.00480**	**10.646**	**.61285**	**-.00049**
Stddev	.00028	.00029	.00023	.00569	.1528	.00054	.040	.00203	.00031
%RSD	2.0113	28.691	139.61	.57595	5.0588	11.164	.37916	.33127	62.575
#1	.01436	.00079	-.00000	.99175	3.1279	.00442	10.674	.61429	-.00070
#2	.01396	.00120	-.00032	.98370	2.9118	.00518	10.617	.61142	-.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**90.012**	**.01980**	**.01828**	**-.00298**	**.36733**	**.00049**	**.00036**	**6.8681**	**14.698**
Stddev	.249	.00097	.00155	.00311	.01150	.00009	.00087	.0034	.007
%RSD	.27651	4.8775	8.5053	104.61	3.1304	19.177	245.13	.04984	.04984
#1	90.188	.02049	.01718	-.00518	.37547	.00056	-.00026	6.8705	14.703
#2	89.836	.01912	.01938	-.00077	.35920	.00042	.00098	6.8656	14.692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00280**	**.16532**	**-.00017**	**.00103**	**.00026**	**.03944**	**.00064**	**.02620**	**.00498**
Stddev	.00026	.00053	.00152	.00062	.00142	.04301	.00026	.00089	.00096
%RSD	9.3537	.31843	888.55	60.405	545.96	109.04	39.865	3.3905	19.314
#1	-.00298	.16495	-.00125	.00059	-.00074	.06986	.00046	.02683	.00566
#2	-.00261	.16569	.00090	.00147	.00126	.00903	.00082	.02557	.00430
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3347.3**	**40877.**	**2921.2**
Stddev	8.5	27.	5.3
%RSD	.25386	.06539	.18257
#1	3341.3	40896.	2917.4
#2	3353.3	40858.	2924.9

Sample Name: 280-116330-B-2-A Acquired: 11/6/2018 17:05:23 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/3 Custom ID2: Custom ID3:
Comment: 435982 6010b

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00096**	**8.1914**	**-.00362**	**4.3163**	**.03705**	**.00050**	**-.00321**	W **508.51**	**.00029**
Stddev	.00019	.0775	.00472	.1229	.00033	.00009	.00417	4.33	.00002
%RSD	19.415	.94621	130.50	2.8481	.88417	18.189	130.00	.85201	6.3111
#1	-.00109	8.2462	-.00695	4.4032	.03728	.00044	-.00616	511.57	.00030
#2	-.00083	8.1366	-.00028	4.2294	.03682	.00057	-.00026	505.44	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00116**	**.01867**	**.00691**	**5.7324**	**13.417**	**.61010**	**177.18**	**.13722**	**.00070**
Stddev	.00042	.00061	.00018	.0472	.031	.00213	.71	.00040	.00029
%RSD	35.914	3.2655	2.5852	.82312	.23147	.34887	.40140	.28918	41.368
#1	.00145	.01910	.00678	5.7658	13.395	.61160	177.68	.13751	.00049
#2	.00086	.01823	.00703	5.6991	13.439	.60859	176.68	.13694	.00090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **943.60**	**.01250**	**.14484**	**-.00728**	F **742.09**	**.00387**	**-.00503**	**27.639**	**59.147**
Stddev	4.18	.00023	.00502	.00575	22.46	.00441	.00991	.154	.330
%RSD	.44330	1.8228	3.4683	78.984	3.0268	113.94	197.10	.55798	.55798
#1	946.56	.01266	.14839	-.01135	757.97	.00699	-.01203	27.748	59.380
#2	940.64	.01233	.14129	-.00322	726.20	.00075	.00198	27.530	58.913
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00465**	W **15.123**	**.00013**	**.26110**	**-.00511**	**.00092**	**.01496**	**.01808**	**.00825**
Stddev	.00142	.247	.00328	.00617	.00091	.05774	.00034	.00009	.00327
%RSD	30.587	1.6329	2561.8	2.3625	17.853	6266.5	2.2407	.47509	39.578
#1	-.00565	15.298	-.00219	.26546	-.00575	.04175	.01472	.01814	.00594
#2	-.00364	14.948	.00245	.25674	-.00446	-.03991	.01519	.01802	.01056
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000							
Low Limit		-.02000							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2827.2**	**34274.**	**2618.4**
Stddev	2.8	76.	43.3
%RSD	.10012	.22092	1.6522
#1	2825.2	34327.	2649.0
#2	2829.2	34220.	2587.8

Sample Name: MB 280-434677/1-A Acquired: 11/6/2018 17:08:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434677 6010d

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00121**	**.00627**	**.00469**	**.00809**	**-.00048**	**-.00031**	**.00340**	**.01808**	**-.00044**
Stddev	.00016	.00163	.00400	.00074	.00001	.00043	.00283	.00402	.00017
%RSD	12.868	25.998	85.210	9.1097	2.8854	137.07	83.307	22.248	38.952
#1	-.00110	.00511	.00186	.00861	-.00049	-.00061	.00140	.02092	-.00032
#2	-.00132	.00742	.00751	.00757	-.00047	-.00001	.00540	.01523	-.00056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00056**	**.00009**	**-.00069**	**.00916**	**-.02858**	**-.00495**	**.00869**	**.00019**	**-.00022**
Stddev	.00022	.00033	.00089	.00566	.04191	.00183	.00432	.00012	.00005
%RSD	39.950	382.47	129.51	61.740	146.65	36.961	49.735	61.405	24.131
#1	.00040	.00032	-.00131	.01316	-.05821	-.00366	.01174	.00011	-.00019
#2	.00071	-.00015	-.00006	.00516	.00106	-.00624	.00563	.00028	-.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48911**	**-.00019**	**.00074**	**-.00027**	**.14890**	**-.00025**	**.00073**	**.02157**	**.04616**
Stddev	.05457	.00002	.00342	.00172	.00931	.00467	.00242	.06720	.14380
%RSD	11.156	8.3046	464.17	645.06	6.2552	1833.0	332.12	311.50	311.50
#1	.52770	-.00020	-.00168	.00095	.15549	-.00356	-.00098	.06909	.14784
#2	.45053	-.00018	.00316	-.00148	.14232	.00305	.00244	-.02594	-.05552
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00137**	**.00068**	**.00384**	**.00089**	**-.00215**	**-.02700**	**.00051**	**.00058**	**.00561**
Stddev	.00005	.00006	.00160	.00016	.00038	.00056	.00054	.00012	.00093
%RSD	3.8470	9.4183	41.636	18.404	17.849	2.0777	107.20	20.590	16.608
#1	-.00141	.00073	.00271	.00078	-.00188	-.02739	.00012	.00066	.00627
#2	-.00134	.00064	.00497	.00101	-.00243	-.02660	.00089	.00049	.00495
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3387.1**	**42392.**	**2958.1**
Stddev	.4	48.	23.3
%RSD	.01122	.11206	.78761
#1	3387.4	42359.	2941.6
#2	3386.8	42426.	2974.6

Sample Name: LCS 280-434677/2-A Acquired: 11/6/2018 17:10:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434677 6010d

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04703**	**2.1583**	**.98910**	**.99857**	**2.0394**	**.05018**	**1.9151**	**49.228**	**.09259**
Stddev	.00033	.0374	.01495	.01785	.0117	.00005	.0360	.175	.00156
%RSD	.69525	1.7325	1.5111	1.7873	.57414	.09095	1.8810	.35643	1.6871
#1	.04680	2.1847	.99966	1.0112	2.0477	.05021	1.9406	49.352	.09369
#2	.04726	2.1318	.97853	.98595	2.0312	.05015	1.8897	49.103	.09148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47833**	**.19550**	**.25077**	**.97518**	**50.194**	**1.0121**	**47.719**	**.47598**	**.99716**
Stddev	.01022	.00383	.00008	.00542	.344	.0010	.045	.00076	.01980
%RSD	2.1367	1.9598	.03311	.55619	.68455	.09421	.09329	.16004	1.9856
#1	.48555	.19821	.25083	.97902	50.437	1.0128	47.688	.47652	1.0112
#2	.47110	.19279	.25071	.97135	49.951	1.0114	47.751	.47544	.98316
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.378**	**.47253**	**10.311**	**.48498**	**2.0481**	**.49216**	**1.9886**	**9.7932**	**20.957**
Stddev	.872	.00852	.220	.01037	.0421	.00769	.0392	.1537	.329
%RSD	1.7650	1.8033	2.1321	2.1378	2.0562	1.5626	1.9704	1.5691	1.5691
#1	49.994	.47855	10.466	.49231	2.0779	.49760	2.0163	9.9019	21.190
#2	48.761	.46650	10.155	.47765	2.0184	.48672	1.9609	9.6846	20.725
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9670**	**1.0078**	**.94583**	**.95821**	**1.9782**	**1.9292**	**.50070**	**.47592**	**.51415**
Stddev	.0423	.0018	.00178	.00240	.0389	.0196	.00295	.00107	.00149
%RSD	2.1491	.17802	.18851	.25028	1.9687	1.0169	.58913	.22420	.29006
#1	1.9969	1.0090	.94709	.95990	2.0057	1.9154	.50278	.47516	.51310
#2	1.9371	1.0065	.94457	.95651	1.9506	1.9431	.49861	.47667	.51520
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3307.1**	**40289.**	**2900.2**
Stddev	3.2	62.	29.8
%RSD	.09550	.15408	1.0259
#1	3304.9	40333.	2879.2
#2	3309.3	40245.	2921.2

Sample Name: 280-115930-A-2-A Acquired: 11/6/2018 17:13:03 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434677 6010d

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00079**	**.00807**	**.00711**	**.02211**	**.09036**	**-.00005**	**.00101**	**39.745**	**-.00038**
Stddev	.00017	.00036	.00478	.00341	.00313	.00026	.00324	.330	.00046
%RSD	20.959	4.4050	67.171	15.414	3.4635	470.73	320.20	.83060	122.37
#1	-.00091	.00833	.00373	.02452	.09258	-.00024	.00331	39.978	-.00005
#2	-.00068	.00782	.01049	.01970	.08815	.00013	-.00128	39.511	-.00071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00077**	**.00131**	**.00114**	**.00727**	**3.5467**	**.00806**	**7.7237**	**.00085**	**.00455**
Stddev	.00022	.00030	.00029	.00576	.0821	.00477	.0328	.00011	.00007
%RSD	28.490	22.640	25.652	79.269	2.3144	59.151	.42519	12.923	1.4355
#1	.00093	.00152	.00135	.01134	3.6047	.00469	7.7469	.00077	.00460
#2	.00062	.00110	.00093	.00319	3.4886	.01143	7.7005	.00092	.00450
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.576**	**-.00043**	**.02556**	**-.00252**	**17.337**	**-.00280**	**-.00303**	**8.9098**	**19.067**
Stddev	.044	.00075	.00202	.00157	.356	.00240	.00411	.0208	.045
%RSD	.17051	174.61	7.9069	62.373	2.0559	85.836	135.85	.23392	.23392
#1	25.545	-.00096	.02413	-.00363	17.589	-.00449	-.00594	8.9245	19.098
#2	25.607	.00010	.02699	-.00141	17.085	-.00110	-.00012	8.8950	19.035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00057**	**.39301**	**.00394**	**.00071**	**-.00043**	**.02548**	**.00184**	**.00403**	**.00594**
Stddev	.00201	.00399	.00107	.00005	.00108	.02040	.00031	.00011	.00269
%RSD	350.92	1.0161	27.122	7.5815	250.70	80.080	16.628	2.7205	45.340
#1	.00085	.39583	.00319	.00067	.00033	.01105	.00163	.00395	.00404
#2	-.00199	.39019	.00470	.00075	-.00120	.03990	.00206	.00411	.00785
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3379.6**	**41600.**	**2972.9**
Stddev	8.2	46.	18.5
%RSD	.24308	.11085	.62174
#1	3385.4	41567.	2959.8
#2	3373.8	41633.	2986.0

Sample Name: 280-115930-A-3-A Acquired: 11/6/2018 17:15:37 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434677 6010d

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00094**	**.00993**	**.01142**	**.02096**	**.09024**	**-.00007**	**-.00361**	**40.359**	**-.00024**
Stddev	.00028	.00130	.00125	.00047	.00015	.00011	.00088	.090	.00055
%RSD	29.668	13.079	10.932	2.2558	.17109	152.64	24.512	.22181	232.17
#1	-.00113	.01085	.01231	.02062	.09035	-.00014	-.00423	40.423	.00015
#2	-.00074	.00901	.01054	.02129	.09013	.00001	-.00298	40.296	-.00063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00071**	**.00140**	**.00086**	**.01454**	**3.6217**	**.00954**	**7.8923**	**.00330**	**.00307**
Stddev	.00031	.00015	.00086	.00002	.0817	.00371	.0135	.00015	.00048
%RSD	43.520	11.038	100.13	.14751	2.2550	38.889	.17105	4.6280	15.461
#1	.00049	.00151	.00025	.01452	3.6794	.00691	7.8828	.00320	.00274
#2	.00093	.00129	.00147	.01455	3.5639	.01216	7.9018	.00341	.00341
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.781**	**.00039**	**.02194**	**-.00481**	**17.590**	**.00198**	**-.01224**	**9.0769**	**19.425**
Stddev	.464	.00026	.00028	.00109	.300	.00743	.00820	.0722	.154
%RSD	1.7314	68.246	1.2759	22.543	1.7071	375.37	66.956	.79534	.79534
#1	27.109	.00020	.02214	-.00558	17.802	.00723	-.01804	9.1279	19.534
#2	26.453	.00057	.02175	-.00405	17.378	-.00327	-.00645	9.0258	19.315
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00052**	**.39713**	**.00387**	**.00083**	**-.00225**	**.05470**	**.00327**	**.01381**	**.00448**
Stddev	.00006	.00145	.00249	.00071	.00055	.04658	.00128	.00035	.00350
%RSD	11.364	.36471	64.352	85.028	24.558	85.146	39.036	2.5461	78.139
#1	-.00048	.39815	.00563	.00134	-.00186	.02177	.00237	.01406	.00200
#2	-.00057	.39611	.00211	.00033	-.00264	.08764	.00417	.01357	.00695
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3379.4**	**41402.**	**2941.7**
Stddev	22.3	42.	13.8
%RSD	.65947	.10233	.47027
#1	3363.6	41432.	2931.9
#2	3395.1	41373.	2951.5

Sample Name: 280-115930-A-5-A Acquired: 11/6/2018 17:18:11 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434677 6010d

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00069**	**.01082**	**.00207**	**.02365**	**.05127**	**.00023**	**.00175**	**37.466**	**-.00020**
Stddev	.00031	.00020	.00220	.00026	.00002	.00038	.00069	.025	.00011
%RSD	44.407	1.8948	106.05	1.0871	.03418	167.31	39.462	.06686	54.111
#1	-.00048	.01096	.00362	.02347	.05126	-.00004	.00126	37.484	-.00027
#2	-.00091	.01067	.00052	.02384	.05128	.00049	.00224	37.448	-.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00039**	**.01686**	**.00019**	**.06714**	**4.1786**	**-.00213**	**13.383**	**.00386**	**.00569**
Stddev	.00015	.00074	.00045	.00623	.0783	.00003	.016	.00005	.00004
%RSD	38.686	4.3896	235.06	9.2732	1.8727	1.2334	.12210	1.2713	.72710
#1	.00050	.01738	.00051	.07154	4.2340	-.00215	13.372	.00382	.00572
#2	.00028	.01633	-.00013	.06274	4.1233	-.00211	13.395	.00389	.00566
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.869**	**.00553**	**.01750**	**-.00901**	**9.6947**	**.00257**	**.00104**	**19.831**	**42.438**
Stddev	.016	.00024	.00109	.00170	.2507	.00044	.00455	.114	.244
%RSD	.06553	4.3756	6.2183	18.894	2.5861	17.248	438.08	.57476	.57476
#1	24.881	.00536	.01827	-.01021	9.8720	.00288	-.00218	19.750	42.265
#2	24.858	.00570	.01673	-.00781	9.5174	.00225	.00426	19.911	42.610
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00082**	**.16599**	**.00048**	**.00056**	**-.00072**	**.05109**	**.02261**	**.00195**	**.00553**
Stddev	.00084	.00003	.00399	.00026	.00154	.02220	.00044	.00082	.00016
%RSD	102.93	.01801	833.08	47.255	212.88	43.463	1.9308	42.016	2.9699
#1	-.00141	.16596	-.00234	.00037	-.00181	.06679	.02292	.00137	.00542
#2	-.00022	.16601	.00330	.00074	.00037	.03539	.02230	.00252	.00565
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3407.5**	**41765.**	**2968.2**
Stddev	1.7	14.	6.1
%RSD	.04897	.03233	.20605
#1	3408.6	41755.	2972.5
#2	3406.3	41774.	2963.9

Sample Name: 280-115930-A-5-Asd@5 Acquired: 11/6/2018 17:20:44 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434677 6010d

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00048**	**.00235**	**.00568**	**.00684**	**.00957**	**-.00016**	**.00148**	**7.1272**	**-.00044**
Stddev	.00033	.00036	.00893	.00034	.00002	.00001	.00151	.0400	.00027
%RSD	68.864	15.148	157.04	4.9454	.21952	7.0403	102.21	.56164	62.002
#1	-.00071	.00210	.01200	.00660	.00959	-.00017	.00041	7.0989	-.00063
#2	-.00025	.00260	-.00063	.00708	.00956	-.00015	.00255	7.1555	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00061**	**.00345**	**-.00002**	**.00969**	**.68127**	**-.00396**	**2.6305**	**.00083**	**.00099**
Stddev	.00013	.00027	.00062	.00610	.04579	.00056	.0072	.00009	.00042
%RSD	21.664	7.9072	4067.3	62.988	6.7217	14.033	.27252	10.812	42.031
#1	.00052	.00364	.00042	.01401	.71365	-.00356	2.6254	.00077	.00128
#2	.00071	.00326	-.00045	.00538	.64889	-.00435	2.6356	.00090	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.0377**	**.00093**	**.00448**	**-.00250**	**1.9285**	**-.00229**	**.00583**	**3.7137**	**7.9474**
Stddev	.0071	.00037	.00168	.00193	.0047	.00259	.00547	.0343	.0734
%RSD	.14056	40.003	37.416	77.278	.24139	112.99	93.936	.92337	.92337
#1	5.0327	.00120	.00567	-.00386	1.9318	-.00413	.00970	3.7380	7.9993
#2	5.0427	.00067	.00330	-.00113	1.9252	-.00046	.00196	3.6895	7.8955
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00395**	**.03145**	**.00106**	**.00132**	**-.00233**	**.03442**	**.00459**	**.00104**	**.00764**
Stddev	.00338	.00028	.00026	.00062	.00096	.03106	.00007	.00053	.00188
%RSD	85.515	.89579	24.601	47.304	41.286	90.255	1.5108	50.618	24.552
#1	-.00156	.03165	.00087	.00176	-.00301	.01245	.00454	.00067	.00896
#2	-.00633	.03125	.00124	.00088	-.00165	.05638	.00464	.00141	.00631
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3407.6**	**41942.**	**2935.1**
Stddev	11.1	175.	10.6
%RSD	.32475	.41690	.36170
#1	3415.5	42066.	2942.6
#2	3399.8	41819.	2927.6

Sample Name: 280-115930-A-5-B MS Acquired: 11/6/2018 17:23:19 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434677 6010d

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04569**	**2.0938**	**.97623**	**1.0076**	**2.0282**	**.04915**	**1.8629**	**85.683**	**.08975**
Stddev	.00218	.0454	.01503	.0154	.0097	.00032	.0361	.221	.00156
%RSD	4.7788	2.1706	1.5396	1.5255	.47919	.65462	1.9382	.25838	1.7384
#1	.04415	2.1259	.98685	1.0184	2.0350	.04938	1.8884	85.839	.09085
#2	.04723	2.0616	.96560	.99671	2.0213	.04893	1.8374	85.526	.08865
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46015**	**.20487**	**.24427**	**1.0192**	**53.068**	**.98515**	**59.948**	**.46736**	**.99225**
Stddev	.00850	.00442	.00063	.0082	.082	.00504	.075	.00073	.02052
%RSD	1.8462	2.1597	.25859	.80698	.15373	.51209	.12549	.15576	2.0679
#1	.46616	.20800	.24472	1.0250	53.125	.98872	60.002	.46788	1.0068
#2	.45415	.20174	.24382	1.0134	53.010	.98159	59.895	.46685	.97774
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**72.474**	**.46158**	**10.078**	**.45796**	**11.990**	**.49070**	**1.9330**	**29.681**	**63.517**
Stddev	.170	.00848	.198	.00840	.237	.01022	.0407	.011	.024
%RSD	.23487	1.8369	1.9644	1.8332	1.9758	2.0829	2.1044	.03716	.03716
#1	72.594	.46758	10.218	.46390	12.158	.49793	1.9618	29.689	63.534
#2	72.353	.45559	9.9382	.45202	11.823	.48348	1.9042	29.673	63.501
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9483**	**1.1488**	**.92252**	**.95982**	**1.8962**	**1.9403**	**.51502**	**.46775**	**.51396**
Stddev	.0373	.0032	.00226	.00026	.0283	.0096	.00059	.00489	.00889
%RSD	1.9158	.27677	.24505	.02662	1.4917	.49327	.11418	1.0447	1.7306
#1	1.9747	1.1511	.92411	.96000	1.9162	1.9335	.51544	.47121	.52025
#2	1.9219	1.1466	.92092	.95964	1.8762	1.9470	.51461	.46430	.50767
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3275.4**	**39785.**	**2935.6**
Stddev	6.1	243.	.3
%RSD	.18594	.60955	.01093
#1	3279.7	39614.	2935.3
#2	3271.1	39957.	2935.8

Sample Name: 280-115930-A-5-C MSD Acquired: 11/6/2018 17:25:38 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434677 6010d

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04956**	**2.2366**	**1.0361**	**1.0554**	**2.2052**	**.05313**	**1.9850**	**92.193**	**.09662**
Stddev	.00075	.0557	.0181	.0223	.0059	.00014	.0532	.401	.00205
%RSD	1.5124	2.4890	1.7451	2.1152	.26645	.25759	2.6825	.43480	2.1167
#1	.04903	2.2760	1.0489	1.0712	2.2093	.05304	2.0226	92.476	.09806
#2	.05009	2.1972	1.0233	1.0397	2.2010	.05323	1.9473	91.909	.09517
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49207**	**.22004**	**.26445**	**1.1159**	**57.463**	**1.0681**	**64.225**	**.50322**	**1.0396**
Stddev	.01244	.00568	.00005	.0060	.426	.0073	.241	.00177	.0255
%RSD	2.5271	2.5823	.02033	.53530	.74073	.68536	.37585	.35121	2.4497
#1	.50087	.22406	.26442	1.1201	57.764	1.0733	64.396	.50447	1.0576
#2	.48328	.21602	.26449	1.1117	57.162	1.0629	64.055	.50197	1.0216
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**78.694**	**.49394**	**10.798**	**.48896**	**12.517**	**.51338**	**2.0703**	**31.669**	**67.773**
Stddev	1.049	.01128	.243	.01232	.315	.00548	.0596	.168	.359
%RSD	1.3329	2.2834	2.2537	2.5197	2.5155	1.0683	2.8770	.53017	.53017
#1	79.436	.50192	10.970	.49767	12.740	.51725	2.1124	31.788	68.027
#2	77.952	.48597	10.626	.48024	12.294	.50950	2.0282	31.551	67.518
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0411**	**1.2431**	**.98763**	**1.0127**	**2.0221**	**2.0734**	**.55199**	**.50272**	**.54427**
Stddev	.0481	.0018	.00814	.0053	.0437	.0143	.00032	.00045	.00159
%RSD	2.3589	.14733	.82448	.52432	2.1597	.69080	.05810	.08943	.29272
#1	2.0751	1.2444	.98187	1.0165	2.0530	2.0835	.55177	.50240	.54539
#2	2.0070	1.2418	.99339	1.0089	1.9912	2.0632	.55222	.50303	.54314
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3169.1**	**38506.**	**2817.9**
Stddev	1.5	124.	3.0
%RSD	.04673	.32165	.10587
#1	3170.1	38594.	2815.8
#2	3168.0	38419.	2820.0

Sample Name: CCVH-5408055 Acquired: 11/6/2018 17:27:58 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00370**	**47.515**	**-.00155**	**.00603**	**.00049**	**.00014**	**.96473**	**.00895**	**-.00011**	**.00167**	**.00058**	**-.00009**	**47.216**
Stddev	.00050	.034	.00410	.00071	.00103	.00009	.01020	.00000	.00018	.00009	.00029	.00010	.099
%RSD	13.476	.07057	264.29	11.740	209.60	67.937	1.0570	.03519	174.41	5.1712	49.966	103.96	.20993
#1	-.00405	47.539	-.00445	.00653	-.00024	.00007	.97194	.00895	.00002	.00161	.00038	-.00002	47.146
#2	-.00335	47.491	.00135	.00553	.00122	.00020	.95751	.00896	-.00024	.00173	.00079	-.00016	47.286
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.06952**	**-.00256**	**-.06326**	**.00235**	**.00105**	**236.90**	**.00347**	**.00011**	**-.00152**	**4.7434**	**.00294**	**.00707**	**.04963**
Stddev	.01700	.00264	.00193	.00011	.00058	.12	.00007	.00253	.00196	.0648	.00227	.00084	.00174
%RSD	24.455	103.13	3.0548	4.8449	55.264	.04972	1.9542	2336.0	128.99	1.3652	77.181	11.932	3.5014
#1	-.05750	-.00069	-.06463	.00227	.00064	236.82	.00352	-.00168	-.00013	4.7892	.00133	.00647	.04840
#2	-.08155	-.00443	-.06189	.00243	.00145	236.99	.00342	.00189	-.00290	4.6976	.00454	.00766	.05086
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10621**	**-.00211**	**.00053**	**4.6081**	**.01959**	**.00239**	**9.6558**	**-.00889**	**.00080**	**.07477**
Stddev	.00372	.00164	.00013	.0030	.00043	.00076	.0879	.00043	.00001	.00082
%RSD	3.5014	77.571	25.186	.06479	2.1835	31.909	.91065	4.8783	.84260	1.0939
#1	.10358	-.00327	.00043	4.6102	.01929	.00293	9.5937	-.00858	.00080	.07535
#2	.10884	-.00095	.00062	4.6060	.01989	.00185	9.7180	-.00919	.00079	.07419
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3085.4**	**38691.**	**2924.2**
Stddev	21.5	579.	28.1
%RSD	.69769	1.4955	.96070
#1	3100.6	39100.	2904.4
#2	3070.2	38282.	2944.1

Sample Name: CCV-5407546 Acquired: 11/6/2018 17:30:29 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48981**	**.54944**	**.97506**	**.48456**	**.50689**	**.49980**	**.00081**	**4.9353**	**.48202**	**.48201**	**.48204**	**.50265**	**2.4440**	**50.045**
Stddev	.00078	.01242	.01952	.01200	.00041	.00117	.00038	.0280	.01162	.01084	.01227	.00209	.0104	.180
%RSD	.15960	2.2600	2.0018	2.4766	.08073	.23395	47.392	.56835	2.4097	2.2496	2.5444	.41667	.42499	.36046
#1	.48926	.55822	.98886	.49305	.50717	.50063	.00054	4.9551	.49024	.48968	.49071	.50413	2.4514	50.173
#2	.49036	.54066	.96126	.47608	.50660	.49897	.00108	4.9154	.47381	.47434	.47337	.50117	2.4367	49.917
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value														
Range														

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0329**	**19.274**	**.47795**	**.48177**	**5.2727**	**.47940**	**.99146**	**.96811**	**.02556**	**.96055**	**.96234**	**4.9162**	**10.521**	**.96266**
Stddev	.0036	.065	.00078	.01162	.0436	.01087	.02378	.02170	.01113	.02713	.02190	.0482	.103	.02421
%RSD	.35273	.33672	.16407	2.4110	.82678	2.2670	2.3986	2.2411	43.544	2.8245	2.2758	.98033	.98033	2.5148
#1	1.0355	19.320	.47850	.48998	5.2418	.48708	1.0083	.98345	.01769	.97973	.97783	4.9502	10.594	.97978
#2	1.0303	19.228	.47739	.47356	5.3035	.47171	.97465	.95277	.03342	.94136	.94686	4.8821	10.448	.94555
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value														
Range														

Elem	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49971**	**.01147**	**.47134**	**1.0004**	**.02093**	**.48611**	**.47296**	**.49305**
Stddev	.00111	.00179	.00025	.0161	.00399	.00098	.00284	.00426
%RSD	.22201	15.582	.05219	1.6105	19.063	.20098	.60022	.86304
#1	.50050	.01273	.47117	1.0118	.02375	.48680	.47497	.49605
#2	.49893	.01020	.47152	.98904	.01811	.48542	.47095	.49004
Check ?	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3103.1**	**38178.**	**2667.8**
Stddev	9.7	11.	19.2
%RSD	.31153	.02777	.71908
#1	3109.9	38171.	2654.3
#2	3096.3	38186.	2681.4

Sample Name: CCB Acquired: 11/6/2018 17:32:56 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00039**	**.00516**	**.00285**	**.00365**	**-.00032**	**.00012**	**.00689**	**-.00932**	**-.00021**	**.00083**	**.00049**	**-.00007**	**.00105**
Stddev	.00040	.00648	.00475	.00095	.00020	.00007	.00506	.00412	.00000	.00059	.00031	.00002	.00268
%RSD	103.41	125.50	166.56	25.889	61.340	55.207	73.396	44.228	.57133	70.934	64.105	24.024	254.11
#1	-.00010	.00975	-.00051	.00432	-.00046	.00017	.01047	-.01224	-.00021	.00124	.00027	-.00008	-.00084
#2	-.00068	.00058	.00622	.00298	-.00018	.00007	.00332	-.00641	-.00021	.00041	.00071	-.00006	.00295
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.13097**	**-.00659**	**-.00582**	**.00021**	**.00151**	**.16175**	**-.00021**	**.00088**	**-.00170**	**.01936**	**-.00029**	**-.00266**	**.03415**
Stddev	.03032	.00013	.00026	.00001	.00016	.00634	.00005	.00463	.00224	.00463	.00045	.00434	.00477
%RSD	23.149	2.0076	4.5372	7.0824	10.737	3.9209	23.996	526.98	131.65	23.931	158.50	162.79	13.978
#1	-.15241	-.00650	-.00563	.00020	.00162	.15726	-.00017	.00415	-.00328	.01608	.00003	.00040	.03753
#2	-.10953	-.00669	-.00600	.00022	.00139	.16623	-.00025	-.00240	-.00012	.02263	-.00061	-.00573	.03078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07309**	**-.00248**	**.00025**	**.00230**	**.00080**	**.00007**	**.04269**	**.00000**	**-.00016**	**.00041**
Stddev	.01022	.00086	.00003	.00157	.00128	.00005	.02857	.00062	.00002	.00434
%RSD	13.978	34.741	11.462	68.348	160.45	72.434	66.915	24468.	11.543	1062.8
#1	.08031	-.00187	.00023	.00341	-.00011	.00010	.06290	.00044	-.00015	-.00266
#2	.06586	-.00308	.00027	.00119	.00171	.00003	.02249	-.00043	-.00018	.00348
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3227.2**	**39605.**	**2799.6**
Stddev	28.7	41.	29.1
%RSD	.88911	.10329	1.0382
#1	3207.0	39576.	2820.2
#2	3247.5	39633.	2779.1

Sample Name: ccvl-5413446 Acquired: 11/6/2018 17:35:32 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00910**	**.10929**	**.01636**	**.09703**	**.01019**	**.00095**	**.10526**	**.19450**	**.00456**	**.01034**	**.00960**	**.01506**
Stddev	.00107	.00388	.00201	.00257	.00028	.00006	.00366	.00054	.00005	.00013	.00053	.00041
%RSD	11.791	3.5474	12.268	2.6452	2.7764	6.7544	3.4815	.28005	1.2016	1.2275	5.5194	2.6951
#1	.00986	.11203	.01778	.09885	.01039	.00091	.10267	.19412	.00452	.01043	.00997	.01535
#2	.00834	.10655	.01494	.09522	.00999	.00100	.10785	.19489	.00460	.01025	.00922	.01477
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10085**	**2.9470**	**.01652**	**.19460**	**.00994**	**.01871**	**1.1547**	**.03825**	**2.8374**	**.00696**	**.11059**	**.01600**
Stddev	.00313	.0080	.00092	.00225	.00009	.00014	.0123	.00125	.0914	.00171	.01297	.00108
%RSD	3.1030	.27206	5.5592	1.1566	.87072	.74369	1.0614	3.2640	3.2219	24.532	11.731	6.7607
#1	.09864	2.9527	.01587	.19619	.01000	.01861	1.1634	.03913	2.9020	.00816	.10142	.01524
#2	.10306	2.9414	.01717	.19301	.00988	.01881	1.1460	.03737	2.7727	.00575	.11977	.01677
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01864**	**.49570**	**1.0608**	**.09334**	**.00992**	**.01489**	**.00986**	**.01801**	F **.10384**	**.00963**	**.02022**	F **.02497**
Stddev	.00280	.01962	.0420	.00213	.00019	.00050	.00028	.00005	.01973	.00021	.00025	.00072
%RSD	15.001	3.9580	3.9580	2.2845	1.9456	3.3585	2.8034	.28426	18.998	2.1623	1.2344	2.8924
#1	.01667	.50957	1.0905	.09485	.00979	.01524	.01005	.01797	.08989	.00949	.02005	.02548
#2	.02062	.48182	1.0311	.09183	.01006	.01453	.00966	.01805	.11778	.00978	.02040	.02446
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3357.1**	**41557.**	**2888.3**
Stddev	.2	200.	41.9
%RSD	.00507	.48094	1.4508
#1	3357.2	41698.	2858.7
#2	3357.0	41416.	2917.9

Sample Name: 280-115930-A-5-Apds Acquired: 11/6/2018 17:38:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434677 6010d

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04262**	**.98711**	**.17799**	**.08544**	**.14915**	**.04893**	**-.00077**	**55.345**	**.04113**
Stddev	.00161	.04804	.00986	.00754	.00236	.00091	.00209	.358	.00212
%RSD	3.7666	4.8670	5.5416	8.8258	1.5794	1.8678	270.32	.64667	5.1428
#1	.04376	1.0211	.18496	.09077	.15081	.04957	.00071	55.598	.04263
#2	.04149	.95314	.17101	.08011	.14748	.04828	-.00226	55.092	.03963
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04099**	**.05952**	**.04807**	**1.0382**	**23.021**	**.10075**	**30.744**	**.04899**	**.03940**
Stddev	.00255	.00250	.00033	.0164	.614	.00163	.198	.00106	.00282
%RSD	6.2291	4.1978	.69132	1.5744	2.6678	1.6205	.64422	2.1633	7.1626
#1	.04280	.06129	.04831	1.0498	23.455	.10190	30.884	.04974	.04140
#2	.03919	.05775	.04784	1.0267	22.587	.09959	30.604	.04824	.03741
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**43.687**	**.04616**	**1.7308**	**.07169**	**9.4911**	**.06495**	**.15771**	**23.864**	**51.070**
Stddev	.308	.00211	.0992	.00519	.2121	.00907	.00869	.199	.427
%RSD	.70464	4.5705	5.7322	7.2460	2.2349	13.962	5.5081	.83585	.83585
#1	43.905	.04766	1.8009	.07536	9.6411	.07136	.16385	24.006	51.372
#2	43.470	.04467	1.6606	.06802	9.3411	.05854	.15157	23.723	50.768
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.06722**	**.20929**	**.18029**	**.04112**	**.15090**	**.46690**	**.06808**	**.18267**	**.05373**
Stddev	.00335	.00207	.00134	.00149	.01026	.00672	.00080	.00124	.00091
%RSD	4.9769	.99128	.74491	3.6213	6.7965	1.4387	1.1725	.68143	1.6882
#1	.06958	.21076	.18124	.04217	.15815	.47165	.06865	.18355	.05309
#2	.06485	.20783	.17934	.04007	.14364	.46215	.06752	.18179	.05437
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3347.1**	**40288.**	**2886.7**
Stddev	4.3	171.	11.2
%RSD	.12702	.42385	.38876
#1	3350.1	40409.	2878.7
#2	3344.1	40167.	2894.6

Sample Name: 280-115930-A-6-A Acquired: 11/6/2018 17:40:35 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434677 6010d

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00031**	**.00548**	**.00387**	**.02152**	**.05129**	**.00009**	**-.00358**	**37.705**	**.00003**
Stddev	.00042	.00018	.00218	.00055	.00043	.00001	.00467	.068	.00019
%RSD	135.74	3.2917	56.301	2.5417	.83151	10.902	130.38	.18042	671.33
#1	-.00001	.00535	.00233	.02113	.05159	.00008	-.00688	37.753	-.00011
#2	-.00060	.00561	.00541	.02191	.05099	.00009	-.00028	37.657	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00015**	**.01041**	**.00076**	**.02762**	**4.3340**	**.00116**	**13.572**	**.00132**	**.00522**
Stddev	.00050	.00066	.00053	.01062	.1018	.00324	.018	.00002	.00061
%RSD	340.96	6.3764	69.904	38.462	2.3491	280.00	.13330	1.6348	11.769
#1	.00050	.01088	.00038	.02011	4.4060	.00344	13.585	.00134	.00479
#2	-.00021	.00994	.00113	.03513	4.2620	-.00113	13.560	.00131	.00566
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.298**	**.00313**	**.01603**	**-.00983**	**9.6448**	**-.00198**	**.00265**	**20.039**	**42.884**
Stddev	1.055	.00057	.00252	.00083	.2215	.00011	.00332	.010	.022
%RSD	4.1718	18.243	15.702	8.4063	2.2968	5.6215	125.33	.05144	.05144
#1	26.044	.00272	.01781	-.00924	9.8014	-.00191	.00500	20.047	42.900
#2	24.552	.00353	.01425	-.01041	9.4881	-.00206	.00030	20.032	42.869
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00237**	**.16703**	**.00221**	**.00032**	**.00024**	**-.02202**	**.02283**	**.00279**	**.00226**
Stddev	.00182	.00013	.00113	.00004	.00167	.04127	.00092	.00087	.00046
%RSD	76.725	.08003	50.929	11.004	698.83	187.42	4.0227	31.215	20.252
#1	-.00108	.16712	.00142	.00035	.00142	-.05120	.02218	.00341	.00258
#2	-.00365	.16693	.00301	.00030	-.00094	.00716	.02348	.00218	.00193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3157.5**	**38474.**	**2723.0**
Stddev	31.0	251.	12.0
%RSD	.98039	.65334	.43947
#1	3135.6	38296.	2731.5
#2	3179.4	38651.	2714.5

Sample Name: MB 280-435536/1-A Acquired: 11/6/2018 17:43:08 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/3 Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00135**	**.00798**	**.00262**	**.00171**	**-.00039**	**.00025**	**-.00119**	**-.00096**	**-.00001**
Stddev	.00053	.00360	.00545	.00143	.00002	.00017	.00357	.00002	.00022
%RSD	39.401	45.157	208.05	83.703	5.6601	67.946	300.05	2.2415	1502.3
#1	-.00173	.01052	.00647	.00273	-.00037	.00037	-.00371	-.00094	-.00017
#2	-.00098	.00543	-.00123	.00070	-.00040	.00013	.00133	-.00097	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00031**	**.00062**	**-.00066**	**.14680**	**-.07429**	**-.00297**	**.00461**	**.00053**	**.00009**
Stddev	.00007	.00018	.00003	.00593	.05172	.00308	.00325	.00010	.00008
%RSD	21.653	28.412	5.1909	4.0392	69.618	103.52	70.446	19.590	81.008
#1	.00036	.00075	-.00068	.15099	-.11086	-.00515	.00691	.00045	.00015
#2	.00027	.00050	-.00064	.14261	-.03772	-.00080	.00232	.00060	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.16773**	**-.00021**	**.00258**	**-.00085**	**.01867**	**-.00408**	**.00884**	**.02564**	**.05486**
Stddev	.01224	.00002	.00300	.00249	.01589	.00407	.00448	.01683	.03601
%RSD	7.2980	7.1870	116.23	290.96	85.091	99.569	50.656	65.636	65.636
#1	.17638	-.00020	.00470	.00090	.02990	-.00121	.01200	.03753	.08032
#2	.15907	-.00022	.00046	-.00261	.00744	-.00696	.00567	.01374	.02940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00370**	**.00015**	**.00630**	**.00019**	**.00287**	**.00598**	**.00064**	**.00097**	**.00409**
Stddev	.00105	.00015	.00013	.00028	.00318	.00931	.00075	.00133	.00265
%RSD	28.497	98.510	1.9986	148.51	110.96	155.53	116.40	137.91	64.759
#1	-.00295	.00004	.00621	-.00001	.00511	.01256	.00117	.00002	.00596
#2	-.00444	.00025	.00639	.00038	.00062	-.00060	.00011	.00191	.00222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3414.2**	**42179.**	**2894.7**
Stddev	1.6	107.	30.3
%RSD	.04644	.25302	1.0472
#1	3415.3	42254.	2873.2
#2	3413.1	42103.	2916.1

Sample Name: LCS 280-435536/2-A Acquired: 11/6/2018 17:45:43 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04529**	**2.1028**	**.96781**	**.98062**	**2.0030**	**.04941**	**1.8841**	**48.478**	**.09107**
Stddev	.00063	.0392	.02123	.01651	.0076	.00014	.0379	.196	.00126
%RSD	1.3910	1.8642	2.1932	1.6837	.37852	.28036	2.0112	.40421	1.3875
#1	.04573	2.1305	.98282	.99229	2.0083	.04931	1.9109	48.617	.09196
#2	.04484	2.0750	.95280	.96894	1.9976	.04951	1.8573	48.339	.09018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46944**	**.18973**	**.24593**	**.97889**	**49.324**	**.98633**	**46.958**	**.46841**	**.97724**
Stddev	.00841	.00371	.00041	.00105	.017	.00055	.025	.00027	.01766
%RSD	1.7911	1.9568	.16480	.10777	.03473	.05538	.05319	.05686	1.8069
#1	.47539	.19236	.24622	.97815	49.336	.98595	46.976	.46822	.98973
#2	.46350	.18710	.24564	.97964	49.312	.98672	46.941	.46859	.96475
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.042**	**.46412**	**10.165**	**.47599**	**1.8956**	**.49257**	**1.9339**	**9.6387**	**20.627**
Stddev	.250	.00814	.170	.01054	.0316	.00838	.0229	.0116	.025
%RSD	.50957	1.7530	1.6758	2.2151	1.6692	1.7004	1.1844	.12062	.12062
#1	48.865	.46987	10.285	.48345	1.9180	.49849	1.9501	9.6469	20.644
#2	49.218	.45836	10.044	.46854	1.8732	.48665	1.9177	9.6305	20.609
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9274**	**.99142**	**.93796**	**.94915**	**1.9383**	**2.0156**	**.49444**	**.47106**	**.50757**
Stddev	.0342	.00300	.00009	.00072	.0371	.1319	.00096	.00238	.00022
%RSD	1.7763	.30269	.00946	.07599	1.9125	6.5438	.19326	.50463	.04380
#1	1.9516	.99354	.93802	.94864	1.9645	1.9223	.49512	.47274	.50741
#2	1.9032	.98930	.93789	.94966	1.9121	2.1088	.49377	.46937	.50772
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3342.2**	**40637.**	**2960.1**
Stddev	18.1	.	24.1
%RSD	.54217	.00045	.81271
#1	3329.4	40637.	2943.0
#2	3355.0	40637.	2977.1

Sample Name: 280-116141-B-1-A Acquired: 11/6/2018 17:48:05 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00033**	**.00222**	**.01035**	**.16558**	**.04529**	**.00021**	**-.00077**	**281.52**	**.00012**
Stddev	.00019	.00000	.00594	.00389	.00006	.00018	.00325	1.12	.00016
%RSD	57.503	.13242	57.378	2.3464	.13840	85.946	421.49	.39656	131.25
#1	-.00047	.00222	.00615	.16833	.04525	.00008	-.00307	282.31	.00001
#2	-.00020	.00222	.01455	.16284	.04534	.00033	.00153	280.73	.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.03285**	**.00170**	**.01859**	**10.735**	**.03914**	**110.94**	**.00031**	**.01667**
Stddev	.00024	.00027	.00052	.00085	.076	.00377	.18	.00013	.00039
%RSD	250.26	.82584	30.652	4.5506	.70543	9.6369	.15832	41.921	2.3528
#1	.00026	.03304	.00133	.01919	10.682	.03648	111.06	.00022	.01639
#2	-.00007	.03266	.00207	.01799	10.789	.04181	110.82	.00040	.01694
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**60.068**	**.00455**	**.01218**	**-.01096**	F **234.82**	**.00153**	**.04903**	**28.142**	**60.223**
Stddev	.982	.00005	.00057	.00019	4.88	.00352	.00536	.262	.561
%RSD	1.6351	1.0479	4.7125	1.7362	2.0768	230.31	10.936	.93223	.93223
#1	60.762	.00458	.01259	-.01083	238.26	-.00096	.05282	28.327	60.620
#2	59.373	.00452	.01178	-.01110	231.37	.00402	.04524	27.956	59.826
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00367**	**3.2407**	**-.00135**	**.00083**	**.00231**	**.12877**	**.00609**	**.00218**	**.00726**
Stddev	.00114	.0145	.00399	.00026	.00071	.02104	.00067	.00018	.00130
%RSD	31.121	.44706	296.07	31.541	30.630	16.340	11.011	8.1719	17.969
#1	-.00287	3.2510	.00147	.00101	.00181	.14365	.00657	.00205	.00818
#2	-.00448	3.2305	-.00417	.00064	.00281	.11390	.00562	.00231	.00633
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3177.4**	**39013.**	**2886.6**
Stddev	2.1	68.	8.7
%RSD	.06587	.17330	.30065
#1	3178.8	39061.	2880.5
#2	3175.9	38965.	2892.8

Sample Name: 280-116141-B-1-Asd@5 Acquired: 11/6/2018 17:50:38 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00109**	**.00546**	**.00894**	**.03704**	**.00886**	**-.00024**	**-.00335**	**56.975**	**.00004**
Stddev	.00030	.00049	.00423	.00215	.00049	.00002	.00361	.049	.00019
%RSD	27.558	9.0642	47.324	5.8139	5.5564	6.9647	107.51	.08586	467.82
#1	-.00088	.00511	.00595	.03856	.00851	-.00025	-.00590	57.010	.00017
#2	-.00131	.00581	.01193	.03551	.00921	-.00023	-.00080	56.940	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.00726**	**.00017**	**.00838**	**2.2636**	**.00763**	**22.663**	**.00034**	**.00565**
Stddev	.00090	.00006	.00002	.00305	.0329	.00058	.112	.00006	.00055
%RSD	1375.3	.83420	8.7972	36.411	1.4543	7.5808	.49289	18.521	9.6883
#1	.00057	.00731	.00016	.00622	2.2868	.00722	22.742	.00038	.00604
#2	-.00070	.00722	.00018	.01053	2.2403	.00804	22.584	.00030	.00527
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.489**	**.00060**	**.00195**	**-.00197**	**46.473**	**-.00028**	**.00698**	**5.7163**	**12.233**
Stddev	.272	.00043	.00016	.00124	.967	.00526	.00045	.1353	.290
%RSD	2.1762	72.074	8.2227	63.176	2.0801	1890.2	6.4715	2.3670	2.3670
#1	12.681	.00090	.00184	-.00109	47.157	-.00400	.00666	5.8119	12.438
#2	12.297	.00029	.00207	-.00285	45.790	.00344	.00730	5.6206	12.028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00219**	**.65228**	**-.00109**	**.00019**	**.00098**	**.08114**	**.00123**	**.00063**	**.00501**
Stddev	.00113	.00089	.00117	.00061	.00110	.06891	.00009	.00011	.00325
%RSD	51.375	.13701	107.64	328.96	111.85	84.930	7.2054	17.045	64.913
#1	-.00299	.65165	-.00191	.00062	.00020	.12987	.00117	.00056	.00731
#2	-.00140	.65291	-.00026	-.00025	.00175	.03241	.00130	.00071	.00271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3068.9**	**38245.**	**2700.8**
Stddev	6.6	32.	17.3
%RSD	.21595	.08410	.63872
#1	3073.6	38222.	2713.0
#2	3064.3	38268.	2688.6

Sample Name: 280-116141-B-1-B MS Acquired: 11/6/2018 17:53:12 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04807**	**2.0825**	**1.0224**	**1.1659**	**2.1034**	**.05039**	**1.9223**	**325.10**	**.09422**
Stddev	.00061	.0422	.0235	.0262	.0117	.00049	.0291	.31	.00155
%RSD	1.2703	2.0252	2.2995	2.2459	.55833	.98041	1.5145	.09389	1.6447
#1	.04851	2.1123	1.0390	1.1845	2.0951	.05004	1.9429	324.89	.09532
#2	.04764	2.0526	1.0057	1.1474	2.1117	.05074	1.9018	325.32	.09313
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46906**	**.22687**	**.25350**	**.99212**	**61.653**	**1.0702**	**155.70**	**.47287**	**1.0251**
Stddev	.01156	.00594	.00082	.00380	.037	.0031	.49	.00097	.0262
%RSD	2.4649	2.6174	.32515	.38299	.06080	.28556	.31360	.20428	2.5604
#1	.47724	.23107	.25409	.98944	61.627	1.0681	156.04	.47355	1.0437
#2	.46089	.22267	.25292	.99481	61.680	1.0724	155.35	.47219	1.0065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**109.41**	**.46780**	**10.780**	**.46223**	F **235.49**	**.50585**	**2.0573**	**37.217**	**79.645**
Stddev	.19	.01066	.239	.00978	4.96	.01008	.0532	.034	.073
%RSD	.17434	2.2780	2.2158	2.1161	2.1048	1.9917	2.5875	.09127	.09127
#1	109.28	.47533	10.949	.46914	239.00	.51298	2.0949	37.193	79.594
#2	109.55	.46026	10.612	.45531	231.99	.49873	2.0196	37.241	79.697
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9581**	**4.2195**	**.95651**	**.97406**	**1.8814**	**2.0570**	**.51391**	**.47533**	**.51641**
Stddev	.0450	.0074	.01034	.00224	.0427	.0478	.00370	.00220	.00295
%RSD	2.2968	.17506	1.0814	.22957	2.2671	2.3228	.71995	.46342	.57148
#1	1.9899	4.2143	.96382	.97565	1.9116	2.0232	.51653	.47689	.51432
#2	1.9263	4.2247	.94920	.97248	1.8513	2.0907	.51130	.47377	.51849
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3154.0**	**38737.**	**2833.8**
Stddev	2.4	595.	.5
%RSD	.07468	1.5358	.01635
#1	3152.3	38316.	2833.4
#2	3155.6	39157.	2834.1

Sample Name: 280-116141-B-1-C MSD Acquired: 11/6/2018 17:55:32 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04768**	**2.0932**	**1.0220**	**1.1703**	**2.1100**	**.05028**	**1.9209**	**322.74**	**.09513**
Stddev	.00064	.0378	.0141	.0159	.0024	.00017	.0200	.07	.00113
%RSD	1.3483	1.8062	1.3836	1.3581	.11409	.33252	1.0423	.02226	1.1865
#1	.04814	2.1199	1.0320	1.1816	2.1117	.05016	1.9351	322.79	.09593
#2	.04723	2.0664	1.0120	1.1591	2.1083	.05040	1.9068	322.69	.09434
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47044**	**.22761**	**.25332**	**.98075**	**61.881**	**1.0759**	**154.92**	**.47437**	**1.0292**
Stddev	.00671	.00470	.00085	.00081	.004	.0017	.21	.00102	.0176
%RSD	1.4261	2.0645	.33658	.08223	.00721	.15949	.13570	.21503	1.7122
#1	.47519	.23093	.25272	.98132	61.878	1.0771	154.77	.47365	1.0416
#2	.46570	.22429	.25393	.98018	61.884	1.0747	155.07	.47509	1.0167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**109.00**	**.47050**	**10.821**	**.46801**	F **234.18**	**.51263**	**2.0686**	**36.968**	**79.111**
Stddev	.30	.00816	.182	.00647	3.24	.00724	.0159	.042	.089
%RSD	.27562	1.7342	1.6785	1.3814	1.3855	1.4131	.76882	.11276	.11276
#1	109.22	.47627	10.950	.47258	236.47	.51775	2.0798	36.997	79.174
#2	108.79	.46473	10.693	.46344	231.89	.50750	2.0573	36.938	79.048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9666**	**4.1990**	**.95553**	**.97481**	**1.8946**	**2.1416**	**.51395**	**.47462**	**.51893**
Stddev	.0279	.0050	.00252	.00180	.0276	.0908	.00001	.00195	.00149
%RSD	1.4164	.11916	.26336	.18439	1.4586	4.2408	.00145	.41005	.28759
#1	1.9863	4.2025	.95375	.97354	1.9141	2.2058	.51396	.47324	.51998
#2	1.9469	4.1954	.95731	.97608	1.8750	2.0774	.51395	.47600	.51787
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3159.1**	**39049.**	**2863.2**
Stddev	1.0	427.	10.6
%RSD	.03074	1.0930	.36880
#1	3158.4	39351.	2855.7
#2	3159.8	38747.	2870.6

Sample Name: CCVH-5408055 Acquired: 11/6/2018 17:57:53 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00371**	**48.174**	**-.00712**	**.00540**	**.00168**	**-.00017**	**.98068**	**.33204**	**-.00055**	**.00170**	**.00083**	**-.00015**	**48.340**
Stddev	.00053	.216	.00241	.00031	.00228	.00005	.01741	.44210	.00010	.00014	.00015	.00055	.391
%RSD	14.282	.44763	33.866	5.7292	135.50	29.315	1.7756	133.14	17.663	8.0572	17.561	369.98	.80828
#1	-.00334	48.326	-.00882	.00518	.00007	-.00014	.99299	.01944	-.00048	.00180	.00072	.00024	48.616
#2	-.00409	48.021	-.00541	.00562	.00329	-.00021	.96837	.64465	-.00062	.00161	.00093	-.00054	48.063
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05235**	**-.00636**	**-.07368**	**.00249**	**.00063**	**241.24**	**.00283**	**.00697**	**-.00236**	**4.8830**	**.00312**	**.01179**	**.08655**
Stddev	.00694	.00410	.00156	.00003	.00028	.10	.00072	.00412	.00078	.0966	.00224	.00210	.08596
%RSD	13.264	64.494	2.1183	1.3599	44.272	.03997	25.561	59.122	33.134	1.9784	71.880	17.822	99.316
#1	.04744	-.00926	-.07258	.00251	.00043	241.31	.00334	.00406	-.00181	4.9513	.00470	.01030	.02577
#2	.05726	-.00346	-.07478	.00246	.00082	241.17	.00232	.00988	-.00291	4.8147	.00153	.01327	.14733
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.18522**	**-.00142**	**.00453**	**4.6677**	**.01888**	**-.00018**	**9.7274**	**-.00987**	**.00223**	**.07354**
Stddev	.18395	.00035	.00555	.0799	.00025	.00016	.0594	.00060	.00087	.00098
%RSD	99.316	24.861	122.44	1.7119	1.3342	88.790	.61054	6.0807	38.895	1.3338
#1	.05515	-.00167	.00061	4.7242	.01906	-.00007	9.7694	-.00945	.00161	.07285
#2	.31529	-.00117	.00846	4.6112	.01870	-.00029	9.6854	-.01030	.00284	.07423
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3220.3**	**39189.**	**2915.9**
Stddev	9.8	1040.	67.2
%RSD	.30544	2.6525	2.3038
#1	3227.3	38453.	2868.4
#2	3213.4	39924.	2963.4

Sample Name: CCV-5407546 Acquired: 11/6/2018 18:00:24 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49198**	F **.56139**	**.99194**	**.49339**	**.50698**	**.49843**	**.00756**	**4.8896**	**.49191**	**.48908**	**.48836**	**.50493**
Stddev	.00119	.00879	.00226	.00965	.00034	.00038	.00479	.0072	.00604	.00680	.00617	.00634
%RSD	.24122	1.5655	.22755	1.9567	.06795	.07558	63.300	.14784	1.2287	1.3908	1.2635	1.2565
#1	.49282	.56761	.99354	.50022	.50674	.49870	.00418	4.8845	.49619	.49389	.49272	.50942
#2	.49114	.55518	.99034	.48657	.50723	.49817	.01095	4.8947	.48764	.48427	.48399	.50045
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4469**	**49.809**	**1.0170**	**19.359**	**.47856**	**.48941**	**5.2891**	**.48660**	**1.0086**	**.98029**	**.06574**	**.98504**
Stddev	.0067	.116	.0056	.124	.00466	.00623	.0401	.00572	.0124	.00895	.00509	.01342
%RSD	.27511	.23215	.55011	.63846	.97306	1.2733	.75819	1.1761	1.2335	.91329	7.7368	1.3628
#1	2.4421	49.727	1.0210	19.447	.48185	.49382	5.3175	.49065	1.0174	.98662	.06934	.99453
#2	2.4516	49.891	1.0131	19.272	.47527	.48500	5.2608	.48255	.99983	.97396	.06214	.97555
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.98354**	**4.8487**	**10.376**	**.97884**	**.49857**	**.01019**	**.47396**	**1.0220**	**.06015**	**.48712**	**.47620**	**.49449**
Stddev	.00269	.0282	.060	.01473	.00028	.00217	.00396	.0061	.00884	.00604	.00512	.00528
%RSD	.27330	.58213	.58213	1.5045	.05669	21.329	.83485	.59695	14.699	1.2400	1.0744	1.0685
#1	.98544	4.8288	10.334	.98925	.49837	.01172	.47676	1.0263	.05389	.49139	.47982	.49076
#2	.98164	4.8687	10.419	.96843	.49877	.00865	.47117	1.0177	.06640	.48285	.47259	.49823
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3097.3**	**39252.**	**2833.0**
Stddev	38.7	1345.	8.5
%RSD	1.2503	3.4260	.29891
#1	3124.7	38301.	2838.9
#2	3069.9	40203.	2827.0

Sample Name: CCB Acquired: 11/6/2018 18:02:50 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00176**	**-.00064**	W **.00817**	**.00251**	**-.00068**	**.00011**	**.00191**	**-.00865**	**-.00044**	**.00056**	**.00021**	**.00075**
Stddev	.00127	.00054	.00086	.00085	.00043	.00001	.00156	.00168	.00018	.00001	.00001	.00075
%RSD	72.028	84.529	10.482	34.022	63.332	6.4610	81.615	19.380	41.014	1.3007	2.5999	99.548
#1	-.00086	-.00026	.00756	.00311	-.00038	.00011	.00301	-.00984	-.00031	.00057	.00021	.00128
#2	-.00266	-.00102	.00877	.00191	-.00099	.00010	.00081	-.00747	-.00057	.00056	.00021	.00022
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.00750									
Low Limit			-.01500									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00402**	**-.09202**	**.00023**	**-.00288**	**.00003**	**.00107**	**.17707**	**-.00062**	**-.00132**	**.00030**	W **.05426**	**.00140**
Stddev	.00136	.08012	.00351	.00093	.00008	.00056	.01141	.00116	.00192	.00107	.00101	.00193
%RSD	33.788	87.063	1522.9	32.470	253.52	52.765	6.4432	187.59	144.80	357.99	1.8606	137.89
#1	-.00306	-.14867	-.00225	-.00222	-.00003	.00146	.18513	-.00144	.00003	.00106	.05497	.00003
#2	-.00498	-.03537	.00271	-.00354	.00009	.00067	.16900	.00020	-.00268	-.00046	.05355	.00276
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit											.05000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00436**	**.00500**	**.01070**	**-.00187**	**.00023**	**.00233**	**.00053**	**.00071**	**.07097**	**.00121**	**-.00074**	**.00189**
Stddev	.00020	.03599	.07702	.00022	.00012	.00314	.00075	.00177	.03027	.00012	.00035	.00063
%RSD	4.6652	719.66	719.66	11.790	51.265	134.79	141.79	249.48	42.647	9.9895	47.980	33.210
#1	-.00422	-.02045	-.04376	-.00171	.00032	.00455	-.00000	-.00054	.04957	.00112	-.00099	.00144
#2	-.00451	.03045	.06516	-.00202	.00015	.00011	.00106	.00196	.09237	.00129	-.00049	.00233
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3203.7**	**39910.**	**2806.1**
Stddev	11.6	1065.	45.4
%RSD	.36247	2.6695	1.6189
#1	3211.9	39157.	2773.9
#2	3195.5	40663.	2838.2

Sample Name: ccvl-5413446 Acquired: 11/6/2018 18:05:26 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00980**	**.11115**	**.01709**	**.09726**	**.01035**	**.00101**	**.10190**	**.24524**	**.00477**	**.01015**	**.00998**	**.01476**
Stddev	.00045	.00368	.00417	.00154	.00011	.00024	.00280	.00534	.00025	.00022	.00015	.00022
%RSD	4.6232	3.3099	24.411	1.5803	1.0910	23.682	2.7444	2.1766	5.2787	2.1519	1.4907	1.4580
#1	.00948	.11375	.01414	.09834	.01027	.00118	.10388	.24902	.00495	.00999	.01009	.01491
#2	.01012	.10855	.02004	.09617	.01043	.00084	.09992	.24147	.00459	.01030	.00988	.01461
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10259**	**2.9151**	**.01951**	**.19932**	**.00995**	**.01893**	**1.1903**	**.03857**	**2.8766**	**.00719**	**.12257**	**.01907**
Stddev	.00163	.0127	.00232	.00025	.00001	.00032	.0095	.00239	.0803	.00163	.00347	.00060
%RSD	1.5854	.43458	11.885	.12354	.05093	1.6683	.79860	6.2083	2.7914	22.703	2.8299	3.1453
#1	.10374	2.9061	.02115	.19949	.00996	.01916	1.1970	.04027	2.9333	.00835	.12012	.01949
#2	.10144	2.9240	.01787	.19915	.00995	.01871	1.1835	.03688	2.8198	.00604	.12503	.01864
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02024**	**.50386**	**1.0783**	**.09345**	**.01005**	**.01397**	**.00910**	**.01519**	F **.12700**	**.01033**	F **.02772**	**.01638**
Stddev	.00090	.02227	.0477	.00111	.00028	.00130	.00061	.00212	.02863	.00095	.00015	.00027
%RSD	4.4618	4.4197	4.4197	1.1929	2.7918	9.2768	6.7307	13.979	22.546	9.2164	.55327	1.6725
#1	.02088	.51960	1.1120	.09424	.00985	.01306	.00867	.01669	.14725	.00966	.02783	.01657
#2	.01960	.48811	1.0446	.09266	.01025	.01489	.00954	.01369	.10675	.01100	.02761	.01619
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass
Value									.06000		.02000	
Range									30.000%		30.000%	

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3292.3**	**40583.**	**2836.9**
Stddev	5.2	117.	10.6
%RSD	.15875	.28935	.37500
#1	3296.0	40666.	2829.4
#2	3288.6	40499.	2844.4

Sample Name: 280-116141-B-1-A Acquired: 11/6/2018 18:08:01 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04065**	**.90835**	**.17377**	**.23875**	**.14078**	**.04730**	**-.00984**	**297.99**	**.04036**
Stddev	.00102	.03467	.00039	.00685	.00283	.00145	.00258	2.47	.00201
%RSD	2.5066	3.8173	.22298	2.8685	2.0127	3.0665	26.163	.83016	4.9907
#1	.04137	.93287	.17349	.24360	.14278	.04832	-.00802	299.74	.04179
#2	.03993	.88383	.17404	.23391	.13878	.04627	-.01166	296.24	.03894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03827**	**.07441**	**.04694**	**.96307**	**29.691**	**.14199**	**128.30**	**.04296**	**.05480**
Stddev	.00104	.00239	.00171	.02973	.609	.00621	.19	.00115	.00154
%RSD	2.7230	3.2151	3.6469	3.0872	2.0518	4.3720	.15009	2.6864	2.8176
#1	.03900	.07610	.04815	.98409	30.122	.14638	128.43	.04378	.05589
#2	.03753	.07271	.04573	.94204	29.260	.13760	128.16	.04214	.05371
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**77.773**	**.04263**	**1.7362**	**.06368**	F **237.81**	**.08033**	**.21362**	**33.289**	**71.238**
Stddev	.681	.00273	.0861	.00264	2.68	.00850	.01347	.584	1.250
%RSD	.87521	6.4020	4.9603	4.1470	1.1284	10.581	6.3057	1.7548	1.7548
#1	78.254	.04456	1.7971	.06555	239.70	.08634	.22315	33.702	72.122
#2	77.291	.04070	1.6753	.06181	235.91	.07432	.20410	32.876	70.355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07445**	**3.2681**	**.16958**	**.04185**	**.14598**	**.55746**	**.04971**	**.17059**	**.05358**
Stddev	.00559	.0198	.00138	.00023	.00778	.04831	.00147	.00458	.00023
%RSD	7.5085	.60659	.81106	.53973	5.3271	8.6658	2.9601	2.6878	.42322
#1	.07840	3.2821	.16860	.04201	.15148	.52330	.05075	.17383	.05375
#2	.07050	3.2541	.17055	.04169	.14049	.59162	.04867	.16734	.05342
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2939.8**	**35978.**	**2666.7**
Stddev	36.2	126.	28.1
%RSD	1.2300	.35036	1.0523
#1	2914.2	36067.	2646.9
#2	2965.3	35889.	2686.6

Sample Name: 280-116141-B-2-A Acquired: 11/6/2018 18:10:30 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00137**	**.01984**	**.00424**	**3.4740**	**.01622**	**.00030**	**-.00515**	W **671.48**	**.00048**
Stddev	.00002	.00144	.00310	.1451	.00118	.00006	.00448	6.88	.00014
%RSD	1.5074	7.2804	73.122	4.1773	7.2862	20.788	86.929	1.0242	29.605
#1	-.00135	.02086	.00205	3.5766	.01539	.00035	-.00199	676.34	.00058
#2	-.00138	.01882	.00643	3.3714	.01706	.00026	-.00832	666.62	.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00081**	**.00730**	**.00373**	**.03422**	**20.507**	**.11624**	**190.49**	**.00144**	**.21695**
Stddev	.00007	.00014	.00102	.00862	.089	.00180	.58	.00006	.00964
%RSD	8.8614	1.9191	27.395	25.192	.43576	1.5511	.30215	3.8754	4.4451
#1	.00076	.00740	.00301	.04032	20.571	.11497	190.89	.00140	.22377
#2	.00086	.00720	.00446	.02813	20.444	.11752	190.08	.00148	.21013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **693.05**	**.07690**	**.03019**	**-.00830**	F **1019.5**	**.01040**	**.00650**	**26.930**	**57.630**
Stddev	.02	.00358	.00103	.00223	44.2	.00357	.01041	.354	.757
%RSD	.00284	4.6614	3.4047	26.927	4.3309	34.351	160.12	1.3134	1.3134
#1	693.07	.07943	.03092	-.00672	1050.7	.00787	-.00086	27.180	58.165
#2	693.04	.07437	.02947	-.00987	988.26	.01293	.01386	26.680	57.094
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00360**	**3.9168**	**-.00101**	**.00313**	**.00149**	**.08029**	**.00599**	**.00251**	**.00597**
Stddev	.00034	.0019	.00053	.00064	.00235	.03320	.00028	.00039	.00079
%RSD	9.3765	.04764	52.545	20.508	158.03	41.347	4.6195	15.633	13.284
#1	-.00336	3.9181	-.00063	.00267	-.00017	.10376	.00619	.00223	.00541
#2	-.00384	3.9154	-.00139	.00358	.00314	.05681	.00580	.00278	.00653
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2976.1**	**35957.**	**2770.6**
Stddev	8.9	27.	10.0
%RSD	.29830	.07629	.36084
#1	2969.9	35976.	2763.5
#2	2982.4	35938.	2777.6

Sample Name: 280-116141-B-3-A Acquired: 11/6/2018 18:13:13 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00097**	**.00829**	**.00792**	**.16614**	**.10000**	**.00024**	**-.01360**	**124.93**	**.00023**
Stddev	.00007	.00040	.00892	.00355	.00044	.00010	.00344	.11	.00006
%RSD	7.4168	4.8501	112.59	2.1338	.44176	42.387	25.306	.08650	26.818
#1	-.00102	.00858	.00162	.16865	.10031	.00032	-.01604	124.85	.00018
#2	-.00092	.00801	.01423	.16364	.09968	.00017	-.01117	125.00	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**.00078**	**.00170**	**.03808**	**8.2669**	**.03964**	**60.927**	**.12974**	**.00445**
Stddev	.00062	.00021	.00033	.00144	.0895	.00176	.067	.00039	.00018
%RSD	1202.1	27.547	19.212	3.7884	1.0823	4.4324	.11047	.30309	4.0357
#1	-.00049	.00063	.00193	.03706	8.2037	.03839	60.975	.13002	.00433
#2	.00039	.00093	.00147	.03910	8.3302	.04088	60.880	.12946	.00458
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**58.668**	**-.00023**	**.04441**	**-.01154**	**124.28**	**.00181**	**-.00013**	**27.406**	**58.649**
Stddev	.390	.00022	.00300	.00157	2.34	.00067	.00667	.051	.109
%RSD	.66421	94.628	6.7469	13.579	1.8791	36.746	4973.0	.18513	.18513
#1	58.393	-.00008	.04653	-.01265	125.93	.00134	.00459	27.442	58.726
#2	58.944	-.00038	.04229	-.01043	122.63	.00229	-.00485	27.370	58.572
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00335**	**1.7318**	**.00058**	**.00073**	**.00142**	**.01055**	**.00309**	**.00236**	**-.00036**
Stddev	.00009	.0013	.00223	.00065	.00220	.01540	.00122	.00074	.00417
%RSD	2.5950	.07248	383.94	89.374	155.34	145.89	39.305	31.461	1159.0
#1	-.00329	1.7327	-.00100	.00027	-.00014	.02144	.00223	.00184	-.00331
#2	-.00341	1.7309	.00216	.00119	.00297	-.00033	.00395	.00289	.00259
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3145.9**	**38739.**	**2826.8**
Stddev	4.9	58.	3.5
%RSD	.15477	.14990	.12515
#1	3149.4	38780.	2829.3
#2	3142.5	38698.	2824.3

Sample Name: 280-116141-B-4-A Acquired: 11/6/2018 18:15:46 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.03700**	**.01424**	**.15647**	**.08401**	**.00011**	**-.00392**	**167.68**	**.00021**
Stddev	.00013	.00130	.00017	.00237	.00011	.00007	.00392	1.04	.00036
%RSD	37.863	3.5246	1.1829	1.5157	.13355	63.733	99.936	.61946	176.11
#1	.00025	.03792	.01436	.15815	.08409	.00006	-.00115	168.41	-.00005
#2	.00044	.03607	.01412	.15480	.08393	.00016	-.00669	166.94	.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00035**	**.00027**	**.00242**	**.14300**	**6.9560**	**.03934**	**51.374**	**.03159**	**.00430**
Stddev	.00008	.00006	.00014	.00830	.0031	.00092	.009	.00137	.00037
%RSD	21.367	23.601	5.7732	5.8009	.04474	2.3486	.01764	4.3451	8.5347
#1	-.00041	.00031	.00232	.14886	6.9582	.04000	51.381	.03062	.00404
#2	-.00030	.00022	.00252	.13713	6.9538	.03869	51.368	.03256	.00456
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**76.834**	**.00137**	**.04963**	**-.01004**	**142.60**	**.00311**	**-.00228**	**25.384**	**54.323**
Stddev	.121	.00076	.00010	.00136	2.92	.00602	.00334	.216	.462
%RSD	.15760	55.433	.20066	13.526	2.0456	193.90	146.50	.84966	.84966
#1	76.749	.00083	.04956	-.01100	144.66	-.00115	-.00464	25.537	54.649
#2	76.920	.00190	.04970	-.00908	140.54	.00736	.00008	25.232	53.996
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00269**	**2.2216**	**.00247**	**.00426**	**-.00036**	**.12542**	**.00970**	**.00958**	**.00433**
Stddev	.00054	.0124	.00807	.00385	.00113	.03992	.00091	.00227	.00050
%RSD	19.994	.55717	326.27	90.298	311.91	31.831	9.4225	23.698	11.610
#1	-.00231	2.2304	-.00323	.00154	.00044	.09719	.00905	.00797	.00469
#2	-.00307	2.2129	.00818	.00698	-.00116	.15365	.01034	.01118	.00398
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3111.4**	**38615.**	**2781.8**
Stddev	26.5	506.	24.4
%RSD	.85212	1.3094	.87633
#1	3130.2	38257.	2764.5
#2	3092.7	38973.	2799.0

Sample Name: 280-116141-B-5-A Acquired: 11/6/2018 18:18:18 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00053**	**.02816**	**.01106**	**.09789**	**.05002**	**.00011**	**-.00082**	**96.488**	**.00027**
Stddev	.00067	.00108	.00554	.00100	.00040	.00019	.00066	.452	.00007
%RSD	126.70	3.8442	50.133	1.0237	.78979	163.01	81.105	.46894	24.637
#1	-.00100	.02892	.00714	.09860	.04974	-.00002	-.00035	96.168	.00023
#2	-.00005	.02739	.01497	.09718	.05029	.00024	-.00129	96.808	.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	**.00205**	**.00094**	**.05996**	**7.2514**	**.04117**	**46.458**	**.00857**	**.00596**
Stddev	.00028	.00030	.00073	.00160	.1544	.00399	.098	.00008	.00049
%RSD	163.16	14.850	76.837	2.6705	2.1296	9.6820	.21095	.92214	8.1591
#1	-.00003	.00227	.00146	.06109	7.1422	.03835	46.528	.00862	.00561
#2	.00037	.00184	.00043	.05883	7.3606	.04399	46.389	.00851	.00630
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**31.790**	**-.00067**	**.03774**	**-.01125**	**69.511**	**-.00024**	**.00930**	**27.074**	**57.939**
Stddev	1.078	.00016	.00186	.00063	1.829	.00264	.00105	.040	.086
%RSD	3.3903	24.182	4.9334	5.5775	2.6310	1113.7	11.275	.14919	.14919
#1	31.027	-.00078	.03905	-.01169	70.804	.00163	.01004	27.046	57.878
#2	32.552	-.00055	.03642	-.01080	68.218	-.00210	.00856	27.103	58.000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00091**	**1.2918**	**-.00051**	**.00162**	**.00077**	**.03009**	**.01030**	**.00451**	**.00342**
Stddev	.00054	.0062	.00463	.00113	.00108	.01372	.00101	.00095	.00474
%RSD	59.674	.47739	899.57	69.854	139.66	45.575	9.8291	21.037	138.58
#1	-.00053	1.2875	-.00379	.00082	.00154	.03979	.00958	.00384	.00678
#2	-.00129	1.2962	.00276	.00242	.00001	.02040	.01101	.00518	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3165.5**	**38674.**	**2783.8**
Stddev	4.1	252.	10.4
%RSD	.12974	.65188	.37479
#1	3162.6	38495.	2791.2
#2	3168.4	38852.	2776.5

Sample Name: 280-116141-B-6-A Acquired: 11/6/2018 18:20:51 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00043**	**-.00047**	**.00517**	**.16390**	**.04452**	**.00014**	**-.00771**	**285.08**	**.00084**
Stddev	.00084	.00036	.00433	.00446	.00068	.00030	.00120	.57	.00039
%RSD	196.64	76.370	83.778	2.7213	1.5190	216.88	15.600	.20106	46.688
#1	-.00102	-.00072	.00823	.16705	.04404	.00036	-.00856	285.49	.00057
#2	.00017	-.00022	.00211	.16075	.04500	-.00007	-.00686	284.68	.00112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.03226**	**.00128**	**.00414**	**10.908**	**.04399**	**112.32**	**.00017**	**.01446**
Stddev	.00008	.00109	.00040	.00371	.003	.00374	.63	.00004	.00065
%RSD	131.85	3.3704	31.504	89.736	.02657	8.5045	.56194	22.354	4.5223
#1	.00012	.03303	.00100	.00676	10.910	.04663	112.77	.00014	.01492
#2	.00000	.03149	.00157	.00151	10.906	.04134	111.87	.00019	.01399
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**61.502**	**.00413**	**.01089**	**-.01357**	F **229.91**	**.00248**	**.03541**	**29.260**	**62.615**
Stddev	.057	.00090	.00186	.00098	9.63	.00194	.01048	.068	.146
%RSD	.09245	21.854	17.066	7.2187	4.1899	78.301	29.608	.23330	.23330
#1	61.543	.00349	.00958	-.01287	236.72	.00386	.04283	29.308	62.719
#2	61.462	.00477	.01221	-.01426	223.10	.00111	.02800	29.211	62.512
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00396**	**3.2772**	**-.00481**	**.00059**	**-.00073**	**.09425**	**.00638**	**.00253**	**.00367**
Stddev	.00091	.0051	.00161	.00024	.00324	.02702	.00097	.00058	.00377
%RSD	23.045	.15516	33.495	40.290	442.22	28.666	15.200	22.823	102.73
#1	-.00461	3.2808	-.00367	.00076	.00156	.07514	.00569	.00293	.00634
#2	-.00332	3.2736	-.00594	.00042	-.00302	.11335	.00706	.00212	.00100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3093.9**	**38131.**	**2794.0**
Stddev	2.3	120.	29.5
%RSD	.07447	.31508	1.0559
#1	3092.2	38046.	2773.1
#2	3095.5	38216.	2814.8

Sample Name: 280-116141-B-7-A Acquired: 11/6/2018 18:23:23 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010c

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00152**	**.00171**	**.00426**	**.00348**	**.00021**	**-.00011**	**.00491**	**.04283**	**-.00037**
Stddev	.00007	.00111	.00131	.00129	.00062	.00050	.00383	.00089	.00026
%RSD	4.3391	64.895	30.661	37.070	289.54	470.50	77.918	2.0793	70.834
#1	-.00157	.00093	.00518	.00439	-.00022	-.00046	.00762	.04220	-.00018
#2	-.00147	.00250	.00334	.00257	.00065	.00025	.00221	.04346	-.00055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00051**	**.00020**	**-.00028**	**.04727**	**-.02170**	**-.00344**	**.01336**	**.00034**	**-.00072**
Stddev	.00016	.00031	.00052	.00399	.04041	.00114	.00417	.00005	.00040
%RSD	30.974	156.97	183.14	8.4347	186.21	33.009	31.230	14.257	55.048
#1	.00062	-.00002	-.00065	.05009	.00687	-.00264	.01041	.00037	-.00100
#2	.00040	.00042	.00008	.04445	-.05028	-.00425	.01631	.00030	-.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.32675**	**-.00114**	**.00024**	**-.00202**	**.16447**	**-.00073**	**.00996**	**.17286**	**.36993**
Stddev	.00173	.00016	.00040	.00055	.00782	.00208	.00117	.05315	.11375
%RSD	.53028	13.720	164.16	27.058	4.7573	285.42	11.788	30.748	30.748
#1	.32797	-.00125	.00052	-.00163	.17000	.00074	.00913	.13528	.28950
#2	.32552	-.00103	-.00004	-.00240	.15893	-.00220	.01079	.21045	.45036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00199**	**.00016**	**.00253**	**.00095**	**-.00074**	**.00095**	**-.00015**	**.00110**	**.00436**
Stddev	.00075	.00021	.00129	.00029	.00193	.03980	.00054	.00004	.00189
%RSD	37.691	130.47	51.058	30.287	260.12	4208.1	366.49	3.9752	43.368
#1	-.00146	.00001	.00345	.00075	.00062	.02908	.00024	.00106	.00569
#2	-.00252	.00031	.00162	.00116	-.00210	-.02719	-.00053	.00113	.00302
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3290.7**	**40670.**	**2833.6**
Stddev	4.7	10.	2.9
%RSD	.14334	.02435	.10136
#1	3294.0	40663.	2831.6
#2	3287.3	40677.	2835.6

Sample Name: 280-116258-A-1-A Acquired: 11/6/2018 18:25:59 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435482

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00149**	**.03425**	**.00166**	**.01733**	**.04816**	**.00011**	**-.00041**	**6.6007**	**-.00003**
Stddev	.00038	.00100	.00142	.00079	.00087	.00007	.00186	.0117	.00001
%RSD	25.477	2.9103	85.432	4.5485	1.7964	58.329	456.37	.17735	38.124
#1	-.00176	.03496	.00266	.01789	.04878	.00016	.00091	6.6089	-.00003
#2	-.00122	.03355	.00066	.01678	.04755	.00007	-.00172	6.5924	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00130**	**.00037**	**.00197**	**.15062**	**1.3577**	**.00064**	**3.2327**	**.04213**	**-.00055**
Stddev	.00018	.00019	.00101	.00254	.1785	.00029	.0053	.00026	.00003
%RSD	13.819	52.563	51.422	1.6885	13.149	45.107	.16544	.61160	5.3427
#1	.00143	.00023	.00269	.14882	1.4840	.00043	3.2365	.04231	-.00057
#2	.00117	.00050	.00125	.15242	1.2315	.00084	3.2289	.04195	-.00053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**40.712**	**.00209**	**.00059**	**-.00489**	**6.9450**	**-.00316**	**.00432**	**6.8691**	**14.700**
Stddev	.747	.00010	.00328	.00003	.1885	.00003	.00052	.0201	.043
%RSD	1.8349	4.8480	555.01	.59740	2.7140	.94765	12.028	.29251	.29251
#1	41.240	.00216	.00291	-.00487	7.0783	-.00314	.00469	6.8549	14.669
#2	40.183	.00202	-.00173	-.00491	6.8118	-.00319	.00395	6.8833	14.730
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00255**	**.04373**	**-.00118**	**.00034**	**.00225**	**.05525**	**-.00016**	**.00473**	**.00708**
Stddev	.00071	.00020	.00709	.00047	.00204	.03121	.00076	.00000	.00066
%RSD	27.800	.45770	601.13	138.81	90.710	56.491	477.90	.06230	9.3551
#1	-.00205	.04359	-.00620	.00001	.00370	.07732	.00038	.00474	.00754
#2	-.00305	.04387	.00384	.00067	.00081	.03318	-.00070	.00473	.00661
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3232.7**	**39495.**	**2825.1**
Stddev	5.2	317.	9.8
%RSD	.15963	.80318	.34554
#1	3236.4	39719.	2832.0
#2	3229.1	39270.	2818.2

Sample Name: CCVH-5408055 Acquired: 11/6/2018 18:28:33 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00334**	**47.946**	**-.00597**	**.00238**	**.00026**	**.00008**	**.95606**	**.00138**	**-.00039**	**.00225**	**.00070**	**-.00056**	**47.718**
Stddev	.00110	.196	.00333	.00058	.00006	.00033	.01872	.00231	.00039	.00005	.00012	.00023	.449
%RSD	32.954	.40882	55.715	24.238	23.093	428.97	1.9583	167.68	100.73	2.1723	17.636	40.735	.94000
#1	-.00412	47.807	-.00832	.00279	.00030	-.00016	.96930	.00301	-.00067	.00228	.00062	-.00073	47.401
#2	-.00256	48.084	-.00362	.00197	.00022	.00031	.94282	-.00026	-.00011	.00221	.00079	-.00040	48.035
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05399**	**.00201**	**-.08162**	**.00239**	**-.00125**	**239.51**	**.00288**	**-.00082**	**-.00078**	**4.9127**	**.00223**	**.00948**	**.05232**
Stddev	.11677	.00231	.00438	.00002	.00033	1.97	.00154	.00148	.00275	.0450	.00226	.00148	.02818
%RSD	216.27	115.03	5.3702	.95413	26.609	.82292	53.573	180.66	351.15	.91527	101.37	15.657	53.856
#1	-.13656	.00364	-.08472	.00237	-.00101	238.11	.00398	.00023	.00116	4.8809	.00383	.00843	.03240
#2	.02858	.00037	-.07852	.00240	-.00148	240.90	.00179	-.00186	-.00273	4.9445	.00063	.01053	.07225
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.11197**	**-.00247**	**.00055**	**4.6840**	**.01819**	**.00153**	**9.6666**	**-.01005**	**.00068**	**.07856**
Stddev	.06030	.00124	.00013	.0443	.00076	.00004	.0737	.00043	.00058	.01057
%RSD	53.856	50.087	24.110	.94502	4.1603	2.7186	.76224	4.2733	84.571	13.449
#1	.06933	-.00160	.00064	4.7153	.01766	.00156	9.7187	-.01035	.00109	.07109
#2	.15461	-.00335	.00045	4.6527	.01873	.00150	9.6145	-.00974	.00027	.08603
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3205.8**	**38604.**	**2792.5**
Stddev	11.0	255.	21.0
%RSD	.34298	.66013	.75204
#1	3198.1	38424.	2807.3
#2	3213.6	38785.	2777.6

Sample Name: CCV-5407546 Acquired: 11/6/2018 18:31:04 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49772**	F **.55787**	**.97008**	**.48907**	**.51826**	**.50996**	**.00037**	**5.0790**	**.48920**	**.48593**	**.48587**	**.50397**
Stddev	.00033	.01156	.02687	.00873	.00410	.00570	.00151	.0330	.01077	.01098	.01079	.00125
%RSD	.06550	2.0720	2.7702	1.7855	.79056	1.1170	410.00	.65036	2.2022	2.2605	2.2204	.24744
#1	.49749	.56605	.98909	.49524	.52116	.51399	-.00070	5.1024	.49682	.49369	.49349	.50309
#2	.49795	.54970	.95108	.48289	.51537	.50594	.00144	5.0556	.48158	.47816	.47824	.50485
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5313**	**51.380**	**1.0513**	**19.562**	**.48655**	**.48482**	**5.4494**	**.48576**	**1.0106**	**.97852**	**.07004**	**.98090**
Stddev	.0277	.269	.0051	.013	.00058	.01157	.0656	.01085	.0234	.01820	.00504	.02094
%RSD	1.0921	.52283	.48285	.06509	.11977	2.3862	1.2031	2.2337	2.3194	1.8599	7.2005	2.1347
#1	2.5509	51.570	1.0549	19.571	.48614	.49300	5.4958	.49344	1.0272	.99139	.06648	.99571
#2	2.5118	51.190	1.0477	19.553	.48696	.47664	5.4030	.47809	.99404	.96565	.07361	.96609
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.97552**	**5.1326**	**10.984**	**.97303**	**.51076**	**.01079**	**.48164**	**1.0062**	**.05846**	**.49067**	**.48160**	**.51000**
Stddev	.01069	.0532	.114	.02206	.00385	.00264	.00150	.0161	.04801	.00130	.00024	.00260
%RSD	1.0954	1.0365	1.0365	2.2674	.75344	24.514	.31200	1.6039	82.128	.26397	.04894	.50886
#1	.98307	5.0949	10.903	.98863	.51348	.01266	.48058	1.0176	.02451	.49159	.48176	.51184
#2	.96796	5.1702	11.064	.95743	.50804	.00892	.48271	.99480	.09241	.48976	.48143	.50817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3215.9**	**38692.**	**2732.3**
Stddev	23.1	910.	21.7
%RSD	.71701	2.3518	.79599
#1	3199.6	39336.	2747.6
#2	3232.2	38049.	2716.9

Sample Name: CCB Acquired: 11/6/2018 18:33:30 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00124**	**-.00143**	**.00355**	**.00342**	**-.00038**	**.00007**	**-.00492**	**-.00467**	**-.00043**	**.00053**	**.00014**	**.00019**
Stddev	.00065	.00050	.00740	.00016	.00048	.00018	.00088	.00709	.00001	.00026	.00045	.00019
%RSD	52.551	35.016	208.45	4.5861	126.98	277.16	17.852	152.02	1.1989	49.749	312.23	100.36
#1	-.00170	-.00108	-.00168	.00353	-.00072	-.00006	-.00430	.00035	-.00044	.00034	.00046	.00032
#2	-.00078	-.00179	.00878	.00331	-.00004	.00020	-.00554	-.00968	-.00043	.00072	-.00017	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00094**	**-.05735**	**-.00334**	**-.00124**	**.00012**	**.00097**	**.21585**	**-.00004**	**.00290**	**-.00056**	W **.05710**	**-.00084**
Stddev	.00162	.03457	.00483	.00710	.00006	.00083	.01290	.00042	.00205	.00020	.00049	.00214
%RSD	172.42	60.276	144.65	571.48	46.408	84.863	5.9771	948.95	70.799	34.799	.85748	254.04
#1	-.00021	-.03290	.00008	-.00627	.00016	.00039	.22497	.00025	.00145	-.00042	.05744	-.00235
#2	.00208	-.08179	-.00676	.00378	.00008	.00156	.20673	-.00034	.00435	-.00070	.05675	.00067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit											.05000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**.05103**	**.10921**	**-.00229**	**.00021**	**.00633**	**-.00045**	**-.00244**	**-.02243**	**.00029**	**.00017**	**.00399**
Stddev	.00193	.03907	.08362	.00031	.00004	.00213	.00023	.00096	.01301	.00019	.00026	.00401
%RSD	2315.9	76.567	76.567	13.460	19.756	33.619	50.638	39.437	57.982	64.493	153.23	100.57
#1	.00128	.07866	.16834	-.00208	.00018	.00784	-.00061	-.00312	-.03163	.00016	-.00001	.00115
#2	-.00145	.02340	.05008	-.00251	.00024	.00483	-.00029	-.00176	-.01323	.00042	.00036	.00683
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3284.6**	**40159.**	**2808.0**
Stddev	20.7	1255.	36.8
%RSD	.63122	3.1249	1.3105
#1	3270.0	41047.	2781.9
#2	3299.3	39272.	2834.0

Sample Name: ccvl-5413446 Acquired: 11/6/2018 18:36:06 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00957**	**.11437**	**.01390**	**.09799**	**.01015**	**.00105**	**.09999**	**.23162**	**.00455**	**.01017**	**.00990**	**.01525**
Stddev	.00058	.00635	.00473	.00259	.00008	.00012	.00931	.00299	.00007	.00090	.00081	.00172
%RSD	6.0891	5.5537	34.012	2.6467	.79070	11.860	9.3155	1.2915	1.4712	8.8974	8.1879	11.258
#1	.00915	.11886	.01724	.09983	.01010	.00114	.10657	.23373	.00459	.01081	.01047	.01404
#2	.00998	.10988	.01056	.09616	.01021	.00096	.09340	.22950	.00450	.00953	.00932	.01646
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10710**	**3.0140**	**.02018**	**.20735**	**.01012**	**.01900**	**1.2088**	**.03839**	**2.9128**	**.00793**	F **.15612**	**.02076**
Stddev	.00421	.0122	.00406	.01213	.00017	.00042	.0007	.00089	.0788	.00163	.01253	.00012
%RSD	3.9282	.40473	20.135	5.8496	1.6419	2.1966	.05678	2.3248	2.7037	20.578	8.0267	.57394
#1	.11007	3.0054	.02305	.21593	.01000	.01929	1.2083	.03902	2.9685	.00908	.16499	.02068
#2	.10412	3.0226	.01731	.19878	.01024	.01870	1.2093	.03776	2.8571	.00677	.14726	.02085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value											.10000	
Range											30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02304**	**.50844**	**1.0881**	**.09506**	**.01014**	**.01596**	**.00984**	**.01806**	F **.12876**	**.00979**	**.02395**	F **.02092**
Stddev	.00168	.01686	.0361	.00350	.00008	.00259	.00034	.00253	.00882	.00030	.00216	.00734
%RSD	7.2988	3.3167	3.3167	3.6808	.82859	16.220	3.4212	13.986	6.8494	3.0486	9.0057	35.098
#1	.02185	.49652	1.0625	.09753	.01020	.01779	.00960	.01984	.13500	.01000	.02547	.02612
#2	.02423	.52036	1.1136	.09258	.01008	.01413	.01008	.01627	.12253	.00958	.02242	.01573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3252.5**	**40098.**	**2823.5**
Stddev	2.2	139.	16.5
%RSD	.06877	.34634	.58453
#1	3254.1	40196.	2811.9
#2	3250.9	40000.	2835.2

Sample Name: CCVH-5408055 Acquired: 11/6/2018 22:44:11 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00113**	**47.908**	**-.01099**	**.00055**	**-.00068**	**.00023**	**.98066**	**.00019**	**-.00037**	**.00210**	**.00079**	**.00412**	**48.548**
Stddev	.00059	.083	.00355	.00081	.00036	.00025	.00117	.00538	.00031	.00015	.00014	.00045	.033
%RSD	51.894	.17394	32.336	146.49	53.917	107.01	.11893	2791.2	85.067	7.3222	17.808	10.963	.06730
#1	-.00072	47.967	-.00848	-.00002	-.00042	.00040	.97984	.00399	-.00059	.00220	.00069	.00380	48.524
#2	-.00155	47.849	-.01350	.00112	-.00093	.00006	.98149	-.00361	-.00015	.00199	.00089	.00444	48.571
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.08529**	**-.00287**	**-.09021**	**.00276**	**-.00062**	**245.13**	**.00337**	**-.00014**	**-.00128**	**4.8877**	**.00888**	**.00122**	**.03937**
Stddev	.07952	.00189	.00419	.00001	.00060	1.52	.00037	.00362	.00171	.0407	.00009	.00142	.00043
%RSD	93.230	65.943	4.6494	.18732	96.538	.62149	11.066	2548.4	133.36	.83254	1.0457	116.43	1.0912
#1	-.02906	-.00153	-.09318	.00277	-.00105	246.20	.00364	.00242	-.00250	4.9165	.00895	.00022	.03967
#2	-.14152	-.00420	-.08725	.00276	-.00020	244.05	.00311	-.00270	-.00007	4.8589	.00881	.00222	.03906
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08425**	**-.00273**	**.00042**	**4.9755**	**.01671**	**-.00006**	**9.8449**	**-.01118**	**.00097**	**.08348**
Stddev	.00092	.00081	.00001	.0159	.00112	.00079	.0058	.00092	.00132	.00247
%RSD	1.0912	29.590	2.2813	.31936	6.7253	1233.5	.05906	8.2465	136.18	2.9606
#1	.08490	-.00216	.00041	4.9643	.01592	.00050	9.8408	-.01053	.00190	.08523
#2	.08360	-.00330	.00043	4.9868	.01750	-.00062	9.8490	-.01183	.00004	.08173
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3042.0**	**36646.**	**2732.6**
Stddev	23.7	18.	32.9
%RSD	.77919	.04917	1.2042
#1	3025.2	36658.	2755.9
#2	3058.7	36633.	2709.3

Sample Name: CCV-5407546 Acquired: 11/6/2018 22:46:42 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52345**	F **.59649**	**1.0079**	**.51822**	**.51220**	**.50090**	**.00448**	**5.1036**	**.52012**	**.51618**	**.50932**	**.52716**
Stddev	.00097	.00520	.0049	.00489	.00094	.00043	.00809	.0035	.00579	.00624	.00464	.00158
%RSD	.18444	.87232	.48862	.94280	.18307	.08633	180.44	.06781	1.1127	1.2095	.91007	.29929
#1	.52414	.60017	1.0114	.52167	.51286	.50121	.01020	5.1011	.52421	.52059	.51260	.52605
#2	.52277	.59281	1.0044	.51476	.51153	.50059	-.00124	5.1060	.51603	.51176	.50605	.52828
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6173**	**51.329**	**1.0262**	**20.797**	**.52116**	**.50788**	**5.4508**	**.51575**	**1.0900**	**1.0376**	**-.01258**	**1.0494**
Stddev	.0352	.126	.0004	.039	.00049	.00658	.1503	.00719	.0130	.0122	.00182	.0093
%RSD	1.3441	.24507	.03671	.18671	.09418	1.2953	2.7571	1.3944	1.1902	1.1730	14.435	.88732
#1	2.5924	51.418	1.0265	20.824	.52151	.51253	5.3445	.52084	1.0991	1.0462	-.01130	1.0559
#2	2.6422	51.240	1.0260	20.769	.52082	.50323	5.5571	.51067	1.0808	1.0290	-.01387	1.0428
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0048**	**5.1155**	**10.947**	**1.0256**	**.50373**	**.01042**	**.52031**	**1.0458**	**-.03059**	**.51678**	**.52033**	**.51164**
Stddev	.0065	.0886	.190	.0052	.00164	.00020	.00182	.0085	.00006	.00125	.00263	.00147
%RSD	.64164	1.7322	1.7322	.50649	.32635	1.8895	.35023	.81084	.19795	.24224	.50624	.28725
#1	1.0094	5.1782	11.081	1.0293	.50489	.01028	.51902	1.0518	-.03063	.51766	.52219	.51268
#2	1.0002	5.0529	10.813	1.0219	.50256	.01056	.52160	1.0398	-.03055	.51589	.51846	.51060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3278.2**	**39628.**	**2870.5**
Stddev	3.7	198.	1.2
%RSD	.11411	.49853	.04305
#1	3275.6	39768.	2871.4
#2	3280.8	39488.	2869.6

Sample Name: CCB Acquired: 11/6/2018 22:49:07 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00161**	**-.00052**	**.00008**	**.00145**	**-.00011**	**.00027**	**.00374**	**-.00359**	**-.00039**	**.00028**	**.00016**	**.00164**	**.00022**
Stddev	.00019	.00130	.00991	.00025	.00006	.00019	.00535	.00999	.00027	.00015	.00018	.00022	.00775
%RSD	11.596	248.93	12994.	17.174	57.222	70.097	143.08	277.90	70.834	54.320	117.01	13.388	3533.5
#1	-.00148	.00040	-.00693	.00128	-.00015	.00040	-.00004	-.01066	-.00019	.00017	.00028	.00179	.00570
#2	-.00175	-.00144	.00708	.00163	-.00006	.00013	.00752	.00347	-.00058	.00039	.00003	.00148	-.00526
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01597**	**.00004**	**-.00350**	**.00012**	**.00069**	**.10902**	**-.00093**	**.00062**	**-.00168**	**-.01635**	**.00272**	**-.00555**	**.02010**
Stddev	.01056	.00186	.00609	.00009	.00026	.03554	.00018	.00045	.00154	.00210	.00035	.00444	.00924
%RSD	66.142	4174.9	173.90	76.563	37.953	32.599	19.306	72.058	91.859	12.855	12.777	80.006	46.002
#1	-.00850	.00136	.00080	.00006	.00087	.13415	-.00080	.00094	-.00277	-.01486	.00297	-.00241	.01356
#2	-.02344	-.00127	-.00780	.00019	.00050	.08389	-.00106	.00031	-.00059	-.01783	.00247	-.00868	.02663
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04300**	**-.00211**	**-.00023**	**-.00070**	**.00060**	**.00244**	**.06126**	**-.00040**	**.00024**	**.00584**
Stddev	.01978	.00023	.00055	.00261	.00035	.00190	.09224	.00101	.00055	.00272
%RSD	46.002	10.670	238.08	371.41	58.365	77.788	150.58	252.44	227.23	46.682
#1	.02902	-.00195	-.00062	-.00254	.00035	.00378	.12648	.00031	.00063	.00776
#2	.05699	-.00227	.00016	.00114	.00085	.00110	-.00397	-.00112	-.00015	.00391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3328.9**	**40474.**	**2947.9**
Stddev	10.1	54.	13.7
%RSD	.30461	.13314	.46544
#1	3321.7	40512.	2938.2
#2	3336.1	40436.	2957.6

Sample Name: ccvl-5413446 Acquired: 11/6/2018 22:51:43 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01022**	**.11547**	**.01605**	**.09768**	**.00961**	**.00124**	**.10260**	**.19004**	**.00468**	**.01083**	**.00971**	**.01679**
Stddev	.00002	.00327	.00589	.00146	.00033	.00031	.00499	.00361	.00031	.00065	.00057	.00037
%RSD	.20800	2.8308	36.670	1.4918	3.4388	24.572	4.8656	1.8979	6.5320	5.9872	5.8756	2.2059
#1	.01021	.11779	.02021	.09871	.00984	.00146	.10613	.19260	.00446	.01129	.00931	.01705
#2	.01024	.11316	.01189	.09665	.00937	.00103	.09907	.18749	.00490	.01037	.01012	.01652
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09794**	**3.0049**	**.02268**	**.20514**	**.01032**	**.01896**	**1.1522**	**.04033**	**2.9821**	**.00735**	**.08044**	**.02073**
Stddev	.00253	.1212	.00179	.00053	.00011	.00047	.0102	.00196	.0607	.00057	.00565	.00305
%RSD	2.5881	4.0340	7.8833	.25731	1.0951	2.4614	.88729	4.8559	2.0370	7.7516	7.0256	14.709
#1	.09614	3.0906	.02394	.20552	.01040	.01929	1.1450	.04171	3.0251	.00775	.08444	.02289
#2	.09973	2.9192	.02141	.20477	.01024	.01863	1.1595	.03894	2.9392	.00695	.07645	.01858
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02138**	**.53500**	**1.1449**	**.09544**	**.00993**	**.01382**	**.01046**	**.01647**	F **.03282**	**.00950**	**.02103**	F **.02038**
Stddev	.00524	.06427	.1376	.00158	.00003	.00077	.00005	.00270	.05631	.00041	.00042	.00113
%RSD	24.498	12.014	12.014	1.6582	.32429	5.5887	.50076	16.400	171.58	4.3361	1.9914	5.5338
#1	.02508	.58045	1.2422	.09656	.00995	.01436	.01043	.01456	-.00700	.00979	.02073	.01958
#2	.01768	.48955	1.0476	.09432	.00990	.01327	.01050	.01838	.07264	.00921	.02133	.02118
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									-30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3346.9**	**40755.**	**2868.8**
Stddev	6.3	256.	16.7
%RSD	.18698	.62760	.58069
#1	3342.5	40574.	2857.1
#2	3351.3	40936.	2880.6

Sample Name: MB 280-436030/1-A Acquired: 11/6/2018 22:54:17 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/6 Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00075**	**.00105**	**.00042**	**.00134**	**-.00008**	**.00036**	**.00380**	**.00648**	**-.00004**
Stddev	.00034	.00088	.00070	.00043	.00041	.00006	.00329	.00149	.00036
%RSD	45.147	83.762	165.84	31.806	540.59	15.642	86.627	22.993	903.39
#1	-.00099	.00167	-.00007	.00104	-.00037	.00040	.00147	.00753	.00021
#2	-.00051	.00043	.00092	.00164	.00022	.00032	.00613	.00543	-.00029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00042**	**.00039**	**.00099**	**.01020**	**-.17703**	**-.00399**	**.00028**	**.00019**	**-.00048**
Stddev	.00013	.00010	.00018	.00248	.02306	.00285	.00643	.00007	.00062
%RSD	31.192	24.665	18.010	24.279	13.028	71.357	2290.2	35.485	131.32
#1	.00051	.00033	.00086	.00845	-.19334	-.00198	-.00427	.00014	-.00003
#2	.00033	.00046	.00111	.01195	-.16072	-.00600	.00483	.00023	-.00092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07288**	**-.00051**	**-.00182**	**-.00154**	**-.01651**	**.00107**	**-.00198**	**.06087**	**.13027**
Stddev	.01262	.00005	.00242	.00049	.00211	.00151	.00161	.02383	.05100
%RSD	17.319	9.7271	133.32	31.684	12.759	140.12	81.680	39.153	39.153
#1	.08181	-.00048	-.00353	-.00188	-.01800	.00214	-.00312	.04402	.09420
#2	.06395	-.00055	-.00010	-.00119	-.01502	.00001	-.00083	.07773	.16634
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00285**	**.00004**	**.00206**	**.00040**	**.00214**	**-.01481**	**-.00018**	**.00242**	**.00362**
Stddev	.00120	.00024	.00081	.00060	.00126	.07118	.00074	.00005	.00132
%RSD	42.120	606.67	39.194	148.24	59.065	480.63	408.53	1.9686	36.480
#1	-.00370	.00021	.00149	.00082	.00124	.03552	-.00071	.00246	.00269
#2	-.00200	-.00013	.00263	-.00002	.00303	-.06514	.00034	.00239	.00456
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3460.4**	**41963.**	**2961.3**
Stddev	2.0	26.	7.8
%RSD	.05910	.06298	.26188
#1	3461.8	41945.	2966.8
#2	3458.9	41982.	2955.9

Sample Name: LCS 280-436030/2-A Acquired: 11/6/2018 22:56:53 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05046**	F **2.3454**	**1.0390**	**1.0179**	**2.0992**	**.05123**	**1.9911**	**51.438**	**.10005**
Stddev	.00026	.0378	.0210	.0092	.0115	.00008	.0279	.319	.00172
%RSD	.51621	1.6113	2.0199	.90511	.54812	.15121	1.4006	.62020	1.7189
#1	.05064	2.3721	1.0539	1.0244	2.1073	.05117	2.0108	51.664	.10127
#2	.05027	2.3186	1.0242	1.0114	2.0911	.05128	1.9714	51.213	.09884
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit		2.2299							
Low Limit		1.7300							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50875**	**.20485**	**.26634**	**1.0539**	**52.491**	**1.0256**	**51.861**	**.51727**	**1.0092**
Stddev	.00655	.00367	.00120	.0090	.236	.0083	.252	.00155	.0170
%RSD	1.2884	1.7934	.44972	.85686	.45035	.81023	.48682	.29918	1.6894
#1	.51338	.20744	.26719	1.0603	52.658	1.0314	52.039	.51836	1.0213
#2	.50411	.20225	.26549	1.0475	52.324	1.0197	51.682	.51617	.99718
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.123**	**.50407**	F **11.363**	**.51836**	**1.9495**	**.50323**	**2.0720**	F **7.6268**	**16.321**
Stddev	.340	.00523	.145	.00875	.0315	.01456	.0260	.0767	.164
%RSD	.66442	1.0382	1.2761	1.6881	1.6170	2.8925	1.2564	1.0060	1.0060
#1	50.883	.50777	11.466	.52454	1.9718	.51352	2.0904	7.6810	16.437
#2	51.364	.50037	11.261	.51217	1.9272	.49293	2.0536	7.5725	16.205
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit			11.100					11.000	
Low Limit			9.1000					9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0067**	**1.0339**	**1.0260**	**1.0167**	**2.0801**	**2.0674**	**.53715**	**.52579**	**.52003**
Stddev	.0213	.0072	.0020	.0025	.0275	.0250	.00347	.00120	.00133
%RSD	1.0633	.69928	.19337	.24583	1.3221	1.2067	.64639	.22731	.25595
#1	2.0218	1.0390	1.0275	1.0185	2.0995	2.0851	.53961	.52664	.52097
#2	1.9916	1.0288	1.0246	1.0149	2.0606	2.0498	.53470	.52495	.51909
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3344.7**	**40097.**	**2940.5**
Stddev	.7	222.	58.9
%RSD	.02039	.55422	2.0037
#1	3345.2	39940.	2898.9
#2	3344.3	40254.	2982.2

Sample Name: LCSD 280-436030/3-A Acquired: 11/6/2018 22:59:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04776**	F **2.2509**	**.98939**	**1.0080**	**2.0229**	**.04927**	**1.8996**	**49.303**	**.09537**
Stddev	.00051	.0295	.02153	.0100	.0041	.00018	.0379	.164	.00131
%RSD	1.0615	1.3119	2.1763	.99248	.20170	.36886	1.9943	.33344	1.3769
#1	.04811	2.2718	1.0046	1.0151	2.0200	.04940	1.9264	49.187	.09630
#2	.04740	2.2301	.97416	1.0009	2.0258	.04914	1.8728	49.419	.09444
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit		2.2299							
Low Limit		1.7300							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48708**	**.19649**	**.25255**	**1.0108**	**50.423**	**.98773**	**49.493**	**.49501**	**.99757**
Stddev	.00543	.00295	.00139	.0027	.342	.00560	.012	.00099	.01423
%RSD	1.1148	1.5033	.54916	.26814	.67766	.56716	.02359	.19923	1.4262
#1	.49092	.19858	.25353	1.0127	50.181	.98377	49.501	.49571	1.0076
#2	.48324	.19440	.25157	1.0089	50.664	.99169	49.485	.49432	.98751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**48.819**	**.48295**	**10.816**	**.49394**	**1.9156**	**.49964**	**1.9849**	F **8.5820**	**18.365**
Stddev	.461	.00626	.133	.00501	.0107	.01165	.0293	.0779	.167
%RSD	.94494	1.2963	1.2317	1.0149	.55778	2.3315	1.4743	.90811	.90811
#1	48.493	.48738	10.911	.49749	1.9231	.50788	2.0056	8.5269	18.247
#2	49.145	.47852	10.722	.49040	1.9080	.49140	1.9642	8.6371	18.483
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit								11.000	
Low Limit								9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9773**	**.99206**	**.98288**	**.99712**	**2.0017**	**1.9352**	**.51159**	**.50327**	**.51490**
Stddev	.0303	.00008	.00899	.00120	.0250	.0285	.00306	.00012	.00357
%RSD	1.5319	.00846	.91487	.12014	1.2465	1.4718	.59816	.02328	.69350
#1	1.9987	.99212	.98923	.99797	2.0193	1.9151	.51376	.50319	.51238
#2	1.9558	.99200	.97652	.99628	1.9840	1.9553	.50943	.50335	.51743
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3295.0**	**39850.**	**2933.2**
Stddev	13.5	192.	15.9
%RSD	.40887	.48187	.54288
#1	3285.5	39714.	2944.5
#2	3304.6	39986.	2922.0

Sample Name: 280-116333-B-1-A Acquired: 11/6/2018 23:01:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00070**	**-.00058**	**.00309**	**.74254**	**.05155**	**.00023**	**-.00202**	**160.01**	**.00003**
Stddev	.00088	.00063	.01192	.01383	.00011	.00023	.00274	.18	.00025
%RSD	126.09	109.81	385.60	1.8620	.22189	99.122	135.95	.11034	800.62
#1	-.00008	-.00013	.01152	.75231	.05163	.00039	-.00395	160.14	-.00015
#2	-.00132	-.00102	-.00534	.73276	.05146	.00007	-.00008	159.89	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00043**	**.00087**	**.00285**	**1.1965**	**2.8289**	**.10107**	**30.203**	**.51671**	**.00483**
Stddev	.00002	.00020	.00021	.0034	.1025	.00171	.071	.00024	.00087
%RSD	5.0154	22.676	7.2733	.28640	3.6221	1.6950	.23404	.04571	18.040
#1	.00041	.00073	.00300	1.1941	2.9013	.09986	30.253	.51687	.00421
#2	.00044	.00101	.00270	1.1990	2.7564	.10228	30.153	.51654	.00545
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**229.22**	**.01813**	**.06580**	**-.00688**	**130.36**	**.00104**	**-.00101**	**18.703**	**40.024**
Stddev	.08	.00068	.00038	.00042	2.27	.00391	.00130	.260	.557
%RSD	.03401	3.7614	.58021	6.0762	1.7382	375.66	129.23	1.3921	1.3921
#1	229.17	.01861	.06553	-.00718	131.96	.00380	-.00193	18.887	40.418
#2	229.28	.01765	.06607	-.00659	128.76	-.00172	-.00009	18.519	39.630
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00185**	**1.0563**	**-.00042**	**.00133**	**.00196**	**.00181**	**-.00082**	**.01281**	**-.00062**
Stddev	.00001	.0012	.00017	.00017	.00078	.07988	.00025	.00032	.00194
%RSD	.42989	.11005	40.811	13.009	39.718	4415.7	30.198	2.5187	311.15
#1	-.00185	1.0571	-.00054	.00120	.00141	-.05468	-.00065	.01258	-.00200
#2	-.00186	1.0555	-.00030	.00145	.00251	.05830	-.00100	.01304	.00075
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3237.2**	**38927.**	**2865.7**
Stddev	3.4	165.	3.5
%RSD	.10377	.42499	.12227
#1	3234.9	38810.	2863.2
#2	3239.6	39043.	2868.1

Sample Name: 280-116333-B-2-A Acquired: 11/6/2018 23:04:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00043**	**.00263**	**.01358**	**1.3055**	**.18871**	**.00005**	**.00181**	**237.43**	**.00019**
Stddev	.00086	.00050	.00527	.0105	.00121	.00026	.00722	.67	.00036
%RSD	198.67	19.127	38.839	.80743	.64197	498.63	398.46	.28380	189.74
#1	-.00017	.00299	.00985	1.3129	.18786	.00023	-.00329	236.96	.00045
#2	.00104	.00227	.01731	1.2980	.18957	-.00013	.00692	237.91	-.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00056**	**.00101**	**.00254**	**6.6013**	**3.7578**	**.16859**	**66.102**	**1.1828**	**.00183**
Stddev	.00011	.00009	.00185	.0068	.1125	.00451	.853	.0153	.00039
%RSD	19.468	8.4309	72.899	.10361	2.9942	2.6770	1.2908	1.2971	21.345
#1	.00048	.00095	.00384	6.5965	3.6783	.17179	66.706	1.1936	.00210
#2	.00063	.00107	.00123	6.6062	3.8374	.16540	65.499	1.1719	.00155
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**294.92**	**.00948**	**.43700**	**-.00735**	**55.845**	**.00226**	**-.00043**	**19.342**	**41.392**
Stddev	1.08	.00007	.00242	.00234	.587	.00109	.00951	.267	.572
%RSD	.36733	.73090	.55369	31.881	1.0507	48.384	2231.3	1.3824	1.3824
#1	294.15	.00953	.43871	-.00569	56.260	.00148	-.00715	19.531	41.797
#2	295.69	.00944	.43529	-.00900	55.431	.00303	.00630	19.153	40.988
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00268**	**2.0936**	**-.00416**	**.00111**	**.00305**	**.02772**	**-.00030**	**.00603**	**.00746**
Stddev	.00065	.0048	.00100	.00038	.00037	.04806	.00068	.00081	.00412
%RSD	24.144	.23049	24.131	34.086	12.111	173.40	230.61	13.371	55.288
#1	-.00314	2.0902	-.00487	.00084	.00279	-.00627	.00019	.00660	.01038
#2	-.00222	2.0970	-.00345	.00138	.00332	.06170	-.00078	.00546	.00454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3157.0**	**37952.**	**2840.2**
Stddev	15.5	479.	6.9
%RSD	.49245	1.2615	.24198
#1	3168.0	37613.	2845.0
#2	3146.0	38290.	2835.3

Sample Name: 280-116333-B-4-A Acquired: 11/6/2018 23:06:36 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**-.00620**	**.00983**	**1.2137**	**.30856**	**.00022**	**.01094**	**181.37**	**.00009**
Stddev	.00080	.00104	.00266	.0196	.00092	.00010	.00480	.45	.00046
%RSD	312.04	16.768	27.093	1.6125	.29667	45.775	43.820	.24887	484.62
#1	.00031	-.00546	.00795	1.2275	.30920	.00029	.01434	181.69	-.00023
#2	-.00082	-.00693	.01171	1.1999	.30791	.00015	.00755	181.05	.00042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00077**	**.00283**	**16.815**	**3.9673**	**.10609**	**33.986**	**1.4007**	**.00037**
Stddev	.00031	.00030	.00062	.037	.0177	.00227	.031	.0004	.00029
%RSD	352.60	38.569	21.937	.21991	.44536	2.1381	.09192	.03235	77.954
#1	.00031	.00098	.00326	16.841	3.9549	.10770	33.964	1.4004	.00017
#2	-.00013	.00056	.00239	16.788	3.9798	.10449	34.008	1.4011	.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**341.49**	**.02507**	**.68424**	**-.00924**	**13.240**	**-.00214**	**-.00493**	**23.575**	**50.450**
Stddev	.39	.00027	.00024	.00201	.220	.00073	.00180	.292	.624
%RSD	.11507	1.0582	.03529	21.773	1.6590	34.150	36.490	1.2376	1.2376
#1	341.76	.02526	.68407	-.01067	13.395	-.00266	-.00620	23.781	50.891
#2	341.21	.02489	.68441	-.00782	13.085	-.00163	-.00366	23.368	50.008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00250**	**1.2293**	**-.00054**	**.00048**	**.00120**	**-.03456**	**.00111**	**.00691**	**.00244**
Stddev	.00154	.0027	.00078	.00031	.00124	.03813	.00054	.00126	.00114
%RSD	61.442	.21522	143.43	65.092	103.45	110.34	48.244	18.209	46.599
#1	-.00359	1.2312	-.00109	.00070	.00032	-.06152	.00073	.00780	.00164
#2	-.00141	1.2275	.00001	.00026	.00207	-.00759	.00149	.00602	.00325
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3191.4**	**38049.**	**2858.0**
Stddev	7.2	92.	6.9
%RSD	.22643	.24263	.24036
#1	3196.6	38114.	2853.2
#2	3186.3	37983.	2862.9

Sample Name: 280-116333-B-5-A Acquired: 11/6/2018 23:09:07 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00110**	**.04779**	**.00810**	**.53265**	**.12377**	**-.00017**	**-.00429**	**124.35**	**.00012**
Stddev	.00069	.00150	.00104	.00741	.00018	.00016	.00161	.31	.00012
%RSD	62.555	3.1293	12.898	1.3913	.14685	92.576	37.564	.24866	104.49
#1	-.00061	.04885	.00884	.53789	.12390	-.00028	-.00543	124.57	.00003
#2	-.00159	.04674	.00736	.52741	.12364	-.00006	-.00315	124.13	.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00234**	**.00071**	**.00343**	**1.2861**	**2.2628**	**.07612**	**34.498**	**1.4981**	**.00175**
Stddev	.00002	.00033	.00035	.0011	.0077	.00048	.054	.0041	.00039
%RSD	.98762	46.106	10.075	.08534	.34163	.63667	.15717	.27657	22.413
#1	.00232	.00094	.00367	1.2853	2.2683	.07646	34.537	1.5011	.00147
#2	.00235	.00048	.00318	1.2869	2.2574	.07578	34.460	1.4952	.00202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**164.54**	**.00929**	**.24829**	**-.00817**	**76.704**	**.00173**	**-.00774**	**17.127**	**36.651**
Stddev	.48	.00022	.00248	.00041	1.256	.00104	.00433	.305	.653
%RSD	.29443	2.3157	1.0002	4.9936	1.6369	60.051	55.909	1.7827	1.7827
#1	164.88	.00945	.25005	-.00788	77.592	.00247	-.01080	17.343	37.113
#2	164.19	.00914	.24653	-.00846	75.816	.00100	-.00468	16.911	36.189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00281**	**1.1097**	**.00135**	**.00290**	**.00053**	**-.00997**	**.00030**	**.00518**	**.00108**
Stddev	.00001	.0032	.00018	.00035	.00041	.00951	.00010	.00130	.00245
%RSD	.23653	.28489	13.371	11.910	77.162	95.440	31.479	24.981	225.74
#1	-.00281	1.1119	.00122	.00266	.00081	-.01669	.00023	.00427	.00281
#2	-.00280	1.1074	.00148	.00315	.00024	-.00324	.00037	.00610	-.00065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3244.3**	**38990.**	**2868.6**
Stddev	5.9	45.	6.2
%RSD	.18055	.11606	.21548
#1	3240.2	39022.	2864.3
#2	3248.5	38958.	2873.0

Sample Name: 280-116333-B-6-A Acquired: 11/6/2018 23:11:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00030**	**.00208**	**.00757**	**2.4740**	**.01279**	**.00009**	**-.00099**	**236.75**	**.00024**
Stddev	.00026	.00036	.00315	.0143	.00070	.00011	.00346	.96	.00052
%RSD	85.228	17.549	41.564	.57649	5.4727	119.27	351.32	.40360	217.14
#1	-.00012	.00234	.00980	2.4841	.01230	.00001	.00146	236.07	-.00013
#2	-.00048	.00182	.00535	2.4639	.01329	.00016	-.00343	237.42	.00061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00059**	**.00073**	**.00333**	**.90888**	**7.5844**	**.26893**	**69.821**	**.38306**	**.00068**
Stddev	.00031	.00009	.00098	.00747	.0384	.00115	.124	.00061	.00032
%RSD	51.278	12.605	29.526	.82159	.50684	.42889	.17791	.15874	47.782
#1	.00081	.00079	.00403	.90360	7.5572	.26975	69.909	.38349	.00090
#2	.00038	.00066	.00263	.91416	7.6116	.26812	69.733	.38263	.00045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**364.17**	**.00305**	**.11381**	**-.00834**	F **390.75**	**.00205**	**-.00546**	**19.811**	**42.396**
Stddev	.78	.00047	.00190	.00078	3.28	.00229	.00127	.261	.559
%RSD	.21425	15.513	1.6652	9.3737	.83943	111.61	23.238	1.3190	1.3190
#1	363.62	.00272	.11515	-.00779	393.07	.00368	-.00636	19.996	42.791
#2	364.73	.00339	.11247	-.00889	388.43	.00043	-.00457	19.626	42.000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00181**	**1.6102**	**.00165**	**-.00006**	**.00268**	F **-.12885**	**-.00094**	**.01135**	**.00264**
Stddev	.00041	.0065	.00302	.00062	.00167	.02565	.00044	.00010	.00148
%RSD	22.484	.40396	182.83	1058.6	62.188	19.910	47.012	.86414	56.226
#1	-.00210	1.6056	-.00048	.00038	.00386	-.11071	-.00063	.01128	.00159
#2	-.00153	1.6148	.00378	-.00050	.00150	-.14699	-.00125	.01142	.00368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						20.000			
Low Limit						-.12000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3180.2**	**38352.**	**2877.0**
Stddev	21.8	20.	5.5
%RSD	.68565	.05194	.19182
#1	3195.6	38338.	2873.1
#2	3164.8	38366.	2880.9

Sample Name: 280-116333-B-7-A Acquired: 11/6/2018 23:14:11 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00146**	**.00141**	**.01112**	**2.4480**	**.01199**	**.00035**	**.00004**	**238.81**	**.00025**
Stddev	.00053	.00004	.00432	.0569	.00084	.00003	.00781	.19	.00004
%RSD	36.287	2.5212	38.850	2.3253	7.0159	8.5482	17721.	.08083	15.916
#1	-.00184	.00138	.01417	2.4882	.01259	.00037	.00557	238.67	.00022
#2	-.00109	.00143	.00806	2.4077	.01140	.00033	-.00548	238.95	.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00098**	**.00027**	**.00401**	**.93814**	**7.6630**	**.27692**	**70.058**	**.38491**	**.00117**
Stddev	.00017	.00029	.00043	.00145	.1250	.00138	.090	.00015	.00019
%RSD	17.823	107.52	10.710	.15414	1.6313	.49694	.12778	.03961	16.346
#1	.00110	.00048	.00431	.93916	7.5746	.27595	70.122	.38502	.00103
#2	.00085	.00007	.00371	.93712	7.7514	.27789	69.995	.38480	.00130
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**368.78**	**.00239**	**.11065**	**-.00847**	F **387.44**	**.00441**	**-.00568**	**20.812**	**44.537**
Stddev	.07	.00112	.00032	.00349	9.48	.00084	.00163	.282	.603
%RSD	.02030	46.884	.29282	41.204	2.4481	18.968	28.661	1.3546	1.3546
#1	368.83	.00160	.11088	-.00600	394.15	.00382	-.00684	21.011	44.963
#2	368.72	.00318	.11042	-.01094	380.73	.00500	-.00453	20.612	44.110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00306**	**1.6268**	**-.00335**	**.00105**	**.00447**	**.00596**	**-.00020**	**.00364**	**.00122**
Stddev	.00051	.0027	.00403	.00034	.00166	.05283	.00087	.00014	.00556
%RSD	16.518	.16451	120.18	32.624	37.111	886.53	437.40	3.7903	456.17
#1	-.00271	1.6249	-.00620	.00080	.00330	.04332	-.00082	.00374	.00515
#2	-.00342	1.6287	-.00050	.00129	.00564	-.03140	.00042	.00354	-.00271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3208.3**	**38022.**	**2825.6**
Stddev	23.9	37.	22.6
%RSD	.74642	.09748	.79972
#1	3191.3	38048.	2841.6
#2	3225.2	37996.	2809.6

Sample Name: CCVH-5408055 Acquired: 11/6/2018 23:16:42 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00377**	**47.297**	**-.00342**	**.01185**	**.00016**	**.00009**	**.95053**	**.11499**	**-.00040**	**.00203**	**.00058**	**.00179**	**47.883**
Stddev	.00027	.603	.00273	.00044	.00025	.00019	.01392	.14804	.00034	.00026	.00014	.00102	.572
%RSD	7.2512	1.2750	79.729	3.6780	156.16	222.53	1.4647	128.74	84.008	12.672	23.703	56.956	1.1939
#1	-.00396	47.723	-.00535	.01216	-.00002	-.00005	.96037	.01031	-.00016	.00184	.00068	.00107	48.288
#2	-.00357	46.870	-.00149	.01154	.00034	.00022	.94069	.21967	-.00064	.00221	.00048	.00251	47.479
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02217**	**-.00190**	**-.08064**	**.00265**	**-.00121**	**240.08**	**.00240**	**.00281**	**-.00123**	**4.8914**	**.00409**	**-.00105**	**.13823**
Stddev	.08360	.00096	.00139	.00010	.00025	2.42	.00019	.00179	.00139	.0811	.00263	.00367	.00286
%RSD	377.04	50.380	1.7285	3.8230	20.375	1.0093	7.8738	63.700	113.46	1.6572	64.344	351.14	2.0709
#1	-.08129	-.00122	-.07966	.00272	-.00104	241.79	.00227	.00154	-.00024	4.9487	.00595	-.00364	.14025
#2	.03694	-.00258	-.08163	.00257	-.00138	238.37	.00253	.00408	-.00221	4.8340	.00223	.00155	.13620
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.29580**	**-.00249**	**.00123**	**4.7715**	**.01704**	**.00299**	**9.6314**	**-.00928**	**.00032**	**.07473**
Stddev	.00613	.00090	.00129	.0028	.00046	.00099	.0855	.00056	.00109	.00388
%RSD	2.0709	36.120	104.97	.05908	2.6766	33.152	.88801	5.9861	343.72	5.1964
#1	.30014	-.00186	.00032	4.7735	.01737	.00370	9.6919	-.00967	.00109	.07747
#2	.29147	-.00313	.00214	4.7695	.01672	.00229	9.5709	-.00889	-.00045	.07198
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3315.1**	**40047.**	**2896.9**
Stddev	21.3	78.	79.4
%RSD	.64248	.19359	2.7392
#1	3330.2	40102.	2840.8
#2	3300.1	39992.	2953.0

Sample Name: CCV-5407546 Acquired: 11/6/2018 23:19:13 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49850**	F **.56752**	**.96414**	**.49096**	**.50103**	**.48702**	**.00297**	**4.9347**	**.48354**	**.48260**	**.47903**	**.50280**
Stddev	.00252	.00243	.02307	.01033	.00179	.00057	.00187	.0068	.00884	.00809	.00912	.00091
%RSD	.50572	.42826	2.3931	2.1038	.35793	.11610	62.921	.13816	1.8288	1.6770	1.9039	.18148
#1	.49671	.56924	.98045	.49826	.50230	.48742	.00165	4.9395	.48979	.48832	.48547	.50344
#2	.50028	.56580	.94782	.48365	.49976	.48662	.00429	4.9299	.47729	.47687	.47258	.50215
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4741**	**49.744**	**.99683**	**19.937**	**.49590**	**.47612**	**5.2973**	**.48335**	**1.0139**	**.97101**	**.07486**	**.97390**
Stddev	.0166	.080	.00852	.054	.00253	.01022	.0595	.00988	.0201	.02058	.00091	.02134
%RSD	.67219	.15989	.85465	.27240	.50954	2.1473	1.1226	2.0442	1.9851	2.1190	1.2122	2.1915
#1	2.4859	49.801	1.0028	19.898	.49412	.48335	5.3393	.49034	1.0282	.98556	.07550	.98899
#2	2.4624	49.688	.99080	19.975	.49769	.46889	5.2552	.47636	.99969	.95646	.07421	.95881
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.94176**	**4.9833**	**10.664**	**.96449**	**.49090**	**.00759**	**.49307**	**.99121**	**-.00212**	**.49597**	**.49851**	**.49267**
Stddev	.00894	.0554	.118	.01581	.00183	.00357	.00259	.02406	.03033	.00024	.00254	.00790
%RSD	.94946	1.1107	1.1107	1.6388	.37255	46.969	.52534	2.4273	1429.3	.04938	.50901	1.6029
#1	.94808	4.9442	10.581	.97567	.49220	.00507	.49124	1.0082	.01932	.49579	.49671	.49825
#2	.93543	5.0225	10.748	.95331	.48961	.01012	.49491	.97420	-.02357	.49614	.50030	.48709
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3328.5**	**40453.**	**2895.3**
Stddev	2.6	859.	25.7
%RSD	.07822	2.1237	.88729
#1	3330.4	41060.	2877.1
#2	3326.7	39845.	2913.4

Sample Name: CCB Acquired: 11/6/2018 23:21:37 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00133**	**-.00185**	**-.00436**	**.00789**	**.00010**	**.00005**	**-.00265**	**-.00145**	**-.00012**	**.00038**	**-.00001**	**.00021**
Stddev	.00040	.00072	.00201	.00073	.00076	.00003	.00566	.01342	.00023	.00004	.00022	.00011
%RSD	29.943	38.788	46.025	9.2261	728.56	68.752	213.96	922.72	191.29	11.815	2355.8	49.992
#1	-.00161	-.00134	-.00294	.00840	-.00044	.00003	.00136	-.01095	-.00028	.00035	.00015	.00029
#2	-.00105	-.00235	-.00577	.00737	.00064	.00008	-.00665	.00804	.00004	.00041	-.00016	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00324**	**-.05885**	**-.00252**	**.00118**	**.00014**	**.00059**	**.22019**	**-.00048**	**.00229**	**-.00119**	W **.05624**	**.00369**
Stddev	.00461	.01146	.00042	.00200	.00007	.00026	.01679	.00117	.00047	.00076	.00296	.00032
%RSD	142.06	19.477	16.517	169.35	48.392	43.677	7.6267	244.73	20.385	64.345	5.2648	8.7496
#1	-.00001	-.05075	-.00282	.00260	.00019	.00041	.23206	-.00131	.00262	-.00173	.05834	.00346
#2	.00650	-.06696	-.00223	-.00023	.00009	.00077	.20831	.00035	.00196	-.00065	.05415	.00392
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit											.05000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00078**	**.06263**	W **.13402**	**-.00396**	**.00010**	**.00055**	**.00039**	**.00222**	**-.00087**	**-.00095**	**.00045**	**.00550**
Stddev	.00072	.00244	.00521	.00019	.00019	.00162	.00012	.00047	.01758	.00028	.00006	.00235
%RSD	92.909	3.8899	3.8899	4.7306	189.08	294.53	32.313	20.952	2029.7	29.065	14.176	42.742
#1	-.00129	.06090	.13034	-.00383	.00024	-.00059	.00047	.00255	-.01330	-.00076	.00049	.00384
#2	-.00027	.06435	.13771	-.00409	-.00003	.00169	.00030	.00189	.01157	-.00115	.00040	.00717
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.13000									
Low Limit			-.13000									

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3319.7**	**40357.**	**2845.5**
Stddev	5.3	676.	55.3
%RSD	.15912	1.6755	1.9427
#1	3315.9	39879.	2806.4
#2	3323.4	40835.	2884.5

Sample Name: ccvl-5413446 Acquired: 11/6/2018 23:24:13 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00979**	**.11477**	F **.01994**	**.10084**	**.00941**	**.00121**	**.10417**	**.19128**	**.00441**	**.01052**	**.01000**	**.01695**
Stddev	.00034	.00190	.00198	.00258	.00065	.00001	.00501	.00287	.00014	.00047	.00050	.00043
%RSD	3.4745	1.6538	9.9406	2.5541	6.9540	.99620	4.8052	1.5027	3.1021	4.4431	4.9745	2.5660
#1	.01003	.11612	.01854	.10266	.00987	.00120	.10771	.19332	.00451	.01085	.01036	.01726
#2	.00955	.11343	.02134	.09902	.00894	.00122	.10063	.18925	.00431	.01019	.00965	.01664
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10343**	**3.0385**	**.01957**	**.20481**	**.01012**	**.01903**	**1.2279**	**.03886**	**2.9557**	**.01011**	**.12764**	**.01684**
Stddev	.00248	.0605	.00099	.00429	.00015	.00061	.0120	.00145	.0738	.00338	.00045	.00042
%RSD	2.3949	1.9906	5.0345	2.0945	1.4520	3.2146	.97949	3.7369	2.4966	33.382	.35246	2.4877
#1	.10518	3.0812	.01887	.20784	.01022	.01946	1.2364	.03989	3.0078	.00773	.12796	.01655
#2	.10168	2.9957	.02026	.20178	.01002	.01860	1.2194	.03783	2.9035	.01250	.12732	.01714
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01844**	**.52891**	**1.1319**	**.09483**	**.00989**	**.01797**	**.01051**	**.01726**	F **.03575**	**.00934**	**.02068**	**.01833**
Stddev	.00350	.04840	.1036	.00041	.00000	.00079	.00017	.00298	.03181	.00060	.00037	.00037
%RSD	18.950	9.1518	9.1518	.42997	.01449	4.4186	1.5976	17.287	88.966	6.4582	1.7842	1.9933
#1	.01597	.56313	1.2051	.09512	.00989	.01741	.01039	.01937	.05824	.00891	.02042	.01808
#2	.02092	.49468	1.0586	.09455	.00989	.01854	.01063	.01515	.01326	.00977	.02094	.01859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3431.6**	**41784.**	**2934.3**
Stddev	7.7	75.	12.6
%RSD	.22459	.17973	.42844
#1	3426.2	41837.	2925.4
#2	3437.1	41731.	2943.2

Sample Name: 280-116339-B-1-A Acquired: 11/6/2018 23:26:48 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00109**	**.02527**	**.00954**	**.45447**	**.20657**	**-.00003**	**-.00037**	**76.506**	**.00004**
Stddev	.00023	.00986	.00203	.00743	.00050	.00030	.00163	.214	.00039
%RSD	20.795	39.012	21.290	1.6346	.24398	953.90	445.10	.27993	924.21
#1	-.00125	.01830	.00810	.45973	.20693	-.00024	-.00152	76.658	-.00023
#2	-.00093	.03224	.01098	.44922	.20621	.00018	.00079	76.355	.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**.00047**	**.00343**	**.03332**	**1.0642**	**.04862**	**26.448**	**.02831**	**.00157**
Stddev	.00029	.00037	.00039	.00377	.0881	.00427	.089	.00022	.00014
%RSD	58.464	77.679	11.251	11.309	8.2773	8.7727	.33817	.76301	8.8441
#1	.00029	.00073	.00371	.03599	1.0019	.05164	26.511	.02846	.00166
#2	.00070	.00021	.00316	.03066	1.1265	.04560	26.385	.02816	.00147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**95.571**	**.00123**	**.08610**	**-.00729**	**11.102**	**.00556**	**.00043**	**16.095**	**34.442**
Stddev	.772	.00033	.00345	.00130	.166	.00256	.01034	.275	.589
%RSD	.80757	26.930	4.0088	17.784	1.4947	45.925	2413.6	1.7107	1.7107
#1	96.117	.00099	.08366	-.00638	11.220	.00376	-.00688	16.289	34.859
#2	95.026	.00146	.08855	-.00821	10.985	.00737	.00774	15.900	34.026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00145**	**1.0236**	**-.00030**	**.00110**	**-.00022**	**.02025**	**.00461**	**.00690**	**.00365**
Stddev	.00012	.0046	.00288	.00026	.00275	.05116	.00134	.00070	.00306
%RSD	8.0809	.44428	958.28	23.362	1250.1	252.62	29.009	10.080	84.008
#1	-.00137	1.0268	-.00234	.00092	.00172	.05643	.00555	.00740	.00148
#2	-.00153	1.0204	.00174	.00128	-.00216	-.01592	.00366	.00641	.00582
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3362.1**	**40411.**	**2971.5**
Stddev	21.0	56.	2.0
%RSD	.62355	.13822	.06750
#1	3376.9	40451.	2970.1
#2	3347.2	40372.	2972.9

Sample Name: 280-116339-B-2-A Acquired: 11/6/2018 23:29:21 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00076**	**.01329**	**.00012**	**.76537**	**.09688**	**.00021**	**.00076**	**86.320**	**.00002**
Stddev	.00108	.00033	.00593	.01120	.00083	.00008	.00145	.251	.00047
%RSD	142.92	2.4880	4969.3	1.4629	.85485	37.945	191.34	.29028	3021.8
#1	.00001	.01352	-.00408	.77329	.09629	.00015	-.00027	86.143	-.00032
#2	-.00152	.01305	.00431	.75745	.09746	.00026	.00178	86.497	.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00067**	**.00051**	**.00207**	**.32427**	**.99348**	**.04991**	**28.043**	**.98416**	**.00207**
Stddev	.00026	.00010	.00169	.00500	.12652	.00737	.043	.00363	.00016
%RSD	38.289	19.691	81.791	1.5407	12.735	14.766	.15390	.36848	7.5537
#1	.00049	.00058	.00087	.32073	.90402	.05512	28.013	.98160	.00196
#2	.00085	.00044	.00327	.32780	1.0829	.04470	28.074	.98673	.00218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**111.39**	**.00130**	**.21695**	**-.00658**	**10.971**	**.00842**	**-.00739**	**15.570**	**33.319**
Stddev	.34	.00011	.00137	.00034	.144	.00251	.01359	.106	.227
%RSD	.30845	8.6554	.63022	5.2214	1.3084	29.827	183.90	.68014	.68014
#1	111.15	.00122	.21792	-.00683	11.072	.00664	.00222	15.645	33.479
#2	111.63	.00138	.21598	-.00634	10.869	.01019	-.01700	15.495	33.159
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00163**	**.94766**	**-.00108**	**.00112**	**.00167**	**.06919**	**-.00049**	**.00365**	**.00425**
Stddev	.00111	.00470	.00277	.00047	.00112	.09061	.00006	.00103	.00124
%RSD	67.732	.49613	257.34	41.992	66.736	130.97	12.351	28.269	29.073
#1	-.00085	.94434	.00088	.00145	.00247	.00511	-.00053	.00438	.00337
#2	-.00241	.95099	-.00303	.00079	.00088	.13326	-.00045	.00292	.00512
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3276.8**	**39659.**	**2902.7**
Stddev	8.5	115.	14.2
%RSD	.25879	.28999	.48980
#1	3282.8	39740.	2912.7
#2	3270.8	39578.	2892.6

Sample Name: 280-116339-B-3-A Acquired: 11/6/2018 23:31:53 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00072**	**.01504**	**.01502**	**.76494**	**.09758**	**.00039**	**-.00304**	**86.757**	**-.00018**
Stddev	.00008	.00055	.00022	.01844	.00009	.00002	.00185	.396	.00013
%RSD	11.393	3.6296	1.4772	2.4104	.09531	5.8705	60.634	.45616	70.956
#1	-.00078	.01543	.01518	.77797	.09764	.00040	-.00435	87.037	-.00027
#2	-.00067	.01465	.01486	.75190	.09751	.00037	-.00174	86.477	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00086**	**.00063**	**.00460**	**.32033**	**1.0561**	**.04857**	**28.259**	**.98366**	**.00229**
Stddev	.00010	.00019	.00090	.00521	.0555	.00263	.011	.00039	.00028
%RSD	11.213	30.009	19.622	1.6261	5.2520	5.4094	.03860	.04003	12.375
#1	.00093	.00076	.00396	.31665	1.0169	.04671	28.251	.98338	.00249
#2	.00080	.00049	.00523	.32401	1.0954	.05043	28.267	.98394	.00209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**111.80**	**.00097**	**.22230**	**-.00743**	**10.983**	**.00012**	**-.00725**	**15.203**	**32.535**
Stddev	.68	.00015	.00109	.00127	.221	.00091	.00334	.215	.461
%RSD	.60741	15.104	.48835	17.127	2.0081	727.99	46.051	1.4166	1.4166
#1	112.28	.00108	.22307	-.00653	11.139	.00076	-.00489	15.355	32.860
#2	111.32	.00087	.22153	-.00833	10.827	-.00052	-.00961	15.051	32.209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00347**	**.95283**	**-.00062**	**.00095**	**.00214**	**.03903**	**.00011**	**.00829**	**.00350**
Stddev	.00151	.00385	.00385	.00021	.00143	.06034	.00003	.00051	.00007
%RSD	43.398	.40451	623.60	22.013	66.782	154.61	29.714	6.1189	1.9876
#1	-.00241	.95556	.00210	.00109	.00315	-.00364	.00009	.00865	.00345
#2	-.00454	.95011	-.00334	.00080	.00113	.08169	.00014	.00793	.00355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3300.0**	**39757.**	**2885.4**
Stddev	7.6	140.	14.0
%RSD	.23012	.35231	.48358
#1	3294.7	39658.	2875.5
#2	3305.4	39856.	2895.2

Sample Name: 280-116339-B-4-A Acquired: 11/6/2018 23:34:25 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00123**	**.00215**	**.00613**	**2.2791**	**.04513**	**-.00005**	**-.00009**	**59.762**	**-.00015**
Stddev	.00018	.00048	.00360	.0405	.00005	.00021	.00643	.283	.00017
%RSD	14.659	22.280	58.791	1.7760	.11145	398.36	7488.1	.47314	111.21
#1	-.00110	.00181	.00358	2.3077	.04517	-.00021	-.00463	59.962	-.00027
#2	-.00136	.00249	.00868	2.2505	.04509	.00010	.00446	59.562	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00106**	**.00049**	**.00176**	**.19318**	**3.6692**	**.04412**	**27.792**	**.55871**	**.00722**
Stddev	.00023	.00033	.00039	.00249	.0463	.00053	.164	.00299	.00022
%RSD	21.238	67.396	22.040	1.2887	1.2631	1.1954	.58856	.53480	3.0603
#1	.00122	.00026	.00204	.19142	3.7020	.04450	27.907	.56082	.00706
#2	.00090	.00073	.00149	.19494	3.6364	.04375	27.676	.55660	.00737
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**163.37**	**.00164**	**.19054**	**-.00697**	**39.093**	**.00058**	**-.00830**	**14.615**	**31.277**
Stddev	.22	.00035	.01219	.00238	.776	.00009	.00050	.166	.355
%RSD	.13607	21.271	6.3954	34.205	1.9841	16.006	6.0472	1.1359	1.1359
#1	163.52	.00188	.19915	-.00865	39.641	.00051	-.00866	14.733	31.528
#2	163.21	.00139	.18192	-.00528	38.544	.00064	-.00795	14.498	31.026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00304**	**.99945**	**.00258**	**.00079**	**.00051**	**-.00260**	**.00079**	**.00388**	**-.00036**
Stddev	.00081	.00645	.00233	.00024	.00209	.06537	.00037	.00007	.00026
%RSD	26.473	.64564	90.461	30.332	407.28	2518.6	46.711	1.7530	71.331
#1	-.00361	1.0040	.00423	.00062	.00199	-.04882	.00053	.00383	-.00018
#2	-.00247	.99489	.00093	.00096	-.00096	.04363	.00105	.00393	-.00055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3346.0**	**40418.**	**2922.2**
Stddev	.0	337.	3.7
%RSD	.00062	.83482	.12508
#1	3346.0	40179.	2919.6
#2	3346.0	40656.	2924.8

Sample Name: 280-116339-B-4-ASD@5 Acquired: 11/6/2018 23:36:56 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00100**	**-.00046**	**.00513**	**.47333**	**.00816**	**.00025**	**.00153**	**12.289**	**-.00040**
Stddev	.00051	.00043	.00110	.00811	.00022	.00009	.00046	.025	.00020
%RSD	50.969	92.262	21.437	1.7143	2.6637	36.619	29.955	.20644	49.245
#1	-.00136	-.00076	.00590	.47907	.00832	.00031	.00186	12.307	-.00026
#2	-.00064	-.00016	.00435	.46759	.00801	.00018	.00121	12.272	-.00053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00065**	**.00016**	**.00067**	**.04376**	**.69697**	**.00811**	**5.8345**	**.11704**	**.00134**
Stddev	.00072	.00005	.00086	.00497	.07805	.00166	.0097	.00031	.00060
%RSD	111.15	35.188	127.74	11.358	11.198	20.501	.16634	.26668	44.659
#1	.00014	.00019	.00128	.04025	.75216	.00694	5.8414	.11726	.00176
#2	.00115	.00012	.00006	.04728	.64178	.00929	5.8277	.11681	.00092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**33.269**	**-.00048**	**.04447**	**-.00059**	**7.7671**	**.00120**	**-.00220**	**2.9662**	**6.3477**
Stddev	.867	.00001	.00650	.00131	.0952	.00545	.01052	.0112	.0239
%RSD	2.6049	1.8323	14.620	222.42	1.2256	456.08	478.09	.37588	.37588
#1	32.657	-.00048	.04907	.00034	7.8345	-.00266	-.00964	2.9583	6.3309
#2	33.882	-.00049	.03988	-.00152	7.6998	.00505	.00524	2.9741	6.3646
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00178**	**.20466**	**.00205**	**.00029**	**.00360**	**.02469**	**.00014**	**.00110**	**.00153**
Stddev	.00004	.00008	.00075	.00043	.00155	.01532	.00048	.00049	.00100
%RSD	1.9842	.03835	36.401	148.63	43.020	62.044	338.22	44.594	65.085
#1	-.00180	.20471	.00258	-.00001	.00251	.01386	-.00020	.00145	.00083
#2	-.00175	.20460	.00152	.00059	.00470	.03552	.00048	.00075	.00224
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3391.1**	**40960.**	**2911.6**
Stddev	4.2	306.	14.7
%RSD	.12514	.74643	.50456
#1	3394.1	40744.	2922.0
#2	3388.1	41176.	2901.2

Sample Name: 280-116339-B-4-B MS Acquired: 11/6/2018 23:39:28 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04765**	**2.2118**	**1.0118**	**3.2660**	**2.0732**	**.04952**	**1.8541**	**110.22**	**.09501**
Stddev	.00033	.0216	.0180	.0374	.0080	.00038	.0235	.21	.00099
%RSD	.69103	.97599	1.7739	1.1447	.38611	.76017	1.2686	.19076	1.0446
#1	.04788	2.2271	1.0245	3.2924	2.0788	.04979	1.8708	110.37	.09571
#2	.04741	2.1965	.99914	3.2396	2.0675	.04926	1.8375	110.07	.09431
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48445**	**.19634**	**.25190**	**1.1940**	**54.306**	**1.0274**	**77.490**	**1.0671**	**1.0153**
Stddev	.00601	.00287	.00187	.0187	.149	.0039	.046	.0008	.0160
%RSD	1.2411	1.4616	.74271	1.5688	.27450	.37600	.05946	.06991	1.5802
#1	.48870	.19837	.25322	1.2072	54.411	1.0247	77.522	1.0676	1.0266
#2	.48020	.19431	.25057	1.1807	54.200	1.0301	77.457	1.0665	1.0039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**213.11**	**.48129**	**11.340**	**.48617**	**42.260**	**.51375**	**1.9675**	**5.7479**	**12.300**
Stddev	1.07	.00621	.151	.00837	.558	.00277	.0223	.0196	.042
%RSD	.50347	1.2894	1.3279	1.7224	1.3209	.53911	1.1324	.34058	.34058
#1	212.35	.48568	11.447	.49209	42.655	.51571	1.9833	5.7617	12.330
#2	213.86	.47690	11.234	.48025	41.866	.51180	1.9518	5.7340	12.271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9842**	**2.0166**	**.99347**	**1.0138**	**1.9002**	**1.9741**	**.52013**	**.51404**	**.51568**
Stddev	.0348	.0043	.00490	.0007	.0321	.0016	.00282	.00130	.00168
%RSD	1.7545	.21404	.49276	.06670	1.6915	.08081	.54221	.25306	.32578
#1	2.0088	2.0196	.99001	1.0143	1.9230	1.9730	.52213	.51312	.51449
#2	1.9596	2.0135	.99694	1.0133	1.8775	1.9752	.51814	.51496	.51687
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3286.7**	**39464.**	**2915.9**
Stddev	1.8	159.	3.9
%RSD	.05553	.40340	.13459
#1	3285.4	39576.	2913.2
#2	3288.0	39351.	2918.7

Sample Name: 280-116339-B-4-C MSD Acquired: 11/6/2018 23:41:49 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04992**	**2.2659**	**1.0431**	**3.2724**	**2.1413**	**.05111**	**1.9045**	**110.69**	**.09798**
Stddev	.00037	.0109	.0192	.0309	.0043	.00004	.0217	.01	.00054
%RSD	.74038	.48084	1.8371	.94566	.20201	.07092	1.1422	.00819	.55005
#1	.05018	2.2736	1.0566	3.2943	2.1383	.05108	1.9199	110.70	.09837
#2	.04966	2.2582	1.0295	3.2505	2.1444	.05113	1.8891	110.68	.09760
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49752**	**.20138**	**.25952**	**1.2361**	**55.885**	**1.0618**	**77.947**	**1.0636**	**1.0217**
Stddev	.00330	.00104	.00093	.0040	.203	.0008	.440	.0058	.0098
%RSD	.66244	.51544	.35760	.32042	.36346	.07760	.56466	.54761	.95490
#1	.49985	.20211	.26018	1.2389	55.741	1.0623	78.258	1.0677	1.0286
#2	.49519	.20065	.25886	1.2333	56.029	1.0612	77.635	1.0595	1.0148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**212.12**	**.49274**	**11.595**	**.49925**	**41.171**	**.49693**	**2.0406**	**9.9566**	**21.307**
Stddev	2.09	.00476	.113	.00079	.543	.00357	.0215	.0250	.054
%RSD	.98530	.96687	.97691	.15765	1.3184	.71845	1.0548	.25152	.25152
#1	210.64	.49610	11.675	.49869	41.555	.49946	2.0559	9.9743	21.345
#2	213.60	.48937	11.515	.49981	40.787	.49441	2.0254	9.9389	21.269
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0007**	**2.0312**	**1.0180**	**1.0154**	**1.9484**	**2.1055**	**.53429**	**.52750**	**.52314**
Stddev	.0278	.0066	.0059	.0078	.0122	.0637	.00250	.00066	.00253
%RSD	1.3888	.32706	.57843	.76827	.62391	3.0274	.46712	.12495	.48426
#1	2.0203	2.0265	1.0222	1.0209	1.9570	2.1506	.53605	.52704	.52494
#2	1.9810	2.0359	1.0139	1.0099	1.9398	2.0604	.53252	.52797	.52135
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3247.6**	**39469.**	**2867.3**
Stddev	113.8	43.	74.0
%RSD	3.5034	.10827	2.5794
#1	3328.0	39499.	2919.6
#2	3167.1	39439.	2815.0

Sample Name: 280-116339-B-4-A PDS Acquired: 11/6/2018 23:44:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02739**	**1.0862**	**.20932**	**2.3610**	**.14406**	**.04844**	**.00833**	**78.220**	**.04709**
Stddev	.00018	.0227	.01202	.0342	.00047	.00051	.00179	.234	.00100
%RSD	.65922	2.0849	5.7406	1.4495	.32800	1.0485	21.453	.29947	2.1290
#1	.02752	1.1023	.21781	2.3852	.14439	.04880	.00707	78.385	.04780
#2	.02727	1.0702	.20082	2.3368	.14372	.04808	.00959	78.054	.04638
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04728**	**.04743**	**.05215**	**1.1695**	**23.412**	**.14370**	**46.712**	**.60142**	**.05704**
Stddev	.00087	.00096	.00066	.0074	.050	.00141	.082	.00203	.00120
%RSD	1.8486	2.0330	1.2628	.63375	.21467	.97913	.17499	.33702	2.1100
#1	.04790	.04811	.05262	1.1748	23.448	.14271	46.654	.59999	.05789
#2	.04666	.04674	.05169	1.1643	23.377	.14470	46.770	.60285	.05619
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**179.02**	**.04766**	**2.3099**	**.08616**	**38.758**	**.10249**	**.18717**	**19.071**	**40.812**
Stddev	.31	.00203	.0317	.00111	.608	.00169	.00112	.076	.163
%RSD	.17159	4.2669	1.3730	1.2912	1.5693	1.6527	.59932	.39933	.39933
#1	178.80	.04910	2.3323	.08695	39.189	.10369	.18637	19.125	40.927
#2	179.24	.04623	2.2875	.08537	38.328	.10129	.18796	19.017	40.696
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09480**	**1.0339**	**.19432**	**.05092**	**.19107**	**.49059**	**.04951**	**.20188**	**.06098**
Stddev	.00362	.0030	.00111	.00053	.00312	.08943	.00112	.00021	.00364
%RSD	3.8219	.29211	.57267	1.0387	1.6320	18.229	2.2665	.10301	5.9702
#1	.09736	1.0361	.19353	.05130	.19327	.42735	.05030	.20173	.06356
#2	.09223	1.0318	.19510	.05055	.18886	.55382	.04872	.20203	.05841
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3395.5**	**40344.**	**2970.5**
Stddev	37.4	84.	.2
%RSD	1.1027	.20716	.00577
#1	3369.0	40403.	2970.6
#2	3422.0	40285.	2970.4

Sample Name: 280-116339-B-6-A Acquired: 11/6/2018 23:46:38 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436030 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00130**	**.00437**	**-.00022**	**.37723**	**.02670**	**.00031**	**.00147**	**94.758**	**.00001**
Stddev	.00071	.00101	.00463	.00906	.00011	.00020	.00857	.321	.00011
%RSD	54.858	23.072	2103.2	2.4016	.42990	64.252	584.74	.33909	979.11
#1	-.00079	.00508	.00306	.38364	.02678	.00017	-.00459	94.985	-.00007
#2	-.00180	.00365	-.00350	.37083	.02662	.00046	.00752	94.530	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00128**	**.00071**	**.00369**	**.08384**	**.16372**	**.04590**	**22.723**	**.21731**	**.00097**
Stddev	.00015	.00041	.00034	.00353	.00631	.00040	.000	.00024	.00020
%RSD	11.509	56.889	9.2212	4.2106	3.8551	.87965	.00047	.11125	20.585
#1	.00118	.00100	.00345	.08634	.15925	.04619	22.723	.21748	.00111
#2	.00139	.00043	.00393	.08134	.16818	.04562	22.723	.21713	.00083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**121.49**	**.00262**	**.03388**	**-.00507**	**55.441**	**.00119**	**-.00272**	**15.345**	**32.838**
Stddev	.52	.00072	.00482	.00115	1.204	.00332	.00265	.207	.443
%RSD	.43142	27.680	14.230	22.742	2.1713	278.14	97.427	1.3481	1.3481
#1	121.86	.00313	.03729	-.00588	56.293	-.00115	-.00460	15.491	33.151
#2	121.12	.00210	.03047	-.00425	54.590	.00354	-.00085	15.198	32.525
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00367**	**.62808**	**-.00285**	**.00018**	**.00011**	**-.01762**	**-.00003**	**.00356**	**.00385**
Stddev	.00023	.00140	.00471	.00077	.00135	.05165	.00077	.00056	.00000
%RSD	6.2443	.22318	165.23	420.56	1237.9	293.10	3036.7	15.796	.03732
#1	-.00383	.62907	.00048	-.00036	.00107	-.05415	-.00057	.00316	.00385
#2	-.00351	.62709	-.00618	.00072	-.00085	.01890	.00052	.00396	.00385
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3307.5**	**40004.**	**2959.9**
Stddev	1.5	68.	12.3
%RSD	.04579	.17066	.41651
#1	3306.5	40053.	2968.6
#2	3308.6	39956.	2951.2

Sample Name: CCVH-5408055 Acquired: 11/6/2018 23:49:14 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00340**	**47.089**	**-.00850**	**.01226**	**-.00048**	**.00003**	**.96116**	**.02183**	**-.00069**	**.00204**	**.00094**	**.00229**	**48.072**
Stddev	.00047	.340	.00286	.00035	.00007	.00011	.01182	.01910	.00000	.00015	.00077	.00145	.182
%RSD	13.882	.72160	33.670	2.8438	14.672	416.54	1.2294	87.505	.57877	7.3619	82.512	63.131	.37796
#1	-.00373	47.329	-.01052	.01251	-.00053	-.00005	.96952	.00832	-.00069	.00215	.00148	.00331	47.944
#2	-.00307	46.849	-.00647	.01202	-.00043	.00011	.95281	.03534	-.00069	.00194	.00039	.00127	48.201
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01094**	**-.00447**	**-.08134**	**.00262**	**-.00102**	**239.47**	**.00280**	**.00260**	**-.00038**	**4.7926**	**.00201**	**.00615**	**.10257**
Stddev	.16620	.00774	.00087	.00001	.00044	.98	.00002	.00220	.00158	.0188	.00121	.01868	.00789
%RSD	1519.6	173.27	1.0678	.46769	43.538	.41053	.60328	84.606	419.29	.39162	60.312	303.53	7.6913
#1	.10658	-.00994	-.08073	.00263	-.00071	240.17	.00279	.00104	-.00149	4.8058	.00287	-.00705	.10815
#2	-.12845	.00101	-.08196	.00261	-.00133	238.78	.00281	.00416	.00074	4.7793	.00116	.01936	.09699
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.21950**	**-.00132**	**.00039**	**4.7944**	**.01751**	**-.00045**	**9.6142**	**-.01088**	**.00080**	**.07855**
Stddev	.01688	.00095	.00005	.0136	.00038	.00068	.0110	.00030	.00103	.00262
%RSD	7.6913	71.552	13.759	.28315	2.1870	149.58	.11398	2.7943	128.25	3.3292
#1	.23144	-.00199	.00035	4.8040	.01724	-.00093	9.6219	-.01109	.00007	.07670
#2	.20756	-.00065	.00043	4.7848	.01778	.00003	9.6064	-.01066	.00153	.08040
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3225.4**	**38840.**	**2877.9**
Stddev	5.1	25.	8.2
%RSD	.15750	.06348	.28577
#1	3229.0	38823.	2883.7
#2	3221.9	38858.	2872.1

Sample Name: CCV-5407546 Acquired: 11/6/2018 23:51:45 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52013**	F **.62557**	**1.0106**	**.52324**	**.52435**	**.50678**	**.00071**	**5.0963**	**.51413**	**.51019**	**.50662**	**.52722**
Stddev	.00158	.04915	.0080	.00848	.00105	.00099	.00267	.0249	.00625	.00641	.00694	.00049
%RSD	.30290	7.8564	.79260	1.6213	.20026	.19450	376.48	.48922	1.2162	1.2558	1.3699	.09236
#1	.52125	.66032	1.0162	.52924	.52509	.50748	.00260	5.1140	.51855	.51472	.51153	.52756
#2	.51902	.59081	1.0049	.51724	.52361	.50609	-.00118	5.0787	.50970	.50566	.50171	.52687
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5625**	**51.595**	**1.0470**	**20.581**	**.51526**	**.50511**	F **5.5350**	**.51050**	**1.0804**	**1.0250**	**.05610**	**1.0339**
Stddev	.0052	.064	.0026	.037	.00039	.00709	.0726	.00593	.0159	.0125	.04338	.0164
%RSD	.20361	.12377	.25022	.18216	.07566	1.4035	1.3114	1.1613	1.4688	1.2170	77.318	1.5883
#1	2.5662	51.640	1.0451	20.608	.51554	.51012	5.5863	.51469	1.0916	1.0339	.08677	1.0455
#2	2.5588	51.550	1.0488	20.555	.51499	.50009	5.4837	.50631	1.0692	1.0162	.02543	1.0222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0131**	**5.1614**	**11.045**	**1.0177**	**.50885**	**.00924**	**.51335**	**1.0449**	**.00786**	**.51813**	**.51587**	**.51037**
Stddev	.0078	.0772	.165	.0129	.00057	.00349	.00156	.0107	.00963	.00161	.00019	.00184
%RSD	.77367	1.4956	1.4956	1.2648	.11280	37.734	.30390	1.0244	122.61	.31000	.03665	.36060
#1	1.0187	5.1068	10.929	1.0268	.50926	.01171	.51446	1.0524	.01467	.51926	.51574	.51167
#2	1.0076	5.2160	11.162	1.0086	.50844	.00678	.51225	1.0373	.00104	.51699	.51600	.50907
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3270.6**	**39361.**	**2818.1**
Stddev	1.8	181.	29.1
%RSD	.05359	.45899	1.0317
#1	3271.9	39489.	2797.6
#2	3269.4	39234.	2838.7

Sample Name: CCB Acquired: 11/6/2018 23:54:11 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00035**	**-.00208**	**.00670**	**.00773**	**-.00061**	**.00041**	**.00301**	**.00031**	**-.00040**	**.00094**	**.00021**	**.00027**	**.00510**
Stddev	.00122	.00149	.00333	.00245	.00023	.00031	.00094	.00241	.00004	.00004	.00009	.00000	.01023
%RSD	344.42	71.767	49.671	31.634	38.083	77.238	31.052	772.87	9.6875	4.7916	41.293	1.6022	200.82
#1	-.00122	-.00102	.00905	.00600	-.00044	.00063	.00368	-.00139	-.00037	.00090	.00028	.00028	-.00214
#2	.00051	-.00313	.00434	.00946	-.00077	.00018	.00235	.00201	-.00043	.00097	.00015	.00027	.01233
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01314**	**-.00298**	**-.00273**	**.00005**	**.00107**	**.19134**	**-.00024**	**.00278**	**-.00070**	**.01391**	**.00013**	**.00168**	**.04916**
Stddev	.05070	.00453	.00534	.00003	.00040	.00405	.00024	.00014	.00024	.00744	.00383	.00985	.02998
%RSD	385.85	151.79	195.33	64.223	37.229	2.1170	98.577	5.2000	34.143	53.482	2894.1	584.65	60.988
#1	.02271	-.00619	.00104	.00007	.00079	.18847	-.00007	.00288	-.00053	.01917	.00284	.00865	.02796
#2	-.04899	.00022	-.00651	.00003	.00135	.19420	-.00041	.00268	-.00087	.00865	-.00258	-.00528	.07036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10521**	**-.00276**	**.00014**	**-.00117**	**.00043**	**-.00045**	**.03621**	**-.00033**	**.00038**	**.00436**
Stddev	.06416	.00179	.00006	.00071	.00001	.00141	.05261	.00078	.00027	.00740
%RSD	60.988	64.707	44.131	60.335	1.9943	310.60	145.29	234.29	71.621	169.53
#1	.05984	-.00150	.00018	-.00168	.00042	-.00145	.07341	-.00089	.00058	.00959
#2	.15058	-.00403	.00010	-.00067	.00044	.00054	-.00099	.00022	.00019	-.00087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3384.4**	**40882.**	**2895.0**
Stddev	4.8	13.	6.8
%RSD	.14070	.03075	.23544
#1	3387.8	40891.	2890.2
#2	3381.1	40873.	2899.8

Sample Name: ccvl-5413446 Acquired: 11/6/2018 23:56:46 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00846**	**.11567**	F **.01964**	**.10263**	**.00980**	**.00129**	**.10380**	**.19391**	**.00445**	**.01037**	**.00974**	**.01633**
Stddev	.00038	.00362	.00465	.00063	.00023	.00029	.00338	.00412	.00030	.00051	.00011	.00016
%RSD	4.4474	3.1256	23.655	.61232	2.3346	22.385	3.2581	2.1250	6.7569	4.8888	1.0829	.99383
#1	.00873	.11823	.02293	.10308	.00996	.00109	.10141	.19682	.00466	.01072	.00981	.01644
#2	.00820	.11311	.01636	.10219	.00964	.00150	.10619	.19099	.00423	.01001	.00966	.01621
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10057**	**2.9819**	**.01401**	**.20159**	**.01009**	**.01906**	**1.1947**	**.03944**	**2.9508**	**.00764**	**.09851**	**.01571**
Stddev	.00103	.0141	.00087	.00023	.00016	.00064	.0198	.00183	.0799	.00031	.01015	.00237
%RSD	1.0245	.47391	6.1945	.11589	1.5505	3.3600	1.6569	4.6482	2.7081	4.0649	10.308	15.059
#1	.10129	2.9719	.01340	.20143	.00998	.01952	1.1807	.04073	3.0073	.00743	.10569	.01404
#2	.09984	2.9919	.01462	.20176	.01020	.01861	1.2087	.03814	2.8943	.00786	.09133	.01739
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.01123**	**.52034**	**1.1135**	**.09296**	**.00997**	**.01561**	**.01041**	**.01511**	**.05215**	**.00966**	**.02007**	**.01897**
Stddev	.00000	.01165	.0249	.00153	.00018	.00119	.00006	.00356	.01794	.00071	.00087	.00214
%RSD	.02706	2.2380	2.2380	1.6504	1.8492	7.6506	.61764	23.537	34.396	7.3635	4.3340	11.291
#1	.01123	.51210	1.0959	.09404	.00984	.01476	.01037	.01762	.03946	.01016	.02068	.01745
#2	.01124	.52857	1.1311	.09187	.01010	.01645	.01046	.01259	.06483	.00915	.01945	.02048
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.02000											
Range	-30.000%											

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3438.2**	**41654.**	**2948.5**
Stddev	4.6	164.	7.6
%RSD	.13286	.39402	.25702
#1	3435.0	41770.	2953.8
#2	3441.4	41538.	2943.1

Sample Name: MB 280-434571/1-C Acquired: 11/6/2018 23:59:20 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436238 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00071**	**.00090**	W **.00830**	**.00453**	**.00012**	**.00024**	**.00837**	**.00369**	**-.00076**
Stddev	.00046	.00080	.00013	.00111	.00060	.00000	.00213	.00140	.00018
%RSD	64.243	88.685	1.5363	24.562	497.95	1.4942	25.419	38.050	23.734
#1	-.00039	.00147	.00821	.00532	.00054	.00024	.00687	.00269	-.00089
#2	-.00103	.00034	.00839	.00375	-.00030	.00024	.00987	.00468	-.00064
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.00750						
Low Limit			-.00750						

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**.00016**	**.00040**	**.01713**	**-.11520**	**-.00275**	**-.00327**	**.00026**	**-.00027**
Stddev	.00029	.00049	.00080	.00335	.01237	.00244	.00438	.00009	.00036
%RSD	59.257	310.56	199.94	19.552	10.736	88.692	133.73	33.476	133.50
#1	.00070	.00050	-.00017	.01950	-.10645	-.00448	-.00637	.00032	-.00002
#2	.00029	-.00019	.00097	.01476	-.12394	-.00103	-.00018	.00020	-.00052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.17780**	**-.00033**	**.00229**	F **-.00407**	**-.00434**	W **-.00712**	**.00075**	**.07186**	**.15377**
Stddev	.00002	.00058	.00064	.00271	.00004	.00106	.00869	.02196	.04700
%RSD	.01328	176.07	27.959	66.624	.84680	14.833	1166.1	30.565	30.565
#1	.17779	-.00074	.00275	-.00599	-.00437	-.00786	.00689	.05633	.12054
#2	.17782	.00008	.00184	-.00216	-.00432	-.00637	-.00540	.08739	.18701
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Warn	Chk Pass	Chk Pass	None
High Limit				.00900		.00500			
Low Limit				-.00300		-.00500			

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00357**	**-.00005**	**.00128**	**.00074**	**.00108**	**.04672**	**.00051**	**.00200**	**.00424**
Stddev	.00091	.00001	.00033	.00041	.00130	.02454	.00118	.00171	.00245
%RSD	25.577	12.782	25.364	54.823	120.73	52.534	230.16	85.440	57.821
#1	-.00292	-.00005	.00105	.00046	.00200	.02936	.00134	.00322	.00598
#2	-.00422	-.00006	.00152	.00103	.00016	.06407	-.00032	.00079	.00251
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3488.3**	**42411.**	**2995.5**
Stddev	3.4	153.	16.2
%RSD	.09803	.35957	.54175
#1	3485.9	42519.	3007.0
#2	3490.8	42303.	2984.0

Sample Name: LCS 280-434571/2-C Acquired: 11/7/2018 0:01:55 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436238 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04928**	F **2.3153**	**1.0168**	**1.0155**	**2.0745**	**.04996**	**1.9474**	**50.417**	**.09820**
Stddev	.00056	.0238	.0085	.0081	.0158	.00022	.0208	.162	.00153
%RSD	1.1399	1.0259	.83364	.80223	.76275	.44043	1.0675	.32130	1.5599
#1	.04889	2.3321	1.0228	1.0212	2.0857	.04980	1.9621	50.532	.09928
#2	.04968	2.2985	1.0109	1.0097	2.0633	.05011	1.9327	50.303	.09712
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit		2.2299							
Low Limit		1.7300							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49950**	**.19969**	**.25721**	**1.0221**	**51.700**	**1.0125**	**50.820**	**.50668**	**.98276**
Stddev	.00674	.00277	.00047	.0059	.146	.0034	.018	.00052	.01536
%RSD	1.3498	1.3894	.18378	.57860	.28335	.33443	.03578	.10189	1.5627
#1	.50427	.20165	.25688	1.0263	51.804	1.0149	50.807	.50631	.99361
#2	.49473	.19773	.25754	1.0179	51.597	1.0101	50.833	.50704	.97190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.553**	**.49557**	F **11.246**	**.51082**	**1.9464**	**.48962**	**2.0681**	F **6.9985**	**14.977**
Stddev	1.118	.00684	.113	.00155	.0061	.01023	.0177	.0394	.084
%RSD	2.2112	1.3800	1.0077	.30297	.31487	2.0900	.85568	.56364	.56364
#1	51.343	.50041	11.326	.51192	1.9507	.49686	2.0806	7.0264	15.036
#2	49.762	.49074	11.166	.50973	1.9420	.48239	2.0556	6.9706	14.917
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit			11.100					11.000	
Low Limit			9.1000					9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9680**	**1.0143**	**1.0079**	**.99055**	**2.0402**	**2.0764**	**.52587**	**.52157**	**.50269**
Stddev	.0282	.0047	.0059	.00023	.0227	.0249	.00111	.00226	.00720
%RSD	1.4302	.46680	.58959	.02353	1.1107	1.2008	.21015	.43422	1.4316
#1	1.9879	1.0176	1.0121	.99072	2.0563	2.0588	.52665	.51997	.49761
#2	1.9481	1.0109	1.0037	.99039	2.0242	2.0941	.52509	.52317	.50778
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3369.5**	**40532.**	**2961.0**
Stddev	19.8	162.	10.8
%RSD	.58836	.40051	.36322
#1	3355.4	40647.	2953.4
#2	3383.5	40417.	2968.6

Sample Name: 280-115911-E-1-C Acquired: 11/7/2018 0:04:16 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436238 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00150**	**.00329**	**.00995**	**.03359**	**.22940**	**.00019**	**.00802**	**79.409**	**.00004**
Stddev	.00165	.00042	.00791	.00010	.00129	.00005	.00599	.261	.00034
%RSD	109.91	12.664	79.488	.28743	.56145	28.444	74.725	.32872	843.27
#1	-.00267	.00299	.01555	.03366	.23031	.00015	.00378	79.594	.00028
#2	-.00034	.00358	.00436	.03352	.22849	.00023	.01225	79.225	-.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00052**	**.00084**	**.04452**	**.00102**	**3.4125**	**.00026**	**18.324**	**.00025**	**.00449**
Stddev	.00030	.00029	.00026	.00172	.0163	.00059	.079	.00007	.00068
%RSD	58.190	34.726	.58354	168.42	.47811	228.22	.42884	28.776	15.246
#1	.00030	.00104	.04434	.00223	3.4240	-.00016	18.380	.00020	.00401
#2	.00073	.00063	.04470	-.00019	3.4009	.00067	18.269	.00030	.00497
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**48.745**	**-.00046**	**.02539**	**-.00199**	**33.737**	**.00209**	**.00051**	**9.6238**	**20.595**
Stddev	.411	.00038	.00064	.00220	.621	.00101	.00202	.0902	.193
%RSD	.84412	82.229	2.5026	110.52	1.8410	48.520	395.49	.93725	.93725
#1	49.036	-.00073	.02495	-.00044	34.176	.00137	.00194	9.6876	20.731
#2	48.454	-.00019	.02584	-.00355	33.297	.00281	-.00092	9.5600	20.459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00258**	**.60548**	**-.00034**	**.00044**	**.00008**	**.05363**	**.00173**	**.02804**	**.00685**
Stddev	.00042	.00187	.00015	.00063	.00353	.01337	.00046	.00008	.00257
%RSD	16.217	.30853	45.686	144.42	4648.4	24.935	26.368	.29871	37.484
#1	-.00288	.60680	-.00023	.00088	.00258	.04418	.00141	.02810	.00504
#2	-.00228	.60415	-.00045	-.00001	-.00242	.06309	.00206	.02798	.00867
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3426.5**	**41488.**	**3046.3**
Stddev	11.4	125.	10.7
%RSD	.33383	.30063	.35273
#1	3434.6	41400.	3038.7
#2	3418.5	41576.	3053.9

Sample Name: 280-115911-E-2-C Acquired: 11/7/2018 0:06:49 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436238 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00044**	**.20214**	**.00253**	**.05192**	**.00942**	**.00182**	**.02543**	**304.82**	**.00032**
Stddev	.00189	.00624	.00407	.00127	.00045	.00017	.00546	1.05	.00025
%RSD	424.91	3.0880	160.82	2.4440	4.7549	9.2899	21.487	.34399	77.233
#1	.00089	.20655	.00540	.05282	.00973	.00170	.02929	304.08	.00014
#2	-.00178	.19772	-.00035	.05102	.00910	.00194	.02156	305.57	.00049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03003**	**.00090**	**.00351**	**39.547**	**6.3389**	**.02780**	**65.749**	**2.2599**	**-.00094**
Stddev	.00050	.00034	.00083	.133	.0400	.00025	.041	.0014	.00079
%RSD	1.6603	38.260	23.785	.33614	.63073	.90411	.06298	.06416	84.057
#1	.03038	.00115	.00292	39.453	6.3106	.02762	65.719	2.2588	-.00150
#2	.02968	.00066	.00410	39.641	6.3672	.02798	65.778	2.2609	-.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**153.58**	**.02164**	**.00034**	**-.00364**	F **436.00**	**-.00175**	**-.00506**	**7.6795**	**16.434**
Stddev	.55	.00004	.00166	.00200	9.10	.00179	.01386	.0522	.112
%RSD	.36122	.16976	487.38	54.749	2.0861	102.08	274.13	.67972	.67972
#1	153.19	.02167	.00152	-.00223	442.44	-.00049	.00474	7.7165	16.513
#2	153.97	.02162	-.00083	-.00506	429.57	-.00301	-.01485	7.6426	16.355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00427**	**6.9098**	**-.00002**	**.00106**	**-.00023**	**.00982**	**.00008**	**.03646**	**.00489**
Stddev	.00046	.0194	.00005	.00030	.00178	.01678	.00035	.00098	.00169
%RSD	10.749	.28032	303.48	28.003	788.51	170.85	421.46	2.6918	34.648
#1	-.00395	6.8961	.00002	.00127	-.00148	-.00204	.00033	.03576	.00369
#2	-.00460	6.9235	-.00005	.00085	.00103	.02168	-.00016	.03715	.00609
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3330.5**	**38906.**	**3027.4**
Stddev	77.2	453.	11.6
%RSD	2.3192	1.1651	.38186
#1	3275.9	39226.	3035.6
#2	3385.1	38585.	3019.2

Sample Name: 280-115911-E-2-CSD@5 Acquired: 11/7/2018 0:09:22 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436238 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00086**	**.04301**	**.00368**	**.01492**	**.00196**	**.00071**	**.00364**	**65.043**	**-.00015**
Stddev	.00016	.00039	.00201	.00039	.00025	.00003	.00368	.358	.00062
%RSD	18.768	.89715	54.582	2.6257	12.956	4.7845	101.08	.55092	426.22
#1	-.00074	.04328	.00226	.01520	.00178	.00068	.00623	65.296	-.00058
#2	-.00097	.04273	.00511	.01464	.00214	.00073	.00104	64.789	.00029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00702**	**.00029**	**.00090**	**8.5665**	**1.2648**	**.00311**	**14.096**	**.48055**	**-.00029**
Stddev	.00018	.00053	.00003	.0333	.0629	.00025	.016	.00088	.00026
%RSD	2.5856	178.99	3.5038	.38880	4.9733	8.0850	.11389	.18348	87.771
#1	.00689	.00067	.00092	8.5901	1.3093	.00328	14.107	.48117	-.00011
#2	.00715	-.00008	.00088	8.5430	1.2204	.00293	14.085	.47992	-.00048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**33.512**	**.00403**	**-.00083**	**-.00294**	**90.085**	**-.00027**	**-.00700**	**1.6577**	**3.5475**
Stddev	.001	.00030	.00162	.00196	2.066	.00090	.00455	.0151	.0323
%RSD	.00184	7.4485	194.88	66.484	2.2928	326.00	65.064	.91193	.91193
#1	33.512	.00424	-.00197	-.00156	91.546	.00036	-.00378	1.6684	3.5704
#2	33.513	.00382	.00031	-.00433	88.625	-.00091	-.01022	1.6470	3.5246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00279**	**1.4647**	**-.00068**	**.00024**	**.00005**	**.07953**	**-.00023**	**.00927**	**.00530**
Stddev	.00037	.0083	.00144	.00031	.00182	.00917	.00003	.00034	.00177
%RSD	13.250	.57007	211.04	128.01	3570.4	11.528	11.065	3.6971	33.505
#1	-.00253	1.4706	-.00170	.00046	.00133	.07304	-.00022	.00951	.00404
#2	-.00306	1.4587	.00034	.00002	-.00123	.08601	-.00025	.00903	.00655
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3455.0**	**41905.**	**3001.2**
Stddev	1.1	83.	14.4
%RSD	.03091	.19802	.48107
#1	3455.7	41846.	2991.0
#2	3454.2	41964.	3011.4

Sample Name: 280-115911-E-2-D MS Acquired: 11/7/2018 0:11:55 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436238 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.05457**	k **2.3727**	k **1.0084**	**1.0360**	k **2.0122**	k **.04973**	k **1.8755**	**352.85**	k **.10454**
Stddev	.00074	.0356	.0161	.0129	.0003	.00006	.0294	.67	.00165
%RSD	1.3528	1.4986	1.5975	1.2459	.01482	.12809	1.5667	.19020	1.5809
#1	k .05405	k 2.3979	k 1.0198	1.0451	k 2.0125	k .04968	k 1.8963	352.38	k .10571
#2	k .05509	k 2.3476	k .99701	1.0269	k 2.0120	k .04977	k 1.8547	353.33	k .10338
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.50563**	k **.19134**	k **.24930**	k **40.089**	**56.626**	**1.0089**	k **113.79**	k **2.7182**	k **.99105**
Stddev	.00751	.00229	.00018	.192	.216	.0005	.12	.0040	.01568
%RSD	1.4848	1.1978	.07376	.47891	.38127	.04587	.10360	.14555	1.5818
#1	k .51094	k .19297	k .24917	k 39.954	56.473	1.0086	k 113.88	k 2.7210	k 1.0021
#2	k .50032	k .18972	k .24943	k 40.225	56.779	1.0093	k 113.71	k 2.7154	k .97996
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**201.31**	k **.49411**	k **11.270**	k **.47688**	kF **444.44**	k **.50410**	k **1.9910**	k **14.891**	k **31.866**
Stddev	.51	.00678	.159	.00954	6.04	.01118	.0310	.089	.191
%RSD	.25420	1.3730	1.4113	1.9997	1.3583	2.2173	1.5550	.59851	.59851
#1	200.95	k .49890	k 11.382	k .48363	k 448.70	k .51201	k 2.0129	k 14.828	k 31.731
#2	201.67	k .48931	k 11.157	k .47014	k 440.17	k .49620	k 1.9691	k 14.954	k 32.001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9358**	**7.9125**	k **1.0426**	k **.99150**	k **1.8280**	k **1.9209**	k **.48704**	k **.52398**	k **.53978**
Stddev	.0355	.0081	.0083	.00116	.0181	.0189	.00146	.00155	.00019
%RSD	1.8339	.10233	.79213	.11681	.99180	.98370	.29966	.29675	.03524
#1	1.9609	7.9068	k 1.0485	k .99231	k 1.8408	k 1.9342	k .48807	k .52508	k .53991
#2	1.9107	7.9183	k 1.0368	k .99068	k 1.8152	k 1.9075	k .48601	k .52288	k .53964
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3288.4**	**39891.**	**3004.2**
Stddev	10.3	195.	11.1
%RSD	.31350	.48771	.36987
#1	3281.1	39753.	2996.4
#2	3295.7	40028.	3012.1

Sample Name: 280-115911-E-2-E MSD Acquired: 11/7/2018 0:14:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436238 6010C

Elem	Ag3280	Al1670	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Line	328.068 {103}	167.079 {502}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.05554**	k **2.3657**	kW **2.3973**	k **1.0128**	**1.0424**	k **2.0273**	k **.04948**	k **1.8783**	**362.43**
Stddev	.00049	.0265	.0033	.0166	.0157	.0051	.00025	.0304	1.40
%RSD	.88889	1.1202	.13669	1.6382	1.5025	.25015	.49870	1.6185	.38713
#1	k .05519	k 2.3845	k 2.3949	k 1.0245	1.0535	k 2.0237	k .04931	k 1.8998	361.44
#2	k .05588	k 2.3470	k 2.3996	k 1.0010	1.0313	k 2.0309	k .04966	k 1.8568	363.43
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			500.00						
Low Limit			3.2000						

Elem	Cd2288	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576
Line	228.802 {447}	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.10425**	k **.50427**	k **.19017**	k **.24934**	k **41.403**	**56.995**	**1.0125**	k **115.82**	k **2.7892**
Stddev	.00075	.00766	.00305	.00020	.078	.096	.0031	.20	.0030
%RSD	.71580	1.5182	1.6019	.07900	.18778	.16902	.30889	.17094	.10861
#1	k .10478	k .50968	k .19232	k .24947	k 41.348	56.927	1.0103	k 115.96	k 2.7914
#2	k .10372	k .49885	k .18801	k .24920	k 41.458	57.063	1.0147	k 115.68	k 2.7871
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Line	202.030 {467}	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.99391**	**208.01**	k **.49081**	k **11.255**	k **.48059**	kF **456.22**	k **.50585**	k **1.9901**	k **16.726**
Stddev	.01425	.06	.00602	.168	.00832	5.58	.00244	.0348	.070
%RSD	1.4340	.03084	1.2268	1.4933	1.7320	1.2221	.48152	1.7478	.41814
#1	k 1.0040	207.96	k .49507	k 11.374	k .48648	k 460.16	k .50757	k 2.0147	k 16.676
#2	k .98383	208.05	k .48656	k 11.137	k .47471	k 452.27	k .50413	k 1.9655	k 16.775
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						200.00			
Low Limit						-.20000			

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062
Line	288.158 {117}2	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **35.793**	**1.9382**	**8.1334**	k **1.0539**	k **.99915**	k **1.8280**	k **1.9390**	k **.48768**	k **.52854**
Stddev	.150	.0256	.0297	.0006	.00040	.0239	.0012	.00439	.00486
%RSD	.41814	1.3229	.36483	.05235	.04047	1.3048	.05936	.90013	.91902
#1	k 35.687	1.9563	8.1124	k 1.0535	k .99943	k 1.8448	k 1.9382	k .49079	k .53198
#2	k 35.899	1.9201	8.1543	k 1.0543	k .99886	k 1.8111	k 1.9399	k .48458	k .52511
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Zr3391
Line	339.198 { 99}
Units	ppm
Avg	k **.54463**
Stddev	.00414
%RSD	.75958
#1	k .54171
#2	k .54756
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: 280-115911-E-2-E MSD Acquired: 11/7/2018 0:14:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436238 6010C

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3269.8**	**39287.**	**2969.0**
Stddev	10.0	134.	7.5
%RSD	.30619	.34069	.25373
#1	3262.8	39193.	2974.3
#2	3276.9	39382.	2963.7

Sample Name: 280-115911-E-2-C PDS Acquired: 11/7/2018 0:16:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436238 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.02578**	k **1.1964**	k **.18903**	**.14672**	k **.09950**	k **.04421**	k **.02994**	**318.48**	k **.04517**
Stddev	.00013	.0109	.00937	.00253	.00013	.00009	.00481	.59	.00007
%RSD	.51918	.90973	4.9569	1.7245	.12955	.20935	16.063	.18604	.14706
#1	.02588	1.1887	.19566	.14851	.09941	.04428	.02654	318.06	.04512
#2	k .02569	k 1.2041	k .18241	.14494	k .09959	k .04415	k .03334	318.90	k .04522
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.07152**	k **.04311**	k **.04855**	**39.941**	**24.485**	**.11554**	k **82.159**	k **2.2574**	k **.04839**
Stddev	.00175	.00060	.00012	.145	.187	.00369	.167	.0001	.00034
%RSD	2.4400	1.3862	.24877	.36374	.76293	3.1923	.20373	.00292	.69937
#1	.07275	.04353	.04863	39.838	24.353	.11293	82.278	2.2574	.04863
#2	k .07028	k .04269	k .04846	40.044	24.617	.11815	k 82.041	k 2.2573	k .04815
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**169.18**	k **.06378**	**2.0067**	k **.07915**	kF **431.46**	k **.09343**	k **.17796**	**12.673**	**27.120**
Stddev	.83	.00096	.0268	.00046	6.63	.00118	.00950	.108	.232
%RSD	.49126	1.4975	1.3367	.57493	1.5363	1.2649	5.3383	.85468	.85468
#1	168.60	.06446	2.0256	.07883	436.15	.09427	.18468	12.750	27.284
#2	169.77	k .06310	1.9877	k .07947	k 426.77	k .09260	k .17125	12.596	26.956
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.08868**	**6.8766**	k **.19539**	k **.05027**	k **.16963**	k **.44775**	k **.04480**	k **.21270**	k **.05747**
Stddev	.00250	.0017	.03223	.00001	.00665	.00784	.00055	.00143	.00154
%RSD	2.8193	.02401	16.493	.01387	3.9198	1.7509	1.2297	.67147	2.6766
#1	.09045	6.8754	.17260	.05028	.17433	.44221	.04519	.21371	.05638
#2	k .08691	6.8777	k .21818	k .05027	k .16493	k .45330	k .04441	k .21169	k .05856
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3255.4**	**39343.**	**2918.2**
Stddev	24.7	40.	2.9
%RSD	.75932	.10108	.09785
#1	3272.9	39315.	2920.2
#2	3238.0	39371.	2916.2

Sample Name: CCVH-5408055 Acquired: 11/7/2018 0:19:01 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00303**	**47.009**	**-.00292**	**.00627**	**-.00033**	**-.00009**	**.94112**	**.01703**	**-.00026**	**.00193**	**.00101**	**.00275**	**48.167**
Stddev	.00084	.093	.00704	.00048	.00037	.00003	.01281	.01212	.00009	.00045	.00020	.00027	.361
%RSD	27.786	.19762	240.87	7.7091	111.91	30.951	1.3616	71.144	33.498	23.502	19.356	9.8671	.74951
#1	-.00243	46.943	-.00790	.00661	-.00059	-.00011	.95018	.02560	-.00032	.00225	.00087	.00294	47.912
#2	-.00363	47.075	.00205	.00593	-.00007	-.00007	.93206	.00846	-.00020	.00161	.00115	.00255	48.422
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.12183**	**-.00287**	**-.08551**	**.00282**	**.00080**	**241.90**	**.00275**	**.00946**	**-.00575**	**5.4636**	**.00839**	**.00026**	**.03619**
Stddev	.03783	.00345	.00623	.00016	.00043	1.90	.00030	.01026	.00062	.8494	.00015	.00736	.01151
%RSD	31.047	120.16	7.2894	5.5549	53.406	.78507	10.773	108.47	10.751	15.547	1.7736	2796.7	31.817
#1	.14858	-.00043	-.08992	.00293	.00110	240.56	.00296	.01671	-.00532	6.0642	.00850	-.00494	.02804
#2	.09509	-.00531	-.08110	.00271	.00050	243.25	.00254	.00220	-.00619	4.8630	.00829	.00547	.04433
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07744**	**-.00256**	**.00085**	**4.8051**	**.01669**	**-.00004**	**9.6372**	**-.00959**	**.00137**	**.07981**
Stddev	.02464	.00120	.00005	.0100	.00089	.00254	.0246	.00141	.00034	.00235
%RSD	31.817	47.034	5.3513	.20787	5.3344	6438.9	.25578	14.685	24.845	2.9383
#1	.06002	-.00171	.00088	4.8122	.01732	.00175	9.6546	-.00860	.00113	.08147
#2	.09486	-.00341	.00081	4.7981	.01606	-.00183	9.6198	-.01059	.00161	.07815
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3308.6**	**38655.**	**2840.2**
Stddev	59.2	59.	17.1
%RSD	1.7878	.15168	.60360
#1	3266.8	38697.	2852.4
#2	3350.4	38614.	2828.1

Sample Name: CCV-5407546 Acquired: 11/7/2018 0:21:32 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49501**	F **.56546**	**.96649**	**.48959**	**.50118**	**.48285**	**.00387**	**4.9040**	**.48832**	**.48487**	**.47942**	**.50176**
Stddev	.00111	.01011	.02804	.00849	.00268	.00130	.00373	.0408	.00841	.00838	.01006	.00057
%RSD	.22467	1.7878	2.9017	1.7350	.53460	.26832	96.257	.83136	1.7216	1.7274	2.0993	.11457
#1	.49580	.57261	.98632	.49559	.50307	.48377	.00651	4.9329	.49426	.49079	.48654	.50136
#2	.49423	.55831	.94666	.48358	.49929	.48194	.00124	4.8752	.48237	.47895	.47231	.50217
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4695**	**49.401**	**.98828**	**19.719**	**.49282**	**.47813**	**5.2659**	**.48395**	**1.0287**	**.97904**	**.12761**	**.98030**
Stddev	.0063	.456	.00632	.070	.00175	.00910	.0451	.00781	.0122	.01548	.00706	.01669
%RSD	.25410	.92333	.63982	.35307	.35576	1.9035	.85700	1.6147	1.1816	1.5812	5.5357	1.7021
#1	2.4740	49.723	.99275	19.768	.49406	.48456	5.2978	.48948	1.0373	.98999	.13260	.99210
#2	2.4651	49.078	.98381	19.670	.49158	.47169	5.2340	.47842	1.0201	.96809	.12261	.96850
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.95041**	**4.9261**	**10.542**	**.96590**	**.48586**	**.00794**	**.48961**	**.99355**	**.04351**	**.49459**	**.49601**	**.49122**
Stddev	.02023	.0045	.010	.02278	.00140	.00213	.00123	.01010	.02636	.00071	.00130	.00075
%RSD	2.1290	.09145	.09145	2.3581	.28788	26.766	.25111	1.0167	60.591	.14259	.26236	.15177
#1	.96472	4.9293	10.549	.98201	.48685	.00945	.49048	1.0007	.06215	.49409	.49509	.49070
#2	.93611	4.9229	10.535	.94980	.48487	.00644	.48874	.98641	.02487	.49509	.49693	.49175
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3464.1**	**41564.**	**3011.5**
Stddev	2.9	125.	21.8
%RSD	.08444	.30043	.72414
#1	3466.2	41652.	2996.1
#2	3462.1	41476.	3026.9

Sample Name: CCB Acquired: 11/7/2018 0:23:58 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**-.00159**	**-.00054**	**.00529**	**-.00025**	**.00012**	**-.00210**	**-.00593**	**.00009**	**.00066**	**.00026**	**.00150**
Stddev	.00017	.00003	.00831	.00061	.00009	.00010	.00150	.00100	.00028	.00022	.00069	.00034
%RSD	264.39	2.1341	1537.9	11.602	35.495	81.173	71.430	16.940	303.81	33.327	270.07	22.906
#1	-.00019	-.00162	.00534	.00573	-.00031	.00019	-.00104	-.00522	-.00010	.00050	-.00023	.00125
#2	.00006	-.00157	-.00642	.00486	-.00019	.00005	-.00316	-.00664	.00029	.00081	.00075	.00174
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00424**	**-.04192**	**-.00157**	**.00550**	**.00012**	**.00098**	**.17318**	**-.00052**	**-.00054**	**-.00169**	W **.09895**	**-.00274**
Stddev	.00003	.00662	.00167	.00233	.00024	.00018	.01954	.00045	.00274	.00136	.00794	.00240
%RSD	.73360	15.794	106.03	42.284	196.40	18.518	11.281	85.421	511.79	80.838	8.0216	87.648
#1	-.00427	-.04660	-.00039	.00386	-.00005	.00085	.18699	-.00021	.00140	-.00265	.10456	-.00104
#2	-.00422	-.03724	-.00275	.00714	.00029	.00111	.15936	-.00084	-.00248	-.00072	.09333	-.00444
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit											.05000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00060**	**.04628**	**.09903**	**-.00235**	**.00025**	**.00209**	**.00050**	**-.00105**	**-.03073**	**.00037**	**-.00002**	**.00298**
Stddev	.00901	.02448	.05238	.00112	.00030	.00171	.00026	.00135	.00207	.00015	.00018	.00275
%RSD	1490.5	52.894	52.894	47.568	118.91	81.946	51.891	128.84	6.7429	40.793	880.75	92.571
#1	.00577	.02897	.06199	-.00156	.00004	.00330	.00032	-.00201	-.02926	.00047	.00011	.00492
#2	-.00697	.06359	.13607	-.00315	.00046	.00088	.00068	-.00009	-.03219	.00026	-.00015	.00103
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3416.4**	**41489.**	**2940.6**
Stddev	.5	16.	1.9
%RSD	.01578	.03887	.06462
#1	3416.8	41500.	2939.3
#2	3416.0	41477.	2942.0

Sample Name: ccvl-5413446 Acquired: 11/7/2018 0:26:33 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01006**	**.11541**	**.01620**	**.09935**	**.00989**	**.00128**	**.10444**	**.19538**	**.00440**	**.01072**	**.00985**	**.01651**
Stddev	.00172	.00326	.00289	.00035	.00018	.00005	.00196	.00342	.00023	.00002	.00019	.00175
%RSD	17.083	2.8254	17.851	.35179	1.8615	3.5874	1.8787	1.7497	5.3137	.18885	1.9433	10.579
#1	.00885	.11772	.01416	.09960	.00975	.00125	.10306	.19296	.00456	.01070	.00999	.01774
#2	.01128	.11311	.01825	.09910	.01002	.00131	.10583	.19780	.00423	.01073	.00972	.01527
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09702**	**3.0376**	**.01896**	**.19804**	**.01024**	**.01888**	**1.1785**	**.03925**	**2.9683**	**.00847**	F **.16664**	**.01510**
Stddev	.00541	.0290	.00159	.00197	.00008	.00085	.0319	.00006	.0792	.00014	.00639	.00113
%RSD	5.5774	.95598	8.4010	.99502	.79427	4.5097	2.7105	.15914	2.6669	1.5975	3.8352	7.4686
#1	.09319	3.0581	.01784	.19664	.01030	.01948	1.1559	.03930	3.0243	.00838	.17116	.01590
#2	.10085	3.0171	.02009	.19943	.01019	.01828	1.2010	.03921	2.9123	.00857	.16213	.01430
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value											.10000	
Range											30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01769**	**.53018**	**1.1346**	**.09399**	**.01008**	**.01575**	**.01009**	**.01710**	F **.13974**	**.00991**	**.02086**	**.01948**
Stddev	.00026	.05392	.1154	.00221	.00007	.00022	.00046	.00201	.03455	.00012	.00105	.00125
%RSD	1.4415	10.171	10.171	2.3505	.73942	1.3781	4.5569	11.752	24.723	1.2409	5.0435	6.3926
#1	.01787	.49205	1.0530	.09555	.01013	.01591	.00977	.01568	.16417	.00999	.02012	.02036
#2	.01751	.56830	1.2162	.09242	.01003	.01560	.01042	.01852	.11531	.00982	.02161	.01860
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3491.9**	**42646.**	**3035.9**
Stddev	4.4	32.	3.1
%RSD	.12500	.07590	.10189
#1	3494.9	42623.	3038.1
#2	3488.8	42669.	3033.7

Sample Name: MB 280-436150/1-A Acquired: 11/7/2018 0:29:08 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/6 Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00047**	**.00308**	**.00504**	**.00273**	**-.00030**	**.00023**	**.00410**	**.02474**	**-.00053**
Stddev	.00070	.00075	.00224	.00013	.00014	.00019	.01094	.00516	.00026
%RSD	148.70	24.298	44.450	4.8197	46.765	82.853	266.66	20.860	49.033
#1	.00002	.00361	.00662	.00282	-.00039	.00009	.01184	.02109	-.00035
#2	-.00097	.00255	.00346	.00264	-.00020	.00036	-.00363	.02839	-.00071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00032**	**.00038**	**.00071**	**.01252**	**-.02986**	**-.00262**	**.00182**	**.00037**	**-.00004**
Stddev	.00030	.00023	.00026	.00221	.15537	.00402	.00544	.00011	.00007
%RSD	91.922	60.346	37.305	17.663	520.28	153.32	297.99	30.557	157.87
#1	.00011	.00055	.00090	.01409	-.13972	.00022	-.00202	.00045	-.00009
#2	.00054	.00022	.00052	.01096	.08000	-.00546	.00567	.00029	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.13525**	**-.00006**	**.00123**	**-.00134**	W **.08235**	**-.00108**	**-.00038**	**.03687**	**.07890**
Stddev	.01379	.00001	.00125	.00103	.02995	.00175	.00209	.02253	.04822
%RSD	10.199	18.966	101.35	76.452	36.367	162.65	552.33	61.115	61.115
#1	.14500	-.00005	.00211	-.00207	.10353	.00016	.00110	.05280	.11300
#2	.12549	-.00007	.00035	-.00062	.06118	-.00232	-.00186	.02094	.04480
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	None
High Limit					.05000				
Low Limit					-.05000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00221**	**-.00003**	**.00223**	**.00098**	**.00065**	**.03632**	**.00079**	**.00139**	**.00595**
Stddev	.00064	.00020	.00414	.00047	.00185	.01727	.00055	.00093	.00049
%RSD	28.886	632.42	186.08	48.541	283.19	47.540	69.555	67.012	8.2317
#1	-.00176	-.00018	-.00070	.00064	.00197	.04853	.00117	.00205	.00630
#2	-.00266	.00011	.00515	.00131	-.00066	.02411	.00040	.00073	.00560
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3597.4**	**43866.**	**3105.2**
Stddev	24.8	12.	3.5
%RSD	.68962	.02656	.11135
#1	3614.9	43874.	3107.6
#2	3579.8	43858.	3102.8

Sample Name: LCS 280-436150/2-A Acquired: 11/7/2018 0:31:43 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04845**	F **2.3053**	**1.0102**	**1.0084**	**2.0713**	**.05043**	**1.9450**	**50.367**	**.09739**
Stddev	.00044	.0326	.0157	.0129	.0020	.00036	.0321	.132	.00159
%RSD	.90650	1.4139	1.5516	1.2810	.09740	.71391	1.6513	.26154	1.6332
#1	.04813	2.3283	1.0213	1.0175	2.0699	.05069	1.9677	50.460	.09851
#2	.04876	2.2822	.99914	.99928	2.0728	.05018	1.9223	50.274	.09626
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit		2.2299							
Low Limit		1.7300							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49737**	**.19994**	**.25892**	**1.0250**	**51.419**	**1.0085**	**50.605**	**.50700**	**.99607**
Stddev	.00770	.00383	.00014	.0012	.033	.0017	.042	.00064	.01620
%RSD	1.5475	1.9163	.05356	.11371	.06455	.17124	.08303	.12532	1.6261
#1	.50282	.20265	.25882	1.0242	51.395	1.0097	50.634	.50745	1.0075
#2	.49193	.19723	.25902	1.0258	51.442	1.0073	50.575	.50655	.98462
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.311**	**.49495**	F **11.151**	**.50661**	**1.9751**	**.49559**	**2.0314**	F **8.5623**	**18.323**
Stddev	.257	.00560	.200	.01011	.0272	.01268	.0366	.0022	.005
%RSD	.51065	1.1305	1.7960	1.9947	1.3766	2.5584	1.8036	.02536	.02536
#1	50.129	.49891	11.292	.51376	1.9944	.50456	2.0573	8.5608	18.320
#2	50.492	.49100	11.009	.49947	1.9559	.48662	2.0055	8.5638	18.327
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit			11.100					11.000	
Low Limit			9.1000					9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9800**	**1.0128**	**1.0077**	**.99948**	**2.0397**	**2.0623**	**.52733**	**.51987**	**.50629**
Stddev	.0428	.0020	.0059	.00296	.0290	.0008	.00029	.00050	.00034
%RSD	2.1615	.19547	.58951	.29660	1.4243	.03743	.05582	.09658	.06765
#1	2.0103	1.0142	1.0035	1.0016	2.0602	2.0618	.52754	.51951	.50653
#2	1.9497	1.0114	1.0119	.99739	2.0191	2.0629	.52712	.52022	.50605
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3428.8**	**41245.**	**3034.2**
Stddev	22.0	104.	.2
%RSD	.64048	.25168	.00707
#1	3413.2	41172.	3034.3
#2	3444.3	41319.	3034.0

Sample Name: 280-116413-B-1-A Acquired: 11/7/2018 0:34:04 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00082**	**.00356**	**-.00269**	**1.4389**	**.00747**	**.00033**	**.00268**	**12.035**	**-.00038**
Stddev	.00106	.00037	.00643	.0219	.00011	.00017	.00288	.039	.00008
%RSD	128.83	10.510	239.41	1.5238	1.4347	51.978	107.84	.32576	21.482
#1	-.00157	.00330	-.00723	1.4544	.00740	.00021	.00472	12.062	-.00044
#2	-.00007	.00383	.00186	1.4233	.00755	.00045	.00064	12.007	-.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00081**	**.00078**	**.00541**	**.20622**	**3.2560**	**.41496**	**1.6210**	**.01375**	**.16393**
Stddev	.00003	.00004	.00047	.00759	.0819	.00136	.0032	.00005	.00344
%RSD	4.1641	4.6854	8.6005	3.6819	2.5141	.32814	.19856	.34167	2.0981
#1	.00079	.00080	.00574	.20085	3.1981	.41400	1.6187	.01372	.16636
#2	.00084	.00075	.00508	.21159	3.3138	.41592	1.6233	.01379	.16149
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **869.71**	**.00028**	**.00550**	**-.00151**	F **257.44**	**-.00752**	**.00054**	**3.7834**	**8.0965**
Stddev	.54	.00092	.00137	.00044	4.14	.00103	.00223	.0002	.0004
%RSD	.06231	325.84	24.951	29.277	1.6077	13.745	415.68	.00499	.00499
#1	869.32	.00094	.00647	-.00182	260.37	-.00679	-.00104	3.7835	8.0967
#2	870.09	-.00037	.00453	-.00119	254.52	-.00825	.00212	3.7833	8.0962
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00433**	**.65105**	**.00215**	**.00057**	**-.00032**	**.02748**	**.00592**	**.00251**	**.00454**
Stddev	.00063	.00144	.00264	.00012	.00484	.01867	.00018	.00061	.00304
%RSD	14.602	.22176	122.47	21.796	1514.5	67.942	2.9862	24.243	66.881
#1	-.00478	.65207	.00402	.00065	-.00374	.04069	.00579	.00294	.00239
#2	-.00389	.65003	.00029	.00048	.00310	.01428	.00604	.00208	.00669
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3332.8**	**39451.**	**3040.0**
Stddev	11.3	29.	15.0
%RSD	.33968	.07414	.49287
#1	3340.8	39431.	3050.6
#2	3324.7	39472.	3029.4

Sample Name: 280-116413-B-1-ASD@5 Acquired: 11/7/2018 0:36:41 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00098**	**.00149**	**-.00261**	**.30308**	**.00138**	**.00034**	**.00576**	**2.4246**	**-.00035**
Stddev	.00012	.00028	.00459	.00603	.00023	.00010	.00706	.0134	.00017
%RSD	12.478	19.075	175.97	1.9886	16.396	29.518	122.59	.55351	49.292
#1	-.00090	.00128	-.00585	.30734	.00122	.00042	.00077	2.4340	-.00047
#2	-.00107	.00169	.00064	.29881	.00154	.00027	.01075	2.4151	-.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00069**	**.00015**	**.00227**	**.05353**	**.60324**	**.08830**	**.37386**	**.00303**	**.03326**
Stddev	.00054	.00003	.00008	.01009	.06146	.00245	.04699	.00053	.00092
%RSD	78.555	22.886	3.7235	18.841	10.189	2.7782	12.568	17.409	2.7674
#1	.00031	.00017	.00233	.04640	.64671	.08657	.34063	.00265	.03391
#2	.00107	.00012	.00221	.06066	.55978	.09004	.40708	.00340	.03261
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**176.14**	**.00001**	**.00340**	**-.00108**	**50.251**	**-.00076**	**.00289**	**.74675**	**1.5980**
Stddev	.43	.00018	.00170	.00021	1.050	.00392	.00212	.00571	.0122
%RSD	.24384	2917.6	49.894	19.877	2.0900	516.02	73.367	.76422	.76422
#1	176.44	.00013	.00460	-.00123	50.994	.00201	.00139	.75078	1.6067
#2	175.83	-.00012	.00220	-.00093	49.509	-.00353	.00439	.74271	1.5894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00343**	**.13116**	**.00000**	**.00144**	**.00292**	**.09175**	**.00185**	**.00195**	**.00256**
Stddev	.00151	.00024	.00297	.00010	.00215	.06722	.00094	.00053	.00272
%RSD	44.108	.18526	59708.	6.7845	73.653	73.272	50.710	27.168	106.38
#1	-.00236	.13133	.00211	.00151	.00444	.04421	.00119	.00232	.00063
#2	-.00450	.13099	-.00210	.00137	.00140	.13928	.00251	.00157	.00449
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3417.9**	**41217.**	**2998.1**
Stddev	12.5	243.	13.7
%RSD	.36659	.58868	.45774
#1	3409.0	41045.	2988.4
#2	3426.7	41389.	3007.8

Sample Name: 280-116413-B-1-B MS Acquired: 11/7/2018 0:39:16 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04929**	**2.1757**	**1.0130**	**2.3391**	**2.0583**	**.04957**	**1.8417**	**61.734**	**.09602**
Stddev	.00017	.0371	.0304	.0339	.0049	.00023	.0313	.136	.00051
%RSD	.35498	1.7066	2.9970	1.4491	.23707	.46751	1.6967	.22071	.52591
#1	.04942	2.2020	1.0344	2.3631	2.0618	.04941	1.8637	61.830	.09638
#2	.04917	2.1495	.99150	2.3151	2.0549	.04973	1.8196	61.637	.09567
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48551**	**.19338**	**.25509**	**1.0261**	**54.748**	**1.3887**	**49.876**	**.51042**	**1.1329**
Stddev	.00715	.00333	.00131	.0048	.026	.0065	.589	.00270	.0219
%RSD	1.4731	1.7217	.51327	.46472	.04790	.46937	1.1800	.52853	1.9314
#1	.49056	.19574	.25602	1.0294	54.730	1.3934	50.293	.51233	1.1484
#2	.48045	.19103	.25417	1.0227	54.767	1.3841	49.460	.50851	1.1175
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **908.08**	**.48353**	**11.512**	**.47621**	F **256.75**	**.47801**	**2.0097**	**10.160**	**21.742**
Stddev	1.80	.00912	.209	.00607	4.02	.01355	.0387	.006	.014
%RSD	.19791	1.8863	1.8119	1.2744	1.5659	2.8350	1.9253	.06310	.06310
#1	909.35	.48998	11.659	.48050	259.59	.48760	2.0370	10.164	21.752
#2	906.81	.47708	11.364	.47191	253.91	.46843	1.9823	10.155	21.732
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9165**	**1.6534**	**1.0096**	**.99293**	**1.7862**	**1.9347**	**.53571**	**.54087**	**.51075**
Stddev	.0366	.0054	.0126	.01275	.0249	.0242	.01043	.00864	.00164
%RSD	1.9112	.32810	1.2500	1.2845	1.3913	1.2521	1.9473	1.5981	.32132
#1	1.9424	1.6573	1.0186	1.0020	1.8038	1.9518	.54308	.54698	.50959
#2	1.8906	1.6496	1.0007	.98392	1.7686	1.9175	.52833	.53476	.51191
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3304.0**	**39056.**	**2992.1**
Stddev	5.2	395.	16.9
%RSD	.15721	1.0103	.56606
#1	3300.3	38777.	3004.1
#2	3307.7	39335.	2980.1

Sample Name: 280-116413-B-1-C MSD Acquired: 11/7/2018 0:41:41 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04762**	**2.1453**	**.99878**	**2.4043**	**2.0403**	**.04956**	**1.8033**	**61.505**	**.09451**
Stddev	.00101	.0412	.01879	.0349	.0023	.00018	.0391	.034	.00176
%RSD	2.1300	1.9188	1.8810	1.4518	.11073	.36101	2.1659	.05488	1.8572
#1	.04690	2.1744	1.0121	2.4290	2.0387	.04969	1.8309	61.529	.09575
#2	.04834	2.1161	.98549	2.3796	2.0419	.04944	1.7757	61.481	.09326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47877**	**.18949**	**.25123**	**1.0003**	**54.171**	**1.4006**	**49.368**	**.50504**	**1.1518**
Stddev	.00784	.00391	.00057	.0136	.093	.0004	.079	.00080	.0234
%RSD	1.6384	2.0634	.22782	1.3550	.17166	.02698	.15946	.15859	2.0288
#1	.48431	.19226	.25163	1.0099	54.237	1.4009	49.424	.50560	1.1683
#2	.47322	.18673	.25082	.99076	54.106	1.4003	49.312	.50447	1.1353
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **931.23**	**.47599**	**11.315**	**.46743**	F **261.99**	**.48986**	**1.9820**	**12.464**	**26.672**
Stddev	2.63	.00749	.192	.00815	4.48	.00961	.0309	.081	.173
%RSD	.28196	1.5736	1.6991	1.7439	1.7117	1.9625	1.5572	.64941	.64941
#1	929.38	.48128	11.451	.47320	265.16	.49666	2.0038	12.406	26.550
#2	933.09	.47069	11.179	.46167	258.82	.48306	1.9602	12.521	26.795
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9425**	**1.6613**	**1.0055**	**1.0115**	**1.7565**	**1.9977**	**.53099**	**.53544**	**.52014**
Stddev	.0371	.0024	.0017	.0009	.0305	.0134	.00170	.00055	.00176
%RSD	1.9082	.14535	.16787	.08941	1.7387	.67116	.32041	.10212	.33755
#1	1.9687	1.6630	1.0067	1.0121	1.7781	2.0072	.53219	.53506	.51889
#2	1.9162	1.6596	1.0044	1.0109	1.7349	1.9882	.52979	.53583	.52138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3236.1**	**38070.**	**2923.3**
Stddev	3.6	63.	5.9
%RSD	.10995	.16639	.20149
#1	3238.7	38025.	2927.5
#2	3233.6	38114.	2919.2

Sample Name: 280-116413-B-1-A PDS Acquired: 11/7/2018 0:44:07 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02676**	**1.0347**	**.19651**	**1.4653**	**.10533**	**.04775**	**.00392**	**30.780**	**.04568**
Stddev	.00003	.0466	.01172	.0623	.00045	.00027	.00318	.182	.00194
%RSD	.09685	4.5018	5.9656	4.2535	.43057	.56744	81.215	.59269	4.2468
#1	.02678	1.0676	.20480	1.5094	.10565	.04794	.00167	30.909	.04705
#2	.02674	1.0017	.18822	1.4212	.10501	.04756	.00617	30.651	.04431
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04555**	**.04552**	**.05314**	**1.0801**	**23.032**	**.50263**	**20.092**	**.05971**	**.20157**
Stddev	.00219	.00164	.00043	.0039	.045	.00154	.049	.00009	.00803
%RSD	4.8075	3.6006	.81712	.36051	.19718	.30607	.24337	.14817	3.9851
#1	.04710	.04668	.05284	1.0774	23.064	.50154	20.127	.05977	.20725
#2	.04400	.04436	.05345	1.0829	23.000	.50371	20.058	.05964	.19589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **872.99**	**.04472**	**2.1020**	**.08735**	F **243.27**	**.09476**	**.18637**	**8.5189**	**18.231**
Stddev	2.48	.00185	.0853	.00365	10.80	.00467	.00976	.1039	.222
%RSD	.28463	4.1436	4.0602	4.1812	4.4397	4.9293	5.2387	1.2192	1.2192
#1	874.75	.04603	2.1623	.08993	250.91	.09806	.19327	8.5924	18.388
#2	871.23	.04341	2.0416	.08476	235.63	.09146	.17946	8.4455	18.073
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08776**	**.68413**	**.19071**	**.05060**	**.17226**	**.52920**	**.05434**	**.21140**	**.05810**
Stddev	.00289	.00520	.00235	.00069	.00025	.01315	.00122	.00061	.00031
%RSD	3.2908	.75946	1.2331	1.3628	.14279	2.4842	2.2474	.28668	.53850
#1	.08981	.68781	.19237	.05109	.17209	.51990	.05521	.21183	.05833
#2	.08572	.68046	.18905	.05012	.17244	.53850	.05348	.21097	.05788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3292.0**	**38455.**	**2961.9**
Stddev	12.0	60.	15.3
%RSD	.36485	.15652	.51557
#1	3283.5	38498.	2951.1
#2	3300.5	38413.	2972.7

Sample Name: 280-116413-B-2-A Acquired: 11/7/2018 0:46:40 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00067**	**.00900**	**.00213**	**1.3951**	**.01483**	**.00041**	**.00318**	**13.980**	**-.00017**
Stddev	.00031	.00016	.00075	.0256	.00040	.00009	.00474	.069	.00045
%RSD	46.869	1.8234	35.159	1.8320	2.7288	20.971	149.01	.49561	267.11
#1	-.00045	.00912	.00160	1.4132	.01454	.00047	.00654	14.029	-.00048
#2	-.00089	.00889	.00265	1.3771	.01512	.00035	-.00017	13.931	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00053**	**.00034**	**.00473**	**.05051**	**4.4922**	**.45374**	**1.7935**	**.01140**	**.05068**
Stddev	.00029	.00026	.00081	.00033	.0307	.00508	.0030	.00007	.00051
%RSD	53.834	75.953	17.110	.65234	.68390	1.1203	.16804	.60921	1.0128
#1	.00033	.00016	.00530	.05074	4.4704	.45733	1.7956	.01145	.05104
#2	.00074	.00052	.00416	.05028	4.5139	.45014	1.7914	.01135	.05031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **989.11**	**-.00006**	**.01368**	**.00138**	**172.44**	**-.00092**	**.00419**	**3.7568**	**8.0396**
Stddev	4.70	.00034	.00011	.00292	3.52	.00156	.00449	.0267	.0571
%RSD	.47567	559.99	.82180	212.34	2.0386	168.47	107.30	.71018	.71018
#1	992.43	.00018	.01376	-.00069	174.93	.00018	.00736	3.7379	7.9992
#2	985.78	-.00030	.01360	.00344	169.96	-.00202	.00101	3.7757	8.0799
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00396**	**1.1789**	**.00113**	**.00124**	**.00199**	**.00336**	**.00057**	**.00314**	**.00350**
Stddev	.00014	.0028	.00200	.00003	.00261	.09250	.00062	.00026	.00514
%RSD	3.4096	.23463	176.88	2.2598	131.27	2753.4	109.55	8.2846	146.94
#1	-.00387	1.1809	.00254	.00122	.00014	-.06205	.00101	.00296	-.00014
#2	-.00406	1.1770	-.00028	.00126	.00384	.06877	.00013	.00333	.00714
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3212.9**	**38156.**	**2969.7**
Stddev	10.5	9.	3.4
%RSD	.32811	.02301	.11426
#1	3220.4	38150.	2967.3
#2	3205.5	38163.	2972.1

Sample Name: 280-116413-B-3-A Acquired: 11/7/2018 0:49:18 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00085**	**.03625**	**.00331**	**.26736**	**.09642**	**.00033**	**-.00137**	**4.8257**	**-.00025**
Stddev	.00163	.00087	.00267	.00522	.00076	.00012	.00379	.0188	.00066
%RSD	192.58	2.3959	80.633	1.9523	.79285	36.572	277.03	.39051	265.60
#1	.00031	.03687	.00142	.27105	.09696	.00024	.00131	4.8390	.00022
#2	-.00200	.03564	.00520	.26367	.09588	.00041	-.00405	4.8123	-.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00041**	**.00086**	**.00395**	**.02319**	**2.3391**	**.14154**	**.54648**	**.00076**	**.00491**
Stddev	.00011	.00006	.00172	.00452	.0040	.00000	.00085	.00009	.00011
%RSD	26.353	6.4503	43.446	19.496	.16954	.00238	.15464	11.336	2.3147
#1	.00033	.00082	.00274	.02639	2.3363	.14153	.54588	.00070	.00483
#2	.00048	.00089	.00517	.02000	2.3419	.14154	.54708	.00082	.00499
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**330.29**	**-.00032**	**.01223**	**-.00186**	**26.584**	**.00075**	**.01317**	**5.3803**	**11.514**
Stddev	2.15	.00047	.00272	.00096	.597	.00129	.00136	.0148	.032
%RSD	.64949	148.99	22.224	51.650	2.2466	172.23	10.325	.27548	.27548
#1	331.81	-.00065	.01416	-.00118	27.007	-.00016	.01220	5.3698	11.491
#2	328.78	.00002	.01031	-.00255	26.162	.00166	.01413	5.3907	11.536
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00399**	**.30949**	**-.00343**	**.00048**	**.00384**	**.03539**	**.00444**	**.00490**	**.00227**
Stddev	.00017	.00059	.00091	.00055	.00104	.00911	.00065	.00015	.00040
%RSD	4.3165	.18958	26.572	115.50	27.220	25.753	14.705	3.0746	17.813
#1	-.00411	.30991	-.00407	.00087	.00458	.04184	.00398	.00479	.00198
#2	-.00387	.30908	-.00279	.00009	.00310	.02895	.00491	.00500	.00255
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3222.4**	**39519.**	**2926.4**
Stddev	8.1	44.	15.3
%RSD	.25065	.11184	.52172
#1	3228.1	39550.	2937.2
#2	3216.7	39488.	2915.6

Sample Name: 280-116413-B-4-A Acquired: 11/7/2018 0:51:52 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00155**	**.01539**	**.00609**	**.49455**	**.03261**	**.00016**	**.00464**	**5.7553**	**.00012**
Stddev	.00069	.00054	.00296	.00728	.00029	.00015	.00173	.0157	.00043
%RSD	44.405	3.4873	48.571	1.4720	.89946	88.842	37.256	.27204	362.99
#1	-.00106	.01577	.00400	.49969	.03281	.00006	.00586	5.7663	.00042
#2	-.00204	.01501	.00819	.48940	.03240	.00027	.00342	5.7442	-.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00093**	**.00112**	**.00322**	**.01389**	**2.4249**	**.18121**	**.61853**	**.00044**	**.00414**
Stddev	.00012	.00029	.00069	.00255	.0444	.00424	.00510	.00010	.00039
%RSD	13.302	26.198	21.322	18.362	1.8296	2.3424	.82396	22.365	9.4980
#1	.00085	.00132	.00274	.01569	2.4562	.18421	.61493	.00051	.00387
#2	.00102	.00091	.00371	.01208	2.3935	.17821	.62213	.00037	.00442
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**418.88**	**.00033**	**.01063**	**-.00483**	**58.308**	**-.00442**	**.00975**	**5.3879**	**11.530**
Stddev	1.00	.00075	.00216	.00195	.951	.00014	.00998	.0100	.021
%RSD	.23904	225.22	20.314	40.324	1.6305	3.2613	102.31	.18588	.18588
#1	419.59	.00086	.01216	-.00620	58.981	-.00432	.01681	5.3808	11.515
#2	418.18	-.00020	.00910	-.00345	57.636	-.00452	.00270	5.3950	11.545
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00286**	**.33964**	**.00062**	**-.00019**	**.00083**	**.07808**	**.01144**	**.00141**	**.00317**
Stddev	.00134	.00119	.00112	.00057	.00056	.02417	.00094	.00075	.00174
%RSD	46.875	.35178	181.12	301.93	67.789	30.961	8.2326	52.801	54.883
#1	-.00381	.34049	.00141	.00022	.00123	.09517	.01077	.00089	.00441
#2	-.00191	.33880	-.00017	-.00060	.00043	.06098	.01210	.00194	.00194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3241.1**	**38687.**	**2872.2**
Stddev	.5	144.	7.7
%RSD	.01678	.37252	.26961
#1	3240.8	38789.	2866.8
#2	3241.5	38585.	2877.7

Sample Name: CCVH-5408055 Acquired: 11/7/2018 0:54:25 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00292**	**46.652**	**.00425**	**.00703**	**.00084**	**.00019**	**.93901**	**.01668**	**-.00067**	**.00200**	**.00093**	**.00292**	**48.239**
Stddev	.00044	.292	.00130	.00027	.00038	.00010	.02523	.00126	.00009	.00015	.00014	.00004	.085
%RSD	15.150	.62687	30.493	3.8682	44.916	54.358	2.6870	7.5603	13.651	7.5798	14.839	1.2122	.17635
#1	-.00323	46.445	.00333	.00722	.00058	.00026	.95686	.01757	-.00073	.00210	.00083	.00289	48.179
#2	-.00261	46.858	.00516	.00684	.00111	.00011	.92117	.01579	-.00060	.00189	.00103	.00294	48.299
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.11085**	**-.00009**	**-.08468**	**.00265**	**-.00091**	**241.93**	**.00302**	**.00318**	**-.00082**	**4.8383**	**.00497**	**.00908**	**.02729**
Stddev	.12818	.00113	.00237	.00003	.00002	.80	.00009	.00308	.00085	.1006	.00417	.00725	.02308
%RSD	115.64	1186.8	2.8047	1.1692	2.3344	.32883	3.0018	96.992	104.16	2.0786	83.854	79.931	84.580
#1	.02021	-.00089	-.08636	.00263	-.00092	241.37	.00308	.00535	-.00142	4.9095	.00202	.01421	.04360
#2	.20148	.00070	-.08300	.00267	-.00089	242.50	.00295	.00100	-.00022	4.7672	.00791	.00395	.01097
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05839**	**-.00347**	**.00081**	**4.8327**	**.01683**	**.00330**	**9.6041**	**-.01024**	**.00121**	**.08057**
Stddev	.04939	.00031	.00005	.0250	.00027	.00101	.0978	.00085	.00026	.00205
%RSD	84.580	8.9149	5.6742	.51752	1.6129	30.654	1.0178	8.3402	21.143	2.5437
#1	.09331	-.00325	.00078	4.8504	.01663	.00259	9.6732	-.00964	.00139	.07912
#2	.02347	-.00369	.00084	4.8150	.01702	.00402	9.5350	-.01084	.00103	.08202
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3283.4**	**39302.**	**2886.9**
Stddev	3.0	36.	25.1
%RSD	.09273	.09272	.87077
#1	3285.5	39327.	2904.7
#2	3281.2	39276.	2869.1

Sample Name: CCV-5407546 Acquired: 11/7/2018 0:56:56 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49887**	F **.57329**	**.97567**	**.49879**	**.50236**	**.48463**	**.00470**	**4.8866**	**.49381**	**.48888**	**.48488**	**.50500**
Stddev	.00175	.01193	.00893	.00560	.00058	.00008	.00295	.0012	.00685	.00850	.00868	.00195
%RSD	.35130	2.0815	.91554	1.1225	.11462	.01598	62.759	.02534	1.3864	1.7392	1.7903	.38644
#1	.50011	.58173	.98198	.50275	.50277	.48469	.00261	4.8875	.49866	.49490	.49102	.50638
#2	.49763	.56486	.96935	.49483	.50195	.48458	.00678	4.8857	.48897	.48287	.47874	.50362
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4724**	**49.806**	**1.0003**	**19.852**	**.49502**	**.48192**	F **5.5439**	**.49052**	**1.0391**	**.98802**	**.08461**	**.99714**
Stddev	.0186	.023	.0040	.019	.00019	.01049	.0104	.00690	.0193	.01274	.00278	.01031
%RSD	.75411	.04621	.39444	.09584	.03739	2.1776	.18800	1.4057	1.8588	1.2899	3.2844	1.0339
#1	2.4856	49.790	.99753	19.839	.49515	.48935	5.5365	.49540	1.0528	.99704	.08265	1.0044
#2	2.4592	49.822	1.0031	19.866	.49489	.47450	5.5513	.48565	1.0255	.97901	.08658	.98985
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.96073**	**4.8963**	**10.478**	**.97275**	**.48746**	**.01177**	**.49060**	**1.0028**	**.03301**	**.50004**	**.50141**	**.49231**
Stddev	.01570	.0830	.178	.01375	.00085	.00010	.00260	.0144	.00613	.00091	.00356	.00203
%RSD	1.6346	1.6951	1.6951	1.4134	.17519	.82367	.53077	1.4312	18.561	.18103	.71005	.41246
#1	.97183	4.8376	10.352	.98247	.48807	.01170	.48876	1.0130	.03734	.50068	.50392	.49087
#2	.94962	4.9550	10.604	.96303	.48686	.01184	.49244	.99266	.02867	.49939	.49889	.49374
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3343.9**	**40276.**	**2901.9**
Stddev	5.5	65.	.1
%RSD	.16319	.16227	.00391
#1	3347.8	40230.	2901.8
#2	3340.1	40322.	2902.0

Sample Name: CCB Acquired: 11/7/2018 0:59:22 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00030**	**.00361**	**.00267**	**.00665**	**-.00057**	**.00030**	**.00433**	**-.00031**	**.00020**	**.00035**	**.00034**	**.00110**
Stddev	.00031	.00800	.00652	.00093	.00032	.00035	.00140	.00219	.00051	.00013	.00012	.00109
%RSD	106.32	221.74	244.55	14.016	55.408	117.29	32.374	695.44	258.12	35.742	35.054	99.050
#1	-.00007	-.00205	-.00194	.00731	-.00080	.00005	.00334	-.00186	.00056	.00044	.00042	.00187
#2	-.00052	.00927	.00728	.00599	-.00035	.00055	.00532	.00123	-.00016	.00026	.00025	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00085**	**-.08637**	**-.00518**	**.00944**	**.00007**	**.00080**	W **.35559**	**.00008**	**.00011**	**-.00200**	W **.08153**	**.00407**
Stddev	.00576	.07456	.00924	.00411	.00002	.00003	.00568	.00046	.00135	.00161	.01341	.00063
%RSD	679.06	86.327	178.40	43.599	28.901	3.7143	1.5966	551.13	1264.8	80.416	16.448	15.442
#1	.00492	-.13909	.00135	.01235	.00006	.00082	.35960	-.00024	.00106	-.00086	.07205	.00363
#2	-.00323	-.03365	-.01172	.00653	.00009	.00078	.35157	.00041	-.00085	-.00314	.09101	.00451
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit							.35000				.05000	
Low Limit							-.35000				-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00358**	**.05126**	**.10970**	**-.00076**	**-.00005**	**.00250**	**.00035**	**.00183**	**-.01154**	**-.00027**	**.00007**	**.00127**
Stddev	.00708	.03194	.06836	.00108	.00014	.00416	.00041	.00408	.06237	.00039	.00001	.00147
%RSD	197.88	62.315	62.315	141.24	253.65	166.55	116.90	222.51	540.32	148.01	10.005	115.83
#1	-.00143	.07385	.15804	-.00152	-.00015	.00544	.00006	-.00105	-.05565	.00001	.00007	.00023
#2	.00859	.02867	.06136	-.00000	.00004	-.00044	.00064	.00472	.03256	-.00054	.00008	.00231
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3314.0**	**40463.**	**2873.3**
Stddev	10.5	304.	4.0
%RSD	.31667	.75183	.14072
#1	3306.6	40679.	2876.1
#2	3321.4	40248.	2870.4

Sample Name: ccvl-5413446 Acquired: 11/7/2018 1:01:57 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00930**	**.11766**	F **.02119**	**.10432**	**.01003**	**.00115**	**.10205**	**.23051**	**.00447**	**.01070**	**.00994**	**.01698**
Stddev	.00030	.00199	.00632	.00128	.00010	.00026	.00349	.01074	.00016	.00008	.00026	.00066
%RSD	3.1876	1.6927	29.826	1.2238	1.0345	22.357	3.4191	4.6603	3.6020	.70880	2.5754	3.9090
#1	.00909	.11907	.01672	.10342	.00995	.00133	.10452	.23811	.00459	.01075	.00976	.01651
#2	.00951	.11625	.02565	.10523	.01010	.00097	.09959	.22292	.00436	.01064	.01012	.01745
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10489**	**3.1427**	**.02098**	**.20517**	**.01016**	**.01964**	F **1.4188**	**.04007**	**3.0695**	**.00774**	F **.15949**	**.01962**
Stddev	.00914	.0603	.00067	.00227	.00017	.00014	.1046	.00163	.0455	.00062	.00258	.00092
%RSD	8.7104	1.9189	3.1928	1.1049	1.6659	.72387	7.3702	4.0765	1.4830	8.0348	1.6199	4.6992
#1	.11135	3.1853	.02145	.20357	.01028	.01954	1.4928	.04123	3.1017	.00730	.16132	.02027
#2	.09843	3.1000	.02050	.20678	.01004	.01974	1.3449	.03892	3.0373	.00818	.15767	.01897
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							1.0000				.10000	
Range							30.000%				30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01963**	**.55093**	**1.1790**	**.09662**	**.01013**	**.01373**	**.01028**	**.01760**	**.04464**	**.01011**	**.02500**	F **.02057**
Stddev	.00334	.02204	.0472	.00524	.00039	.00325	.00065	.00127	.08999	.00112	.00052	.00300
%RSD	17.002	4.0007	4.0007	5.4284	3.8168	23.689	6.3603	7.1902	201.58	11.039	2.0880	14.594
#1	.01727	.53534	1.1456	.10033	.01040	.01143	.01074	.01850	.10828	.00932	.02537	.01845
#2	.02199	.56651	1.2123	.09291	.00985	.01604	.00981	.01671	-.01899	.01090	.02463	.02269
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value												.01500
Range												30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3383.6**	**41211.**	**2909.7**
Stddev	16.1	24.	29.6
%RSD	.47440	.05807	1.0167
#1	3372.2	41228.	2888.8
#2	3394.9	41194.	2930.7

Sample Name: 280-116413-B-5-A Acquired: 11/7/2018 1:04:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00216**	**.22375**	**.01092**	**.80583**	**.03019**	**.00021**	**.00152**	**4.5847**	**-.00032**
Stddev	.00063	.00273	.00269	.00825	.00001	.00025	.00128	.0039	.00038
%RSD	28.995	1.2184	24.674	1.0244	.03654	119.93	84.484	.08451	117.72
#1	-.00172	.22567	.01282	.81167	.03019	.00038	.00243	4.5874	-.00005
#2	-.00260	.22182	.00901	.79999	.03018	.00003	.00061	4.5819	-.00059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00055**	**.00094**	**.01019**	**.08169**	**2.0278**	**.12462**	**.25231**	**.00595**	**.02688**
Stddev	.00028	.00000	.00020	.00444	.0836	.00230	.00191	.00011	.00001
%RSD	50.393	.11110	1.9135	5.4358	4.1215	1.8451	.75550	1.8075	.03134
#1	.00075	.00094	.01005	.08483	1.9687	.12625	.25366	.00603	.02688
#2	.00036	.00094	.01033	.07855	2.0869	.12300	.25096	.00588	.02689
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**414.13**	**.00087**	**.18330**	**-.00038**	**79.068**	**.00257**	**-.00171**	**11.807**	**25.268**
Stddev	.49	.00003	.00193	.00120	.732	.00449	.01197	.097	.207
%RSD	.11750	3.9847	1.0528	311.87	.92553	174.89	698.96	.82032	.82032
#1	414.47	.00089	.18194	-.00123	79.586	.00574	-.01018	11.876	25.415
#2	413.78	.00084	.18467	.00046	78.551	-.00061	.00675	11.739	25.121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00371**	**.16038**	**.00234**	**.00412**	**.00210**	**.00817**	**.04849**	**.00716**	**.00392**
Stddev	.00065	.00028	.00108	.00039	.00057	.01377	.00016	.00023	.00313
%RSD	17.531	.17708	46.155	9.4321	27.416	168.45	.33064	3.1609	79.945
#1	-.00325	.16058	.00310	.00384	.00250	.01791	.04860	.00700	.00170
#2	-.00416	.16018	.00158	.00439	.00169	-.00156	.04838	.00733	.00613
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3299.2**	**38997.**	**2944.4**
Stddev	1.3	11.	18.4
%RSD	.03994	.02835	.62521
#1	3300.1	39004.	2957.4
#2	3298.3	38989.	2931.4

Sample Name: 280-116413-B-6-A Acquired: 11/7/2018 1:07:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00154**	**.13899**	**-.00004**	**.22681**	**.11384**	**.00049**	**.00648**	**3.3072**	**-.00034**
Stddev	.00026	.00280	.00349	.00307	.00083	.00019	.00044	.0106	.00012
%RSD	16.752	2.0133	8727.2	1.3544	.72500	38.437	6.8232	.31965	35.662
#1	-.00136	.14097	.00243	.22898	.11326	.00062	.00680	3.2998	-.00043
#2	-.00172	.13701	-.00251	.22464	.11443	.00035	.00617	3.3147	-.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00079**	**.00102**	**.00388**	**.10870**	**1.9866**	**.14247**	**.32003**	**.00325**	**.00985**
Stddev	.00012	.00039	.00119	.00004	.0215	.00417	.00156	.00000	.00029
%RSD	15.505	38.766	30.670	.03673	1.0802	2.9254	.48687	.13199	2.9249
#1	.00070	.00130	.00473	.10867	1.9714	.14541	.31893	.00326	.01005
#2	.00087	.00074	.00304	.10873	2.0018	.13952	.32113	.00325	.00964
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**389.22**	**.00077**	**.01732**	**-.00082**	**27.846**	**-.00311**	**.01673**	**4.9654**	**10.626**
Stddev	.80	.00077	.00119	.00252	.581	.00835	.00403	.0162	.035
%RSD	.20493	100.37	6.8866	307.00	2.0865	268.47	24.081	.32678	.32678
#1	389.78	.00132	.01648	.00096	28.256	-.00902	.01958	4.9540	10.601
#2	388.66	.00022	.01816	-.00260	27.435	.00280	.01388	4.9769	10.651
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00320**	**.16140**	**-.00210**	**.00177**	**.00370**	**.01233**	**.03500**	**.00427**	**.00635**
Stddev	.00004	.00017	.00300	.00014	.00323	.03019	.00013	.00031	.00296
%RSD	1.3487	.10294	142.95	7.7519	87.248	244.93	.37617	7.3187	46.598
#1	-.00323	.16151	.00002	.00167	.00142	-.00902	.03509	.00405	.00844
#2	-.00317	.16128	-.00422	.00186	.00599	.03368	.03491	.00449	.00426
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3254.7**	**38809.**	**2894.8**
Stddev	3.9	24.	7.2
%RSD	.12062	.06120	.24700
#1	3251.9	38793.	2889.8
#2	3257.5	38826.	2899.9

Sample Name: 280-116413-B-7-A Acquired: 11/7/2018 1:09:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00118**	**.11737**	**.00865**	**1.2480**	**.03301**	**.00039**	**.00907**	**6.7860**	**.00023**
Stddev	.00066	.06336	.00125	.0112	.00019	.00023	.00298	.0133	.00109
%RSD	55.542	53.987	14.440	.90068	.57238	59.801	32.835	.19535	472.07
#1	-.00164	.16217	.00954	1.2560	.03287	.00055	.01118	6.7766	.00100
#2	-.00072	.07256	.00777	1.2401	.03314	.00023	.00696	6.7953	-.00054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00171**	**.00141**	**.00455**	**.06744**	**3.2581**	**.24401**	**1.1079**	**.05962**	**.03026**
Stddev	.00165	.00104	.00128	.00648	.1031	.00172	.0082	.00007	.00345
%RSD	96.675	73.478	28.080	9.6031	3.1645	.70605	.74122	.11971	11.389
#1	.00288	.00215	.00365	.07202	3.1852	.24280	1.1021	.05967	.03270
#2	.00054	.00068	.00545	.06286	3.3310	.24523	1.1137	.05957	.02783
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **589.77**	**.00176**	**.18753**	**-.00278**	**77.362**	**.00341**	**-.00353**	**5.4117**	**11.581**
Stddev	2.75	.00123	.03203	.00231	1.596	.00150	.00565	.0188	.040
%RSD	.46695	70.132	17.079	83.058	2.0635	44.072	160.05	.34786	.34786
#1	587.83	.00263	.21017	-.00115	78.491	.00447	.00046	5.3984	11.553
#2	591.72	.00088	.16488	-.00441	76.233	.00234	-.00752	5.4250	11.610
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.37055**	**.00141**	**.00097**	**.00933**	**.02215**	**.00089**	**.00413**	**.00731**
Stddev	.00309	.00096	.00584	.00046	.00493	.07598	.00145	.00057	.00142
%RSD	8566.8	.25795	412.89	46.789	52.866	343.04	162.92	13.812	19.411
#1	.00222	.36988	-.00271	.00129	.01281	.07587	-.00014	.00453	.00832
#2	-.00215	.37123	.00554	.00065	.00584	-.03158	.00192	.00372	.00631
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3350.2**	**38252.**	**2914.2**
Stddev	25.7	179.	7.8
%RSD	.76766	.46860	.26734
#1	3332.0	38379.	2919.7
#2	3368.4	38126.	2908.7

Sample Name: 280-116413-B-8-A Acquired: 11/7/2018 1:12:11 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00195**	**.04018**	**.00910**	**1.3467**	**.01938**	**.00021**	**.00213**	**4.7909**	**-.00051**
Stddev	.00072	.00020	.00164	.0292	.00083	.00001	.00022	.0132	.00044
%RSD	36.587	.49934	18.009	2.1676	4.2750	2.8730	10.280	.27576	85.613
#1	-.00145	.04003	.01026	1.3673	.01879	.00021	.00197	4.8003	-.00020
#2	-.00246	.04032	.00794	1.3261	.01997	.00021	.00228	4.7816	-.00083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00053**	**.00001**	**.00281**	**.07218**	**2.8136**	**.22091**	**.81432**	**.03366**	**.03250**
Stddev	.00003	.00037	.00047	.00170	.0441	.00328	.00099	.00009	.00035
%RSD	5.3857	6019.2	16.583	2.3599	1.5673	1.4849	.12188	.26102	1.0896
#1	.00055	.00027	.00248	.07339	2.7824	.21859	.81362	.03360	.03275
#2	.00051	-.00025	.00314	.07098	2.8448	.22323	.81502	.03372	.03225
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **540.38**	**.00017**	**.20602**	**-.00068**	**75.986**	**-.00125**	**-.01085**	**4.9638**	**10.622**
Stddev	.19	.00011	.00751	.00213	1.853	.00215	.00600	.0093	.020
%RSD	.03481	62.128	3.6463	311.37	2.4383	172.34	55.344	.18680	.18680
#1	540.51	.00025	.21133	-.00219	77.296	-.00276	-.01509	4.9572	10.608
#2	540.24	.00010	.20071	.00082	74.676	.00027	-.00660	4.9703	10.636
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00292**	**.25575**	**.00225**	**.00046**	**.00044**	**.02822**	**.00003**	**.00583**	**.00437**
Stddev	.00063	.00076	.00337	.00041	.00256	.03349	.00015	.00015	.00210
%RSD	21.680	.29652	149.91	89.556	578.22	118.66	580.54	2.6303	48.042
#1	-.00336	.25628	-.00013	.00075	-.00137	.00454	.00013	.00594	.00288
#2	-.00247	.25521	.00463	.00017	.00225	.05190	-.00008	.00573	.00585
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3225.3**	**39154.**	**3016.2**
Stddev	55.0	184.	3.0
%RSD	1.7052	.47005	.09974
#1	3264.2	39284.	3014.1
#2	3186.4	39024.	3018.4

Sample Name: 280-116413-B-9-A Acquired: 11/7/2018 1:14:43 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00127**	**.03848**	**-.00382**	**1.2362**	**.03432**	**.00014**	**.00496**	**18.376**	**-.00044**
Stddev	.00089	.00017	.00206	.0307	.00065	.00028	.00206	.079	.00022
%RSD	69.975	.45332	53.852	2.4801	1.8823	203.20	41.615	.43062	50.269
#1	-.00190	.03860	-.00236	1.2579	.03477	.00034	.00642	18.320	-.00028
#2	-.00064	.03836	-.00527	1.2146	.03386	-.00006	.00350	18.432	-.00060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00015**	**.00016**	**.00437**	**.07472**	**5.4985**	**.53414**	**2.2500**	**.08198**	**.03075**
Stddev	.00010	.00056	.00007	.00338	.0063	.00084	.0056	.00029	.00012
%RSD	63.936	343.34	1.7028	4.5226	.11549	.15637	.25127	.35533	.39883
#1	.00022	-.00023	.00432	.07711	5.4941	.53473	2.2540	.08218	.03083
#2	.00008	.00056	.00442	.07233	5.5030	.53355	2.2460	.08177	.03066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **1160.4**	**.00027**	**.10262**	**-.00541**	**106.97**	**-.00325**	**-.00083**	**4.1941**	**8.9754**
Stddev	5.0	.00032	.00356	.00313	2.81	.00130	.00175	.0391	.0836
%RSD	.42840	118.16	3.4707	57.871	2.6230	40.167	211.91	.93151	.93151
#1	1156.9	.00050	.10514	-.00763	108.96	-.00417	-.00206	4.1665	8.9163
#2	1163.9	.00004	.10011	-.00320	104.99	-.00232	.00041	4.2217	9.0345
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00440**	**1.6785**	**.00100**	**.00124**	**.00098**	**-.01518**	**-.00013**	**.00633**	**.00438**
Stddev	.00177	.0079	.00053	.00007	.00067	.03629	.00025	.00017	.00212
%RSD	40.121	.47308	52.481	5.8517	68.097	239.06	188.33	2.7177	48.460
#1	-.00315	1.6728	.00063	.00119	.00145	-.04084	.00004	.00645	.00288
#2	-.00565	1.6841	.00138	.00129	.00051	.01048	-.00031	.00621	.00587
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3253.6**	**37670.**	**2914.6**
Stddev	5.7	512.	32.6
%RSD	.17517	1.3589	1.1186
#1	3257.6	37308.	2937.6
#2	3249.5	38032.	2891.5

Sample Name: MB 280-436155/1-A Acquired: 11/7/2018 1:17:21 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00182**	**.00222**	**.00342**	**.00833**	**-.00028**	**.00038**	**.00783**	**.06983**	**-.00059**
Stddev	.00000	.00079	.00452	.00144	.00009	.00005	.00577	.01173	.00021
%RSD	.05174	35.790	132.29	17.282	33.347	11.809	73.669	16.792	35.841
#1	-.00183	.00278	.00662	.00731	-.00035	.00041	.00375	.06153	-.00044
#2	-.00182	.00166	.00022	.00935	-.00021	.00035	.01191	.07812	-.00074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00061**	**.00045**	**.00074**	**.00482**	**.00121**	**-.00242**	**.01524**	**.00024**	**-.00028**
Stddev	.00006	.00029	.00095	.00059	.05086	.00121	.00076	.00001	.00005
%RSD	10.272	65.936	128.60	12.243	4202.8	49.903	5.0034	4.1447	17.297
#1	.00066	.00024	.00007	.00524	-.03475	-.00157	.01578	.00023	-.00025
#2	.00057	.00065	.00141	.00440	.03717	-.00327	.01470	.00025	-.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.98461**	**-.00022**	**.01455**	**-.00183**	F **.12393**	**-.00305**	**-.00087**	**.03896**	**.08338**
Stddev	.00146	.00052	.00079	.00244	.07661	.00018	.00280	.03734	.07990
%RSD	.14807	235.35	5.3958	133.44	61.818	5.8968	321.81	95.822	95.822
#1	.98565	-.00059	.01400	-.00010	.06976	-.00292	.00111	.06536	.13988
#2	.98358	.00015	.01511	-.00355	.17810	-.00318	-.00285	.01256	.02689
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None
High Limit	.50000				.10000				
Low Limit	-.50000				-.10000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01183**	**.00015**	**.00032**	**.00061**	**.00136**	F **.06899**	**.00029**	**.00248**	**.00666**
Stddev	.00229	.00009	.00063	.00066	.00085	.01827	.00025	.00049	.00038
%RSD	19.374	61.446	194.33	108.33	62.628	26.484	86.835	19.831	5.6538
#1	.01345	.00022	.00077	.00107	.00076	.08191	.00047	.00213	.00639
#2	.01021	.00009	-.00012	.00014	.00197	.05607	.00011	.00283	.00692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						.06000			
Low Limit						-.06000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3576.1**	**43589.**	**3067.8**
Stddev	12.2	125.	3.0
%RSD	.34156	.28605	.09939
#1	3567.5	43678.	3065.6
#2	3584.7	43501.	3069.9

Sample Name: LCS 280-436155/2-A Acquired: 11/7/2018 1:19:57 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04863**	F **2.2630**	**.99229**	**1.0065**	**2.0506**	**.04985**	**1.9003**	**49.928**	**.09596**
Stddev	.00064	.0357	.01528	.0138	.0032	.00037	.0312	.020	.00168
%RSD	1.3142	1.5790	1.5400	1.3687	.15450	.73817	1.6403	.03936	1.7526
#1	.04909	2.2883	1.0031	1.0162	2.0483	.04959	1.9223	49.914	.09715
#2	.04818	2.2377	.98148	.99676	2.0528	.05011	1.8782	49.942	.09477
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit		2.2299							
Low Limit		1.7300							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48982**	**.19605**	**.25520**	**1.0330**	**51.163**	**.99951**	**49.531**	**.49963**	**.99882**
Stddev	.00747	.00142	.00075	.0120	.120	.00016	.151	.00157	.01602
%RSD	1.5245	.72574	.29473	1.1623	.23424	.01637	.30487	.31468	1.6039
#1	.49510	.19705	.25573	1.0415	51.079	.99939	49.638	.50074	1.0101
#2	.48454	.19504	.25467	1.0245	51.248	.99962	49.425	.49852	.98749
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.692**	**.48689**	**11.003**	**.49857**	**1.9948**	**.50239**	**1.9778**	F **.93721**	**2.0056**
Stddev	.605	.00666	.168	.00402	.0232	.01069	.0312	.03600	.0770
%RSD	1.1929	1.3673	1.5273	.80569	1.1617	2.1275	1.5789	3.8415	3.8415
#1	50.265	.49160	11.122	.50141	2.0112	.50995	1.9999	.96267	2.0601
#2	51.120	.48218	10.884	.49573	1.9784	.49483	1.9557	.91175	1.9511
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit								11.000	
Low Limit								9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9941**	**.99931**	**.99608**	**1.0074**	**2.0030**	**2.0866**	**.51824**	**.51244**	**.51489**
Stddev	.0249	.00123	.00499	.0052	.0296	.0560	.00188	.00261	.00233
%RSD	1.2506	.12298	.50129	.51897	1.4792	2.6859	.36310	.50989	.45214
#1	2.0117	.99844	.99961	1.0111	2.0239	2.0469	.51957	.51429	.51324
#2	1.9764	1.0002	.99255	1.0038	1.9820	2.1262	.51691	.51059	.51653
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3346.5**	**40369.**	**2970.5**
Stddev	6.1	3.	.9
%RSD	.18235	.00743	.03020
#1	3350.8	40371.	2971.1
#2	3342.2	40367.	2969.9

Sample Name: 490-162286-A-2-B Acquired: 11/7/2018 1:22:19 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00276**	**64.416**	**.03053**	**.03183**	**.31774**	**.00380**	**.10827**	**36.457**	**.00144**
Stddev	.00125	.474	.00227	.00255	.00155	.00000	.00323	.178	.00005
%RSD	45.108	.73649	7.4198	8.0080	.48728	.03186	2.9845	.48736	3.5817
#1	-.00188	64.751	.03213	.03363	.31883	.00380	.10599	36.582	.00140
#2	-.00365	64.081	.02893	.03002	.31664	.00380	.11056	36.331	.00148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05109**	**.13187**	**.19094**	**150.85**	**5.2189**	**.05108**	**27.171**	**2.6402**	**.00393**
Stddev	.00176	.00347	.00000	.71	.0826	.00192	.033	.0000	.00017
%RSD	3.4503	2.6344	.00071	.47105	1.5835	3.7658	.12169	.00170	4.4032
#1	.05234	.13432	.19094	151.35	5.2773	.05244	27.195	2.6402	.00381
#2	.04985	.12941	.19094	150.35	5.1604	.04972	27.148	2.6403	.00406
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.9860**	**.13482**	**3.7480**	**.03270**	**.20361**	**.00311**	**-.00133**	**1.8288**	**3.9135**
Stddev	.0267	.00329	.1017	.00080	.00146	.00577	.00053	.0218	.0467
%RSD	.89579	2.4411	2.7126	2.4318	.71924	185.28	40.175	1.1942	1.1942
#1	3.0050	.13714	3.8199	.03327	.20465	-.00097	-.00170	1.8133	3.8805
#2	2.9671	.13249	3.6761	.03214	.20258	.00719	-.00095	1.8442	3.9466
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01452**	**.10793**	**.03520**	**5.8763**	**.00384**	**.24113**	**.29941**	**.25492**	**.14959**
Stddev	.00040	.00002	.00030	.0031	.00407	.04784	.00006	.00012	.00080
%RSD	2.7469	.01699	.86508	.05306	105.98	19.842	.02048	.04804	.53743
#1	.01480	.10791	.03542	5.8741	.00672	.20730	.29937	.25500	.15016
#2	.01424	.10794	.03499	5.8785	.00096	.27496	.29946	.25483	.14902
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3711.5**	**44804.**	**3280.8**
Stddev	16.5	130.	27.5
%RSD	.44510	.29003	.83675
#1	3699.9	44896.	3261.4
#2	3723.2	44712.	3300.2

Sample Name: 490-162286-A-4-B Acquired: 11/7/2018 1:24:47 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00328**	**63.312**	**.03309**	**.02528**	**.30701**	**.00262**	**.09398**	**24.137**	**.00119**
Stddev	.00103	.265	.00771	.00041	.00120	.00030	.00669	.006	.00013
%RSD	31.310	.41817	23.300	1.6104	.38989	11.569	7.1207	.02454	10.708
#1	-.00401	63.500	.02764	.02557	.30785	.00283	.09872	24.141	.00110
#2	-.00256	63.125	.03854	.02500	.30616	.00240	.08925	24.133	.00128
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04978**	**.16261**	**.17054**	**130.30**	**5.9806**	**.05578**	**23.674**	**2.4622**	**.00058**
Stddev	.00087	.00279	.00082	.27	.0708	.00059	.089	.0074	.00026
%RSD	1.7454	1.7181	.48179	.20886	1.1831	1.0603	.37725	.30120	44.286
#1	.05039	.16459	.17112	130.49	6.0306	.05620	23.737	2.4674	.00076
#2	.04916	.16064	.16996	130.10	5.9305	.05536	23.611	2.4569	.00040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.9193**	**.13687**	**2.7920**	**.02564**	**.11340**	**-.00303**	**.00144**	**2.0247**	**4.3329**
Stddev	.4022	.00287	.0551	.00080	.00285	.00295	.00641	.0123	.0264
%RSD	13.776	2.0941	1.9723	3.1258	2.5175	97.230	446.25	.60932	.60932
#1	2.6349	.13890	2.8309	.02620	.11542	-.00512	-.00310	2.0160	4.3143
#2	3.2037	.13485	2.7530	.02507	.11138	-.00095	.00597	2.0335	4.3516
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01489**	**.10776**	**.03381**	**4.6941**	**.00486**	**.19001**	**.32649**	**.20268**	**.12085**
Stddev	.00050	.00056	.00318	.0102	.00049	.05621	.00277	.00035	.00191
%RSD	3.3575	.51873	9.4009	.21749	10.172	29.583	.84908	.17360	1.5840
#1	.01524	.10737	.03156	4.7013	.00451	.22976	.32845	.20243	.11950
#2	.01454	.10816	.03606	4.6869	.00521	.15026	.32453	.20293	.12220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3695.5**	**43982.**	**3226.8**
Stddev	17.0	121.	1.0
%RSD	.45991	.27618	.03016
#1	3683.5	43897.	3226.1
#2	3707.5	44068.	3227.5

Sample Name: 490-162286-A-6-B Acquired: 11/7/2018 1:27:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00301**	**77.286**	**.02427**	**.02524**	**.34685**	**.00313**	**.09738**	**27.981**	**.00077**
Stddev	.00033	.430	.00429	.00026	.00117	.00011	.00669	.125	.00010
%RSD	10.802	.55634	17.664	1.0278	.33705	3.5755	6.8704	.44602	13.419
#1	-.00324	76.982	.02731	.02543	.34602	.00305	.10211	27.893	.00084
#2	-.00278	77.590	.02124	.02506	.34768	.00320	.09265	28.069	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.06344**	**.17350**	**.19910**	**141.19**	**5.2910**	**.06567**	**30.357**	**2.7437**	**.00057**
Stddev	.00190	.00370	.00090	.77	.0637	.00045	.139	.0094	.00007
%RSD	2.9979	2.1314	.45033	.54730	1.2046	.67994	.45836	.34300	13.136
#1	.06479	.17612	.19973	140.65	5.2460	.06535	30.455	2.7504	.00062
#2	.06210	.17089	.19847	141.74	5.3361	.06598	30.258	2.7371	.00052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.9766**	**.18426**	**3.4430**	**.02716**	**.14076**	**-.00077**	**-.01017**	**1.7105**	**3.6604**
Stddev	.0123	.00292	.0767	.00394	.00053	.00119	.00145	.0326	.0697
%RSD	.41409	1.5825	2.2274	14.512	.37707	155.29	14.280	1.9044	1.9044
#1	2.9679	.18632	3.4972	.02437	.14113	.00008	-.00914	1.6874	3.6111
#2	2.9853	.18219	3.3887	.02995	.14038	-.00161	-.01119	1.7335	3.7097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01338**	**.12334**	**.03985**	**5.7176**	**.00242**	**.11632**	**.34482**	**.23966**	**.12711**
Stddev	.00278	.00087	.00186	.0137	.00337	.01600	.00157	.00249	.00094
%RSD	20.772	.70265	4.6688	.23934	139.25	13.751	.45645	1.0377	.73611
#1	.01141	.12273	.04117	5.7273	.00480	.12763	.34593	.24142	.12644
#2	.01534	.12396	.03854	5.7080	.00004	.10501	.34371	.23790	.12777
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3717.8**	**43906.**	**3243.3**
Stddev	10.5	35.	28.3
%RSD	.28326	.08039	.87311
#1	3725.3	43881.	3263.3
#2	3710.4	43931.	3223.2

Sample Name: CCVH-5408055 Acquired: 11/7/2018 1:29:41 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00432**	**47.051**	**.00010**	**.00607**	**-.00016**	**.00031**	**.93505**	**.00537**	**-.00035**	**.00231**	**.00049**	**.00320**	**48.757**
Stddev	.00031	.389	.00518	.00001	.00050	.00021	.01445	.00783	.00007	.00019	.00022	.00008	.617
%RSD	7.0623	.82728	5057.0	.24095	307.19	68.189	1.5451	145.72	20.445	8.1056	45.025	2.6577	1.2662
#1	-.00411	47.326	-.00356	.00608	.00019	.00046	.94527	-.00016	-.00040	.00218	.00064	.00314	49.193
#2	-.00454	46.775	.00377	.00606	-.00052	.00016	.92484	.01091	-.00030	.00245	.00033	.00326	48.320
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00954**	**-.00072**	**-.08215**	**.00308**	**-.00128**	**243.42**	**.00351**	**.00476**	**-.00132**	**4.7877**	**.00419**	**.00809**	**.00862**
Stddev	.02004	.01117	.00049	.00014	.00016	1.33	.00037	.00451	.00084	.1057	.00078	.00626	.03839
%RSD	210.00	1544.8	.59275	4.3968	12.571	.54774	10.684	94.767	63.134	2.2076	18.587	77.378	445.12
#1	.00463	.00717	-.08181	.00318	-.00140	244.36	.00377	.00794	-.00191	4.8624	.00474	.00366	-.01852
#2	-.02371	-.00862	-.08250	.00299	-.00117	242.47	.00324	.00157	-.00073	4.7130	.00364	.01252	.03577
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01846**	**-.00121**	**.00036**	**4.8434**	**.01956**	**.00122**	**9.7287**	**-.01061**	**.00106**	**.08544**
Stddev	.08215	.00167	.00011	.0187	.00033	.00114	.0656	.00063	.00118	.00207
%RSD	445.12	137.80	31.493	.38642	1.6884	93.947	.67470	5.9490	110.94	2.4180
#1	-.03963	-.00003	.00044	4.8567	.01980	.00041	9.7751	-.01016	.00023	.08397
#2	.07654	-.00240	.00028	4.8302	.01933	.00203	9.6822	-.01106	.00190	.08690
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3331.9**	**39688.**	**2902.8**
Stddev	21.4	14.	18.1
%RSD	.64176	.03554	.62187
#1	3347.0	39698.	2890.0
#2	3316.8	39678.	2915.6

Sample Name: CCV-5407546 Acquired: 11/7/2018 1:32:12 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49853**	F **.57313**	**.96311**	**.48903**	**.50250**	**.47928**	**.00828**	**4.8703**	**.48735**	**.48451**	**.47880**	**.50274**
Stddev	.00206	.01696	.01198	.01016	.00013	.00216	.00435	.0133	.01116	.01130	.01040	.00159
%RSD	.41222	2.9595	1.2438	2.0783	.02494	.45077	52.585	.27252	2.2891	2.3324	2.1722	.31686
#1	.49998	.58512	.97158	.49622	.50259	.47776	.00520	4.8609	.49524	.49250	.48616	.50386
#2	.49707	.56113	.95464	.48185	.50241	.48081	.01136	4.8797	.47946	.47651	.47145	.50161
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4597**	**49.888**	**.99356**	**19.919**	**.49576**	**.47623**	**5.3216**	**.48392**	**1.0291**	**.97891**	**.02800**	**.98074**
Stddev	.0053	.101	.00115	.089	.00224	.01196	.0059	.01059	.0192	.02123	.00247	.01759
%RSD	.21609	.20309	.11597	.44880	.45154	2.5119	.11025	2.1873	1.8678	2.1687	8.8297	1.7935
#1	2.4559	49.816	.99274	19.982	.49734	.48468	5.3257	.49141	1.0427	.99392	.02625	.99318
#2	2.4635	49.960	.99437	19.856	.49417	.46777	5.3174	.47644	1.0155	.96389	.02975	.96830
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.94488**	**4.8435**	**10.365**	**.96367**	**.48498**	**.00611**	**.49450**	**.99574**	**.05879**	**.49891**	**.49989**	**.49726**
Stddev	.01364	.0772	.165	.02601	.00070	.00270	.00063	.01833	.00390	.00255	.00328	.00064
%RSD	1.4434	1.5940	1.5940	2.6994	.14413	44.163	.12675	1.8412	6.6326	.51148	.65696	.12801
#1	.95452	4.7889	10.248	.98206	.48448	.00420	.49494	1.0087	.05603	.50072	.50222	.49681
#2	.93523	4.8981	10.482	.94527	.48547	.00802	.49405	.98277	.06155	.49711	.49757	.49771
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3441.2**	**41475.**	**2915.3**
Stddev	14.5	32.	2.9
%RSD	.42198	.07762	.10079
#1	3430.9	41452.	2917.4
#2	3451.4	41498.	2913.2

Sample Name: CCB Acquired: 11/7/2018 1:34:37 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00035**	**.00189**	W **.00919**	**.00347**	**-.00007**	**.00009**	**.00185**	**-.00466**	**-.00010**	**.00043**	**.00047**	**.00095**
Stddev	.00110	.00032	.00410	.00109	.00067	.00037	.00451	.00100	.00014	.00016	.00005	.00180
%RSD	314.23	16.922	44.581	31.560	980.25	388.30	244.23	21.427	132.38	35.858	10.622	189.21
#1	-.00113	.00166	.01209	.00424	.00041	-.00017	.00504	-.00395	-.00020	.00054	.00050	.00222
#2	.00043	.00211	.00630	.00269	-.00054	.00036	-.00134	-.00536	-.00001	.00032	.00043	-.00032
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.00750									
Low Limit			-.01500									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00246**	**-.05892**	**-.00067**	**.00170**	**.00021**	**.00112**	**.23223**	**.00007**	**.00018**	**.00019**	**.02804**	**.00040**
Stddev	.00337	.16476	.00197	.00076	.00004	.00027	.01509	.00068	.00181	.00056	.00335	.00024
%RSD	136.77	279.62	295.04	44.818	16.689	23.688	6.4999	945.65	1010.3	291.61	11.936	59.713
#1	.00008	.05758	.00072	.00224	.00024	.00131	.22156	-.00041	.00146	-.00021	.03040	.00023
#2	.00485	-.17543	-.00206	.00116	.00019	.00093	.24290	.00055	-.00110	.00059	.02567	.00056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00377**	**.00096**	**.00206**	**-.00237**	**-.00006**	**.00042**	**.00103**	**.00038**	**.07484**	**-.00047**	**.00052**	**.00363**
Stddev	.00937	.01717	.03674	.00004	.00025	.00017	.00026	.00108	.03671	.00073	.00009	.00198
%RSD	248.78	1781.3	1781.3	1.8737	400.31	40.996	24.885	284.13	49.054	155.38	17.894	54.451
#1	.01040	.01311	.02805	-.00234	-.00024	.00054	.00085	.00114	.10079	-.00099	.00059	.00503
#2	-.00286	-.01118	-.02392	-.00240	.00011	.00030	.00122	-.00038	.04888	.00005	.00046	.00223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3421.8**	**41518.**	**2919.0**
Stddev	.7	254.	12.3
%RSD	.02090	.61191	.42084
#1	3422.3	41697.	2927.7
#2	3421.3	41338.	2910.3

Sample Name: ccvl-5413446 Acquired: 11/7/2018 1:37:12 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00910**	**.11902**	**.01647**	**.10019**	**.01015**	**.00078**	**.10596**	**.22665**	**.00479**	**.01038**	**.00955**	**.01669**
Stddev	.00024	.00303	.00435	.00188	.00007	.00026	.00349	.00662	.00011	.00006	.00020	.00061
%RSD	2.6377	2.5424	26.433	1.8764	.66395	33.006	3.2984	2.9205	2.3004	.60868	2.0787	3.6694
#1	.00927	.12116	.01955	.10152	.01020	.00060	.10843	.22197	.00487	.01033	.00941	.01712
#2	.00893	.11688	.01339	.09886	.01010	.00096	.10349	.23134	.00472	.01042	.00969	.01625
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.11236**	**3.0465**	F **.01219**	**.20949**	**.01039**	**.01921**	**1.2461**	**.03984**	**3.0152**	**.00853**	**.10618**	**.01916**
Stddev	.00081	.1347	.00049	.00016	.00009	.00053	.0158	.00127	.0793	.00063	.00412	.00229
%RSD	.72501	4.4225	3.9879	.07860	.91050	2.7548	1.2642	3.1956	2.6314	7.4320	3.8804	11.968
#1	.11294	3.1418	.01184	.20961	.01045	.01958	1.2349	.04074	3.0713	.00898	.10909	.02078
#2	.11178	2.9513	.01253	.20937	.01032	.01883	1.2572	.03894	2.9591	.00808	.10327	.01754
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.02000									
Range			-30.000%									

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01978**	**.49561**	**1.0606**	**.09715**	**.00984**	**.01514**	**.01045**	**.01689**	F **.08090**	**.00995**	**.02453**	F **.02507**
Stddev	.00449	.04442	.0950	.00435	.00033	.00174	.00038	.00060	.00902	.00004	.00131	.00075
%RSD	22.684	8.9621	8.9621	4.4745	3.3873	11.507	3.6844	3.5295	11.152	.35908	5.3472	2.9876
#1	.01661	.46420	.99339	.10023	.01008	.01637	.01072	.01731	.07452	.00997	.02546	.02454
#2	.02296	.52702	1.1278	.09408	.00961	.01391	.01018	.01647	.08728	.00992	.02360	.02560
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3549.9**	**42993.**	**3035.7**
Stddev	2.1	261.	2.7
%RSD	.05943	.60679	.08916
#1	3551.4	43177.	3033.8
#2	3548.5	42809.	3037.6

Sample Name: 490-162286-A-8-B Acquired: 11/7/2018 1:39:47 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00233**	**89.308**	**.02572**	**.02510**	**.41672**	**.00372**	**.09596**	**17.258**	**.00088**
Stddev	.00005	.089	.00665	.00084	.00004	.00052	.00085	.021	.00008
%RSD	2.2516	.09932	25.859	3.3306	.00870	13.858	.88090	.12151	9.4682
#1	-.00237	89.371	.02101	.02569	.41674	.00408	.09536	17.273	.00083
#2	-.00230	89.246	.03042	.02451	.41669	.00335	.09655	17.243	.00094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05826**	**.19573**	**.19146**	**139.83**	**5.4664**	**.05604**	**22.394**	**2.4002**	**.00071**
Stddev	.00068	.00306	.00136	.21	.0769	.00092	.022	.0012	.00003
%RSD	1.1589	1.5618	.70853	.14901	1.4066	1.6497	.09655	.04877	4.7187
#1	.05873	.19789	.19050	139.68	5.5208	.05669	22.410	2.4010	.00069
#2	.05778	.19357	.19242	139.97	5.4121	.05539	22.379	2.3994	.00074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.3315**	**.13721**	**2.6682**	**.04387**	**.24623**	**-.00314**	**-.00259**	**1.8891**	**4.0427**
Stddev	.0972	.00185	.0324	.00060	.00722	.00138	.00304	.0315	.0675
%RSD	7.2980	1.3503	1.2152	1.3661	2.9338	43.817	117.52	1.6688	1.6688
#1	1.4002	.13852	2.6911	.04430	.25134	-.00217	-.00473	1.9114	4.0904
#2	1.2628	.13590	2.6453	.04345	.24113	-.00412	-.00044	1.8668	3.9950
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01551**	**.11087**	**.05069**	**4.6259**	**.00772**	**.17470**	**.36324**	**.21583**	**.12401**
Stddev	.00158	.00009	.00259	.0010	.00150	.03085	.00098	.00312	.00230
%RSD	10.189	.07788	5.1019	.02147	19.390	17.657	.26863	1.4455	1.8562
#1	.01439	.11093	.04886	4.6252	.00878	.19651	.36393	.21803	.12563
#2	.01662	.11081	.05252	4.6266	.00666	.15289	.36255	.21362	.12238
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3750.4**	**43973.**	**3258.7**
Stddev	1.6	40.	12.2
%RSD	.04179	.09092	.37336
#1	3751.5	43945.	3250.1
#2	3749.3	44002.	3267.3

Sample Name: 490-162286-A-10-B Acquired: 11/7/2018 1:42:15 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00185**	**48.194**	**.01607**	**.01615**	**.48969**	**.00200**	**.06228**	**14.346**	**.00109**
Stddev	.00045	.686	.00498	.00055	.00627	.00037	.00352	.156	.00029
%RSD	24.223	1.4244	30.991	3.3910	1.2801	18.277	5.6567	1.0902	26.718
#1	-.00217	47.708	.01959	.01653	.48526	.00174	.05979	14.235	.00088
#2	-.00154	48.679	.01255	.01576	.49412	.00226	.06477	14.456	.00129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03997**	**.13271**	**.07091**	**91.415**	**3.0988**	**.04109**	**13.825**	**.90245**	**.00212**
Stddev	.00030	.00102	.00029	1.097	.0655	.00288	.232	.01397	.00001
%RSD	.76055	.77018	.41273	1.1995	2.1145	7.0115	1.6746	1.5477	.29484
#1	.04018	.13343	.07112	90.639	3.0525	.03906	13.989	.91232	.00211
#2	.03975	.13199	.07071	92.190	3.1452	.04313	13.662	.89257	.00212
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0288**	**.07710**	**1.8020**	**.12265**	**.59839**	**-.00381**	**-.00272**	**2.3815**	**5.0964**
Stddev	.0124	.00054	.0054	.00051	.00092	.00324	.00419	.0061	.0132
%RSD	1.2081	.70611	.29997	.41442	.15331	85.190	154.09	.25794	.25794
#1	1.0200	.07748	1.8058	.12229	.59904	-.00151	.00024	2.3858	5.1057
#2	1.0376	.07671	1.7982	.12301	.59775	-.00610	-.00569	2.3771	5.0871
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01536**	**.08491**	**.03248**	**3.6181**	**.00232**	**.08610**	**.27686**	**.29058**	**.04146**
Stddev	.00078	.00039	.00200	.0541	.00136	.07220	.00423	.00587	.00197
%RSD	5.0551	.45786	6.1630	1.4944	58.389	83.860	1.5281	2.0218	4.7622
#1	.01591	.08463	.03389	3.6563	.00136	.13716	.27985	.29474	.04007
#2	.01481	.08518	.03106	3.5798	.00328	.03504	.27387	.28643	.04286
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3551.9**	**41964.**	**3044.2**
Stddev	.6	612.	66.0
%RSD	.01705	1.4583	2.1682
#1	3552.3	41532.	3090.9
#2	3551.5	42397.	2997.5

Sample Name: 490-162286-A-12-B Acquired: 11/7/2018 1:44:47 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00249**	**95.118**	**.03200**	**.03539**	**.64663**	**.00374**	**.12488**	**33.615**	**.00277**
Stddev	.00044	.553	.00220	.00019	.00356	.00028	.00569	.117	.00015
%RSD	17.544	.58121	6.8901	.55029	.55084	7.5952	4.5533	.34810	5.4534
#1	-.00280	95.508	.03044	.03553	.64915	.00394	.12085	33.698	.00267
#2	-.00218	94.727	.03356	.03525	.64411	.00354	.12890	33.533	.00288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05491**	**.19634**	**.62781**	**176.14**	**6.0200**	**.06258**	**29.690**	**2.5097**	**.00391**
Stddev	.00012	.00031	.00100	.58	.0229	.00178	.031	.0001	.00032
%RSD	.21291	.15568	.15904	.32663	.38006	2.8426	.10577	.00572	8.1348
#1	.05500	.19656	.62852	176.54	6.0361	.06384	29.712	2.5098	.00413
#2	.05483	.19613	.62711	175.73	6.0038	.06133	29.668	2.5096	.00368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.6996**	**.16374**	**2.5740**	**.64218**	**.56817**	**-.00134**	**.00037**	**1.7791**	**3.8073**
Stddev	.0276	.00153	.0238	.00335	.00047	.00018	.00844	.0222	.0475
%RSD	1.6256	.93743	.92576	.52206	.08212	13.607	2261.0	1.2484	1.2484
#1	1.7191	.16482	2.5908	.64455	.56784	-.00147	.00634	1.7948	3.8409
#2	1.6800	.16265	2.5571	.63981	.56850	-.00121	-.00559	1.7634	3.7737
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03328**	**.15217**	**.04565**	**4.6524**	**.00116**	**.15100**	**.39839**	**4.5069**	**.11670**
Stddev	.00106	.00037	.00356	.0004	.00021	.01573	.00150	.0090	.00164
%RSD	3.1704	.24408	7.7912	.00831	18.219	10.420	.37681	.20034	1.4072
#1	.03402	.15243	.04817	4.6527	.00131	.16212	.39945	4.5133	.11786
#2	.03253	.15191	.04314	4.6522	.00101	.13987	.39733	4.5005	.11554
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3694.4**	**43625.**	**3213.0**
Stddev	16.4	10.	24.6
%RSD	.44435	.02369	.76661
#1	3682.8	43633.	3195.6
#2	3706.0	43618.	3230.4

Sample Name: 162286-A-12-B SD@5 Acquired: 11/7/2018 1:47:13 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00192**	**20.514**	**.00745**	**.00857**	**.13963**	**.00084**	**.03166**	**7.2795**	**.00035**
Stddev	.00038	.028	.00194	.00141	.00092	.00020	.00579	.0216	.00002
%RSD	19.766	.13791	25.978	16.410	.65974	23.286	18.298	.29657	4.3279
#1	-.00219	20.494	.00609	.00956	.14029	.00070	.03576	7.2948	.00034
#2	-.00165	20.534	.00882	.00757	.13898	.00098	.02757	7.2643	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01200**	**.04200**	**.13365**	**37.940**	**1.1768**	**.01477**	**6.4219**	**.53392**	**.00043**
Stddev	.00009	.00095	.00078	.141	.0542	.00262	.0047	.00066	.00012
%RSD	.77341	2.2534	.58155	.37266	4.6043	17.743	.07383	.12300	27.745
#1	.01207	.04267	.13310	38.040	1.1385	.01663	6.4186	.53438	.00035
#2	.01194	.04133	.13420	37.840	1.2151	.01292	6.4253	.53346	.00052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.45965**	**.03498**	**.53236**	**.13896**	**.12335**	**-.00167**	**.00248**	**.40094**	**.85801**
Stddev	.02700	.00090	.00824	.00029	.00368	.00097	.00083	.01692	.03621
%RSD	5.8740	2.5829	1.5473	.20841	2.9873	58.152	33.496	4.2201	4.2201
#1	.44056	.03562	.53819	.13875	.12596	-.00236	.00307	.41290	.88361
#2	.47874	.03434	.52654	.13916	.12075	-.00098	.00189	.38897	.83240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00459**	**.03280**	**.00885**	**.96790**	**.00174**	**.05804**	**.08364**	**.95788**	**.02885**
Stddev	.00070	.00043	.00041	.00072	.00373	.05478	.00004	.00253	.00105
%RSD	15.148	1.3202	4.6352	.07436	214.94	94.396	.04365	.26381	3.6294
#1	.00410	.03310	.00914	.96841	.00438	.01930	.08362	.95967	.02959
#2	.00509	.03249	.00856	.96739	-.00090	.09677	.08367	.95609	.02811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3528.7**	**42165.**	**3071.2**
Stddev	18.4	12.	27.6
%RSD	.52116	.02736	.89801
#1	3515.7	42157.	3090.7
#2	3541.8	42173.	3051.7

Sample Name: 490-162286-A-12-C MS Acquired: 11/7/2018 1:49:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04136**	**131.28**	**.88526**	**.93199**	**2.8536**	**.04755**	**1.7444**	**139.13**	**.08715**
Stddev	.00072	.81	.01588	.01505	.0174	.00069	.0352	.65	.00145
%RSD	1.7342	.61816	1.7940	1.6147	.60922	1.4541	2.0167	.46975	1.6613
#1	.04085	131.86	.89649	.94263	2.8659	.04804	1.7693	139.59	.08818
#2	.04187	130.71	.87402	.92135	2.8413	.04706	1.7196	138.67	.08613
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46577**	**.39266**	**.76818**	**158.56**	**57.020**	**.96737**	**103.15**	**2.6819**	**.85009**
Stddev	.00771	.00861	.00107	1.77	.087	.00513	.17	.0065	.01778
%RSD	1.6553	2.1928	.13867	1.1137	.15338	.53055	.16470	.24083	2.0910
#1	.47122	.39874	.76893	159.81	57.082	.97100	103.27	2.6865	.86266
#2	.46031	.38657	.76743	157.31	56.958	.96374	103.03	2.6773	.83752
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**47.932**	**.58059**	**12.438**	**.97901**	**2.2277**	**.22660**	**1.6819**	**3.7689**	**8.0654**
Stddev	.288	.01031	.202	.02272	.0451	.00655	.0175	.0298	.0639
%RSD	.60142	1.7756	1.6275	2.3205	2.0259	2.8888	1.0375	.79170	.79170
#1	48.136	.58788	12.581	.99508	2.2597	.23123	1.6942	3.7900	8.1105
#2	47.729	.57330	12.295	.96295	2.1958	.22197	1.6696	3.7478	8.0202
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8201**	**1.2622**	**.92269**	**7.2899**	**1.6699**	**1.9755**	**.88322**	W **12.082**	**.65445**
Stddev	.0339	.0062	.00265	.0242	.0251	.0301	.00153	.050	.00076
%RSD	1.8631	.48945	.28712	.33227	1.5020	1.5259	.17269	.41516	.11668
#1	1.8440	1.2666	.92082	7.3070	1.6876	1.9968	.88430	12.117	.65499
#2	1.7961	1.2579	.92456	7.2727	1.6521	1.9542	.88214	12.046	.65391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								10.000	
Low Limit								-.04000	

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3639.9**	**42717.**	**3236.4**
Stddev	11.3	358.	5.8
%RSD	.31141	.83774	.18054
#1	3647.9	42464.	3240.6
#2	3631.9	42970.	3232.3

Sample Name: 162286-A-12-D MSD Acquired: 11/7/2018 1:52:00 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04416**	**113.64**	**.94029**	**.95951**	**2.7780**	**.04835**	**1.8518**	**84.274**	**.09452**
Stddev	.00138	.06	.00618	.00978	.0036	.00071	.0179	.140	.00138
%RSD	3.1352	.05386	.65748	1.0196	.12762	1.4661	.96753	.16599	1.4619
#1	.04514	113.60	.94466	.96643	2.7755	.04785	1.8645	84.175	.09549
#2	.04318	113.68	.93592	.95259	2.7805	.04885	1.8391	84.373	.09354
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50115**	**.49291**	**1.9210**	**163.20**	**57.042**	**1.0096**	**83.016**	**2.0992**	**.90946**
Stddev	.00631	.00699	.0066	.13	.085	.0036	.267	.0087	.00909
%RSD	1.2593	1.4191	.34325	.07757	.14815	.35764	.32112	.41542	.99989
#1	.50561	.49786	1.9257	163.11	56.982	1.0070	83.205	2.1053	.91589
#2	.49668	.48797	1.9164	163.29	57.102	1.0121	82.828	2.0930	.90303
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.666**	**.65909**	**12.616**	**2.4398**	**2.5306**	**.27672**	**1.7925**	**4.4024**	**9.4211**
Stddev	.161	.00673	.168	.0214	.0206	.00053	.0297	.0351	.0752
%RSD	.32414	1.0218	1.3334	.87725	.81484	.19287	1.6588	.79808	.79808
#1	49.780	.66385	12.735	2.4549	2.5452	.27710	1.8135	4.3775	9.3679
#2	49.552	.65433	12.497	2.4246	2.5160	.27635	1.7715	4.4272	9.4742
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8748**	**1.1170**	**.97068**	**6.4461**	**1.7848**	**2.1140**	**.86897**	W **20.618**	**.62808**
Stddev	.0217	.0003	.00512	.0286	.0188	.0350	.00146	.070	.00044
%RSD	1.1574	.02593	.52738	.44327	1.0550	1.6566	.16745	.33861	.06985
#1	1.8902	1.1168	.97430	6.4663	1.7982	2.0892	.87000	20.667	.62777
#2	1.8595	1.1172	.96706	6.4258	1.7715	2.1388	.86794	20.568	.62839
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								10.000	
Low Limit								-.04000	

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3538.5**	**41914.**	**3155.3**
Stddev	5.0	7.	8.3
%RSD	.14229	.01765	.26310
#1	3542.1	41909.	3149.4
#2	3535.0	41919.	3161.1

Sample Name: 490-162286-A-12-BPDS Acquired: 11/7/2018 1:54:19 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436155 6010D soil

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02429**	**95.486**	**.22364**	**.12712**	**.74228**	**.04789**	**.12376**	**51.563**	**.04808**
Stddev	.00009	.422	.00766	.00366	.00215	.00006	.00313	.188	.00079
%RSD	.35240	.44173	3.4258	2.8831	.28942	.11953	2.5287	.36401	1.6526
#1	.02435	95.785	.22906	.12971	.74380	.04793	.12154	51.696	.04864
#2	.02423	95.188	.21822	.12453	.74076	.04785	.12597	51.430	.04751
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09618**	**.23513**	**.66548**	**177.06**	**24.776**	**.15699**	**47.859**	**2.5041**	**.04980**
Stddev	.00100	.00398	.00295	1.17	.103	.00084	.093	.0047	.00102
%RSD	1.0350	1.6907	.44365	.66224	.41693	.53763	.19347	.18984	2.0545
#1	.09688	.23794	.66757	177.89	24.849	.15639	47.925	2.5075	.05053
#2	.09548	.23232	.66340	176.24	24.703	.15759	47.794	2.5007	.04908
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.682**	**.20011**	**4.4764**	**.70460**	**.55960**	**.08772**	**.17525**	**6.2369**	**13.347**
Stddev	.280	.00274	.0716	.01257	.00180	.00785	.01004	.0078	.017
%RSD	1.3526	1.3676	1.5985	1.7847	.32083	8.9492	5.7267	.12546	.12546
#1	20.484	.20205	4.5270	.71349	.56087	.09327	.18235	6.2424	13.359
#2	20.880	.19818	4.4258	.69571	.55833	.08217	.16816	6.2314	13.335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.11943**	**.19702**	**.22300**	**4.6383**	**.18412**	**.69465**	**.44277**	**4.6306**	**.16955**
Stddev	.00139	.00038	.00380	.0198	.00601	.02969	.00174	.0061	.00124
%RSD	1.1614	.19152	1.7040	.42612	3.2635	4.2735	.39198	.13114	.73261
#1	.11845	.19729	.22032	4.6523	.18837	.67366	.44399	4.6348	.16868
#2	.12041	.19675	.22569	4.6243	.17987	.71564	.44154	4.6263	.17043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3668.2**	**43229.**	**3203.2**
Stddev	3.4	77.	9.2
%RSD	.09241	.17846	.28634
#1	3670.6	43174.	3196.7
#2	3665.8	43283.	3209.7

Sample Name: CCVH-5408055 Acquired: 11/7/2018 1:56:43 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00284**	**47.202**	**-.00645**	**.00426**	**.00014**	**.00026**	**.93142**	**-.00119**	**-.00019**	**.00190**	**.00081**	**.00204**	**49.126**
Stddev	.00019	.125	.00025	.00118	.00101	.00037	.03304	.00019	.00054	.00031	.00017	.00152	.065
%RSD	6.7464	.26480	3.8108	27.787	711.77	141.46	3.5469	15.954	290.68	16.277	20.467	74.813	.13325
#1	-.00298	47.291	-.00662	.00342	.00085	-.00000	.95479	-.00133	-.00057	.00168	.00093	.00096	49.173
#2	-.00271	47.114	-.00627	.00510	-.00057	.00052	.90806	-.00106	.00020	.00212	.00070	.00311	49.080
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05648**	**-.00000**	**-.08978**	**.00282**	**-.00029**	**244.48**	**.00353**	**.00174**	**-.00194**	**4.6951**	**.00182**	**.00796**	**.00449**
Stddev	.04414	.00143	.00499	.00013	.00045	.12	.00012	.00071	.00326	.1285	.00100	.00143	.01516
%RSD	78.156	40423.	5.5527	4.5892	157.16	.04975	3.3544	40.708	167.46	2.7376	55.072	17.931	338.01
#1	-.08769	.00100	-.09331	.00291	-.00061	244.39	.00344	.00224	-.00425	4.7860	.00111	.00695	-.00623
#2	-.02526	-.00101	-.08626	.00273	.00003	244.56	.00361	.00124	.00036	4.6042	.00252	.00896	.01520
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00960**	**-.00183**	**.00025**	**4.8491**	**.01893**	**-.00005**	**9.7273**	**-.01039**	**.00147**	**.08390**
Stddev	.03244	.00108	.00009	.0260	.00028	.00063	.0623	.00093	.00093	.00320
%RSD	338.01	59.060	34.541	.53570	1.4860	1248.7	.64064	8.9666	63.201	3.8156
#1	-.01334	-.00259	.00032	4.8675	.01873	.00040	9.7714	-.00973	.00213	.08163
#2	.03254	-.00107	.00019	4.8307	.01913	-.00050	9.6833	-.01104	.00081	.08616
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3342.8**	**40019.**	**2928.5**
Stddev	27.3	69.	25.6
%RSD	.81671	.17190	.87468
#1	3362.1	39970.	2910.4
#2	3323.5	40067.	2946.6

Sample Name: CCV-5407546 Acquired: 11/7/2018 1:59:14 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49795**	F **.57408**	**.96186**	**.49272**	**.50633**	**.47944**	**.00649**	**4.9195**	**.49183**	**.48787**	**.48179**	**.50323**
Stddev	.00019	.01223	.01605	.00506	.00074	.00112	.00800	.0446	.00839	.00821	.00846	.00015
%RSD	.03873	2.1296	1.6683	1.0271	.14675	.23407	123.29	.90639	1.7057	1.6822	1.7560	.02923
#1	.49782	.58272	.97321	.49630	.50686	.48024	.00083	4.8880	.49777	.49368	.48777	.50334
#2	.49809	.56544	.95052	.48915	.50581	.47865	.01215	4.9511	.48590	.48207	.47581	.50313
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5469**	**50.078**	**.99399**	**19.906**	**.49630**	**.47939**	**5.3143**	**.48719**	**1.0373**	**.98379**	**.00882**	**.99006**
Stddev	.0756	.101	.00055	.024	.00035	.01010	.0304	.00832	.0219	.01559	.00183	.01291
%RSD	2.9703	.20188	.05547	.12070	.07003	2.1066	.57187	1.7079	2.1099	1.5847	20.732	1.3043
#1	2.4934	50.006	.99360	19.923	.49654	.48653	5.2929	.49307	1.0528	.99482	.00752	.99919
#2	2.6004	50.149	.99438	19.889	.49605	.47224	5.3358	.48130	1.0218	.97277	.01011	.98093
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.95198**	**4.8782**	**10.439**	**.96817**	**.48542**	**.00975**	**.49468**	**1.0036**	**.03060**	**.49992**	**.49960**	**.49466**
Stddev	.02335	.0038	.008	.01820	.00114	.00172	.00146	.0140	.01387	.00010	.00030	.00156
%RSD	2.4528	.07839	.07839	1.8794	.23495	17.593	.29594	1.3959	45.340	.02052	.06084	.31468
#1	.96849	4.8755	10.433	.98104	.48622	.01097	.49571	1.0135	.02079	.49985	.49939	.49356
#2	.93547	4.8809	10.445	.95531	.48461	.00854	.49364	.99367	.04041	.49999	.49982	.49576
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3385.9**	**40478.**	**2882.7**
Stddev	4.6	146.	10.8
%RSD	.13521	.36022	.37494
#1	3382.6	40375.	2890.4
#2	3389.1	40582.	2875.1

Sample Name: CCB Acquired: 11/7/2018 2:01:39 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00066**	**.00050**	**.00579**	**.00265**	**-.00066**	**.00029**	**-.00186**	**-.01033**	**-.00039**	**.00016**	**.00027**	**.00130**	**.00500**
Stddev	.00023	.00035	.00280	.00024	.00029	.00039	.00180	.00004	.00003	.00017	.00044	.00011	.00049
%RSD	35.520	69.642	48.383	9.0898	44.293	133.46	96.708	.39398	6.5106	109.79	162.78	8.3995	9.9044
#1	-.00049	.00074	.00381	.00283	-.00087	.00002	-.00313	-.01036	-.00037	.00003	-.00004	.00123	.00535
#2	-.00082	.00025	.00777	.00248	-.00046	.00057	-.00059	-.01030	-.00040	.00028	.00058	.00138	.00465
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.11330**	**-.00217**	**.00437**	**.00005**	**.00157**	**.14161**	**-.00033**	**.00025**	**-.00147**	**.00635**	**.00176**	**-.00188**	**.03534**
Stddev	.09631	.00147	.00484	.00016	.00059	.01086	.00005	.00051	.00283	.00638	.00586	.01152	.01349
%RSD	85.001	67.481	110.78	325.01	37.445	7.6674	14.933	201.53	192.93	100.39	331.90	612.89	38.184
#1	-.04520	-.00114	.00095	.00016	.00198	.14929	-.00037	.00061	.00053	.00184	.00591	-.01003	.02580
#2	-.18140	-.00321	.00779	-.00006	.00115	.13393	-.00030	-.00011	-.00347	.01086	-.00238	.00627	.04488
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07562**	**-.00203**	**.00011**	**.00046**	**.00094**	**.00158**	**.03991**	**.00049**	**.00074**	**.00303**
Stddev	.02887	.00089	.00005	.00069	.00030	.00274	.01267	.00057	.00046	.00057
%RSD	38.184	43.911	44.345	149.71	31.793	173.38	31.737	117.45	62.745	18.911
#1	.05520	-.00140	.00008	-.00003	.00073	.00352	.04886	.00090	.00106	.00344
#2	.09604	-.00267	.00015	.00095	.00115	-.00036	.03095	.00008	.00041	.00263
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3336.8**	**40666.**	**2861.4**
Stddev	5.7	151.	17.0
%RSD	.17199	.37044	.59532
#1	3340.9	40772.	2873.5
#2	3332.8	40559.	2849.4

Sample Name: ccvl-5413446 Acquired: 11/7/2018 2:04:15 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00946**	**.12709**	**.01424**	**.10091**	**.00958**	F **.00133**	**.10523**	**.22284**	**.00456**	**.01064**	**.01019**	**.01656**
Stddev	.00142	.00869	.00380	.00223	.00055	.00035	.00191	.00664	.00035	.00018	.00022	.00032
%RSD	14.999	6.8393	26.661	2.2051	5.7247	26.657	1.8156	2.9797	7.7323	1.7033	2.1854	1.9171
#1	.00846	.12094	.01692	.10249	.00997	.00158	.10388	.21814	.00431	.01051	.01035	.01679
#2	.01047	.13323	.01155	.09934	.00920	.00108	.10658	.22753	.00481	.01077	.01003	.01634
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						.00100						
Range						30.000%						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.11257**	**3.1254**	**.01609**	**.20380**	**.01037**	**.01940**	**1.1911**	**.04023**	**3.0413**	**.00879**	**.09295**	**.02157**
Stddev	.00449	.0717	.00386	.00635	.00022	.00101	.0204	.00067	.0632	.00029	.00618	.00297
%RSD	3.9874	2.2930	24.003	3.1172	2.0902	5.2175	1.7149	1.6729	2.0773	3.3389	6.6468	13.745
#1	.10939	3.1761	.01882	.19931	.01052	.02012	1.1767	.04070	3.0860	.00900	.09732	.01948
#2	.11574	3.0747	.01336	.20829	.01022	.01869	1.2056	.03975	2.9967	.00858	.08858	.02367
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01812**	**.52162**	**1.1163**	**.09872**	**.00995**	**.01400**	**.01104**	**.01753**	F **.11076**	**.01030**	**.02483**	F **.02408**
Stddev	.00007	.00748	.0160	.00398	.00014	.00126	.00011	.00355	.01911	.00029	.00006	.00147
%RSD	.38504	1.4335	1.4335	4.0346	1.3681	8.9887	.96535	20.224	17.254	2.8360	.24018	6.1195
#1	.01807	.52691	1.1276	.10153	.00985	.01311	.01096	.01503	.09725	.01051	.02487	.02304
#2	.01817	.51633	1.1049	.09590	.01004	.01489	.01111	.02004	.12427	.01009	.02479	.02512
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3447.6**	**41667.**	**2909.2**
Stddev	3.3	92.	22.7
%RSD	.09582	.22055	.78073
#1	3445.2	41732.	2893.1
#2	3449.9	41602.	2925.2

Sample Name: MB 280-434125/1-A Acquired: 11/7/2018 2:06:50 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00113**	**.00331**	**.00651**	**.00169**	**-.00004**	**.00009**	**.00290**	**.00762**	**-.00038**
Stddev	.00084	.00102	.00209	.00100	.00043	.00009	.00465	.00481	.00004
%RSD	74.217	30.798	32.057	58.852	1185.9	91.991	160.29	63.195	10.100
#1	-.00054	.00403	.00504	.00240	.00027	.00003	.00619	.01102	-.00040
#2	-.00172	.00259	.00799	.00099	-.00034	.00015	-.00039	.00421	-.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00057**	**.00065**	**.00093**	**.00444**	**-.06169**	**-.00038**	**.00145**	**.00028**	**-.00011**
Stddev	.00041	.00030	.00024	.00141	.07329	.00429	.00336	.00003	.00003
%RSD	72.086	46.628	25.999	31.642	118.82	1126.6	231.73	10.573	26.146
#1	.00087	.00086	.00110	.00544	-.11351	-.00342	-.00092	.00030	-.00013
#2	.00028	.00043	.00076	.00345	-.00986	.00265	.00382	.00026	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10022**	**-.00053**	**-.00012**	**-.00088**	**-.00296**	**.00173**	**.00073**	**.03133**	**.06704**
Stddev	.00385	.00033	.00101	.00056	.00184	.00125	.00556	.03838	.08213
%RSD	3.8410	62.969	851.32	64.433	62.113	72.516	767.05	122.52	122.52
#1	.09750	-.00029	.00060	-.00128	-.00425	.00084	.00466	.05846	.12511
#2	.10294	-.00077	-.00084	-.00048	-.00166	.00261	-.00321	.00419	.00896
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00176**	**.00005**	**-.00240**	**.00092**	**.00057**	F **.09646**	**-.00034**	**.00186**	**.00285**
Stddev	.00068	.00008	.00601	.00006	.00026	.06660	.00130	.00013	.00000
%RSD	38.445	152.04	250.14	6.8380	46.365	69.043	385.48	6.9197	.03093
#1	-.00128	-.00000	.00185	.00087	.00038	.04937	.00058	.00176	.00285
#2	-.00224	.00010	-.00666	.00096	.00075	.14355	-.00125	.00195	.00285
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						.06000			
Low Limit						-.06000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3532.3**	**42572.**	**2970.7**
Stddev	3.9	99.	15.2
%RSD	.11158	.23244	.51095
#1	3529.5	42642.	2959.9
#2	3535.1	42502.	2981.4

Sample Name: LCS 280-434125/2-A Acquired: 11/7/2018 2:09:26 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04751**	F **2.2709**	**.99228**	**1.0096**	**2.0395**	**.04890**	**1.9115**	**49.060**	**.09692**
Stddev	.00095	.0271	.01464	.0065	.0046	.00056	.0202	.117	.00075
%RSD	1.9911	1.1929	1.4755	.64147	.22578	1.1446	1.0577	.23811	.77077
#1	.04818	2.2900	1.0026	1.0142	2.0363	.04851	1.9258	48.977	.09745
#2	.04685	2.2517	.98192	1.0050	2.0428	.04930	1.8972	49.142	.09639
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit		2.2299							
Low Limit		1.7300							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49063**	**.19663**	**.25548**	**.99743**	**50.652**	**.98901**	**49.815**	**.49776**	**.99196**
Stddev	.00478	.00107	.00089	.00602	.178	.00379	.154	.00147	.01361
%RSD	.97493	.54270	.34902	.60386	.35078	.38271	.30851	.29544	1.3720
#1	.49401	.19738	.25485	.99317	50.526	.98633	49.924	.49880	1.0016
#2	.48725	.19588	.25611	1.0017	50.778	.99168	49.707	.49672	.98233
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.979**	**.48607**	**11.055**	**.49969**	**1.9396**	**.50727**	**1.9887**	F **7.4196**	**15.878**
Stddev	.374	.00543	.126	.00662	.0251	.00159	.0018	.0496	.106
%RSD	.74762	1.1169	1.1392	1.3246	1.2966	.31257	.09268	.66799	.66799
#1	49.715	.48991	11.144	.50437	1.9574	.50839	1.9900	7.3846	15.803
#2	50.244	.48223	10.966	.49501	1.9218	.50615	1.9874	7.4547	15.953
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit								11.000	
Low Limit								9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9796**	**.98721**	**1.0006**	**.99986**	**2.0112**	**2.0477**	**.52006**	**.51418**	**.50761**
Stddev	.0249	.00310	.0037	.00311	.0285	.0399	.00264	.00083	.00981
%RSD	1.2579	.31404	.37321	.31055	1.4187	1.9500	.50669	.16110	1.9328
#1	1.9972	.98502	1.0032	1.0021	2.0314	2.0195	.52192	.51476	.50068
#2	1.9619	.98941	.99793	.99767	1.9910	2.0760	.51819	.51359	.51455
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3483.4**	**41665.**	**3007.7**
Stddev	8.6	453.	2.2
%RSD	.24689	1.0879	.07437
#1	3489.4	41344.	3009.2
#2	3477.3	41985.	3006.1

Sample Name: 280-115729-A-1-B Acquired: 11/7/2018 2:11:46 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00088**	**.06711**	**.02234**	**.03241**	**.02730**	**.00014**	**.00483**	**39.117**	**.00022**
Stddev	.00087	.08539	.00950	.00230	.00053	.00008	.00039	.101	.00037
%RSD	98.623	127.24	42.499	7.1086	1.9541	57.622	8.1665	.25895	171.35
#1	-.00149	.12749	.02906	.03404	.02692	.00020	.00511	39.045	.00048
#2	-.00027	.00673	.01563	.03078	.02768	.00008	.00455	39.188	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00095**	**.00292**	**.00407**	**.01377**	**24.693**	**.00959**	**12.193**	**.00494**	**.01060**
Stddev	.00046	.00039	.00009	.00388	.204	.00076	.007	.00002	.00067
%RSD	48.420	13.291	2.1815	28.165	.82469	7.9605	.05789	.47846	6.3257
#1	.00127	.00320	.00414	.01652	24.549	.00905	12.188	.00492	.01108
#2	.00062	.00265	.00401	.01103	24.837	.01013	12.198	.00495	.01013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**77.600**	**.00097**	W **39.941**	**-.00644**	**18.080**	**-.00369**	**.00549**	**15.247**	**32.630**
Stddev	.308	.00070	.605	.00037	.294	.00109	.00449	.078	.167
%RSD	.39687	71.805	1.5153	5.7300	1.6261	29.465	81.631	.51270	.51270
#1	77.383	.00146	40.369	-.00618	18.288	-.00446	.00867	15.303	32.748
#2	77.818	.00048	39.513	-.00670	17.872	-.00292	.00232	15.192	32.511
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			20.000						
Low Limit			-6.0000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00070**	**.18527**	**.00485**	**.00187**	**.00358**	**-.00238**	**.02071**	**.00336**	**.00653**
Stddev	.00338	.00101	.00383	.00073	.00456	.04232	.00058	.00031	.00107
%RSD	481.58	.54294	78.916	38.785	127.46	1777.6	2.8192	9.3396	16.409
#1	.00169	.18456	.00755	.00136	.00680	-.03230	.02029	.00314	.00577
#2	-.00309	.18598	.00214	.00239	.00035	.02754	.02112	.00359	.00728
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3483.3**	**41171.**	**3013.1**
Stddev	1.5	238.	26.9
%RSD	.04308	.57779	.89317
#1	3484.4	41339.	3032.2
#2	3482.2	41002.	2994.1

Sample Name: 280-115729-A-2-D Acquired: 11/7/2018 2:14:18 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00038**	**1.4796**	**.02616**	**.02934**	**.09590**	**.00029**	**.00454**	**40.579**	**.00007**
Stddev	.00069	.0200	.00590	.00060	.00076	.00015	.00501	.281	.00037
%RSD	180.08	1.3492	22.539	2.0412	.78904	49.463	110.32	.69187	540.92
#1	-.00087	1.4937	.03033	.02892	.09643	.00040	.00809	40.778	-.00019
#2	.00010	1.4655	.02199	.02976	.09536	.00019	.00100	40.381	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00138**	**.00951**	**.01591**	**1.5249**	**24.626**	**.00913**	**12.243**	**.05109**	**.00780**
Stddev	.00007	.00060	.00074	.0102	.188	.00103	.016	.00024	.00031
%RSD	5.0089	6.2643	4.6435	.66797	.76246	11.239	.12668	.47054	3.9692
#1	.00143	.00993	.01644	1.5321	24.758	.00986	12.254	.05126	.00758
#2	.00133	.00909	.01539	1.5177	24.493	.00841	12.232	.05092	.00802
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**74.182**	**.00538**	W **40.607**	**-.00461**	**17.758**	**.00475**	**.00322**	**16.110**	**34.475**
Stddev	.645	.00006	.505	.00298	.229	.00298	.00359	.311	.666
%RSD	.86906	1.0848	1.2425	64.644	1.2869	62.783	111.49	1.9316	1.9316
#1	74.638	.00534	40.964	-.00672	17.920	.00264	.00068	16.330	34.946
#2	73.726	.00542	40.251	-.00250	17.597	.00685	.00576	15.890	34.005
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			20.000						
Low Limit			-6.0000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00113**	**.21180**	**.00285**	**.11199**	**.00236**	**.00077**	**.02358**	**.02542**	**.01919**
Stddev	.00003	.00080	.00043	.00068	.00004	.03805	.00081	.00084	.00521
%RSD	2.5882	.37679	15.167	.60323	1.8653	4965.5	3.4505	3.3163	27.132
#1	-.00115	.21237	.00255	.11151	.00239	.02767	.02301	.02601	.02287
#2	-.00110	.21124	.00316	.11246	.00233	-.02614	.02416	.02482	.01551
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3495.4**	**41648.**	**3012.0**
Stddev	9.8	125.	8.9
%RSD	.28155	.30101	.29427
#1	3488.5	41560.	3005.7
#2	3502.4	41737.	3018.2

Sample Name: 280-115729-A-2-DSD@5 Acquired: 11/7/2018 2:16:48 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00090**	**.30763**	**.00346**	**.00785**	**.01929**	**-.00000**	**.00054**	**8.0821**	**.00028**
Stddev	.00082	.00666	.00524	.00032	.00051	.00034	.00565	.0199	.00041
%RSD	91.751	2.1646	151.50	4.0430	2.6252	57976.	1039.7	.24675	143.66
#1	-.00148	.31234	-.00025	.00807	.01893	-.00024	.00453	8.0962	.00057
#2	-.00032	.30293	.00717	.00762	.01965	.00024	-.00345	8.0680	-.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00096**	**.00198**	**.00421**	**.31582**	**5.0164**	**-.00023**	**2.4793**	**.01070**	**.00141**
Stddev	.00017	.00025	.00114	.00353	.0527	.00080	.0080	.00034	.00026
%RSD	17.609	12.636	27.013	1.1178	1.0511	348.18	.32072	3.1506	18.342
#1	.00108	.00216	.00341	.31831	4.9791	.00034	2.4849	.01046	.00123
#2	.00084	.00181	.00502	.31332	5.0537	-.00079	2.4737	.01093	.00159
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.794**	**.00050**	**7.9029**	**-.00037**	**3.3755**	**-.00179**	**.00723**	**3.1717**	**6.7875**
Stddev	.333	.00015	.1622	.00164	.0706	.00265	.00847	.0227	.0486
%RSD	2.2505	30.333	2.0520	440.55	2.0904	147.65	117.11	.71607	.71607
#1	14.559	.00060	8.0175	.00079	3.4254	-.00367	.01322	3.1878	6.8218
#2	15.030	.00039	7.7882	-.00153	3.3256	.00008	.00124	3.1557	6.7531
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00260**	**.04239**	**-.00059**	**.02319**	**.00230**	**.03013**	**.00469**	**.00601**	**.00938**
Stddev	.00052	.00053	.00217	.00047	.00091	.00452	.00040	.00101	.00591
%RSD	19.818	1.2408	368.92	2.0120	39.355	14.999	8.5071	16.803	63.060
#1	-.00224	.04276	-.00212	.02286	.00166	.02694	.00441	.00530	.00520
#2	-.00297	.04202	.00095	.02352	.00294	.03333	.00497	.00672	.01356
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3452.0**	**41505.**	**2968.7**
Stddev	1.8	109.	7.3
%RSD	.05165	.26375	.24652
#1	3450.7	41428.	2963.5
#2	3453.3	41583.	2973.9

Sample Name: 280-115729-A-2-E MS Acquired: 11/7/2018 2:19:23 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04993**	**3.9127**	**1.0390**	**1.0407**	**2.1719**	**.04977**	**1.9209**	**91.164**	**.09734**
Stddev	.00050	.0175	.0073	.0046	.0081	.00035	.0045	.123	.00026
%RSD	1.0065	.44746	.69919	.43946	.37102	.69875	.23316	.13473	.27051
#1	.05028	3.9251	1.0441	1.0439	2.1776	.05002	1.9240	91.251	.09753
#2	.04957	3.9003	1.0338	1.0374	2.1662	.04952	1.9177	91.077	.09715
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49430**	**.20922**	**.26935**	**2.8044**	**76.153**	**.99783**	**62.197**	**.55393**	**1.0189**
Stddev	.00177	.00088	.00108	.0073	.096	.00575	.092	.00156	.0063
%RSD	.35811	.42022	.40031	.26050	.12625	.57611	.14815	.28180	.62323
#1	.49555	.20984	.27011	2.7992	76.221	.99376	62.262	.55504	1.0234
#2	.49304	.20860	.26858	2.8096	76.085	1.0019	62.132	.55283	1.0144
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**125.27**	**.49592**	F **53.943**	**.49265**	**20.420**	**.51523**	**1.9956**	**17.159**	**36.719**
Stddev	.35	.00186	.221	.00241	.038	.00486	.0113	.035	.074
%RSD	.27875	.37597	.40953	.48860	.18384	.94248	.56567	.20230	.20230
#1	125.52	.49724	54.099	.49095	20.447	.51867	2.0036	17.183	36.772
#2	125.03	.49460	53.786	.49436	20.394	.51180	1.9876	17.134	36.667
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			50.000						
Low Limit			-6.0000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0006**	**1.2221**	**1.0100**	**1.1480**	**1.9588**	**2.0681**	**.54958**	**.54174**	**.54717**
Stddev	.0142	.0012	.0042	.0001	.0096	.0411	.00218	.00248	.00129
%RSD	.70933	.09882	.41426	.01220	.49013	1.9873	.39654	.45836	.23494
#1	2.0106	1.2229	1.0129	1.1481	1.9656	2.0390	.55112	.54349	.54808
#2	1.9906	1.2212	1.0070	1.1479	1.9520	2.0971	.54804	.53998	.54626
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3346.2**	**39954.**	**2907.4**
Stddev	13.4	360.	6.8
%RSD	.40014	.90025	.23549
#1	3355.7	39700.	2902.6
#2	3336.8	40209.	2912.3

Sample Name: 280-115729-A-2-F MSD Acquired: 11/7/2018 2:21:44 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04913**	**3.8808**	**1.0189**	**1.0424**	**2.1433**	**.04914**	**1.9009**	**89.855**	**.09684**
Stddev	.00105	.0386	.0082	.0004	.0075	.00029	.0066	.170	.00024
%RSD	2.1402	.99546	.80816	.04333	.34866	.59741	.34859	.18904	.24874
#1	.04839	3.8535	1.0247	1.0427	2.1380	.04894	1.9056	89.734	.09701
#2	.04987	3.9081	1.0131	1.0421	2.1485	.04935	1.8962	89.975	.09667
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48973**	**.20576**	**.26919**	**2.7833**	**75.216**	**.99223**	**61.786**	**.55129**	**1.0183**
Stddev	.00260	.00141	.00177	.0033	.414	.00203	.127	.00031	.0097
%RSD	.53079	.68528	.65853	.12013	.55024	.20480	.20498	.05686	.95028
#1	.49157	.20676	.27045	2.7809	74.924	.99079	61.876	.55152	1.0251
#2	.48790	.20477	.26794	2.7856	75.509	.99367	61.697	.55107	1.0115
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**123.18**	**.49150**	F **52.941**	**.48884**	**20.077**	**.51642**	**1.9716**	**19.631**	**42.010**
Stddev	.90	.00200	.108	.00209	.072	.00420	.0163	.073	.156
%RSD	.73390	.40595	.20470	.42785	.35911	.81370	.82639	.37094	.37094
#1	122.54	.49292	53.018	.49032	20.128	.51940	1.9832	19.682	42.120
#2	123.82	.49009	52.865	.48736	20.026	.51345	1.9601	19.579	41.900
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			50.000						
Low Limit			-6.0000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0016**	**1.2049**	**1.0076**	**1.1483**	**1.9532**	**2.0650**	**.54631**	**.53948**	**.54298**
Stddev	.0095	.0022	.0098	.0027	.0001	.0211	.00032	.00065	.00543
%RSD	.47474	.18488	.97034	.23668	.00448	1.0219	.05936	.12041	1.0003
#1	2.0083	1.2033	1.0145	1.1502	1.9531	2.0501	.54653	.53994	.53914
#2	1.9949	1.2065	1.0007	1.1463	1.9532	2.0800	.54608	.53902	.54683
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3309.1**	**39607.**	**2928.4**
Stddev	13.0	151.	8.2
%RSD	.39209	.38230	.28157
#1	3318.3	39500.	2934.3
#2	3299.9	39714.	2922.6

Sample Name: 280-115729-A-2-D PDS Acquired: 11/7/2018 2:24:03 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02788**	W **2.5558**	**.21953**	**.12721**	**.19581**	**.04849**	**.00307**	**59.209**	**.04860**
Stddev	.00045	.0244	.00219	.00138	.00141	.00021	.00329	.144	.00008
%RSD	1.6081	.95393	.99835	1.0851	.72216	.43170	107.16	.24284	.16395
#1	.02756	2.5730	.22108	.12819	.19481	.04834	.00074	59.107	.04866
#2	.02819	2.5385	.21798	.12624	.19681	.04863	.00540	59.311	.04855
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		2.5000							
Low Limit		-.20000							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04876**	**.05685**	**.06606**	**2.4688**	**44.071**	**.10738**	**31.595**	**.09935**	**.05830**
Stddev	.00032	.00117	.00064	.0102	.003	.00274	.039	.00007	.00091
%RSD	.64845	2.0642	.97197	.41325	.00677	2.5510	.12397	.07380	1.5615
#1	.04899	.05768	.06651	2.4615	44.073	.10544	31.568	.09940	.05894
#2	.04854	.05602	.06560	2.4760	44.068	.10931	31.623	.09930	.05765
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**92.436**	**.05268**	W **42.623**	**.08913**	**17.582**	**.08737**	**.19571**	**21.447**	**45.897**
Stddev	.042	.00044	.406	.00336	.151	.00076	.00229	.018	.039
%RSD	.04495	.84102	.95169	3.7666	.85655	.86503	1.1711	.08466	.08466
#1	92.466	.05299	42.910	.09150	17.689	.08684	.19409	21.434	45.869
#2	92.407	.05237	42.336	.08676	17.476	.08791	.19733	21.460	45.924
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			20.000						
Low Limit			-6.0000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09686**	**.25781**	**.19654**	**.16046**	**.19776**	**.49425**	**.07279**	**.22921**	**.07695**
Stddev	.00297	.00033	.00200	.00002	.00125	.03324	.00013	.00071	.00006
%RSD	3.0669	.12899	1.0178	.00951	.62989	6.7258	.17234	.30885	.07358
#1	.09896	.25758	.19513	.16045	.19864	.51775	.07288	.22971	.07691
#2	.09476	.25805	.19796	.16047	.19688	.47074	.07271	.22871	.07699
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3409.6**	**40092.**	**2921.3**
Stddev	2.2	52.	42.7
%RSD	.06543	.12855	1.4608
#1	3411.2	40128.	2951.5
#2	3408.1	40056.	2891.1

Sample Name: CCVH-5408055 Acquired: 11/7/2018 2:26:33 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00344**	**47.827**	**-.00792**	**.00364**	**-.00029**	**-.00011**	**.97572**	**.01808**	**-.00019**	**.00185**	**.00081**	**.00229**	**49.327**
Stddev	.00036	.386	.01012	.00070	.00024	.00008	.00540	.00516	.00025	.00011	.00030	.00053	.139
%RSD	10.451	.80760	127.74	19.367	82.872	73.094	.55297	28.521	133.46	6.0804	36.817	23.200	.28166
#1	-.00370	48.100	-.01507	.00413	-.00045	-.00017	.97953	.02172	-.00001	.00193	.00102	.00192	49.426
#2	-.00319	47.554	-.00077	.00314	-.00012	-.00006	.97190	.01443	-.00036	.00177	.00060	.00267	49.229
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02755**	**-.00157**	**-.07711**	**.00279**	**-.00002**	**247.43**	**.00399**	**.00814**	**-.00273**	**4.8634**	**.00705**	**.01260**	**.03202**
Stddev	.14331	.00206	.00650	.00004	.00026	1.97	.00024	.00320	.00362	.0330	.00205	.00465	.03695
%RSD	520.19	131.15	8.4362	1.2944	1284.5	.79757	6.0636	39.271	132.39	.67758	29.076	36.888	115.39
#1	-.07378	-.00303	-.07251	.00277	-.00020	248.83	.00416	.00588	-.00529	4.8867	.00850	.01589	.00590
#2	.12888	-.00011	-.08171	.00282	.00016	246.04	.00382	.01041	-.00017	4.8401	.00560	.00932	.05815
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.06853**	**.00029**	**.00055**	**4.9261**	**.01779**	**-.00114**	**9.8779**	**-.00987**	**.00139**	**.08284**
Stddev	.07907	.00005	.00005	.0074	.00065	.00280	.0148	.00053	.00063	.00045
%RSD	115.39	18.602	8.5065	.15067	3.6478	245.60	.14991	5.3720	45.014	.54104
#1	.01262	.00025	.00052	4.9313	.01733	.00084	9.8883	-.01025	.00095	.08315
#2	.12444	.00032	.00058	4.9208	.01825	-.00312	9.8674	-.00950	.00184	.08252
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3317.2**	**39139.**	**2847.9**
Stddev	14.9	23.	15.0
%RSD	.44914	.05983	.52710
#1	3327.7	39123.	2837.3
#2	3306.6	39156.	2858.5

Sample Name: CCV-5407546 Acquired: 11/7/2018 2:29:03 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49709**	F **.60810**	**.96333**	**.48939**	**.50759**	**.48255**	**.00865**	**4.9025**	**.48523**	**.48224**	**.47826**	**.50119**
Stddev	.00435	.05627	.02791	.01011	.00210	.00048	.00084	.0311	.00932	.00842	.00908	.00167
%RSD	.87482	9.2540	2.8969	2.0649	.41376	.10045	9.7388	.63470	1.9217	1.7467	1.8993	.33297
#1	.50016	.64789	.98306	.49653	.50907	.48289	.00924	4.9245	.49183	.48820	.48469	.50237
#2	.49401	.56831	.94360	.48224	.50610	.48221	.00805	4.8805	.47864	.47629	.47184	.50001
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4374**	**50.111**	**.99980**	**19.802**	**.49364**	**.47661**	**5.3863**	**.48249**	F **1.1247**	**.96999**	**.03677**	**.97985**
Stddev	.0154	.060	.00065	.097	.00267	.00931	.0165	.00916	.1435	.02136	.05016	.01981
%RSD	.63071	.11897	.06453	.48821	.53988	1.9530	.30663	1.8991	12.758	2.2019	136.44	2.0222
#1	2.4265	50.153	.99935	19.870	.49553	.48320	5.3979	.48897	1.2261	.98510	.07224	.99386
#2	2.4482	50.068	1.0003	19.733	.49176	.47003	5.3746	.47601	1.0232	.95489	.00130	.96584
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass
Value									1.0000			
Range									10.000%			

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.94803**	**4.9066**	**10.500**	**.96173**	**.48909**	**.00877**	**.49183**	**.99574**	**.01224**	**.49958**	**.49912**	**.49543**
Stddev	.01694	.0156	.033	.02108	.00098	.00287	.00091	.01278	.09504	.00285	.00401	.01098
%RSD	1.7864	.31865	.31865	2.1914	.19952	32.765	.18570	1.2839	776.53	.56956	.80336	2.2170
#1	.96001	4.9177	10.524	.97663	.48978	.01080	.49248	1.0048	-.05496	.50159	.50195	.50319
#2	.93606	4.8956	10.476	.94683	.48840	.00674	.49119	.98670	.07944	.49757	.49628	.48766
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3397.7**	**40602.**	**2902.8**
Stddev	36.1	105.	5.2
%RSD	1.0618	.25941	.17821
#1	3423.2	40676.	2906.4
#2	3372.2	40527.	2899.1

Sample Name: CCB Acquired: 11/7/2018 2:31:29 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00040**	**.00556**	**.00011**	**.00387**	**-.00047**	**.00002**	**.00253**	**-.00187**	**-.00020**	**.00048**	**.00022**	**.00067**	**.01648**
Stddev	.00067	.00034	.00214	.00139	.00039	.00016	.00320	.00175	.00008	.00064	.00003	.00036	.00062
%RSD	167.17	6.0480	1961.4	36.065	83.296	784.72	126.43	93.660	41.793	131.84	15.856	54.731	3.7903
#1	-.00087	.00580	.00162	.00485	-.00074	.00014	.00479	-.00063	-.00014	.00093	.00019	.00092	.01604
#2	.00007	.00532	-.00140	.00288	-.00019	-.00009	.00027	-.00310	-.00025	.00003	.00024	.00041	.01692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01250**	**-.00211**	**.00630**	**.00017**	**.00133**	**.21094**	**-.00051**	**.00398**	**-.00020**	**-.00345**	**.00231**	**.00127**	**.03686**
Stddev	.00497	.00070	.00306	.00011	.00039	.00286	.00017	.00326	.00148	.00781	.00278	.00476	.02958
%RSD	39.744	33.024	48.615	69.295	29.109	1.3539	32.699	81.935	732.25	226.03	120.24	376.36	80.240
#1	-.01601	-.00162	.00414	.00008	.00106	.20892	-.00039	.00629	-.00125	-.00897	.00035	-.00210	.05778
#2	-.00898	-.00260	.00847	.00025	.00161	.21296	-.00063	.00167	.00085	.00207	.00428	.00463	.01595
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07889**	**-.00295**	**.00009**	**-.00107**	**.00105**	**.00250**	**.07481**	**-.00002**	**.00005**	**.00674**
Stddev	.06330	.00022	.00010	.00340	.00042	.00132	.02855	.00029	.00063	.00148
%RSD	80.240	7.3421	105.72	316.48	40.426	52.709	38.159	1563.2	1213.9	21.977
#1	.12364	-.00279	.00016	-.00348	.00075	.00157	.05462	-.00022	-.00039	.00569
#2	.03413	-.00310	.00002	.00133	.00134	.00343	.09499	.00019	.00050	.00779
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3428.0**	**41560.**	**2907.1**
Stddev	5.0	76.	5.9
%RSD	.14688	.18177	.20444
#1	3431.6	41613.	2911.3
#2	3424.5	41506.	2902.9

Sample Name: ccvl-5413446 Acquired: 11/7/2018 2:34:04 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00943**	F **.14039**	**.01877**	**.10540**	**.01073**	F **.00137**	**.10660**	F **.27479**	**.00500**	**.01112**	**.01042**	**.01793**
Stddev	.00092	.02337	.00358	.00039	.00061	.00012	.00096	.01490	.00035	.00033	.00021	.00074
%RSD	9.8002	16.647	19.074	.37444	5.7059	8.5022	.90443	5.4238	6.9571	2.9355	1.9933	4.1366
#1	.01009	.15692	.02130	.10568	.01117	.00129	.10592	.28533	.00525	.01135	.01057	.01740
#2	.00878	.12387	.01624	.10512	.01030	.00145	.10728	.26425	.00476	.01089	.01027	.01845
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.10000				.00100		.20000				
Range		30.000%				30.000%		30.000%				

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.12398**	**3.4595**	F **.02924**	**.22417**	**.01097**	**.02068**	F **1.3369**	**.04167**	**3.1626**	**.00791**	**.09255**	**.02124**
Stddev	.00930	.2246	.00544	.00744	.00000	.00069	.0555	.00150	.0588	.00169	.00213	.00159
%RSD	7.4994	6.4911	18.612	3.3205	.00671	3.3209	4.1535	3.6046	1.8585	21.435	2.2966	7.5001
#1	.13056	3.6182	.02539	.22943	.01097	.02117	1.3762	.04273	3.2041	.00671	.09405	.02011
#2	.11741	3.3007	.03309	.21891	.01097	.02020	1.2977	.04061	3.1210	.00910	.09105	.02236
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.02000				1.0000					
Range			30.000%				30.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.03215**	**.59654**	**1.2766**	**.10273**	**.01090**	**.01700**	**.01109**	**.01619**	**.05811**	**.01008**	F **.03038**	F **.02089**
Stddev	.00566	.02184	.0467	.00217	.00039	.00030	.00015	.00138	.06268	.00012	.00056	.00015
%RSD	17.613	3.6607	3.6607	2.1134	3.6087	1.7720	1.3163	8.5529	107.86	1.2351	1.8456	.73329
#1	.02814	.61199	1.3097	.10427	.01118	.01679	.01120	.01717	.01379	.01017	.03078	.02100
#2	.03615	.58110	1.2436	.10120	.01062	.01721	.01099	.01521	.10243	.00999	.02998	.02078
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail
Value	.02000										.02000	.01500
Range	30.000%										30.000%	30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3279.5**	**39932.**	**2701.8**
Stddev	20.4	351.	153.0
%RSD	.62118	.88012	5.6613
#1	3293.9	40181.	2593.7
#2	3265.0	39684.	2810.0

Sample Name: 280-115729-A-3-B Acquired: 11/7/2018 2:36:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00126**	**9.4576**	**.03023**	**.02535**	**.16476**	**.00054**	**.01043**	**50.823**	**.00011**
Stddev	.00008	.0099	.00224	.00035	.00002	.00037	.00046	.083	.00033
%RSD	5.9709	.10474	7.4005	1.3779	.01186	69.551	4.3681	.16425	310.02
#1	-.00121	9.4506	.02865	.02560	.16475	.00080	.01075	50.882	-.00013
#2	-.00132	9.4646	.03182	.02511	.16478	.00027	.01011	50.764	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00418**	**.01238**	**.01807**	**12.212**	**16.901**	**.01339**	**16.088**	**.27084**	**.00508**
Stddev	.00011	.00020	.00060	.001	.028	.00189	.022	.00009	.00022
%RSD	2.5291	1.5940	3.3232	.00745	.16852	14.125	.13568	.03355	4.3458
#1	.00425	.01252	.01765	12.211	16.880	.01205	16.104	.27090	.00524
#2	.00411	.01224	.01850	12.212	16.921	.01473	16.073	.27078	.00493
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**64.059**	**.00780**	W **39.231**	**-.00903**	**16.788**	**.00177**	**-.00198**	**25.702**	**55.003**
Stddev	.158	.00038	1.128	.00051	.457	.00190	.00292	.224	.479
%RSD	.24649	4.9081	2.8756	5.6715	2.7221	107.45	147.72	.87041	.87041
#1	63.948	.00807	40.028	-.00867	17.111	.00311	-.00405	25.861	55.342
#2	64.171	.00753	38.433	-.00940	16.465	.00043	.00009	25.544	54.665
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			20.000						
Low Limit			-6.0000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00211**	**.25570**	**.00228**	**.93293**	**-.00082**	**.12186**	**.04495**	**.26333**	**.02605**
Stddev	.00186	.00074	.00056	.00273	.00025	.06420	.00050	.00000	.00106
%RSD	88.495	.28766	24.554	.29230	29.798	52.680	1.1019	.00133	4.0568
#1	-.00079	.25622	.00268	.93100	-.00100	.07647	.04460	.26333	.02530
#2	-.00342	.25518	.00189	.93486	-.00065	.16726	.04530	.26333	.02680
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3449.0**	**40443.**	**2921.5**
Stddev	20.9	68.	.9
%RSD	.60654	.16866	.03128
#1	3434.2	40491.	2922.2
#2	3463.8	40395.	2920.9

Sample Name: 280-115729-A-4-B Acquired: 11/7/2018 2:39:08 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00134**	**.02287**	**.02847**	**.02624**	**.05542**	**.00015**	**.00133**	**48.443**	**.00002**
Stddev	.00000	.02035	.00689	.00093	.00044	.00006	.00275	.089	.00002
%RSD	.24246	88.961	24.207	3.5259	.79236	36.811	205.78	.18290	152.35
#1	-.00134	.03726	.03334	.02690	.05574	.00019	-.00061	48.380	-.00000
#2	-.00134	.00848	.02360	.02559	.05511	.00011	.00328	48.506	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00072**	**.00305**	**.00280**	**.00792**	**16.038**	**.00686**	**13.949**	**.00105**	**.00518**
Stddev	.00031	.00069	.00006	.00565	.024	.00304	.014	.00002	.00026
%RSD	43.721	22.715	2.2589	71.311	.14764	44.336	.09990	2.3411	4.9951
#1	.00049	.00354	.00284	.01191	16.054	.00471	13.939	.00107	.00536
#2	.00094	.00256	.00275	.00393	16.021	.00901	13.958	.00104	.00500
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**64.651**	**-.00019**	W **40.376**	**-.00647**	**17.617**	**-.00090**	**.00080**	**15.465**	**33.094**
Stddev	.390	.00033	.876	.00250	.347	.00327	.00856	.161	.345
%RSD	.60270	170.08	2.1699	38.674	1.9707	363.59	1068.3	1.0437	1.0437
#1	64.375	.00004	40.996	-.00470	17.863	-.00321	-.00525	15.579	33.339
#2	64.926	-.00043	39.757	-.00824	17.372	.00141	.00686	15.351	32.850
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			20.000						
Low Limit			-6.0000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00288**	**.23002**	**-.00053**	**.00070**	**.00240**	**.10117**	**.02021**	**.01857**	**.00595**
Stddev	.00068	.00048	.00333	.00056	.00323	.01999	.00018	.00011	.00138
%RSD	23.649	.20700	631.36	79.975	134.48	19.762	.87476	.60471	23.272
#1	-.00240	.23036	-.00289	.00110	.00469	.08703	.02033	.01864	.00497
#2	-.00336	.22969	.00183	.00031	.00012	.11530	.02008	.01849	.00693
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3451.8**	**40805.**	**2942.2**
Stddev	42.4	349.	29.7
%RSD	1.2288	.85606	1.0087
#1	3421.8	41052.	2963.2
#2	3481.8	40558.	2921.3

Sample Name: 280-115729-A-5-B Acquired: 11/7/2018 2:41:40 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.00072**	**.02911**	**.02787**	**.05088**	**.00027**	**.00136**	**34.666**	**-.00070**
Stddev	.00039	.00073	.00041	.00021	.00044	.00003	.00749	.073	.00029
%RSD	164.69	100.35	1.4202	.75385	.85834	9.6222	551.14	.20985	41.691
#1	.00051	.00021	.02882	.02802	.05119	.00025	-.00394	34.615	-.00049
#2	-.00004	.00124	.02941	.02773	.05057	.00029	.00665	34.718	-.00090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00030**	**.00344**	**.00284**	**.00424**	**7.2696**	**.00541**	**8.9496**	**.00048**	**.00617**
Stddev	.00038	.00001	.00012	.00648	.1106	.00600	.0256	.00006	.00011
%RSD	127.07	.36627	4.1674	152.73	1.5209	110.92	.28661	13.147	1.7610
#1	.00003	.00343	.00275	.00883	7.1914	.00117	8.9677	.00052	.00624
#2	.00057	.00345	.00292	-.00034	7.3478	.00966	8.9314	.00043	.00609
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**105.29**	**.00034**	W **46.272**	**-.00797**	**18.204**	**-.00239**	**-.00176**	**17.791**	**38.072**
Stddev	.23	.00075	.777	.00040	.310	.00363	.00508	.078	.167
%RSD	.21976	223.18	1.6783	5.0633	1.7017	151.86	289.21	.43906	.43906
#1	105.12	-.00019	46.821	-.00825	18.423	-.00495	-.00535	17.846	38.190
#2	105.45	.00087	45.723	-.00768	17.985	.00018	.00184	17.736	37.954
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			20.000						
Low Limit			-6.0000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00208**	**.16368**	**.00152**	**.00071**	**.00393**	**-.02814**	**.02842**	**.00318**	**.00304**
Stddev	.00067	.00000	.00122	.00047	.00140	.01606	.00135	.00002	.00295
%RSD	31.997	.00065	80.018	66.383	35.771	57.084	4.7479	.63402	96.986
#1	-.00256	.16368	.00066	.00038	.00293	-.03950	.02938	.00317	.00513
#2	-.00161	.16368	.00239	.00104	.00492	-.01678	.02747	.00320	.00096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3517.8**	**42110.**	**3040.0**
Stddev	22.8	223.	38.2
%RSD	.64898	.53046	1.2577
#1	3533.9	41952.	3067.0
#2	3501.7	42268.	3013.0

Sample Name: 280-115729-A-6-B Acquired: 11/7/2018 2:44:11 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00123**	**.00149**	**.03056**	**.02735**	**.05116**	**.00036**	**-.00175**	**34.108**	**-.00008**
Stddev	.00065	.00029	.00398	.00002	.00007	.00007	.00083	.056	.00004
%RSD	52.645	19.329	13.024	.07424	.13615	19.613	47.229	.16540	53.307
#1	-.00077	.00128	.03338	.02736	.05111	.00031	-.00233	34.068	-.00005
#2	-.00169	.00169	.02775	.02734	.05121	.00041	-.00116	34.148	-.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00378**	**.00167**	**.00921**	**7.2170**	**.00726**	**8.8140**	**.00031**	**.00634**
Stddev	.00002	.00034	.00057	.00069	.1277	.00062	.0058	.00006	.00001
%RSD	41.056	8.9264	33.931	7.4649	1.7700	8.5549	.06533	19.997	.11521
#1	.00006	.00402	.00207	.00969	7.1267	.00770	8.8180	.00027	.00634
#2	.00003	.00354	.00127	.00872	7.3074	.00682	8.8099	.00036	.00633
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**104.32**	**-.00028**	W **45.992**	**-.00740**	**18.079**	**-.00223**	**.00861**	**17.665**	**37.803**
Stddev	.57	.00002	.603	.00018	.214	.00203	.00273	.147	.315
%RSD	.54988	7.2478	1.3107	2.3810	1.1819	91.096	31.699	.83384	.83384
#1	103.91	-.00026	46.418	-.00753	18.230	-.00367	.00668	17.769	38.026
#2	104.72	-.00029	45.566	-.00728	17.927	-.00079	.01054	17.561	37.580
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			20.000						
Low Limit			-6.0000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00366**	**.16142**	**.00106**	**.00091**	**.00077**	**.01925**	**.02799**	**.00107**	**.00444**
Stddev	.00091	.00011	.00289	.00025	.00316	.00840	.00006	.00015	.00193
%RSD	24.766	.06540	272.91	27.924	412.04	43.651	.20569	13.866	43.429
#1	-.00430	.16149	.00310	.00109	.00300	.02520	.02803	.00117	.00308
#2	-.00302	.16134	-.00098	.00073	-.00147	.01331	.02795	.00096	.00581
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3512.7**	**41920.**	**3027.8**
Stddev	4.1	331.	10.5
%RSD	.11676	.78902	.34827
#1	3515.6	41686.	3035.3
#2	3509.8	42154.	3020.4

Sample Name: 280-115729-A-7-B Acquired: 11/7/2018 2:46:43 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00131**	**.00524**	**.01898**	**.02427**	**.04828**	**.00021**	**-.00133**	**40.216**	**-.00053**
Stddev	.00015	.00309	.00384	.00152	.00012	.00046	.00019	.102	.00002
%RSD	11.657	59.028	20.243	6.2739	.25315	213.86	14.505	.25452	4.0666
#1	-.00142	.00305	.01627	.02535	.04837	-.00011	-.00119	40.143	-.00051
#2	-.00120	.00742	.02170	.02320	.04819	.00054	-.00147	40.288	-.00054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00053**	**.00315**	**.00170**	**.00534**	**23.517**	**.01144**	**12.137**	**.00048**	**.00461**
Stddev	.00013	.00020	.00141	.00075	.041	.00771	.010	.00011	.00010
%RSD	24.949	6.3125	82.899	14.022	.17611	67.378	.08614	22.482	2.1080
#1	.00044	.00301	.00070	.00481	23.487	.01690	12.144	.00040	.00454
#2	.00062	.00329	.00270	.00586	23.546	.00599	12.129	.00055	.00468
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**59.484**	**-.00075**	W **26.403**	**-.00644**	**18.253**	**-.00002**	**-.00181**	**14.295**	**30.591**
Stddev	.149	.00003	.395	.00068	.285	.00294	.00129	.056	.120
%RSD	.25074	4.4627	1.4960	10.520	1.5610	14858.	71.405	.39330	.39330
#1	59.378	-.00077	26.682	-.00596	18.454	.00206	-.00090	14.335	30.676
#2	59.589	-.00073	26.124	-.00692	18.051	-.00210	-.00273	14.255	30.506
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			20.000						
Low Limit			-6.0000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00311**	**.19480**	**.00054**	**.00056**	**.00226**	**.04164**	**.01920**	**.00975**	**.00499**
Stddev	.00028	.00071	.00302	.00083	.00118	.10181	.00075	.00022	.00095
%RSD	9.0021	.36289	559.68	148.67	52.127	244.53	3.9040	2.2998	19.104
#1	-.00331	.19430	.00267	-.00003	.00143	-.03036	.01973	.00991	.00432
#2	-.00292	.19530	-.00159	.00115	.00309	.11363	.01867	.00959	.00566
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3495.9**	**41984.**	**3052.7**
Stddev	1.8	227.	32.3
%RSD	.05217	.54016	1.0597
#1	3497.2	42144.	3075.6
#2	3494.6	41823.	3029.9

Sample Name: 280-115729-A-8-B Acquired: 11/7/2018 2:49:15 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00139**	**.00261**	**.01411**	**.02401**	**.04924**	**.00024**	**.00600**	**40.255**	**-.00030**
Stddev	.00049	.00048	.00569	.00020	.00020	.00003	.00330	.065	.00010
%RSD	34.987	18.366	40.302	.83056	.39661	10.472	54.901	.16179	32.944
#1	-.00173	.00227	.01813	.02415	.04938	.00022	.00833	40.301	-.00037
#2	-.00105	.00294	.01009	.02387	.04910	.00026	.00367	40.209	-.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	**.00314**	**.00182**	**.01990**	**23.668**	**.00492**	**12.016**	**.00049**	**.00454**
Stddev	.00036	.00038	.00053	.00443	.008	.00191	.037	.00014	.00057
%RSD	108.21	12.146	29.177	22.244	.03318	38.884	.30643	28.797	12.457
#1	.00008	.00341	.00144	.02303	23.662	.00627	12.042	.00060	.00414
#2	.00059	.00287	.00219	.01677	23.673	.00356	11.990	.00039	.00494
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**60.945**	**-.00052**	W **26.382**	**-.00626**	**18.147**	**-.00035**	**-.00081**	**14.318**	**30.640**
Stddev	.561	.00012	.459	.00119	.272	.00069	.00096	.189	.405
%RSD	.92125	23.339	1.7409	19.030	1.4962	199.49	119.23	1.3210	1.3210
#1	61.342	-.00044	26.707	-.00541	18.339	.00014	-.00013	14.452	30.927
#2	60.548	-.00061	26.058	-.00710	17.955	-.00083	-.00148	14.184	30.354
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			20.000						
Low Limit			-6.0000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00295**	**.19567**	**.00200**	**.00162**	**.00099**	**.05510**	**.01832**	**.01126**	**.00520**
Stddev	.00033	.00026	.00429	.00021	.00149	.00049	.00036	.00111	.00455
%RSD	11.090	.13475	214.76	13.280	150.85	.88412	1.9552	9.8688	87.449
#1	-.00272	.19586	.00503	.00177	.00205	.05475	.01857	.01205	.00199
#2	-.00319	.19548	-.00103	.00146	-.00007	.05544	.01807	.01047	.00842
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3504.2**	**41822.**	**2986.3**
Stddev	2.0	21.	27.8
%RSD	.05571	.05044	.93126
#1	3502.8	41837.	2966.6
#2	3505.6	41807.	3005.9

Sample Name: 280-115729-A-9-B Acquired: 11/7/2018 2:51:47 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00024**	**.03369**	**.00988**	**.02291**	**.08481**	**-.00001**	**-.00270**	**52.696**	**-.00034**
Stddev	.00032	.00136	.01185	.00103	.00061	.00018	.00359	.007	.00026
%RSD	131.45	4.0298	120.00	4.5021	.72404	2715.6	132.80	.01343	75.342
#1	-.00002	.03465	.01826	.02364	.08524	-.00013	-.00524	52.691	-.00052
#2	-.00047	.03273	.00150	.02218	.08437	.00012	-.00016	52.701	-.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00043**	**.00395**	**.00249**	**.05515**	**5.1075**	**-.00027**	**12.901**	**.00146**	**.00423**
Stddev	.00055	.00020	.00112	.00024	.0896	.00204	.057	.00013	.00085
%RSD	126.36	5.1661	45.111	.42999	1.7543	748.69	.44277	8.7506	20.182
#1	.00082	.00410	.00329	.05498	5.1709	-.00171	12.941	.00155	.00484
#2	.00005	.00381	.00170	.05531	5.0441	.00117	12.860	.00137	.00363
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.814**	**.00032**	**.11625**	**-.00522**	**18.511**	**-.00312**	**-.00250**	**11.846**	**25.350**
Stddev	.318	.00001	.00318	.00143	.309	.00605	.00182	.176	.378
%RSD	1.3373	4.3878	2.7346	27.318	1.6670	193.82	72.839	1.4893	1.4893
#1	23.589	.00033	.11850	-.00623	18.729	.00116	-.00121	11.971	25.617
#2	24.039	.00031	.11401	-.00421	18.293	-.00740	-.00378	11.721	25.083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00237**	**.25204**	**-.00016**	**.00352**	**.00275**	**.10382**	**.00658**	**.04406**	**.00743**
Stddev	.00021	.00004	.00027	.00026	.00314	.06180	.00044	.00023	.00082
%RSD	8.9648	.01412	170.69	7.3518	114.15	59.523	6.7528	.51089	11.100
#1	-.00252	.25202	.00003	.00371	.00498	.06013	.00689	.04422	.00685
#2	-.00222	.25207	-.00035	.00334	.00053	.14752	.00627	.04390	.00801
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3403.6**	**41175.**	**2956.8**
Stddev	27.6	66.	12.1
%RSD	.81221	.16149	.40896
#1	3384.0	41128.	2965.4
#2	3423.1	41222.	2948.3

Sample Name: 280-115729-A-10-B Acquired: 11/7/2018 2:54:20 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00135**	**.00424**	**.00446**	**.02245**	**.08438**	**.00031**	**-.00113**	**52.091**	**-.00009**
Stddev	.00115	.00155	.00318	.00051	.00044	.00007	.00145	.015	.00016
%RSD	84.834	36.456	71.296	2.2600	.52614	22.860	128.72	.02837	178.99
#1	-.00054	.00533	.00221	.02281	.08407	.00026	-.00010	52.102	-.00020
#2	-.00216	.00315	.00671	.02209	.08469	.00036	-.00215	52.081	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00000**	**.00353**	**.00142**	**.00794**	**4.8577**	**.00366**	**12.739**	**.00063**	**.00439**
Stddev	.00031	.00025	.00035	.00048	.0170	.00460	.033	.00001	.00039
%RSD	6921.2	6.9710	24.816	6.0393	.35082	125.49	.26163	2.1589	8.7762
#1	-.00022	.00371	.00167	.00828	4.8698	.00041	12.763	.00062	.00412
#2	.00021	.00336	.00117	.00760	4.8457	.00692	12.716	.00064	.00466
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.654**	**.00003**	**.10632**	**-.00518**	**18.314**	**-.00206**	**.00391**	**11.726**	**25.094**
Stddev	.022	.00022	.00152	.00013	.236	.00100	.00128	.049	.105
%RSD	.09850	811.04	1.4319	2.4822	1.2894	48.445	32.710	.42040	.42040
#1	22.638	.00018	.10524	-.00509	18.481	-.00277	.00481	11.761	25.168
#2	22.669	-.00013	.10740	-.00527	18.147	-.00135	.00300	11.691	25.019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00309**	**.24944**	**-.00084**	**-.00012**	**.00329**	**.00495**	**.00735**	**.04296**	**.00294**
Stddev	.00031	.00096	.00577	.00024	.00213	.01731	.00070	.00013	.00018
%RSD	9.9473	.38349	683.19	197.12	64.892	349.34	9.4645	.29462	6.0107
#1	-.00330	.25011	-.00492	.00005	.00178	.01719	.00784	.04305	.00281
#2	-.00287	.24876	.00323	-.00029	.00480	-.00728	.00686	.04287	.00306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3474.6**	**41655.**	**2966.8**
Stddev	1.6	3.	7.1
%RSD	.04463	.00807	.24045
#1	3473.5	41657.	2971.9
#2	3475.7	41653.	2961.8

Sample Name: CCVH-5408055 Acquired: 11/7/2018 2:56:55 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00389**	**46.909**	**-.00299**	**.00174**	**-.00045**	**.00025**	**.94858**	**.00548**	**-.00020**	**.00170**	**.00098**	**.00233**	**48.452**
Stddev	.00120	.066	.00118	.00003	.00004	.00022	.00957	.00205	.00029	.00047	.00006	.00057	.192
%RSD	30.887	.14033	39.400	1.5389	8.7896	88.723	1.0092	37.393	148.14	27.809	5.9337	24.541	.39543
#1	-.00304	46.956	-.00382	.00172	-.00042	.00009	.95535	.00693	.00001	.00137	.00102	.00274	48.587
#2	-.00474	46.863	-.00216	.00176	-.00048	.00040	.94181	.00403	-.00040	.00204	.00094	.00193	48.316
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09937**	**.00192**	**-.07897**	**.00275**	**-.00072**	**245.68**	**.00295**	**-.00025**	**-.00204**	**4.7486**	**-.00169**	**.00925**	**.11922**
Stddev	.06166	.00104	.00084	.00001	.00005	.32	.00046	.00387	.00011	.0691	.00247	.00062	.01627
%RSD	62.051	53.926	1.0635	.31925	7.3929	.13111	15.511	1557.9	5.4120	1.4542	146.12	6.6597	13.646
#1	.05577	.00266	-.07837	.00275	-.00076	245.45	.00327	.00249	-.00212	4.7975	.00006	.00881	.13073
#2	.14297	.00119	-.07956	.00274	-.00069	245.91	.00263	-.00299	-.00196	4.6998	-.00344	.00968	.10772
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25513**	**-.00253**	**.00010**	**4.8913**	**.01686**	**.00149**	**9.7908**	**-.01147**	**.00031**	**.07838**
Stddev	.03482	.00000	.00046	.0167	.00010	.00012	.1028	.00015	.00000	.00927
%RSD	13.646	.10449	462.72	.34113	.58058	8.1259	1.0502	1.3213	1.2252	11.827
#1	.27975	-.00253	.00043	4.9031	.01679	.00158	9.8635	-.01158	.00030	.08493
#2	.23052	-.00253	-.00023	4.8795	.01692	.00141	9.7181	-.01136	.00031	.07182
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3332.1**	**39724.**	**2904.4**
Stddev	7.2	191.	12.6
%RSD	.21618	.48088	.43459
#1	3327.0	39589.	2913.3
#2	3337.2	39859.	2895.4

Sample Name: CCV-5407546 Acquired: 11/7/2018 2:59:28 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50140**	F **.59618**	**.98432**	**.49933**	**.51241**	**.48740**	**.00391**	**4.9190**	**.50222**	**.49809**	**.49541**	**.50789**
Stddev	.00167	.00363	.01032	.00618	.00170	.00065	.00337	.0128	.00427	.00276	.00492	.00193
%RSD	.33210	.60846	1.0483	1.2382	.33187	.13316	86.283	.26021	.84963	.55423	.99408	.37908
#1	.50023	.59875	.99162	.50370	.51361	.48786	.00629	4.9099	.50524	.50005	.49890	.50926
#2	.50258	.59362	.97703	.49496	.51121	.48694	.00152	4.9280	.49920	.49614	.49193	.50653
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4341**	**50.497**	**1.0133**	**19.943**	**.49613**	**.49154**	**5.4008**	**.49753**	**1.0622**	**1.0040**	**.00073**	**1.0092**
Stddev	.0070	.241	.0040	.020	.00062	.00582	.0387	.00323	.0023	.0049	.00837	.0099
%RSD	.28673	.47724	.39136	.10204	.12444	1.1833	.71683	.64954	.21993	.48718	1149.4	.98195
#1	2.4390	50.668	1.0161	19.958	.49657	.49565	5.4281	.49981	1.0639	1.0075	.00665	1.0162
#2	2.4291	50.327	1.0105	19.929	.49569	.48743	5.3734	.49524	1.0606	1.0006	-.00519	1.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.97740**	**4.9630**	**10.621**	**.99593**	**.49372**	**.01057**	**.49388**	**1.0214**	**.02060**	**.50445**	**.50202**	**.49598**
Stddev	.00766	.0838	.179	.00675	.00128	.00344	.00055	.0048	.05199	.00013	.00345	.00092
%RSD	.78334	1.6875	1.6875	.67769	.25953	32.522	.11131	.46800	252.40	.02645	.68767	.18457
#1	.98281	4.9038	10.494	1.0007	.49463	.00814	.49427	1.0248	-.01617	.50436	.50446	.49663
#2	.97199	5.0222	10.748	.99116	.49282	.01301	.49349	1.0181	.05736	.50454	.49958	.49533
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3393.1**	**40976.**	**2924.8**
Stddev	2.4	194.	9.4
%RSD	.07056	.47451	.32275
#1	3391.4	40838.	2918.1
#2	3394.8	41113.	2931.5

Sample Name: CCB Acquired: 11/7/2018 3:01:54 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00083**	**-.00075**	**.00306**	**.00087**	**-.00062**	**.00012**	**.00429**	**.04368**	**-.00058**	**.00083**	**.00003**	**.00113**	**.01569**
Stddev	.00018	.00019	.00361	.00068	.00046	.00051	.00148	.06556	.00021	.00053	.00033	.00080	.02143
%RSD	22.032	25.859	117.82	78.283	75.566	439.33	34.582	150.09	36.133	63.671	1106.5	70.954	136.62
#1	-.00096	-.00089	.00561	.00039	-.00029	.00048	.00324	.09003	-.00043	.00046	-.00020	.00169	.03084
#2	-.00070	-.00061	.00051	.00135	-.00094	-.00025	.00533	-.00268	-.00073	.00121	.00026	.00056	.00053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00267**	**.00041**	**-.00123**	**.00007**	**.00134**	**.31602**	**-.00040**	**-.00197**	**.00051**	**.00600**	**.00273**	**-.00251**	**.05972**
Stddev	.14579	.00014	.00445	.00009	.00045	.15120	.00025	.00156	.00083	.00054	.00008	.00970	.00235
%RSD	5464.0	34.009	362.45	116.70	33.947	47.845	63.482	79.142	163.57	8.9483	2.8097	387.30	3.9323
#1	.10042	.00051	-.00437	.00013	.00101	.42293	-.00022	-.00307	.00110	.00638	.00267	-.00937	.06138
#2	-.10575	.00031	.00192	.00001	.00166	.20911	-.00058	-.00087	-.00008	.00562	.00278	.00436	.05806
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.12781**	**-.00127**	**.00050**	**-.00174**	**.00026**	**-.00031**	**.02114**	**.00004**	**-.00026**	**.00020**
Stddev	.00503	.00129	.00077	.00245	.00051	.00011	.05843	.00051	.00080	.00054
%RSD	3.9323	101.41	153.47	140.49	201.66	37.183	276.36	1399.6	305.63	269.68
#1	.13136	-.00036	.00105	-.00001	-.00011	-.00023	.06245	.00039	.00030	.00058
#2	.12425	-.00218	-.00004	-.00348	.00062	-.00039	-.02017	-.00032	-.00082	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3346.5**	**40349.**	**2820.7**
Stddev	27.4	209.	7.4
%RSD	.81748	.51674	.26240
#1	3327.1	40201.	2825.9
#2	3365.8	40496.	2815.4

Sample Name: ccvl-5413446 Acquired: 11/7/2018 3:04:32 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00958**	**.12271**	**.01658**	**.10043**	**.00998**	**.00109**	**.10503**	F **.34428**	**.00445**	**.01080**	**.01046**	**.01671**
Stddev	.00118	.00193	.00955	.00005	.00039	.00012	.00060	.00603	.00001	.00024	.00015	.00066
%RSD	12.321	1.5748	57.624	.05424	3.8814	11.003	.56859	1.7524	.17906	2.2671	1.4576	3.9524
#1	.01041	.12408	.02334	.10047	.01026	.00101	.10545	.34854	.00445	.01098	.01056	.01718
#2	.00874	.12135	.00982	.10039	.00971	.00118	.10460	.34001	.00444	.01063	.01035	.01625
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								.20000				
Range								30.000%				

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10951**	**3.1490**	**.01621**	**.20707**	**.01073**	**.01883**	**1.2681**	**.04015**	**3.0525**	**.00768**	**.08707**	**.01942**
Stddev	.00017	.0055	.00362	.00473	.00012	.00021	.0162	.00131	.0437	.00150	.00501	.00561
%RSD	.15600	.17579	22.339	2.2851	1.1588	1.1077	1.2793	3.2558	1.4303	19.536	5.7524	28.904
#1	.10963	3.1529	.01878	.20373	.01081	.01897	1.2566	.04107	3.0834	.00875	.08353	.01545
#2	.10939	3.1450	.01365	.21042	.01064	.01868	1.2796	.03923	3.0217	.00662	.09061	.02339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02470**	**.56367**	**1.2062**	**.09575**	**.01011**	**.01598**	**.01094**	**.01605**	F **.01314**	**.01010**	F **.05154**	F **.02045**
Stddev	.01046	.04510	.0965	.00183	.00055	.00119	.00100	.00121	.02625	.00077	.00046	.00246
%RSD	42.354	8.0017	8.0017	1.9163	5.4753	7.4625	9.1052	7.5170	199.81	7.5841	.89327	12.012
#1	.03209	.53178	1.1380	.09704	.01050	.01513	.01165	.01691	.03170	.00956	.05186	.02219
#2	.01730	.59556	1.2745	.09445	.00972	.01682	.01024	.01520	-.00542	.01064	.05121	.01872
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail
Value									.06000		.02000	.01500
Range									-30.000%		30.000%	30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3448.5**	**41897.**	**2930.0**
Stddev	12.9	211.	20.9
%RSD	.37415	.50317	.71410
#1	3457.6	41748.	2944.8
#2	3439.3	42046.	2915.2

Sample Name: MB 280-436442/1-A Acquired: 11/7/2018 3:07:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00103**	**.02123**	**-.00215**	**.00052**	**-.00061**	**.00012**	**.00206**	**.00070**	**-.00019**
Stddev	.00048	.02939	.00426	.00076	.00027	.00019	.00402	.00531	.00000
%RSD	46.140	138.42	198.22	145.96	45.272	156.32	195.36	756.18	1.2057
#1	-.00137	.04202	.00086	-.00002	-.00041	-.00001	.00490	-.00305	-.00019
#2	-.00070	.00045	-.00517	.00106	-.00080	.00025	-.00078	.00446	-.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00063**	**.00043**	**.00097**	**.00151**	**-.12245**	**-.00418**	**-.00310**	**.00029**	**-.00013**
Stddev	.00006	.00005	.00008	.00479	.02707	.00240	.00034	.00002	.00021
%RSD	9.6986	12.332	7.9966	318.01	22.109	57.345	10.903	7.8487	154.97
#1	.00059	.00039	.00092	-.00188	-.10331	-.00248	-.00286	.00030	.00001
#2	.00067	.00046	.00103	.00489	-.14159	-.00587	-.00334	.00027	-.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.15467**	**-.00008**	**.00147**	**-.00217**	**-.00384**	**-.00121**	**.00369**	**.04249**	**.09093**
Stddev	.02330	.00076	.00267	.00210	.01396	.00120	.00134	.03709	.07938
%RSD	15.064	892.74	180.99	96.953	363.69	99.141	36.287	87.295	87.295
#1	.13820	.00045	.00336	-.00068	.00603	-.00036	.00274	.01626	.03480
#2	.17115	-.00062	-.00041	-.00366	-.01371	-.00205	.00464	.06872	.14706
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00087**	**.00002**	**.00136**	**.00067**	**.00336**	**.02413**	**.00037**	**.00072**	**.00591**
Stddev	.00264	.00013	.00046	.00013	.00189	.03187	.00034	.00001	.00137
%RSD	304.08	740.74	34.044	19.060	56.287	132.09	91.375	1.3418	23.154
#1	.00100	.00011	.00104	.00076	.00469	.00159	.00013	.00073	.00688
#2	-.00273	-.00007	.00169	.00058	.00202	.04666	.00061	.00072	.00494
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3489.9**	**42731.**	**2970.8**
Stddev	1.5	14.	12.9
%RSD	.04435	.03230	.43358
#1	3491.0	42741.	2979.9
#2	3488.8	42722.	2961.7

Sample Name: LCS 280-436442/2-A Acquired: 11/7/2018 3:09:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.04207**	F **2.2347**	**.96963**	**1.0319**	**2.0265**	**.04829**	**1.8619**	**48.536**	**.09432**
Stddev	.00034	.0470	.01386	.0145	.0025	.00046	.0302	.055	.00153
%RSD	.80153	2.1045	1.4294	1.4032	.12249	.95116	1.6245	.11289	1.6217
#1	.04231	2.2679	.97943	1.0422	2.0283	.04861	1.8833	48.575	.09540
#2	.04183	2.2014	.95983	1.0217	2.0248	.04796	1.8405	48.497	.09324
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750	2.2299							
Low Limit	.04275	1.7300							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47681**	**.19171**	**.24963**	**.97903**	**50.256**	**.99130**	**48.717**	**.48794**	**1.0051**
Stddev	.00819	.00439	.00263	.00690	.038	.00014	.141	.00180	.0192
%RSD	1.7179	2.2907	1.0555	.70464	.07651	.01394	.28959	.36948	1.9086
#1	.48260	.19482	.25150	.98391	50.283	.99140	48.816	.48921	1.0187
#2	.47102	.18861	.24777	.97415	50.229	.99120	48.617	.48666	.99156
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**48.711**	**.47126**	**10.723**	**.48521**	**1.9380**	**.51725**	**1.9490**	**10.032**	**21.469**
Stddev	.754	.00655	.164	.00309	.0212	.00872	.0235	.056	.120
%RSD	1.5482	1.3908	1.5250	.63646	1.0938	1.6857	1.2047	.55944	.55944
#1	49.245	.47590	10.838	.48739	1.9530	.52341	1.9656	9.9928	21.385
#2	48.178	.46663	10.607	.48303	1.9230	.51108	1.9324	10.072	21.554
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9998**	**.98260**	**.97624**	**1.0126**	**1.9675**	**2.0216**	**.50994**	**.50185**	**.52262**
Stddev	.0252	.00211	.00940	.0020	.0301	.0120	.00387	.00490	.00246
%RSD	1.2589	.21500	.96256	.19647	1.5301	.59476	.75978	.97597	.46994
#1	2.0176	.98409	.98288	1.0140	1.9888	2.0301	.51268	.50531	.52435
#2	1.9820	.98110	.96959	1.0112	1.9462	2.0131	.50720	.49838	.52088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3351.7**	**40042.**	**2905.5**
Stddev	5.9	1.	8.3
%RSD	.17531	.00286	.28456
#1	3355.9	40041.	2899.7
#2	3347.6	40043.	2911.4

Sample Name: LCSD 280-436442/3-A Acquired: 11/7/2018 3:12:03 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.04249**	F **2.2795**	**.99456**	**1.0430**	**2.0400**	**.04908**	**1.9082**	**48.854**	**.09615**
Stddev	.00091	.0380	.00411	.0114	.0074	.00044	.0309	.012	.00116
%RSD	2.1437	1.6673	.41363	1.0932	.36132	.89101	1.6170	.02526	1.2040
#1	.04184	2.3064	.99747	1.0511	2.0348	.04877	1.9300	48.863	.09697
#2	.04313	2.2527	.99165	1.0350	2.0452	.04939	1.8864	48.846	.09533
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750	2.2299							
Low Limit	.04275	1.7300							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48802**	**.20577**	**.25428**	**1.1077**	**50.578**	**.99596**	**49.252**	**.49397**	**1.0222**
Stddev	.00548	.00222	.00147	.0054	.108	.00104	.089	.00052	.0160
%RSD	1.1228	1.0778	.57879	.49026	.21329	.10454	.18055	.10615	1.5658
#1	.49189	.20734	.25532	1.1115	50.654	.99669	49.315	.49360	1.0335
#2	.48414	.20421	.25324	1.1039	50.501	.99522	49.189	.49434	1.0108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.261**	**.48401**	**10.935**	**.49758**	**1.9642**	**.52067**	**1.9962**	**10.012**	**21.427**
Stddev	.071	.00375	.109	.00424	.0058	.01533	.0169	.171	.366
%RSD	.14067	.77501	.99792	.85131	.29738	2.9453	.84797	1.7100	1.7100
#1	50.311	.48666	11.012	.50057	1.9683	.53151	2.0081	9.8914	21.168
#2	50.211	.48136	10.858	.49458	1.9600	.50982	1.9842	10.134	21.686
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0242**	**.99014**	**.99469**	**1.0155**	**2.0064**	**2.0420**	**.51652**	**.50629**	**.52146**
Stddev	.0267	.00079	.00426	.0002	.0216	.0596	.00104	.00161	.00809
%RSD	1.3191	.07943	.42783	.01818	1.0759	2.9207	.20128	.31824	1.5514
#1	2.0431	.98958	.99770	1.0156	2.0217	1.9998	.51725	.50742	.51574
#2	2.0054	.99069	.99168	1.0154	1.9911	2.0842	.51578	.50515	.52718
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3410.5**	**40557.**	**2957.6**
Stddev	35.2	42.	8.3
%RSD	1.0309	.10328	.28111
#1	3385.7	40527.	2963.5
#2	3435.4	40586.	2951.8

Sample Name: 280-116327-D-1-D Acquired: 11/7/2018 3:14:23 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00118**	**.00157**	**.00360**	**.03918**	**.11306**	**.00009**	**.00091**	**34.905**	**-.00001**
Stddev	.00053	.00059	.00144	.00127	.00079	.00003	.00146	.055	.00044
%RSD	44.799	37.648	40.064	3.2422	.70031	30.438	160.77	.15853	4280.2
#1	-.00155	.00199	.00462	.04008	.11250	.00011	.00194	34.944	-.00032
#2	-.00081	.00115	.00258	.03828	.11362	.00007	-.00012	34.866	.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00016**	**.00305**	**.00140**	**.00369**	**1.9153**	**.01061**	**5.6417**	**.00060**	**.00334**
Stddev	.00006	.00001	.00028	.00231	.0122	.00284	.0139	.00010	.00026
%RSD	34.218	.34990	19.999	62.710	.63614	26.728	.24654	16.305	7.8247
#1	-.00012	.00306	.00159	.00532	1.9240	.01262	5.6515	.00067	.00353
#2	-.00020	.00305	.00120	.00205	1.9067	.00861	5.6318	.00053	.00316
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.531**	**-.00020**	**.00707**	**-.00540**	**7.0517**	**-.00294**	**-.00348**	**13.127**	**28.092**
Stddev	.083	.00007	.00210	.00006	.1164	.00149	.00276	.078	.166
%RSD	.35149	33.558	29.762	1.1978	1.6506	50.742	79.411	.59120	.59120
#1	23.473	-.00024	.00558	-.00545	7.1340	-.00400	-.00153	13.072	27.974
#2	23.590	-.00015	.00856	-.00535	6.9694	-.00189	-.00543	13.182	28.209
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00047**	**.24487**	**.00084**	**.00112**	**.00282**	**.00373**	**.00662**	**.00263**	**.00515**
Stddev	.00190	.00094	.00074	.00024	.00565	.06323	.00020	.00062	.00263
%RSD	400.04	.38490	88.065	20.929	200.27	1693.5	2.9711	23.724	51.073
#1	.00087	.24554	.00136	.00096	.00682	-.04098	.00675	.00219	.00701
#2	-.00182	.24420	.00032	.00129	-.00117	.04845	.00648	.00308	.00329
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3513.5**	**42226.**	**3024.3**
Stddev	1.8	189.	.7
%RSD	.05034	.44862	.02162
#1	3514.7	42093.	3024.8
#2	3512.2	42360.	3023.8

Sample Name: 280-116327-D-1-DSD@5 Acquired: 11/7/2018 3:16:56 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00142**	**-.00035**	**.00959**	**.00876**	**.02308**	**.00009**	**.00175**	**7.1437**	**-.00073**
Stddev	.00018	.00068	.00552	.00079	.00094	.00019	.00048	.0179	.00040
%RSD	12.436	193.88	57.562	8.9923	4.0909	218.90	27.661	.25026	55.428
#1	-.00130	-.00083	.01349	.00932	.02374	.00023	.00140	7.1564	-.00101
#2	-.00155	.00013	.00568	.00821	.02241	-.00005	.00209	7.1311	-.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00075**	**.00066**	**.00116**	**-.00061**	**.44621**	**.00283**	**1.1713**	**.00017**	**.00051**
Stddev	.00024	.00030	.00110	.00080	.08427	.00293	.0000	.00008	.00017
%RSD	31.931	45.645	94.871	130.52	18.885	103.44	.00325	48.074	34.066
#1	.00092	.00087	.00194	-.00005	.50579	.00076	1.1713	.00011	.00039
#2	.00058	.00044	.00038	-.00118	.38662	.00490	1.1712	.00022	.00063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.0619**	**-.00004**	**-.00085**	**-.00199**	**1.3751**	**-.00382**	**.00042**	**2.7155**	**5.8111**
Stddev	.0107	.00023	.00143	.00025	.0348	.00081	.00604	.0054	.0116
%RSD	.21090	529.50	167.00	12.392	2.5280	21.107	1443.4	.19903	.19903
#1	5.0694	-.00021	-.00186	-.00216	1.3997	-.00325	.00469	2.7193	5.8193
#2	5.0543	.00012	.00015	-.00182	1.3505	-.00439	-.00385	2.7117	5.8029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00260**	**.05025**	**.00047**	**.00066**	**.00120**	**.03665**	**.00176**	**-.00024**	**.00698**
Stddev	.00022	.00018	.00146	.00089	.00164	.00560	.00018	.00131	.00038
%RSD	8.6652	.36347	309.96	135.72	137.34	15.286	10.349	539.25	5.4914
#1	-.00276	.05038	.00150	.00003	.00236	.03269	.00189	.00068	.00671
#2	-.00244	.05012	-.00056	.00129	.00003	.04061	.00163	-.00117	.00725
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3487.5**	**42279.**	**2951.2**
Stddev	.9	391.	3.7
%RSD	.02483	.92547	.12615
#1	3488.2	42003.	2948.6
#2	3486.9	42556.	2953.9

Sample Name: 280-116327-D-1-E MS Acquired: 11/7/2018 3:19:31 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04098**	**2.2372**	**.98501**	**1.0621**	**2.1356**	**.04868**	**1.8691**	**82.775**	**.09435**
Stddev	.00003	.0299	.01494	.0141	.0036	.00013	.0309	.120	.00150
%RSD	.08121	1.3381	1.5168	1.3301	.16930	.26262	1.6529	.14454	1.5913
#1	.04101	2.2583	.99557	1.0721	2.1331	.04859	1.8909	82.690	.09541
#2	.04096	2.2160	.97444	1.0521	2.1382	.04877	1.8472	82.859	.09329
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47804**	**.19628**	**.25098**	**.96544**	**52.157**	**1.0005**	**53.861**	**.48676**	**1.0021**
Stddev	.00588	.00260	.00246	.00105	.077	.0020	.216	.00276	.0111
%RSD	1.2293	1.3255	.98116	.10926	.14785	.20113	.40109	.56726	1.1081
#1	.48220	.19812	.25273	.96619	52.103	1.0019	54.013	.48871	1.0100
#2	.47389	.19444	.24924	.96470	52.212	.99907	53.708	.48481	.99425
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**72.357**	**.47354**	**10.825**	**.48070**	**9.0235**	**.51387**	**1.9586**	**22.905**	**49.017**
Stddev	.580	.00518	.133	.00536	.0797	.00696	.0316	.055	.117
%RSD	.80214	1.0932	1.2301	1.1143	.88350	1.3549	1.6158	.23796	.23796
#1	71.946	.47720	10.919	.48449	9.0799	.51879	1.9810	22.866	48.934
#2	72.767	.46988	10.730	.47692	8.9671	.50895	1.9362	22.944	49.099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9875**	**1.2276**	**.98593**	**1.0039**	**1.9446**	**2.0031**	**.51837**	**.50272**	**.51465**
Stddev	.0255	.0012	.00056	.0059	.0192	.0284	.00442	.00037	.00223
%RSD	1.2809	.09472	.05684	.58517	.98572	1.4161	.85178	.07283	.43315
#1	2.0055	1.2267	.98553	1.0081	1.9581	2.0231	.52149	.50246	.51307
#2	1.9695	1.2284	.98632	.99978	1.9310	1.9830	.51525	.50297	.51623
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3331.7**	**40027.**	**2912.8**
Stddev	4.8	96.	7.6
%RSD	.14518	.23884	.26089
#1	3335.1	39960.	2907.5
#2	3328.2	40095.	2918.2

Sample Name: 280-116327-D-1-F MSD Acquired: 11/7/2018 3:21:51 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04148**	**2.2553**	**.99724**	**1.0732**	**2.1787**	**.04994**	**1.8914**	**85.121**	**.09555**
Stddev	.00047	.0366	.02284	.0168	.0010	.00041	.0211	.025	.00102
%RSD	1.1251	1.6219	2.2907	1.5662	.04418	.82269	1.1135	.02895	1.0703
#1	.04181	2.2812	1.0134	1.0851	2.1780	.04965	1.9063	85.103	.09627
#2	.04115	2.2294	.98109	1.0613	2.1794	.05023	1.8765	85.138	.09482
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48368**	**.19856**	**.25420**	**.99228**	**53.215**	**1.0222**	**54.881**	**.49512**	**1.0130**
Stddev	.00809	.00374	.00156	.00062	.000	.0006	.093	.00097	.0196
%RSD	1.6717	1.8837	.61259	.06284	.00075	.06065	.16893	.19562	1.9317
#1	.48940	.20120	.25531	.99184	53.215	1.0218	54.947	.49580	1.0268
#2	.47796	.19591	.25310	.99272	53.215	1.0227	54.815	.49444	.99912
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**74.217**	**.48024**	**10.971**	**.48283**	**9.3001**	**.51630**	**1.9679**	**23.667**	**50.647**
Stddev	.319	.00931	.167	.00560	.1285	.00743	.0287	.136	.291
%RSD	.42991	1.9379	1.5241	1.1596	1.3816	1.4394	1.4576	.57406	.57406
#1	73.992	.48682	11.089	.48678	9.3910	.52156	1.9882	23.571	50.441
#2	74.443	.47366	10.852	.47887	9.2093	.51105	1.9476	23.763	50.853
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0021**	**1.2562**	**1.0003**	**1.0162**	**1.9710**	**2.0319**	**.52880**	**.50898**	**.52343**
Stddev	.0349	.0014	.0061	.0012	.0314	.0333	.00352	.00381	.00163
%RSD	1.7444	.10884	.61311	.11650	1.5937	1.6368	.66571	.74769	.31122
#1	2.0268	1.2571	1.0047	1.0170	1.9933	2.0084	.53129	.51167	.52458
#2	1.9774	1.2552	.99599	1.0154	1.9488	2.0554	.52631	.50628	.52228
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3352.1**	**40218.**	**2932.4**
Stddev	12.9	117.	2.0
%RSD	.38434	.29105	.06737
#1	3361.2	40301.	2933.8
#2	3342.9	40135.	2931.0

Sample Name: 280-116327-D-1-D PDS Acquired: 11/7/2018 3:24:11 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02711**	**1.1314**	**.20479**	**.13765**	**.21045**	**.04840**	**-.00049**	**53.000**	**.04789**
Stddev	.00107	.0180	.00047	.00229	.00094	.00048	.01141	.134	.00075
%RSD	3.9402	1.5922	.22731	1.6660	.44553	.99368	2330.9	.25234	1.5560
#1	.02786	1.1442	.20512	.13927	.20979	.04874	-.00856	52.906	.04842
#2	.02635	1.1187	.20446	.13603	.21112	.04806	.00758	53.095	.04736
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04718**	**.05045**	**.05138**	**.96306**	**21.810**	**.11062**	**24.703**	**.04916**	**.04982**
Stddev	.00030	.00076	.00102	.00234	.028	.00390	.042	.00029	.00020
%RSD	.63537	1.4997	1.9877	.24283	.12812	3.5237	.16898	.58755	.40019
#1	.04740	.05099	.05210	.96141	21.830	.10786	24.733	.04936	.04996
#2	.04697	.04992	.05066	.96471	21.790	.11338	24.674	.04896	.04968
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.764**	**.04673**	**2.1194**	**.08828**	**6.9646**	**.10029**	**.19132**	**17.681**	**37.837**
Stddev	.021	.00094	.0309	.00049	.0879	.00455	.00546	.047	.100
%RSD	.04996	2.0211	1.4590	.55636	1.2623	4.5388	2.8519	.26425	.26425
#1	41.749	.04739	2.1413	.08863	7.0268	.10351	.18746	17.648	37.766
#2	41.779	.04606	2.0976	.08794	6.9025	.09707	.19518	17.714	37.907
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09557**	**.28722**	**.18905**	**.05013**	**.19530**	**.44807**	**.05600**	**.19958**	**.05937**
Stddev	.00250	.00060	.00540	.00005	.00114	.07477	.00010	.00072	.00005
%RSD	2.6137	.20993	2.8540	.10939	.58212	16.686	.17664	.36308	.09200
#1	.09734	.28680	.18523	.05010	.19611	.50094	.05607	.19907	.05933
#2	.09380	.28765	.19286	.05017	.19450	.39520	.05593	.20010	.05941
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3455.6**	**41636.**	**3002.5**
Stddev	4.6	117.	.5
%RSD	.13218	.28015	.01767
#1	3452.3	41718.	3002.8
#2	3458.8	41553.	3002.1

Sample Name: 280-116204-D-1-C Acquired: 11/7/2018 3:26:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00201**	**.00163**	**.00931**	**.03286**	**.05509**	**.00027**	**-.00118**	**138.31**	**-.00018**
Stddev	.00069	.00035	.01085	.00191	.00034	.00013	.00576	.39	.00039
%RSD	34.032	21.646	116.48	5.7985	.61847	47.074	486.30	.28288	223.38
#1	-.00153	.00188	.00164	.03421	.05534	.00037	-.00526	138.03	-.00045
#2	-.00250	.00138	.01698	.03151	.05485	.00018	.00289	138.59	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00044**	**.00225**	**.00235**	**.00938**	**2.7396**	**.02141**	**24.513**	**.00046**	**.00103**
Stddev	.00011	.00041	.00027	.00625	.0778	.00016	.059	.00012	.00007
%RSD	25.579	18.441	11.355	66.687	2.8397	.75071	.23925	25.578	6.6847
#1	.00036	.00254	.00217	.01380	2.6846	.02130	24.555	.00055	.00098
#2	.00052	.00196	.00254	.00496	2.7946	.02153	24.472	.00038	.00108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.053**	**-.00036**	**.00564**	**-.00582**	**31.559**	**-.00393**	**.01734**	**11.915**	**25.497**
Stddev	.412	.00018	.00276	.00277	.767	.00256	.00375	.049	.104
%RSD	1.5241	48.890	48.997	47.550	2.4292	65.014	21.654	.40722	.40722
#1	27.345	-.00024	.00368	-.00386	32.101	-.00213	.01468	11.949	25.571
#2	26.762	-.00049	.00759	-.00777	31.017	-.00574	.01999	11.880	25.424
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00239**	**1.0790**	**.00263**	**.00026**	**.00123**	**-.01283**	**.00355**	**.00141**	**.00224**
Stddev	.00012	.0019	.00302	.00077	.00037	.00107	.00042	.00002	.00267
%RSD	5.1061	.17302	114.73	292.84	30.389	8.3069	11.819	1.1654	119.05
#1	-.00247	1.0777	.00050	-.00028	.00097	-.01358	.00385	.00142	.00036
#2	-.00230	1.0803	.00476	.00081	.00150	-.01208	.00325	.00140	.00413
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3410.2**	**41120.**	**2946.5**
Stddev	4.7	242.	41.0
%RSD	.13874	.58934	1.3900
#1	3406.8	41291.	2917.5
#2	3413.5	40949.	2975.4

Sample Name: 280-116204-D-2-C Acquired: 11/7/2018 3:29:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00077**	**.00242**	**.00851**	**.02508**	**.08607**	**.00062**	**-.00253**	**44.007**	**-.00010**
Stddev	.00021	.00012	.00408	.00009	.00801	.00041	.00065	.189	.00026
%RSD	27.289	4.8616	47.929	.36440	9.3042	66.252	25.794	.42982	264.46
#1	-.00092	.00251	.01140	.02514	.08040	.00033	-.00299	43.873	.00008
#2	-.00062	.00234	.00563	.02501	.09173	.00090	-.00207	44.141	-.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00281**	**.00128**	**.03066**	**2.0313**	**.01514**	**6.9886**	**.00041**	**.00074**
Stddev	.00001	.00013	.00070	.00127	.1384	.00445	.0037	.00001	.00066
%RSD	25.008	4.7094	54.505	4.1347	6.8152	29.372	.05246	3.1247	88.699
#1	.00003	.00290	.00177	.02977	1.9334	.01199	6.9912	.00040	.00121
#2	.00002	.00271	.00079	.03156	2.1292	.01828	6.9860	.00042	.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.905**	**.00021**	**.00940**	**-.00410**	**11.758**	**-.00043**	**.00459**	**12.809**	**27.411**
Stddev	.615	.00081	.00100	.00108	.129	.00186	.00039	.068	.145
%RSD	2.5708	387.99	10.668	26.387	1.0967	433.09	8.5393	.52790	.52790
#1	23.471	-.00036	.00869	-.00334	11.849	-.00174	.00431	12.761	27.309
#2	24.340	.00078	.01011	-.00487	11.667	.00088	.00486	12.857	27.513
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00446**	**.28707**	**.00072**	**.00101**	**.00445**	**-.01097**	**.00404**	**.00114**	**.00882**
Stddev	.00028	.00304	.00137	.00036	.00235	.10424	.00051	.00017	.00319
%RSD	6.3731	1.0588	189.57	35.365	52.908	949.86	12.713	14.942	36.186
#1	-.00426	.28493	.00169	.00126	.00279	-.08468	.00440	.00102	.00657
#2	-.00466	.28922	-.00025	.00076	.00612	.06274	.00367	.00126	.01108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3417.2**	**41287.**	**3011.4**
Stddev	12.8	159.	4.2
%RSD	.37483	.38468	.14095
#1	3426.3	41175.	3008.4
#2	3408.2	41400.	3014.4

Sample Name: CCVH-5408055 Acquired: 11/7/2018 3:31:50 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00383**	**47.566**	**-.00081**	**.00350**	**-.00045**	**.00007**	**.96655**	**-.00123**	**-.00039**	**.00156**	**.00051**	**.00305**	**48.250**
Stddev	.00109	.092	.00434	.00039	.00044	.00009	.00736	.00148	.00007	.00032	.00052	.00075	.126
%RSD	28.572	.19422	534.83	11.122	96.667	126.94	.76148	120.14	16.714	20.597	101.91	24.503	.26184
#1	-.00460	47.631	-.00388	.00378	-.00076	.00014	.97176	-.00018	-.00035	.00133	.00088	.00358	48.161
#2	-.00306	47.501	.00226	.00323	-.00014	.00001	.96135	-.00227	-.00044	.00179	.00014	.00252	48.339
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01639**	**-.00045**	**-.08531**	**.00280**	**-.00104**	**246.36**	**.00232**	**.00430**	**-.00098**	**4.7767**	**.00147**	**-.00040**	**.02162**
Stddev	.05166	.00316	.00472	.00014	.00006	.45	.00034	.00043	.00062	.0546	.00505	.00348	.03150
%RSD	315.12	710.19	5.5277	4.8553	5.4839	.18335	14.859	10.067	63.195	1.1426	342.61	870.42	145.70
#1	-.02014	-.00268	-.08197	.00290	-.00108	246.68	.00256	.00400	-.00142	4.8153	-.00210	.00206	.04390
#2	.05292	.00179	-.08864	.00271	-.00099	246.04	.00207	.00461	-.00054	4.7381	.00505	-.00286	-.00065
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04627**	**-.00269**	**.00050**	**4.8872**	**.01700**	**-.00067**	**9.8450**	**-.01090**	**.00088**	**.08478**
Stddev	.06741	.00104	.00009	.0043	.00105	.00038	.1457	.00060	.00013	.00091
%RSD	145.70	38.517	17.571	.08883	6.1614	56.803	1.4794	5.5193	14.459	1.0771
#1	.09394	-.00342	.00044	4.8903	.01774	-.00094	9.7420	-.01048	.00097	.08543
#2	-.00140	-.00196	.00056	4.8841	.01626	-.00040	9.9480	-.01133	.00079	.08414
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3290.2**	**39227.**	**2834.9**
Stddev	9.5	241.	12.3
%RSD	.28884	.61333	.43391
#1	3296.9	39056.	2826.2
#2	3283.4	39397.	2843.6

Sample Name: CCV-5407546 Acquired: 11/7/2018 3:34:24 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49701**	F **.58380**	**.97349**	**.49375**	**.51111**	**.48458**	**-.00125**	**4.9374**	**.49279**	**.48979**	**.48736**	**.50332**
Stddev	.00171	.00777	.02163	.00483	.00011	.00104	.00278	.0365	.00596	.00688	.00582	.00116
%RSD	.34456	1.3305	2.2217	.97850	.02069	.21493	223.60	.74014	1.2103	1.4048	1.1949	.23028
#1	.49580	.58929	.98879	.49717	.51103	.48385	-.00321	4.9632	.49701	.49466	.49148	.50414
#2	.49822	.57831	.95820	.49033	.51118	.48532	.00072	4.9115	.48858	.48493	.48324	.50250
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4550**	**50.441**	**1.0041**	**19.782**	**.49274**	**.48468**	F **5.5450**	**.48931**	**1.0427**	**.98845**	**-.01077**	**.99211**
Stddev	.0344	.007	.0032	.042	.00073	.01023	.2564	.00744	.0083	.01458	.00193	.01706
%RSD	1.4004	.01385	.31545	.21218	.14722	2.1105	4.6244	1.5208	.79923	1.4754	17.946	1.7196
#1	2.4793	50.446	1.0063	19.812	.49326	.49192	5.7263	.49457	1.0486	.99876	-.01213	1.0042
#2	2.4307	50.436	1.0018	19.753	.49223	.47745	5.3637	.48405	1.0369	.97814	-.00940	.98005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.96026**	**4.9507**	**10.594**	**.97724**	**.49294**	**.01040**	**.48927**	**1.0042**	**-.00287**	**.49996**	**.49895**	**.49001**
Stddev	.01645	.0511	.109	.01134	.00022	.00371	.00292	.0082	.00612	.00296	.00440	.00476
%RSD	1.7129	1.0319	1.0319	1.1604	.04386	35.665	.59744	.81661	213.25	.59301	.88226	.97176
#1	.97189	4.9145	10.517	.98526	.49278	.00778	.49134	1.0100	-.00720	.50206	.50206	.49338
#2	.94863	4.9868	10.672	.96922	.49309	.01302	.48720	.99840	.00146	.49787	.49583	.48665
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3346.9**	**40559.**	**2850.7**
Stddev	16.8	62.	15.4
%RSD	.50087	.15184	.54136
#1	3335.0	40516.	2861.6
#2	3358.7	40603.	2839.8

Sample Name: CCB Acquired: 11/7/2018 3:36:50 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00091**	**.00107**	**.00070**	**.00214**	**-.00060**	**-.00017**	**.00236**	**-.00968**	**-.00012**	**.00080**	**.00026**	**.00098**	**.00094**
Stddev	.00005	.00013	.00873	.00045	.00057	.00010	.00392	.00407	.00019	.00008	.00042	.00004	.00062
%RSD	5.4025	12.104	1251.1	20.817	95.938	56.684	166.17	42.045	162.39	9.5102	162.98	4.1825	66.217
#1	-.00095	.00117	-.00548	.00246	-.00101	-.00010	.00513	-.00680	-.00025	.00075	-.00004	.00095	.00050
#2	-.00088	.00098	.00687	.00183	-.00019	-.00024	-.00041	-.01255	.00002	.00086	.00055	.00101	.00138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01368**	**-.00231**	**-.00182**	**.00015**	**.00141**	**.17315**	**.00015**	**-.00038**	**-.00082**	**-.01285**	**.00190**	**.00588**	**.02468**
Stddev	.07343	.00030	.00641	.00009	.00050	.01261	.00027	.00261	.00094	.00381	.00202	.01450	.00478
%RSD	536.78	12.864	351.81	59.646	35.714	7.2822	176.89	685.27	114.71	29.634	106.35	246.49	19.380
#1	.03825	-.00252	-.00636	.00009	.00176	.16423	.00034	-.00223	-.00149	-.01555	.00047	.01613	.02130
#2	-.06561	-.00210	.00271	.00021	.00105	.18206	-.00004	.00147	-.00016	-.01016	.00332	-.00437	.02807
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05282**	**-.00142**	**.00023**	**-.00062**	**.00084**	**.00054**	**.07328**	**-.00022**	**.00002**	**.00674**
Stddev	.01024	.00057	.00013	.00098	.00043	.00153	.00141	.00010	.00005	.00215
%RSD	19.380	40.228	56.988	157.21	50.930	283.78	1.9288	48.301	199.65	31.910
#1	.04558	-.00102	.00032	-.00131	.00114	-.00054	.07228	-.00029	.00005	.00826
#2	.06006	-.00182	.00014	.00007	.00054	.00162	.07428	-.00014	-.00001	.00522
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3385.4**	**41182.**	**2854.0**
Stddev	20.2	294.	.3
%RSD	.59703	.71492	.01161
#1	3371.2	40974.	2853.8
#2	3399.7	41390.	2854.3

Sample Name: ccvl-5413446 Acquired: 11/7/2018 3:39:29 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00971**	**.12082**	F **.02124**	**.09975**	**.01034**	**.00114**	**.11022**	**.20101**	**.00459**	**.01034**	**.00976**	**.01659**
Stddev	.00015	.00192	.00547	.00045	.00051	.00016	.00466	.00361	.00022	.00062	.00041	.00034
%RSD	1.5076	1.5857	25.753	.44939	4.9082	14.444	4.2245	1.7951	4.8425	5.9621	4.1512	2.0345
#1	.00961	.12217	.01737	.10007	.01070	.00125	.11351	.19846	.00475	.01077	.00948	.01683
#2	.00982	.11946	.02510	.09943	.00998	.00102	.10693	.20356	.00443	.00990	.01005	.01635
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09800**	**2.9195**	**.01917**	**.20655**	**.01034**	**.01949**	**1.2185**	**.03932**	**3.0301**	**.00697**	**.07373**	**.01909**
Stddev	.00455	.1451	.00016	.00314	.00005	.00069	.0004	.00049	.0374	.00034	.00232	.00092
%RSD	4.6460	4.9701	.81470	1.5209	.50601	3.5420	.03153	1.2486	1.2349	4.9390	3.1471	4.8017
#1	.09478	3.0221	.01906	.20878	.01030	.01998	1.2187	.03967	3.0566	.00672	.07537	.01844
#2	.10122	2.8169	.01928	.20433	.01038	.01901	1.2182	.03897	3.0037	.00721	.07209	.01974
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01956**	**.54999**	**1.1770**	**.09615**	**.01012**	**.01595**	**.01012**	**.01795**	F **.09456**	**.01088**	**.02084**	F **.02106**
Stddev	.00346	.00120	.0026	.00058	.00014	.00271	.00019	.00059	.04352	.00024	.00129	.00254
%RSD	17.689	.21745	.21745	.60126	1.3996	17.018	1.8443	3.3116	46.023	2.2098	6.2130	12.060
#1	.01711	.55083	1.1788	.09574	.01002	.01403	.01026	.01837	.12533	.01105	.01992	.02285
#2	.02201	.54914	1.1752	.09656	.01022	.01787	.00999	.01753	.06379	.01071	.02175	.01926
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3429.6**	**41881.**	**2922.0**
Stddev	3.9	195.	18.1
%RSD	.11245	.46602	.61928
#1	3432.3	42019.	2909.2
#2	3426.9	41743.	2934.8

Sample Name: 280-116533-A-1-A Acquired: 11/7/2018 3:42:04 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00081**	**.10928**	**.00081**	**.00671**	**.02535**	**.00022**	**.00412**	**28.034**	**.00072**
Stddev	.00106	.08970	.01099	.00434	.00007	.00013	.00947	.012	.00117
%RSD	130.12	82.082	1362.5	64.617	.26629	56.702	229.86	.04348	162.86
#1	-.00156	.04585	-.00697	.00364	.02530	.00031	-.00258	28.025	-.00011
#2	-.00007	.17271	.00858	.00977	.02540	.00013	.01082	28.042	.00154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00164**	**.00985**	**.00254**	**.06233**	**1.6431**	**.00631**	**8.2100**	W **11.295**	**.00160**
Stddev	.00165	.00127	.00007	.00741	.0689	.00013	.0471	.031	.00304
%RSD	100.18	12.928	2.6005	11.890	4.1944	2.0014	.57344	.27540	189.75
#1	.00048	.00895	.00249	.06757	1.5944	.00640	8.2433	11.317	-.00055
#2	.00281	.01075	.00258	.05709	1.6918	.00623	8.1767	11.273	.00375
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								10.000	
Low Limit								-.02000	

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**33.714**	**.00112**	**.10985**	**-.00404**	**6.1163**	**.00212**	**.00165**	**19.410**	**41.538**
Stddev	.016	.00200	.04338	.00290	.1587	.00087	.01005	.081	.174
%RSD	.04707	179.64	39.492	71.804	2.5953	40.881	609.35	.41773	.41773
#1	33.726	-.00030	.07917	-.00609	6.2285	.00151	-.00545	19.353	41.416
#2	33.703	.00253	.14053	-.00199	6.0040	.00273	.00875	19.468	41.661
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00125**	**.13906**	**.00063**	**.00392**	**.01263**	**.01080**	**.00586**	**.00215**	**.00639**
Stddev	.00508	.00047	.00164	.00102	.00141	.07570	.00065	.00008	.00091
%RSD	406.09	.33541	258.82	26.057	11.145	700.76	11.101	3.6515	14.203
#1	-.00234	.13939	-.00052	.00320	.01164	.06433	.00540	.00209	.00703
#2	.00484	.13873	.00179	.00464	.01363	-.04272	.00631	.00221	.00575
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3491.3**	**41089.**	**2914.3**
Stddev	24.1	430.	37.2
%RSD	.69108	1.0467	1.2752
#1	3474.2	40785.	2940.5
#2	3508.3	41393.	2888.0

Sample Name: 280-116533-A-2-A Acquired: 11/7/2018 3:44:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00518**	**.22985**	**.00489**	**.00517**	**.06091**	**-.00000**	**.00425**	**30.752**	**.00057**
Stddev	.00093	.00867	.00640	.00043	.00025	.00026	.00451	.137	.00004
%RSD	17.921	3.7724	131.10	8.4099	.41108	11393.	106.10	.44623	7.3490
#1	.00584	.23598	.00941	.00548	.06073	-.00019	.00744	30.850	.00054
#2	.00452	.22372	.00036	.00486	.06109	.00018	.00106	30.655	.00060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.06384**	**.00491**	**.26510**	**2.2869**	**-.00106**	**8.3924**	F **110.60**	**-.00337**
Stddev	.00038	.00165	.00141	.00152	.0198	.00196	.0018	1.04	.00016
%RSD	409.18	2.5804	28.831	.57429	.86514	184.88	.02128	.94107	4.8278
#1	.00036	.06500	.00391	.26403	2.2729	-.00245	8.3911	109.86	-.00348
#2	-.00017	.06267	.00591	.26618	2.3009	.00033	8.3936	111.33	-.00325
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit								20.000	
Low Limit								-.02000	

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**80.675**	**.00190**	**.06676**	**.00905**	**6.6156**	**-.01183**	**-.00079**	**19.626**	**42.000**
Stddev	.944	.00027	.00214	.00168	.1373	.00291	.00085	.026	.057
%RSD	1.1695	14.280	3.2100	18.589	2.0748	24.596	106.43	.13472	.13472
#1	81.342	.00209	.06827	.01024	6.7126	-.01389	-.00139	19.645	42.040
#2	80.008	.00171	.06524	.00786	6.5185	-.00978	-.00020	19.608	41.960
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00308**	**.15475**	**-.01695**	**.01558**	**.09413**	**.02012**	**.02237**	**.01428**	**.00539**
Stddev	.00091	.00016	.00109	.00087	.00500	.01707	.00070	.00071	.00123
%RSD	29.543	.10122	6.4266	5.5554	5.3135	84.823	3.1190	4.9953	22.804
#1	-.00244	.15486	-.01772	.01497	.09767	.00805	.02187	.01378	.00452
#2	-.00372	.15464	-.01618	.01620	.09059	.03219	.02286	.01478	.00626
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3490.9**	**41354.**	**2991.3**
Stddev	1.9	243.	3.4
%RSD	.05302	.58642	.11524
#1	3492.2	41526.	2988.9
#2	3489.6	41183.	2993.7

Sample Name: 280-116533-A-3-A Acquired: 11/7/2018 3:47:20 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00116**	**.13301**	**-.00003**	**.00385**	**.01995**	**.00004**	**-.00349**	**21.719**	**.00002**
Stddev	.00029	.00290	.00234	.00009	.00085	.00010	.00012	.064	.00005
%RSD	25.077	2.1784	6958.9	2.3348	4.2596	226.49	3.3497	.29299	223.56
#1	-.00137	.13506	.00162	.00391	.02055	-.00003	-.00340	21.764	.00006
#2	-.00096	.13097	-.00169	.00378	.01935	.00012	-.00357	21.674	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00008**	**.08238**	**.00190**	**.24710**	**.77137**	**-.00286**	**6.2002**	**.13888**	**.00029**
Stddev	.00016	.00259	.00021	.00232	.08005	.00049	.0241	.01412	.00048
%RSD	191.11	3.1455	10.873	.93785	10.377	17.254	.38917	10.168	165.99
#1	.00003	.08421	.00205	.24546	.71477	-.00321	6.1831	.14887	-.00005
#2	-.00019	.08054	.00176	.24874	.82797	-.00251	6.2172	.12890	.00063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **10.596**	**-.00083**	**.11869**	**-.01017**	**5.0269**	**-.00151**	**-.00436**	**22.777**	**48.743**
Stddev	.650	.00047	.00215	.00079	.1167	.00358	.00289	.031	.065
%RSD	6.1360	56.160	1.8093	7.7917	2.3207	237.32	66.226	.13422	.13422
#1	10.137	-.00116	.12021	-.01073	5.1094	-.00405	-.00640	22.799	48.789
#2	11.056	-.00050	.11717	-.00961	4.9444	.00102	-.00232	22.756	48.697
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00325**	**.10979**	**.00225**	**.00899**	**.00245**	**.03002**	**.01433**	**.00164**	**.00355**
Stddev	.00007	.00044	.00041	.00078	.00068	.04314	.00051	.00005	.00055
%RSD	2.0265	.40208	18.185	8.6592	27.807	143.71	3.5345	2.8637	15.464
#1	-.00320	.11010	.00196	.00844	.00197	.06052	.01469	.00161	.00316
#2	-.00330	.10948	.00254	.00954	.00293	-.00049	.01397	.00168	.00394
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3568.2**	**42481.**	**3050.9**
Stddev	3.4	134.	5.9
%RSD	.09573	.31505	.19353
#1	3565.8	42576.	3046.7
#2	3570.6	42386.	3055.1

Sample Name: 280-116533-A-8-A Acquired: 11/7/2018 3:49:53 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00143**	**.00647**	**.00284**	**.00999**	**.01879**	**.00023**	**-.00123**	**6.7539**	**-.00031**
Stddev	.00019	.00202	.00029	.00121	.00005	.00028	.00529	.0320	.00010
%RSD	13.235	31.173	10.053	12.096	.25781	122.14	430.74	.47381	32.122
#1	-.00157	.00505	.00305	.01085	.01876	.00003	-.00497	6.7766	-.00038
#2	-.00130	.00790	.00264	.00914	.01882	.00043	.00251	6.7313	-.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00037**	**.00422**	**.00233**	**.02184**	**1.7261**	**-.00436**	**.89080**	**.00308**	**.00037**
Stddev	.00027	.00053	.00008	.00338	.1001	.00271	.00229	.00079	.00002
%RSD	71.877	12.538	3.6242	15.462	5.7993	62.211	.25705	25.551	6.6211
#1	.00018	.00385	.00239	.02423	1.6553	-.00628	.89241	.00364	.00035
#2	.00056	.00459	.00227	.01945	1.7969	-.00244	.88918	.00253	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4426**	**.00015**	**.01044**	**-.00257**	**.38545**	**-.00588**	**-.00021**	**1.6833**	**3.6022**
Stddev	.0274	.00062	.00118	.00050	.00059	.00036	.00434	.0494	.1058
%RSD	1.1225	398.88	11.267	19.491	.15292	6.1704	2115.6	2.9359	2.9359
#1	2.4232	-.00028	.00961	-.00221	.38587	-.00614	-.00328	1.7182	3.6770
#2	2.4620	.00059	.01128	-.00292	.38503	-.00562	.00286	1.6483	3.5274
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00329**	**.03072**	**-.00241**	**.00134**	**.00259**	**.01081**	**.00059**	**.02584**	**.00525**
Stddev	.00124	.00014	.00087	.00025	.00066	.02793	.00022	.00084	.00236
%RSD	37.681	.44099	36.255	18.509	25.597	258.38	36.839	3.2357	44.906
#1	-.00241	.03082	-.00303	.00116	.00306	-.00894	.00075	.02525	.00358
#2	-.00417	.03063	-.00179	.00151	.00212	.03056	.00044	.02643	.00692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3567.4**	**43047.**	**3025.2**
Stddev	15.6	304.	3.2
%RSD	.43590	.70704	.10553
#1	3556.4	43263.	3027.5
#2	3578.4	42832.	3023.0

Sample Name: 280-116533-A-12-A Acquired: 11/7/2018 3:52:28 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00112**	**.05125**	**.01103**	**.00675**	**.14203**	**.00020**	**.00166**	**70.366**	**-.00049**
Stddev	.00033	.00105	.00009	.00090	.00017	.00011	.00225	.099	.00033
%RSD	29.559	2.0471	.81056	13.254	.12210	55.614	134.89	.14044	67.478
#1	-.00136	.05199	.01109	.00739	.14191	.00028	.00008	70.436	-.00072
#2	-.00089	.05051	.01097	.00612	.14215	.00012	.00325	70.296	-.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00099**	**.00045**	**.00133**	**.11067**	**.66994**	**-.00634**	**16.221**	**.67486**	**.00195**
Stddev	.00022	.00027	.00010	.00501	.04111	.00164	.011	.00101	.00017
%RSD	22.586	59.750	7.2558	4.5267	6.1362	25.894	.06889	.14931	8.7824
#1	.00114	.00064	.00126	.11422	.64087	-.00750	16.213	.67557	.00208
#2	.00083	.00026	.00140	.10713	.69901	-.00518	16.229	.67415	.00183
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**30.661**	**.00010**	**.08901**	**-.00618**	**9.2787**	**-.00201**	**-.00519**	**15.581**	**33.343**
Stddev	.326	.00005	.00299	.00032	.2296	.00072	.00262	.014	.030
%RSD	1.0633	47.567	3.3614	5.2409	2.4741	36.043	50.513	.08873	.08873
#1	30.430	.00007	.08689	-.00595	9.4410	-.00149	-.00334	15.571	33.322
#2	30.891	.00013	.09113	-.00641	9.1164	-.00252	-.00704	15.590	33.364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00258**	**.31488**	**.00139**	**.00466**	**.00335**	**.12134**	**.00429**	**.00193**	**.00546**
Stddev	.00006	.00029	.00117	.00035	.00201	.01633	.00035	.00128	.00019
%RSD	2.4935	.09264	84.187	7.4079	59.947	13.460	8.1875	66.543	3.4632
#1	-.00262	.31467	.00056	.00442	.00477	.10979	.00454	.00102	.00533
#2	-.00253	.31508	.00221	.00491	.00193	.13289	.00405	.00283	.00560
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3541.9**	**42795.**	**3079.7**
Stddev	17.0	159.	6.6
%RSD	.47900	.37088	.21377
#1	3553.9	42682.	3084.3
#2	3529.9	42907.	3075.0

Sample Name: 280-116533-A-15-A Acquired: 11/7/2018 3:55:00 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00048**	**.06181**	**.00378**	**.01534**	**.08561**	**.00032**	**-.00222**	**36.564**	**.00017**
Stddev	.00017	.00006	.00074	.00019	.00003	.00013	.00138	.199	.00006
%RSD	36.009	.10359	19.595	1.2678	.03707	41.492	61.981	.54429	34.110
#1	-.00061	.06185	.00430	.01520	.08558	.00041	-.00125	36.424	.00013
#2	-.00036	.06176	.00325	.01547	.08563	.00022	-.00320	36.705	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00056**	**.00163**	**.00202**	**.08539**	**1.5737**	**-.00488**	**7.6190**	**.00491**	**.00279**
Stddev	.00010	.00006	.00109	.00492	.1712	.00024	.0457	.00001	.00071
%RSD	17.768	3.7693	53.660	5.7637	10.881	4.8775	.60037	.14392	25.298
#1	.00049	.00167	.00126	.08191	1.4526	-.00471	7.6514	.00491	.00329
#2	.00063	.00159	.00279	.08887	1.6948	-.00505	7.5867	.00492	.00229
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.262**	**-.00059**	**.05684**	**-.00570**	**2.2798**	**.00163**	**.00092**	**14.364**	**30.739**
Stddev	.898	.00001	.00205	.00078	.0331	.00063	.00231	.158	.338
%RSD	5.5242	1.2378	3.5998	13.766	1.4527	38.829	249.25	1.0980	1.0980
#1	16.898	-.00060	.05829	-.00514	2.3032	.00208	.00256	14.253	30.501
#2	15.627	-.00059	.05539	-.00625	2.2563	.00118	-.00071	14.476	30.978
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00221**	**.18810**	**-.00204**	**.00353**	**.00170**	**.01515**	**.00521**	**.01790**	**.00356**
Stddev	.00162	.00180	.00139	.00066	.00113	.00476	.00080	.00077	.00142
%RSD	73.267	.95522	68.178	18.782	66.864	31.420	15.418	4.2978	39.892
#1	-.00106	.18683	-.00302	.00400	.00089	.01852	.00578	.01845	.00256
#2	-.00335	.18937	-.00106	.00306	.00250	.01179	.00464	.01736	.00457
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3502.1**	**41756.**	**3007.7**
Stddev	11.9	110.	8.9
%RSD	.33860	.26452	.29675
#1	3510.5	41678.	3014.0
#2	3493.7	41834.	3001.4

Sample Name: 280-116533-A-16-A Acquired: 11/7/2018 3:57:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00116**	**.00564**	**.01002**	**.00176**	**.04858**	**.00006**	**.00226**	**52.604**	**-.00037**
Stddev	.00072	.00023	.00395	.00054	.00020	.00000	.00014	.167	.00023
%RSD	62.125	4.0368	39.437	30.510	.41077	5.8888	6.2237	.31676	63.305
#1	-.00167	.00580	.00722	.00214	.04844	.00006	.00236	52.722	-.00053
#2	-.00065	.00548	.01281	.00138	.04873	.00006	.00216	52.486	-.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00010**	**.00058**	**.00148**	**.00849**	**.57235**	**-.00234**	**15.834**	**.02873**	**.00106**
Stddev	.00034	.00005	.00116	.00401	.03417	.00116	.070	.00027	.00029
%RSD	330.96	9.2953	78.168	47.195	5.9698	49.723	.44268	.94874	27.597
#1	-.00034	.00054	.00066	.01132	.59651	-.00317	15.883	.02893	.00085
#2	.00014	.00062	.00230	.00565	.54819	-.00152	15.784	.02854	.00127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.828**	**.00030**	**.09441**	**-.00790**	**2.5785**	**-.00183**	**-.00402**	**19.429**	**41.579**
Stddev	.568	.00016	.00024	.00057	.0428	.00245	.00402	.111	.237
%RSD	4.1041	53.989	.25574	7.2152	1.6618	134.21	99.944	.56882	.56882
#1	14.229	.00019	.09458	-.00750	2.6088	-.00009	-.00687	19.507	41.746
#2	13.427	.00042	.09424	-.00830	2.5483	-.00356	-.00118	19.351	41.411
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00262**	**.26433**	**.00321**	**.00101**	**.00090**	**-.03145**	**.00894**	**.00258**	**.00101**
Stddev	.00140	.00088	.00280	.00040	.00288	.00860	.00115	.00067	.00282
%RSD	53.578	.33407	87.340	39.588	320.48	27.341	12.842	26.128	280.37
#1	-.00361	.26495	.00123	.00073	-.00114	-.02537	.00976	.00211	-.00099
#2	-.00163	.26371	.00519	.00130	.00293	-.03754	.00813	.00306	.00300
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3479.4**	**41822.**	**2992.8**
Stddev	5.5	152.	21.3
%RSD	.15735	.36304	.71258
#1	3483.3	41715.	2977.7
#2	3475.5	41929.	3007.9

Sample Name: 280-116533-A-26-A Acquired: 11/7/2018 4:00:08 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00101**	**.00182**	**.00475**	**.02223**	**.04916**	**.00040**	**.00310**	**25.883**	**-.00018**
Stddev	.00004	.00021	.00161	.00117	.00086	.00017	.00192	.416	.00002
%RSD	4.0617	11.777	33.878	5.2436	1.7424	41.411	61.885	1.6089	11.400
#1	-.00098	.00167	.00361	.02305	.04976	.00028	.00174	26.177	-.00017
#2	-.00104	.00197	.00589	.02140	.04855	.00052	.00446	25.589	-.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00088**	**.00047**	**.00150**	**.69149**	**2.9676**	**.00056**	**5.3791**	**.30573**	**.00156**
Stddev	.00019	.00004	.00027	.00291	.0279	.00099	.0165	.00152	.00049
%RSD	21.276	8.9747	17.776	.42096	.93865	178.01	.30734	.49587	31.556
#1	.00075	.00044	.00131	.69355	2.9873	-.00014	5.3908	.30680	.00190
#2	.00101	.00050	.00168	.68943	2.9479	.00126	5.3674	.30466	.00121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.1257**	**.00034**	**.04201**	**-.00408**	**1.0729**	**.00043**	**.00112**	**6.1248**	**13.107**
Stddev	.1265	.00031	.00348	.00051	.0304	.00053	.00249	.0639	.137
%RSD	2.4675	92.216	8.2936	12.599	2.8314	122.26	223.20	1.0431	1.0431
#1	5.2152	.00056	.04448	-.00371	1.0944	.00006	.00288	6.1700	13.204
#2	5.0363	.00012	.03955	-.00444	1.0514	.00081	-.00065	6.0797	13.010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00208**	**.10845**	**-.00046**	**.00085**	**.00313**	**.02753**	**.00049**	**.07723**	**.00681**
Stddev	.00131	.00290	.00113	.00056	.00416	.04092	.00022	.00001	.00348
%RSD	62.892	2.6770	245.76	66.022	132.98	148.65	44.935	.01164	51.078
#1	-.00116	.11050	-.00126	.00125	.00607	-.00141	.00033	.07724	.00926
#2	-.00301	.10639	.00034	.00046	.00019	.05646	.00065	.07723	.00435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3487.3**	**42432.**	**3007.4**
Stddev	16.7	148.	34.2
%RSD	.47960	.34818	1.1365
#1	3475.5	42327.	2983.2
#2	3499.1	42536.	3031.6

Sample Name: CCVH-5408055 Acquired: 11/7/2018 4:02:43 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00283**	**46.802**	**.00112**	**.00174**	**-.00057**	**.00011**	**.93838**	**.00719**	**-.00048**	**.00184**	**.00067**	**.00325**	**48.217**
Stddev	.00011	.054	.00400	.00119	.00001	.00019	.02225	.00000	.00041	.00013	.00021	.00138	.137
%RSD	3.9880	.11439	356.02	68.162	2.3840	176.24	2.3707	.06112	86.339	7.0051	30.778	42.475	.28497
#1	-.00275	46.840	.00396	.00258	-.00056	-.00003	.95411	.00719	-.00019	.00193	.00052	.00227	48.120
#2	-.00290	46.764	-.00171	.00090	-.00058	.00024	.92265	.00719	-.00077	.00175	.00081	.00423	48.314
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.03927**	**-.00635**	**-.08222**	**.00290**	**-.00096**	**245.29**	**.00235**	**.00421**	**-.00349**	**4.7021**	**.00240**	**.00381**	**-.01372**
Stddev	.12171	.00767	.00294	.00000	.00002	.10	.00056	.00139	.00100	.1137	.00125	.00377	.02112
%RSD	309.93	120.68	3.5760	.03903	2.4669	.03885	23.917	32.929	28.608	2.4183	51.887	99.180	153.93
#1	-.12533	-.01178	-.08014	.00290	-.00098	245.36	.00195	.00323	-.00419	4.7825	.00152	.00114	-.02866
#2	.04679	-.00093	-.08430	.00290	-.00095	245.22	.00275	.00519	-.00278	4.6217	.00328	.00648	.00121
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02937**	**-.00217**	**.00021**	**4.8793**	**.01727**	**.00134**	**9.7843**	**-.01000**	**.00077**	**.07813**
Stddev	.04520	.00136	.00049	.0105	.00105	.00263	.0728	.00048	.00101	.00242
%RSD	153.93	62.381	227.43	.21515	6.1075	196.34	.74431	4.8106	131.51	3.1024
#1	-.06133	-.00313	-.00013	4.8867	.01802	-.00052	9.8358	-.00966	.00005	.07642
#2	.00260	-.00122	.00056	4.8719	.01653	.00320	9.7328	-.01034	.00148	.07985
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3415.9**	**40839.**	**2979.9**
Stddev	18.8	186.	8.9
%RSD	.55031	.45633	.29976
#1	3402.6	40971.	2986.2
#2	3429.2	40707.	2973.5

Sample Name: CCV-5407546 Acquired: 11/7/2018 4:05:14 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50211**	F **.58437**	**.97916**	**.49424**	**.51344**	**.48830**	**.00507**	**4.9298**	**.49333**	**.48982**	**.48489**	**.50984**
Stddev	.00121	.00622	.03226	.00948	.00011	.00100	.00231	.0059	.01059	.00992	.01105	.00054
%RSD	.24050	1.0644	3.2952	1.9181	.02125	.20535	45.617	.11894	2.1471	2.0259	2.2781	.10607
#1	.50297	.58877	1.0020	.50094	.51336	.48759	.00671	4.9339	.50082	.49684	.49270	.51022
#2	.50126	.57997	.95634	.48753	.51351	.48901	.00343	4.9256	.48584	.48281	.47708	.50946
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4458**	**50.665**	**1.0102**	**19.904**	**.49614**	**.48232**	**5.3722**	**.48904**	**1.0406**	**.98302**	**-.02125**	**.99941**
Stddev	.0020	.026	.0044	.076	.00205	.01374	.0005	.01073	.0193	.02498	.00452	.02577
%RSD	.08021	.05213	.43193	.38365	.41276	2.8497	.01006	2.1931	1.8508	2.5410	21.277	2.5784
#1	2.4445	50.647	1.0071	19.958	.49759	.49204	5.3718	.49662	1.0542	1.0007	-.02444	1.0176
#2	2.4472	50.684	1.0133	19.850	.49469	.47260	5.3726	.48146	1.0269	.96536	-.01805	.98119
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.95462**	**4.9460**	**10.584**	**.97480**	**.49485**	**.01064**	**.49385**	**1.0089**	**.03081**	**.50438**	**.50150**	**.49662**
Stddev	.02556	.0961	.206	.01979	.00015	.00159	.00153	.0180	.02605	.00164	.00424	.00121
%RSD	2.6775	1.9425	1.9425	2.0306	.03008	14.991	.30981	1.7855	84.556	.32566	.84497	.24445
#1	.97269	4.8781	10.439	.98880	.49474	.01176	.49493	1.0216	.01239	.50554	.50450	.49747
#2	.93655	5.0139	10.730	.96081	.49495	.00951	.49277	.99616	.04923	.50322	.49851	.49576
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3436.5**	**41381.**	**2963.3**
Stddev	2.5	27.	8.5
%RSD	.07130	.06640	.28577
#1	3434.7	41362.	2969.3
#2	3438.2	41400.	2957.3

Sample Name: CCB Acquired: 11/7/2018 4:07:42 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00158**	**-.00103**	**.00548**	**.00052**	**-.00039**	**.00037**	**.00056**	**.00094**	**-.00043**	**.00072**	**.00027**	**.00098**	**.00235**
Stddev	.00077	.00082	.00401	.00076	.00027	.00005	.00649	.00231	.00009	.00001	.00008	.00017	.00482
%RSD	48.568	79.167	73.206	147.46	68.955	13.015	1152.8	246.23	21.257	1.6259	29.077	17.133	205.17
#1	-.00104	-.00161	.00264	-.00002	-.00020	.00040	-.00403	.00257	-.00037	.00072	.00033	.00109	-.00106
#2	-.00213	-.00045	.00831	.00106	-.00057	.00033	.00515	-.00070	-.00050	.00073	.00022	.00086	.00576
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04598**	**-.00045**	**.00138**	**.00035**	**.00076**	**.18597**	**-.00046**	**.00131**	**-.00115**	**-.01712**	**.00155**	**.00432**	**.00534**
Stddev	.04699	.00041	.00275	.00001	.00019	.01003	.00051	.00226	.00099	.00588	.00562	.00338	.01310
%RSD	102.18	91.625	199.51	3.9280	24.309	5.3927	111.76	173.22	86.373	34.352	363.19	78.117	245.35
#1	.01276	-.00074	-.00057	.00036	.00063	.17888	-.00082	.00291	-.00045	-.01296	.00553	.00194	-.00392
#2	.07921	-.00016	.00333	.00034	.00090	.19306	-.00010	-.00029	-.00184	-.02128	-.00243	.00671	.01460
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01142**	**-.00071**	**.00014**	**.00215**	**.00061**	**.00001**	**.01672**	**.00054**	**-.00002**	**-.00227**
Stddev	.02803	.00079	.00004	.00060	.00012	.00427	.06292	.00056	.00003	.00125
%RSD	245.35	110.62	29.442	27.907	19.453	52212.	376.31	104.13	154.36	55.201
#1	-.00840	-.00016	.00017	.00173	.00069	-.00301	-.02777	.00014	.00000	-.00315
#2	.03124	-.00127	.00011	.00258	.00053	.00303	.06121	.00094	-.00004	-.00138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3386.0**	**41260.**	**2845.7**
Stddev	3.4	269.	5.8
%RSD	.10148	.65276	.20226
#1	3383.5	41070.	2841.6
#2	3388.4	41451.	2849.7

Sample Name: ccvl-5413446 Acquired: 11/7/2018 4:10:20 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00810**	**.11920**	**.01587**	**.09876**	**.00996**	**.00114**	**.10874**	**.19197**	**.00463**	**.01070**	**.00972**	**.01656**
Stddev	.00046	.00208	.00461	.00027	.00026	.00006	.00198	.00254	.00031	.00007	.00000	.00103
%RSD	5.6174	1.7457	29.056	.27750	2.5908	4.8483	1.8235	1.3213	6.7337	.66699	.00440	6.2389
#1	.00842	.12067	.01261	.09895	.01014	.00118	.11015	.19018	.00485	.01065	.00972	.01729
#2	.00778	.11773	.01913	.09856	.00977	.00110	.10734	.19376	.00441	.01075	.00972	.01583
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10206**	**3.1108**	**.02247**	**.20543**	**.01029**	**.01912**	**1.2151**	**.04038**	**3.0453**	**.00888**	**.07102**	**.01844**
Stddev	.00788	.0727	.00619	.00045	.00016	.00074	.0161	.00014	.0436	.00062	.00211	.00261
%RSD	7.7237	2.3385	27.563	.22084	1.5846	3.8527	1.3216	.33473	1.4325	6.9938	2.9716	14.167
#1	.09648	3.1622	.01809	.20511	.01041	.01964	1.2038	.04047	3.0762	.00932	.07251	.02028
#2	.10763	3.0594	.02685	.20575	.01018	.01860	1.2265	.04028	3.0145	.00844	.06952	.01659
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01659**	**.51395**	**1.0998**	**.09652**	**.00977**	**.01156**	**.01025**	**.01675**	F **.13035**	**.01044**	**.02083**	F **.02084**
Stddev	.00568	.00358	.0077	.00289	.00006	.00026	.00002	.00306	.05589	.00067	.00040	.00230
%RSD	34.232	.69741	.69741	2.9939	.62542	2.2703	.14843	18.295	42.881	6.4585	1.9358	11.045
#1	.01257	.51648	1.1053	.09857	.00973	.01175	.01026	.01892	.09083	.01092	.02111	.02247
#2	.02060	.51141	1.0944	.09448	.00981	.01138	.01024	.01459	.16987	.00996	.02054	.01921
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3498.0**	**42274.**	**2937.6**
Stddev	.3	282.	5.9
%RSD	.00720	.66664	.20157
#1	3497.8	42074.	2933.5
#2	3498.2	42473.	2941.8

Sample Name: 280-116543-A-1-A Acquired: 11/7/2018 4:12:58 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00142**	**.02152**	**.00678**	**.00196**	**.07419**	**.00004**	**.00184**	**47.505**	**-.00001**
Stddev	.00020	.01606	.01114	.00014	.00105	.00012	.00057	.176	.00024
%RSD	14.370	74.607	164.34	7.2293	1.4138	331.44	30.999	.36979	1849.9
#1	-.00128	.03288	.01465	.00206	.07345	.00012	.00225	47.380	.00016
#2	-.00157	.01017	-.00110	.00186	.07493	-.00005	.00144	47.629	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00006**	**.00156**	**.00142**	**.01375**	**.18092**	**-.00358**	**11.321**	**.00654**	**.00218**
Stddev	.00021	.00037	.00004	.00293	.14906	.00307	.029	.00009	.00006
%RSD	333.30	23.609	2.4783	21.304	82.391	85.666	.25247	1.3722	2.9479
#1	.00021	.00182	.00139	.01582	.07552	-.00575	11.341	.00661	.00214
#2	-.00009	.00130	.00144	.01168	.28633	-.00141	11.301	.00648	.00223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.5734**	**-.00053**	**.11701**	**-.00796**	**2.9236**	**-.00006**	**-.00405**	**17.617**	**37.700**
Stddev	.0021	.00018	.00246	.00155	.0328	.00057	.00403	.031	.066
%RSD	.02742	33.695	2.1047	19.465	1.1218	890.71	99.520	.17551	.17551
#1	7.5749	-.00066	.11875	-.00686	2.9468	.00034	-.00690	17.639	37.746
#2	7.5719	-.00041	.11527	-.00905	2.9004	-.00047	-.00120	17.595	37.653
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00283**	**.19931**	**.00364**	**.00127**	**.00012**	**-.01725**	**.01323**	**.00241**	**.00185**
Stddev	.00179	.00046	.00340	.00001	.00226	.00518	.00154	.00012	.00313
%RSD	63.227	.23152	93.515	.40023	1868.9	29.993	11.606	4.8960	169.01
#1	-.00156	.19898	.00604	.00128	-.00148	-.01360	.01432	.00249	-.00036
#2	-.00409	.19963	.00123	.00127	.00172	-.02091	.01215	.00232	.00407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3469.7**	**41647.**	**2974.6**
Stddev	1.1	93.	4.4
%RSD	.03203	.22280	.14641
#1	3468.9	41712.	2977.6
#2	3470.5	41581.	2971.5

Sample Name: 280-116543-A-2-A Acquired: 11/7/2018 4:15:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00108**	**.63493**	**.00479**	**.00132**	**.06475**	**.00012**	**-.00515**	**41.690**	**-.00024**
Stddev	.00028	.00250	.00356	.00078	.00033	.00018	.00268	.114	.00043
%RSD	25.839	.39395	74.250	59.173	.50778	157.08	51.979	.27455	180.29
#1	-.00127	.63670	.00228	.00187	.06498	.00024	-.00326	41.771	.00006
#2	-.00088	.63316	.00731	.00077	.06451	-.00001	-.00705	41.609	-.00054
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.00252**	**.00163**	**.82211**	**.22589**	**-.00201**	**9.7530**	**.01843**	**.00176**
Stddev	.00009	.00005	.00011	.00305	.06509	.00187	.0169	.00008	.00024
%RSD	21.172	2.0033	6.7677	.37149	28.817	93.220	.17275	.40892	13.881
#1	.00046	.00248	.00155	.82427	.17986	-.00068	9.7649	.01848	.00193
#2	.00034	.00255	.00171	.81995	.27192	-.00333	9.7411	.01838	.00158
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.8200**	**-.00028**	**.18222**	**-.00809**	**.76940**	**-.00171**	**-.00599**	**19.256**	**41.209**
Stddev	.0213	.00002	.00369	.00249	.00355	.00448	.01343	.083	.178
%RSD	.24199	5.4715	2.0264	30.784	.46173	262.26	224.15	.43231	.43231
#1	8.8351	-.00030	.17961	-.00985	.77192	.00146	-.01549	19.315	41.335
#2	8.8049	-.00027	.18484	-.00633	.76689	-.00487	.00351	19.198	41.083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00222**	**.17797**	**.00258**	**.03191**	**.00116**	**.00082**	**.01480**	**.00465**	**.00462**
Stddev	.00011	.00020	.00584	.00098	.00136	.00348	.00040	.00111	.00444
%RSD	4.9376	.11192	225.82	3.0704	117.78	423.09	2.7179	23.794	96.197
#1	-.00214	.17811	.00671	.03122	.00019	-.00164	.01509	.00386	.00148
#2	-.00229	.17783	-.00154	.03260	.00212	.00328	.01452	.00543	.00776
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3518.0**	**42133.**	**2967.8**
Stddev	.9	122.	28.3
%RSD	.02496	.28938	.95261
#1	3518.6	42047.	2947.8
#2	3517.4	42219.	2987.8

Sample Name: 280-116543-A-3-A Acquired: 11/7/2018 4:18:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00142**	**.19944**	**.00509**	**.00182**	**.08250**	**.00007**	**.00052**	**61.196**	**.00004**
Stddev	.00048	.00600	.00137	.00220	.00012	.00015	.00725	.054	.00004
%RSD	33.589	3.0106	26.939	120.91	.14911	211.79	1389.1	.08761	85.777
#1	-.00176	.20369	.00606	.00338	.08259	.00018	.00565	61.158	.00007
#2	-.00108	.19519	.00412	.00026	.08241	-.00004	-.00461	61.234	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00049**	**.00146**	**.00160**	**.17961**	**.23214**	**-.00476**	**13.023**	**.02271**	**.00062**
Stddev	.00011	.00037	.00062	.00854	.04436	.00234	.014	.00003	.00017
%RSD	21.650	25.575	39.001	4.7566	19.110	49.228	.10851	.14380	28.014
#1	.00042	.00119	.00204	.18565	.26351	-.00641	13.013	.02274	.00074
#2	.00057	.00172	.00116	.17357	.20077	-.00310	13.033	.02269	.00049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.433**	**.00014**	**.15152**	**-.00785**	**3.0750**	**-.00064**	**-.00404**	**18.666**	**39.945**
Stddev	.015	.00018	.00285	.00181	.0114	.00047	.00371	.068	.145
%RSD	.14315	130.90	1.8782	23.120	.37087	73.172	91.795	.36179	.36179
#1	10.444	.00001	.15353	-.00656	3.0831	-.00031	-.00142	18.713	40.047
#2	10.423	.00027	.14951	-.00913	3.0669	-.00098	-.00666	18.618	39.843
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00214**	**.24706**	**.00037**	**.00630**	**.00237**	**.08789**	**.01466**	**.01527**	**.00538**
Stddev	.00013	.00042	.00096	.00135	.00045	.01245	.00063	.00008	.00283
%RSD	5.9940	.17047	262.07	21.449	19.191	14.166	4.2790	.52062	52.590
#1	-.00205	.24676	.00105	.00725	.00269	.09670	.01511	.01533	.00738
#2	-.00223	.24735	-.00031	.00534	.00205	.07909	.01422	.01521	.00338
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3498.0**	**41927.**	**2991.1**
Stddev	25.6	72.	10.6
%RSD	.73319	.17269	.35275
#1	3516.1	41978.	2983.6
#2	3479.9	41876.	2998.6

Sample Name: 280-116543-A-10-A Acquired: 11/7/2018 4:20:46 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00073**	**.06150**	**.00710**	**.00280**	**.07933**	**.00012**	**.00107**	**59.328**	**-.00034**
Stddev	.00018	.00100	.00091	.00041	.00022	.00008	.00255	.042	.00002
%RSD	24.334	1.6316	12.809	14.806	.28207	60.575	237.62	.07130	6.4507
#1	-.00085	.06221	.00646	.00309	.07917	.00007	.00287	59.298	-.00036
#2	-.00060	.06079	.00774	.00250	.07948	.00018	-.00073	59.358	-.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	**.00139**	**.00202**	**.07174**	**.23902**	**-.00588**	**12.507**	**.01608**	**.00056**
Stddev	.00013	.00006	.00034	.00166	.03817	.00257	.038	.00004	.00013
%RSD	80.631	4.2741	16.861	2.3125	15.971	43.698	.30629	.27245	23.576
#1	.00007	.00143	.00178	.07057	.26601	-.00770	12.534	.01611	.00047
#2	.00026	.00135	.00226	.07292	.21203	-.00407	12.480	.01605	.00066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.205**	**.00056**	**.13988**	**-.00810**	**2.7891**	**.00132**	**-.01381**	**18.321**	**39.206**
Stddev	.028	.00022	.00103	.00075	.0194	.00023	.00868	.123	.264
%RSD	.27511	39.337	.73429	9.2572	.69483	17.169	62.854	.67315	.67315
#1	10.225	.00040	.13915	-.00863	2.8028	.00116	-.00767	18.408	39.393
#2	10.185	.00071	.14061	-.00757	2.7754	.00148	-.01995	18.233	39.019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00295**	**.24024**	**-.00089**	**.00292**	**.00295**	**.01692**	**.01324**	**.00734**	**.00393**
Stddev	.00096	.00057	.00758	.00036	.00077	.01659	.00070	.00091	.00079
%RSD	32.683	.23878	847.48	12.301	26.077	98.070	5.2813	12.390	20.037
#1	-.00363	.23983	-.00625	.00318	.00350	.02866	.01373	.00670	.00448
#2	-.00227	.24065	.00446	.00267	.00241	.00519	.01274	.00798	.00337
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3456.1**	**41773.**	**2993.3**
Stddev	9.9	48.	3.6
%RSD	.28669	.11555	.11883
#1	3463.1	41807.	2995.8
#2	3449.1	41739.	2990.8

Sample Name: 280-116511-B-1-A Acquired: 11/7/2018 4:23:22 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00089**	**.00430**	**.00132**	**.00195**	**.00480**	**.00006**	**.00085**	**26.482**	**.00005**
Stddev	.00066	.00089	.00533	.00186	.00041	.00002	.00246	.155	.00001
%RSD	73.401	20.617	403.01	95.190	8.5153	29.457	287.91	.58457	25.010
#1	-.00136	.00368	-.00244	.00064	.00451	.00007	.00259	26.372	.00004
#2	-.00043	.00493	.00509	.00327	.00509	.00005	-.00088	26.591	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00047**	**.00037**	**.00432**	**.01270**	**3.4436**	**.00583**	**3.1692**	**.00055**	**-.00001**
Stddev	.00012	.00054	.00000	.00103	.0616	.00416	.0200	.00011	.00124
%RSD	25.930	144.41	.07174	8.0832	1.7877	71.333	.63124	20.039	21634.
#1	.00039	-.00001	.00432	.01343	3.4871	.00877	3.1833	.00047	-.00088
#2	.00056	.00075	.00432	.01198	3.4001	.00289	3.1551	.00063	.00087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6132**	**-.00035**	**.00099**	**-.00410**	**4.6449**	**-.00332**	**.00026**	**6.3424**	**13.573**
Stddev	.0063	.00014	.00562	.00063	.0790	.00209	.00914	.0107	.023
%RSD	.23958	40.233	566.51	15.274	1.7019	62.937	3543.8	.16807	.16807
#1	2.6176	-.00025	.00497	-.00366	4.7008	-.00479	.00672	6.3499	13.589
#2	2.6088	-.00045	-.00298	-.00454	4.5890	-.00184	-.00620	6.3349	13.557
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00364**	**.09290**	**-.00134**	**.00040**	**.00171**	**.04072**	**.00058**	**.00196**	**.00550**
Stddev	.00028	.00029	.00050	.00011	.00154	.03109	.00095	.00053	.00049
%RSD	7.7094	.30948	37.295	28.221	90.142	76.347	164.03	27.230	8.8485
#1	-.00384	.09269	-.00099	.00048	.00062	.06270	.00125	.00234	.00584
#2	-.00345	.09310	-.00170	.00032	.00281	.01874	-.00009	.00158	.00515
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3412.2**	**41202.**	**2895.4**
Stddev	20.8	132.	20.2
%RSD	.61092	.32122	.69598
#1	3427.0	41108.	2909.7
#2	3397.5	41296.	2881.2

Sample Name: 280-116511-B-2-A Acquired: 11/7/2018 4:25:58 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00083**	**.00187**	**.00957**	**.00204**	**.01047**	**.00030**	**.00116**	**48.877**	**-.00064**
Stddev	.00082	.00015	.00608	.00018	.00053	.00020	.00162	.100	.00060
%RSD	98.755	8.2236	63.569	8.7939	5.0806	65.336	139.90	.20542	94.079
#1	-.00025	.00197	.01387	.00191	.01084	.00044	.00001	48.807	-.00106
#2	-.00141	.00176	.00527	.00217	.01009	.00016	.00231	48.948	-.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	**.00071**	**.00650**	**.01067**	**4.2766**	**.00524**	**6.0855**	**.00986**	**.00037**
Stddev	.00029	.00063	.00049	.00898	.0945	.00241	.0032	.00001	.00022
%RSD	172.41	89.798	7.5128	84.186	2.2093	45.915	.05254	.08717	58.914
#1	.00037	.00115	.00615	.00432	4.2098	.00695	6.0833	.00985	.00053
#2	-.00004	.00026	.00684	.01703	4.3434	.00354	6.0878	.00986	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.7432**	**-.00028**	**.01167**	**-.00254**	**16.730**	**.00090**	**-.00890**	**5.0125**	**10.727**
Stddev	.0290	.00016	.00215	.00174	.046	.00034	.00587	.0170	.036
%RSD	.61114	57.284	18.456	68.679	.27332	37.349	65.938	.33938	.33938
#1	4.7637	-.00017	.01015	-.00377	16.762	.00066	-.01305	5.0005	10.701
#2	4.7227	-.00039	.01320	-.00131	16.697	.00114	-.00475	5.0246	10.753
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.20422**	**.00231**	**.00031**	**.00012**	**-.03041**	**-.00092**	**.00912**	**.00401**
Stddev	.00069	.00102	.00003	.00132	.00005	.00071	.00023	.00010	.00082
%RSD	293.27	.50011	1.1066	425.00	42.202	2.3415	24.454	1.0578	20.593
#1	.00072	.20349	.00229	.00125	.00009	-.02991	-.00108	.00919	.00459
#2	-.00025	.20494	.00233	-.00062	.00016	-.03091	-.00077	.00905	.00342
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3441.4**	**41498.**	**2942.7**
Stddev	19.2	138.	.7
%RSD	.55812	.33241	.02468
#1	3427.8	41595.	2942.2
#2	3455.0	41400.	2943.3

Sample Name: 280-116511-B-3-A Acquired: 11/7/2018 4:28:32 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00018**	**.00567**	**.01032**	**.00285**	**.01039**	**.00037**	**.00242**	**29.287**	**-.00020**
Stddev	.00032	.00094	.00492	.00048	.00005	.00000	.00050	.015	.00018
%RSD	182.08	16.641	47.620	16.939	.51767	.58689	20.820	.04976	87.024
#1	.00005	.00500	.01380	.00319	.01036	.00037	.00207	29.298	-.00033
#2	-.00041	.00634	.00685	.00251	.01043	.00037	.00278	29.277	-.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00004**	**.00073**	**.00937**	**.00862**	**3.3384**	**.00355**	**3.8870**	**.00040**	**-.00017**
Stddev	.00010	.00013	.00149	.00132	.2017	.00064	.0029	.00019	.00055
%RSD	257.38	17.990	15.909	15.256	6.0426	18.086	.07467	47.809	321.38
#1	.00003	.00082	.00831	.00769	3.1958	.00310	3.8849	.00053	-.00056
#2	-.00011	.00064	.01042	.00955	3.4811	.00401	3.8890	.00026	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.9194**	**.00016**	**-.00030**	**-.00093**	**6.2542**	**-.00164**	**-.00426**	**4.9019**	**10.490**
Stddev	.0177	.00046	.00253	.00090	.1560	.00141	.00005	.0409	.087
%RSD	.45287	283.81	845.96	96.859	2.4937	85.659	1.1483	.83402	.83402
#1	3.9069	.00048	.00149	-.00157	6.3645	-.00263	-.00430	4.8730	10.428
#2	3.9320	-.00016	-.00209	-.00029	6.1439	-.00065	-.00423	4.9308	10.552
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00258**	**.44122**	**-.00370**	**.00063**	**-.00163**	**.04855**	**.00023**	**.00270**	**.00356**
Stddev	.00131	.00146	.00048	.00019	.00558	.01162	.00054	.00037	.00028
%RSD	50.695	.32984	13.011	30.005	341.48	23.927	237.17	13.899	7.7818
#1	-.00350	.44019	-.00336	.00049	-.00558	.04034	.00061	.00243	.00375
#2	-.00165	.44225	-.00404	.00076	.00231	.05676	-.00015	.00296	.00336
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3492.5**	**42305.**	**2993.1**
Stddev	3.5	64.	4.2
%RSD	.09989	.15177	.14018
#1	3490.0	42351.	2996.1
#2	3495.0	42260.	2990.2

Sample Name: 280-116336-F-6-B Acquired: 11/7/2018 4:31:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00159**	**3.8100**	**.02944**	**.04280**	**.04342**	**.00041**	**.00353**	**74.312**	**-.00017**
Stddev	.00016	.0529	.00196	.00200	.00076	.00023	.00023	.447	.00014
%RSD	9.8591	1.3885	6.6529	4.6719	1.7425	57.387	6.6082	.60190	86.813
#1	-.00170	3.8474	.02806	.04421	.04395	.00024	.00337	74.628	-.00006
#2	-.00148	3.7726	.03083	.04138	.04288	.00057	.00370	73.995	-.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00106**	**.00473**	**.00276**	**3.2231**	**3.2107**	**.05124**	**47.950**	**.09732**	**.00249**
Stddev	.00017	.00007	.00027	.0046	.1079	.00137	.017	.00050	.00026
%RSD	16.340	1.4326	9.7278	.14296	3.3591	2.6807	.03444	.50903	10.371
#1	.00094	.00478	.00257	3.2199	3.1344	.05027	47.962	.09767	.00231
#2	.00119	.00469	.00295	3.2264	3.2869	.05221	47.938	.09697	.00268
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**21.797**	**.00246**	**.03107**	**-.00453**	**18.191**	**-.00164**	**-.01157**	**14.683**	**31.421**
Stddev	.720	.00120	.00363	.00271	.220	.00332	.00555	.141	.301
%RSD	3.3052	48.557	11.676	59.852	1.2088	201.70	47.952	.95891	.95891
#1	22.306	.00162	.03363	-.00644	18.346	-.00399	-.00765	14.782	31.634
#2	21.287	.00331	.02850	-.00261	18.035	.00070	-.01549	14.583	31.208
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00199**	**.27032**	**-.00211**	**.15558**	**.00401**	**.07943**	**.00626**	**.00734**	**.00553**
Stddev	.00130	.00117	.00206	.00308	.00450	.04285	.00043	.00081	.00230
%RSD	65.664	.43176	97.461	1.9772	112.37	53.948	6.8396	11.060	41.533
#1	-.00106	.27115	-.00357	.15776	.00719	.10974	.00595	.00791	.00715
#2	-.00291	.26950	-.00066	.15341	.00082	.04913	.00656	.00677	.00390
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3404.0**	**40940.**	**2957.2**
Stddev	10.6	103.	5.1
%RSD	.31051	.25133	.17404
#1	3411.4	40867.	2960.8
#2	3396.5	41012.	2953.6

Sample Name: 280-116407-F-5-A Acquired: 11/7/2018 4:33:37 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00130**	**3.2784**	**.01167**	**.07544**	**.04090**	**.00033**	**-.00448**	**162.60**	**.00044**
Stddev	.00116	.0811	.00047	.00047	.00138	.00021	.01230	.12	.00018
%RSD	89.040	2.4731	4.0231	.62838	3.3626	65.771	274.32	.07300	39.520
#1	-.00213	3.3357	.01133	.07577	.04187	.00048	-.01318	162.68	.00032
#2	-.00048	3.2211	.01200	.07510	.03993	.00017	.00421	162.51	.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00210**	**.00461**	**.00376**	**3.2601**	**4.8107**	**.07356**	**77.035**	**.14287**	**.00253**
Stddev	.00063	.00018	.00069	.0138	.0506	.00046	.193	.00004	.00047
%RSD	29.796	3.9733	18.414	.42182	1.0511	.62781	.25099	.02482	18.430
#1	.00255	.00474	.00327	3.2698	4.8465	.07388	77.172	.14285	.00287
#2	.00166	.00448	.00425	3.2504	4.7749	.07323	76.898	.14290	.00220
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.085**	**.00352**	**.03803**	**-.00440**	**73.652**	**.00147**	**-.01122**	**15.841**	**33.900**
Stddev	.702	.00002	.00246	.00024	1.465	.00506	.00149	.141	.302
%RSD	2.5928	.58253	6.4761	5.3703	1.9895	344.75	13.239	.89156	.89156
#1	26.589	.00351	.03977	-.00457	74.688	-.00211	-.01227	15.941	34.114
#2	27.582	.00354	.03629	-.00424	72.616	.00505	-.01017	15.741	33.686
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00197**	**.35291**	**-.00060**	**.10316**	**-.00004**	**.05517**	**.00591**	**.00776**	**.00957**
Stddev	.00304	.00015	.00457	.00999	.00103	.03070	.00045	.00134	.00210
%RSD	154.22	.04225	758.92	9.6835	2728.0	55.644	7.6101	17.315	21.966
#1	.00018	.35301	.00263	.09609	.00069	.03347	.00623	.00871	.00808
#2	-.00412	.35280	-.00384	.11022	-.00076	.07688	.00559	.00681	.01105
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3355.1**	**41018.**	**2976.0**
Stddev	1.0	178.	15.9
%RSD	.02948	.43301	.53364
#1	3355.8	41144.	2964.8
#2	3354.4	40893.	2987.3

Sample Name: CCVH-5408055 Acquired: 11/7/2018 4:36:08 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00427**	**47.354**	**-.01249**	**.00189**	**-.00035**	**.00004**	**.96475**	**.01621**	**-.00060**	**.00163**	**.00043**	**.00221**	**48.540**
Stddev	.00075	.202	.00644	.00009	.00106	.00024	.01566	.01377	.00023	.00011	.00073	.00226	.467
%RSD	17.540	.42638	51.536	4.7436	302.15	528.61	1.6233	84.993	37.633	6.7157	167.06	102.13	.96309
#1	-.00480	47.211	-.00794	.00182	-.00110	-.00012	.97582	.02595	-.00077	.00171	.00095	.00381	48.209
#2	-.00374	47.497	-.01705	.00195	.00040	.00021	.95368	.00647	-.00044	.00156	-.00008	.00062	48.871
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02272**	**-.00334**	**-.08212**	**.00276**	**-.00140**	**248.58**	**.00294**	**.00091**	**-.00160**	**4.8088**	**.00380**	**.00104**	**.01225**
Stddev	.01331	.00153	.01454	.00009	.00051	.54	.00004	.00032	.00155	.0497	.00307	.00462	.04947
%RSD	58.556	45.753	17.710	3.1212	36.243	.21545	1.3411	35.159	96.792	1.0327	80.635	445.00	403.94
#1	.01331	-.00226	-.09241	.00270	-.00104	248.20	.00297	.00113	-.00051	4.8439	.00163	.00430	.04723
#2	.03213	-.00441	-.07184	.00282	-.00175	248.96	.00291	.00068	-.00270	4.7736	.00597	-.00223	-.02273
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02621**	**-.00300**	**.00068**	**4.9022**	**.01750**	**.00135**	**9.7875**	**-.00991**	**.00100**	**.08282**
Stddev	.10587	.00095	.00022	.0146	.00020	.00171	.0108	.00006	.00059	.00211
%RSD	403.94	31.650	32.758	.29853	1.1391	126.65	.11015	.56984	58.574	2.5488
#1	.10107	-.00367	.00053	4.9126	.01764	.00256	9.7799	-.00995	.00142	.08133
#2	-.04865	-.00233	.00084	4.8919	.01736	.00014	9.7952	-.00987	.00059	.08431
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3348.5**	**39848.**	**2888.1**
Stddev	2.0	337.	13.0
%RSD	.06094	.84655	.44923
#1	3349.9	39610.	2879.0
#2	3347.0	40087.	2897.3

Sample Name: CCV-5407546 Acquired: 11/7/2018 4:38:39 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49817**	F **.59672**	**.97546**	**.49035**	**.51247**	**.48639**	**.00460**	**4.9228**	**.49072**	**.48735**	**.48272**	**.50601**
Stddev	.00019	.01189	.02036	.00893	.00226	.00423	.00040	.0181	.01029	.00831	.00992	.00045
%RSD	.03895	1.9921	2.0877	1.8206	.44112	.87020	8.8054	.36781	2.0969	1.7051	2.0557	.08861
#1	.49803	.58832	.98986	.49666	.51407	.48938	.00489	4.9356	.49799	.49322	.48974	.50633
#2	.49831	.60513	.96106	.48404	.51087	.48340	.00431	4.9100	.48344	.48147	.47570	.50570
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4441**	**50.710**	**1.0195**	**19.850**	**.49442**	**.48192**	**5.3732**	**.48753**	**1.0355**	**.98162**	**.00956**	**.98654**
Stddev	.0046	.285	.0054	.039	.00093	.01207	.0281	.00960	.0105	.01935	.03279	.01589
%RSD	.18758	.56176	.52911	.19432	.18877	2.5048	.52337	1.9696	1.0142	1.9714	342.86	1.6106
#1	2.4474	50.912	1.0233	19.877	.49508	.49046	5.3931	.49432	1.0429	.99530	-.01362	.99778
#2	2.4409	50.509	1.0157	19.823	.49376	.47339	5.3533	.48074	1.0280	.96793	.03275	.97531
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.95801**	**4.9130**	**10.514**	**.97065**	**.49282**	**.00745**	**.49208**	**.99786**	**.07276**	**.50226**	**.50139**	**.49254**
Stddev	.01139	.0164	.035	.02220	.00196	.00112	.00069	.01249	.00172	.00088	.00154	.00096
%RSD	1.1892	.33299	.33299	2.2869	.39708	15.016	.13987	1.2520	2.3613	.17484	.30668	.19559
#1	.96607	4.9014	10.489	.98635	.49420	.00666	.49257	1.0067	.07155	.50288	.50247	.49323
#2	.94995	4.9245	10.538	.95496	.49144	.00824	.49160	.98903	.07398	.50163	.50030	.49186
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3380.1**	**40657.**	**2885.1**
Stddev	7.8	146.	2.1
%RSD	.23065	.35886	.07242
#1	3385.6	40554.	2886.6
#2	3374.6	40760.	2883.6

Sample Name: CCB Acquired: 11/7/2018 4:41:04 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00170**	**-.00172**	**.00124**	**.00031**	**-.00010**	**.00003**	**.00211**	**-.00087**	**-.00044**	**.00057**	**.00055**	**.00052**	**.00407**
Stddev	.00158	.00017	.00325	.00110	.00043	.00026	.00239	.00690	.00001	.00022	.00042	.00086	.00584
%RSD	93.024	9.9485	262.76	354.47	421.83	852.42	113.19	795.48	2.6482	38.457	76.854	164.62	143.34
#1	-.00281	-.00184	.00354	.00109	-.00041	-.00015	.00380	.00401	-.00045	.00042	.00025	-.00009	-.00006
#2	-.00058	-.00160	-.00106	-.00047	.00020	.00021	.00042	-.00575	-.00043	.00073	.00084	.00113	.00820
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.09201**	**-.00197**	**-.00135**	**.00007**	**.00083**	**.19656**	**.00008**	**-.00113**	**-.00342**	**-.00922**	**.00197**	**.00037**	**.05974**
Stddev	.01125	.00512	.00511	.00004	.00055	.02562	.00008	.00413	.00074	.00494	.00171	.00395	.01068
%RSD	12.224	259.61	377.75	53.643	65.741	13.033	106.89	365.19	21.635	53.635	86.607	1058.6	17.883
#1	-.08406	-.00559	.00226	.00009	.00045	.17844	.00013	-.00405	-.00395	-.01271	.00076	-.00242	.06729
#2	-.09996	.00165	-.00496	.00004	.00122	.21467	.00002	.00179	-.00290	-.00572	.00318	.00317	.05218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.12784**	**-.00237**	**-.00005**	**.00060**	**-.00012**	**.00095**	**.05644**	**.00026**	**-.00035**	**.00270**
Stddev	.02286	.00011	.00003	.00131	.00016	.00024	.02808	.00005	.00025	.00524
%RSD	17.883	4.4793	65.839	219.75	134.33	24.803	49.758	19.113	71.745	194.05
#1	.14400	-.00230	-.00007	-.00033	-.00024	.00078	.07630	.00029	-.00017	.00640
#2	.11167	-.00245	-.00003	.00153	-.00001	.00112	.03658	.00022	-.00053	-.00100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3466.6**	**41764.**	**2858.5**
Stddev	6.9	967.	7.8
%RSD	.19832	2.3161	.27285
#1	3471.4	41080.	2853.0
#2	3461.7	42448.	2864.0

Sample Name: ccvl-5413446 Acquired: 11/7/2018 4:43:41 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00897**	**.11847**	F **.01957**	**.09786**	**.01081**	**.00100**	**.10686**	**.19896**	**.00449**	**.01049**	**.01018**	**.01667**
Stddev	.00055	.00293	.00340	.00098	.00003	.00009	.00320	.00392	.00004	.00064	.00073	.00054
%RSD	6.0821	2.4714	17.371	1.0019	.27172	9.0166	2.9902	1.9704	.81631	6.1430	7.1974	3.2421
#1	.00936	.12054	.01716	.09855	.01079	.00094	.10912	.19618	.00446	.01094	.01070	.01705
#2	.00858	.11640	.02197	.09716	.01083	.00107	.10460	.20173	.00452	.01003	.00966	.01628
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09779**	**3.1047**	**.02455**	**.21610**	**.01041**	**.01887**	**1.2149**	**.03973**	**3.0046**	**.00789**	**.07078**	**.01681**
Stddev	.00059	.0605	.00654	.01239	.00022	.00154	.0154	.00042	.0612	.00264	.00007	.00140
%RSD	.60163	1.9480	26.643	5.7333	2.1377	8.1661	1.2699	1.0573	2.0376	33.513	.09380	8.3529
#1	.09737	3.1474	.01992	.22486	.01057	.01996	1.2039	.04003	3.0479	.00976	.07073	.01582
#2	.09820	3.0619	.02917	.20734	.01025	.01778	1.2258	.03943	2.9613	.00602	.07083	.01781
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02043**	**.51120**	**1.0940**	**.09450**	**.00988**	**.01691**	**.01001**	**.01814**	F **.03154**	**.01067**	**.02127**	F **.02058**
Stddev	.00016	.02162	.0463	.00237	.00023	.00192	.00002	.00190	.07575	.00064	.00056	.00274
%RSD	.80329	4.2285	4.2285	2.5075	2.3765	11.345	.22242	10.451	240.18	6.0183	2.6330	13.318
#1	.02032	.49592	1.0613	.09618	.00971	.01827	.00999	.01680	-.02203	.01021	.02167	.01865
#2	.02055	.52649	1.1267	.09282	.01005	.01555	.01003	.01948	.08511	.01112	.02087	.02252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									-30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3501.8**	**42689.**	**2986.2**
Stddev	12.4	192.	4.3
%RSD	.35543	.44874	.14464
#1	3510.6	42553.	2989.3
#2	3493.0	42824.	2983.2

Sample Name: MB 280-436445/1-A Acquired: 11/7/2018 4:46:17 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00171**	**.00180**	**.00116**	**.00114**	**-.00029**	**.00012**	**.00218**	**.00118**	**-.00020**
Stddev	.00044	.00150	.00030	.00085	.00025	.00021	.00164	.00275	.00009
%RSD	25.467	83.230	25.485	74.714	84.229	182.04	75.321	232.95	46.866
#1	-.00140	.00074	.00095	.00174	-.00012	.00027	.00102	-.00076	-.00027
#2	-.00202	.00286	.00137	.00054	-.00047	-.00003	.00334	.00312	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00061**	**.00054**	**.00048**	**.00757**	**.02725**	**-.00268**	**-.00117**	**.00082**	**.00040**
Stddev	.00053	.00007	.00034	.00700	.10947	.00241	.00937	.00004	.00018
%RSD	87.162	12.354	71.403	92.464	401.67	89.983	801.40	4.4158	46.298
#1	.00023	.00049	.00072	.01251	-.05015	-.00098	-.00779	.00079	.00027
#2	.00098	.00059	.00024	.00262	.10466	-.00439	.00546	.00085	.00053
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.12921**	**-.00065**	**.00003**	**.00049**	**-.01353**	**.00221**	**.00068**	**.01669**	**.03572**
Stddev	.01062	.00045	.00050	.00205	.00083	.00162	.00179	.01128	.02414
%RSD	8.2193	70.377	1728.1	415.20	6.1516	73.374	264.60	67.576	67.576
#1	.12170	-.00097	-.00033	.00194	-.01295	.00336	.00194	.02467	.05279
#2	.13672	-.00032	.00038	-.00095	-.01412	.00106	-.00059	.00872	.01865
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00230**	**-.00005**	**.00191**	**.00210**	**.00182**	**.03753**	**.00069**	**.00122**	**.00432**
Stddev	.00098	.00015	.00410	.00316	.00064	.00582	.00002	.00040	.00032
%RSD	42.796	321.31	214.77	150.78	34.927	15.521	2.2884	33.068	7.4517
#1	-.00160	-.00016	.00481	-.00014	.00227	.03341	.00070	.00151	.00455
#2	-.00299	.00006	-.00099	.00433	.00137	.04165	.00068	.00094	.00409
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3528.0**	**43065.**	**2983.1**
Stddev	11.9	100.	13.3
%RSD	.33659	.23209	.44476
#1	3519.6	42994.	2973.7
#2	3536.4	43136.	2992.5

Sample Name: LCS 280-436445/2-A Acquired: 11/7/2018 4:48:56 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.04141**	F **2.2987**	**.99249**	**1.0274**	**2.0504**	**.04914**	**1.9239**	**48.958**	**.09628**
Stddev	.00033	.0133	.00318	.0036	.0046	.00025	.0133	.011	.00050
%RSD	.79220	.58054	.32016	.34641	.22492	.51030	.68975	.02152	.52392
#1	.04164	2.3081	.99473	1.0299	2.0537	.04932	1.9333	48.950	.09664
#2	.04117	2.2893	.99024	1.0248	2.0472	.04896	1.9145	48.965	.09592
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750	2.2299							
Low Limit	.04275	1.7300							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48975**	**.19754**	**.25339**	**.98069**	**50.700**	**1.0070**	**48.866**	**.49038**	**1.0147**
Stddev	.00285	.00088	.00282	.00115	.141	.0058	.365	.00417	.0085
%RSD	.58289	.44460	1.1131	.11757	.27859	.57563	.74795	.84947	.83544
#1	.49177	.19817	.25539	.97987	50.601	1.0111	49.125	.49333	1.0207
#2	.48773	.19692	.25140	.98150	50.800	1.0029	48.608	.48744	1.0087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.150**	**.48501**	**10.989**	**.49574**	**1.9526**	**.52228**	**1.9877**	**9.4895**	**20.307**
Stddev	.313	.00339	.059	.00257	.0010	.00029	.0085	.0493	.105
%RSD	.62395	.69903	.53431	.51921	.05253	.05638	.42697	.51941	.51941
#1	49.929	.48741	11.030	.49756	1.9519	.52249	1.9937	9.4546	20.233
#2	50.372	.48261	10.947	.49392	1.9533	.52207	1.9817	9.5243	20.382
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0057**	**.99581**	**.99067**	**1.0004**	**2.0092**	**1.9908**	**.51447**	**.50049**	**.51586**
Stddev	.0214	.00183	.00469	.0081	.0056	.0101	.00689	.01022	.00770
%RSD	1.0685	.18426	.47339	.81283	.28024	.50961	1.3399	2.0427	1.4922
#1	2.0208	.99711	.99398	1.0062	2.0132	1.9980	.51935	.50772	.52130
#2	1.9905	.99451	.98735	.99466	2.0052	1.9837	.50960	.49326	.51042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3401.3**	**40910.**	**2931.4**
Stddev	4.3	412.	4.5
%RSD	.12584	1.0065	.15343
#1	3404.3	40619.	2934.5
#2	3398.3	41202.	2928.2

Sample Name: LCSD 280-436445/3-A Acquired: 11/7/2018 4:51:19 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04131**	**2.3086**	**.99281**	**1.0406**	**2.0581**	**.04939**	**1.9256**	**49.010**	**.09655**
Stddev	.00113	.0132	.01722	.0079	.0005	.00027	.0171	.139	.00051
%RSD	2.7438	.57027	1.7342	.75713	.02558	.55638	.88660	.28321	.52430
#1	.04051	2.3179	1.0050	1.0462	2.0577	.04920	1.9376	48.912	.09690
#2	.04212	2.2993	.98063	1.0350	2.0584	.04959	1.9135	49.108	.09619
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49123**	**.19901**	**.25478**	**1.1733**	**50.814**	**.99926**	**49.059**	**.49253**	**1.0307**
Stddev	.00357	.00112	.00044	.0056	.013	.00591	.096	.00065	.0102
%RSD	.72576	.56083	.17380	.48027	.02631	.59095	.19506	.13138	.99070
#1	.49375	.19980	.25509	1.1772	50.824	.99509	49.127	.49299	1.0379
#2	.48871	.19822	.25446	1.1693	50.805	1.0034	48.992	.49208	1.0235
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.245**	**.48796**	**11.014**	**.49632**	**1.9617**	**.52444**	**1.9869**	**9.7934**	**20.958**
Stddev	.846	.00374	.064	.00586	.0164	.00105	.0053	.0391	.084
%RSD	1.6845	.76658	.58225	1.1813	.83406	.19937	.26773	.39879	.39879
#1	49.647	.49061	11.059	.50047	1.9733	.52517	1.9907	9.7658	20.899
#2	50.844	.48532	10.968	.49218	1.9501	.52370	1.9832	9.8211	21.017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0452**	**.99626**	**.98974**	**1.0114**	**2.0285**	**2.0549**	**.51941**	**.50501**	**.52571**
Stddev	.0070	.00003	.00351	.0026	.0137	.0398	.00020	.00109	.00644
%RSD	.34383	.00303	.35504	.25921	.67434	1.9352	.03772	.21640	1.2242
#1	2.0501	.99623	.98725	1.0133	2.0382	2.0830	.51955	.50424	.53026
#2	2.0402	.99628	.99222	1.0096	2.0189	2.0267	.51927	.50578	.52116
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3420.3**	**41310.**	**2983.8**
Stddev	7.0	215.	1.9
%RSD	.20400	.52121	.06364
#1	3415.4	41157.	2982.4
#2	3425.3	41462.	2985.1

Sample Name: 280-116482-C-1-A Acquired: 11/7/2018 4:53:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00117**	W **2.6474**	**.00537**	**.25256**	**.08722**	**.00056**	**.00490**	**11.101**	**.00064**
Stddev	.00048	.0182	.00064	.00174	.00007	.00004	.00002	.005	.00028
%RSD	40.965	.68784	11.836	.68800	.08264	6.9815	.40016	.04485	43.202
#1	-.00083	2.6603	.00582	.25379	.08727	.00053	.00491	11.097	.00045
#2	-.00150	2.6345	.00492	.25134	.08717	.00059	.00489	11.104	.00084
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		500.00							
Low Limit		3.2000							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00114**	**.00327**	**.01226**	**1.7212**	**3.8754**	**-.00623**	**4.9484**	**.02671**	**.00270**
Stddev	.00028	.00008	.00031	.0070	.0155	.00126	.0066	.00002	.00003
%RSD	24.923	2.4733	2.5151	.40478	.40084	20.226	.13398	.08235	1.2379
#1	.00134	.00333	.01248	1.7162	3.8864	-.00713	4.9531	.02669	.00268
#2	.00094	.00322	.01204	1.7261	3.8644	-.00534	4.9437	.02672	.00273
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.284**	**.00313**	**.06328**	**-.00129**	**3.6916**	**.00373**	**-.00772**	**8.6351**	**18.479**
Stddev	.151	.00054	.00104	.00028	.0155	.00508	.00189	.0080	.017
%RSD	1.2303	17.123	1.6508	21.463	.41997	136.25	24.496	.09326	.09326
#1	12.178	.00351	.06254	-.00110	3.7026	.00014	-.00638	8.6294	18.467
#2	12.391	.00275	.06402	-.00149	3.6807	.00732	-.00905	8.6408	18.491
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00054**	**.23583**	**-.00133**	**.07146**	**.00156**	**.04976**	**.00476**	**.02713**	**.01086**
Stddev	.00226	.00019	.00365	.00042	.00236	.00731	.00035	.00079	.00104
%RSD	418.35	.08043	274.11	.58641	150.66	14.687	7.3176	2.8942	9.6033
#1	-.00214	.23596	.00125	.07117	.00323	.04459	.00501	.02657	.01160
#2	.00106	.23570	-.00391	.07176	-.00010	.05492	.00451	.02768	.01012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3525.6**	**42253.**	**2992.9**
Stddev	2.6	253.	18.6
%RSD	.07242	.59827	.62313
#1	3523.8	42431.	3006.1
#2	3527.4	42074.	2979.7

Sample Name: 280-116482-C-1-ASD@5 Acquired: 11/7/2018 4:56:18 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00164**	**.70288**	**.00286**	**.05223**	**.01917**	**.00003**	**-.00073**	**2.2380**	**-.00006**
Stddev	.00056	.00632	.00517	.00097	.00009	.00002	.00024	.0158	.00033
%RSD	33.777	.89865	180.88	1.8490	.44448	53.373	32.307	.70782	529.69
#1	-.00125	.70734	-.00080	.05291	.01911	.00005	-.00056	2.2492	-.00030
#2	-.00204	.69841	.00652	.05154	.01923	.00002	-.00090	2.2268	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00054**	**.00081**	**.00373**	**.42026**	**.67703**	**-.00227**	**1.0015**	**.00633**	**.00013**
Stddev	.00016	.00001	.00052	.00732	.02226	.00094	.0026	.00005	.00003
%RSD	29.009	1.1678	13.972	1.7414	3.2873	41.260	.25885	.85049	22.911
#1	.00043	.00082	.00336	.42544	.66129	-.00294	1.0034	.00629	.00015
#2	.00065	.00081	.00410	.41509	.69277	-.00161	.99970	.00637	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6364**	**.00044**	**.01710**	**-.00042**	**.71112**	**.00247**	**-.00838**	**1.7657**	**3.7787**
Stddev	.0065	.00010	.00123	.00275	.01160	.00233	.00484	.0329	.0705
%RSD	.24764	22.038	7.2187	646.42	1.6308	94.517	57.797	1.8651	1.8651
#1	2.6318	.00037	.01622	.00152	.71932	.00412	-.01180	1.7890	3.8285
#2	2.6411	.00050	.01797	-.00237	.70292	.00082	-.00496	1.7425	3.7289
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00231**	**.04776**	**.00364**	**.01599**	**.00181**	**.02714**	**.00132**	**.00615**	**.00398**
Stddev	.00092	.00003	.00055	.00043	.00138	.05195	.00065	.00092	.00241
%RSD	39.739	.06551	14.981	2.6888	76.372	191.40	49.289	14.925	60.510
#1	-.00166	.04778	.00326	.01630	.00279	-.00959	.00086	.00680	.00568
#2	-.00296	.04774	.00403	.01569	.00083	.06388	.00178	.00550	.00228
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3489.7**	**42252.**	**2962.5**
Stddev	4.9	129.	6.0
%RSD	.14173	.30452	.20398
#1	3493.2	42161.	2958.2
#2	3486.2	42343.	2966.7

Sample Name: 280-116482-C-1-B MS Acquired: 11/7/2018 4:58:53 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04288**	**5.8265**	**1.0098**	**1.2941**	**2.1854**	**.04979**	**1.9404**	**60.941**	**.09855**
Stddev	.00019	.0063	.0014	.0081	.0006	.00002	.0086	.088	.00062
%RSD	.44185	.10852	.13855	.62260	.02935	.03915	.44262	.14497	.63032
#1	.04302	5.8220	1.0108	1.2998	2.1859	.04981	1.9465	61.003	.09899
#2	.04275	5.8310	1.0088	1.2884	2.1850	.04978	1.9344	60.878	.09811
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49866**	**.20476**	**.27272**	**2.9147**	**55.567**	**1.0218**	**55.364**	**.53063**	**1.0310**
Stddev	.00308	.00081	.00011	.0128	.056	.0025	.031	.00070	.0078
%RSD	.61818	.39582	.03863	.43983	.10046	.24049	.05587	.13180	.75660
#1	.50083	.20534	.27279	2.9237	55.607	1.0201	55.386	.53113	1.0365
#2	.49648	.20419	.27265	2.9056	55.528	1.0236	55.342	.53014	1.0255
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**63.274**	**.49693**	**11.251**	**.50194**	**5.8196**	**.52155**	**2.0108**	**19.292**	**41.285**
Stddev	.904	.00282	.096	.00697	.0070	.00661	.0012	.038	.080
%RSD	1.4292	.56769	.84941	1.3880	.11984	1.2682	.06078	.19476	.19476
#1	62.635	.49893	11.319	.50686	5.8246	.52622	2.0117	19.265	41.228
#2	63.913	.49494	11.184	.49701	5.8147	.51687	2.0100	19.319	41.342
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0401**	**1.2530**	**1.0191**	**1.0779**	**2.0238**	**2.0588**	**.53826**	**.54374**	**.53041**
Stddev	.0173	.0018	.0046	.0007	.0156	.0180	.00002	.00188	.00143
%RSD	.84794	.14421	.45260	.06543	.77060	.87421	.00329	.34492	.26979
#1	2.0524	1.2543	1.0223	1.0774	2.0349	2.0715	.53828	.54507	.53142
#2	2.0279	1.2517	1.0158	1.0784	2.0128	2.0460	.53825	.54241	.52940
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3428.3**	**40850.**	**2945.6**
Stddev	10.2	57.	21.4
%RSD	.29651	.13978	.72817
#1	3435.5	40809.	2930.5
#2	3421.1	40890.	2960.8

Sample Name: 280-116482-C-1-C MSD Acquired: 11/7/2018 5:01:15 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04269**	**5.8025**	**1.0125**	**1.2941**	**2.1697**	**.05052**	**1.9411**	**60.563**	**.09814**
Stddev	.00037	.0412	.0159	.0028	.0105	.00017	.0113	.281	.00022
%RSD	.87766	.71025	1.5726	.21585	.48314	.33540	.58419	.46354	.22167
#1	.04243	5.8316	1.0238	1.2960	2.1771	.05040	1.9491	60.761	.09798
#2	.04296	5.7734	1.0013	1.2921	2.1623	.05064	1.9331	60.364	.09829
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49489**	**.20409**	**.27034**	**2.9010**	**55.069**	**1.0163**	**54.957**	**.52707**	**1.0288**
Stddev	.00233	.00121	.00170	.0065	.391	.0047	.250	.00194	.0037
%RSD	.47108	.59492	.62804	.22385	.71015	.46730	.45526	.36774	.36253
#1	.49654	.20495	.27154	2.8964	55.346	1.0196	55.134	.52844	1.0314
#2	.49324	.20323	.26914	2.9056	54.793	1.0129	54.780	.52570	1.0261
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**62.525**	**.49477**	**11.195**	**.50057**	**5.7848**	**.52403**	**1.9992**	**19.810**	**42.393**
Stddev	.077	.00126	.041	.00354	.0040	.00426	.0039	.027	.058
%RSD	.12314	.25368	.36562	.70776	.06975	.81364	.19234	.13651	.13651
#1	62.471	.49566	11.224	.50308	5.7876	.52704	2.0019	19.791	42.353
#2	62.580	.49388	11.166	.49807	5.7819	.52101	1.9964	19.829	42.434
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0280**	**1.2473**	**1.0126**	**1.0688**	**2.0169**	**2.0484**	**.53259**	**.54017**	**.52862**
Stddev	.0063	.0035	.0048	.0074	.0070	.0245	.00200	.00437	.00231
%RSD	.31011	.27882	.47152	.69306	.34847	1.1952	.37490	.80891	.43652
#1	2.0325	1.2497	1.0160	1.0740	2.0219	2.0311	.53400	.54326	.53025
#2	2.0236	1.2448	1.0093	1.0635	2.0119	2.0657	.53118	.53708	.52699
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3493.0**	**41556.**	**3054.9**
Stddev	4.7	143.	22.8
%RSD	.13325	.34415	.74471
#1	3489.8	41455.	3038.8
#2	3496.3	41657.	3070.9

Sample Name: 280-116482-C-1-A PDS Acquired: 11/7/2018 5:03:33 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02660**	**3.6283**	**.19789**	**.34908**	**.18734**	**.04815**	**.00180**	**29.873**	**.04837**
Stddev	.00141	.0168	.00436	.00674	.00014	.00015	.00645	.033	.00073
%RSD	5.3143	.46212	2.2043	1.9304	.07345	.32174	358.82	.11077	1.5179
#1	.02760	3.6164	.20097	.35385	.18744	.04804	-.00276	29.897	.04888
#2	.02560	3.6401	.19480	.34432	.18724	.04826	.00636	29.850	.04785
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04799**	**.05100**	**.06354**	**2.6443**	**23.608**	**.09972**	**24.166**	**.07498**	**.04999**
Stddev	.00070	.00103	.00007	.0200	.011	.00390	.057	.00012	.00112
%RSD	1.4610	2.0179	.11677	.75696	.04523	3.9129	.23508	.15498	2.2388
#1	.04848	.05172	.06359	2.6585	23.601	.09696	24.206	.07506	.05078
#2	.04749	.05027	.06349	2.6302	23.616	.10248	24.125	.07490	.04920
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**30.985**	**.05043**	**2.1463**	**.09284**	**3.6533**	**.09655**	**.18289**	**13.569**	**29.038**
Stddev	.141	.00124	.0382	.00220	.0424	.00154	.00380	.014	.030
%RSD	.45545	2.4628	1.7782	2.3653	1.1603	1.5922	2.0761	.10228	.10228
#1	30.885	.05131	2.1733	.09440	3.6832	.09763	.18020	13.579	29.059
#2	31.084	.04955	2.1193	.09129	3.6233	.09546	.18557	13.559	29.017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09206**	**.27884**	**.19463**	**.12535**	**.19944**	**.49775**	**.05483**	**.22301**	**.06075**
Stddev	.00232	.00099	.00150	.00011	.00421	.06636	.00009	.00095	.00124
%RSD	2.5250	.35607	.77028	.09102	2.1126	13.333	.16110	.42496	2.0454
#1	.09370	.27954	.19357	.12543	.20242	.54468	.05489	.22234	.06163
#2	.09042	.27814	.19569	.12527	.19646	.45082	.05477	.22368	.05987
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3549.3**	**42754.**	**3074.0**
Stddev	6.5	.	2.7
%RSD	.18325	.00031	.08694
#1	3544.7	42754.	3075.9
#2	3553.9	42754.	3072.1

Sample Name: 280-116482-C-2-A Acquired: 11/7/2018 5:06:05 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00087**	W **2.7406**	**.00585**	**.03122**	**.05946**	**.00026**	**.00165**	**5.2152**	**-.00025**
Stddev	.00079	.0163	.00429	.00003	.00096	.00027	.00278	.0002	.00017
%RSD	90.600	.59432	73.406	.09269	1.6153	101.24	168.57	.00314	68.971
#1	-.00031	2.7522	.00281	.03119	.05878	.00008	-.00032	5.2151	-.00036
#2	-.00143	2.7291	.00888	.03124	.06014	.00045	.00362	5.2153	-.00013
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		500.00							
Low Limit		3.2000							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**.00310**	**.00537**	**1.7310**	**2.1220**	**-.00318**	**1.7687**	**.02809**	**.00020**
Stddev	.00065	.00000	.00072	.0004	.0717	.00386	.1601	.00131	.00022
%RSD	130.81	.14960	13.455	.02584	3.3773	121.37	9.0526	4.6551	112.70
#1	.00095	.00310	.00588	1.7307	2.0714	-.00591	1.6555	.02717	.00004
#2	.00004	.00309	.00486	1.7314	2.1727	-.00045	1.8819	.02901	.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.2665**	**.00387**	**.05081**	**-.00283**	**1.6764**	**-.00106**	**.00333**	**7.7592**	**16.605**
Stddev	.0185	.00030	.00412	.00305	.0137	.00452	.00675	.0111	.024
%RSD	.56575	7.7868	8.1103	107.98	.81956	426.20	202.61	.14296	.14296
#1	3.2534	.00409	.05372	-.00067	1.6861	.00214	.00810	7.7513	16.588
#2	3.2796	.00366	.04789	-.00499	1.6667	-.00426	-.00144	7.7670	16.621
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00271**	**.05985**	**.00271**	**.07123**	**.00224**	**.07622**	**.00566**	**.01312**	**.00874**
Stddev	.00115	.00038	.00260	.00236	.00222	.02584	.00140	.00165	.00109
%RSD	42.498	.63564	96.079	3.3165	99.256	33.905	24.672	12.606	12.433
#1	-.00352	.06012	.00087	.06956	.00381	.05795	.00468	.01195	.00798
#2	-.00189	.05958	.00455	.07290	.00067	.09449	.00665	.01429	.00951
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3498.1**	**42627.**	**3008.7**
Stddev	4.2	271.	23.0
%RSD	.11916	.63637	.76446
#1	3501.1	42435.	3025.0
#2	3495.2	42819.	2992.4

Sample Name: 280-116482-C-3-A Acquired: 11/7/2018 5:08:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00201**	**3.2084**	**.00757**	**.02282**	**.05918**	**.00037**	**-.00182**	**5.0737**	**-.00036**
Stddev	.00104	.0032	.00047	.00016	.00009	.00003	.00163	.0221	.00094
%RSD	51.582	.09982	6.1640	.68895	.15045	8.6411	89.483	.43508	258.08
#1	-.00274	3.2062	.00790	.02293	.05924	.00035	-.00298	5.0893	-.00102
#2	-.00128	3.2107	.00724	.02271	.05912	.00039	-.00067	5.0581	.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00109**	**.00386**	**.00400**	**1.9433**	**1.9916**	**.00187**	**1.5847**	**.02748**	**.00041**
Stddev	.00001	.00001	.00004	.0006	.0611	.00102	.0034	.00012	.00042
%RSD	1.2080	.27501	1.0142	.03209	3.0696	54.411	.21255	.43101	102.21
#1	.00108	.00385	.00402	1.9429	1.9483	.00259	1.5870	.02740	.00071
#2	.00110	.00387	.00397	1.9437	2.0348	.00115	1.5823	.02756	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.0478**	**.00437**	**.05906**	**-.00415**	**1.6712**	**-.00008**	**-.00704**	**8.4939**	**18.177**
Stddev	.0323	.00028	.00196	.00120	.0112	.00114	.00364	.0405	.087
%RSD	1.0585	6.4173	3.3242	28.836	.67007	1470.5	51.733	.47666	.47666
#1	3.0707	.00417	.06045	-.00500	1.6791	-.00088	-.00447	8.5226	18.238
#2	3.0250	.00457	.05767	-.00331	1.6633	.00073	-.00962	8.4653	18.116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00257**	**.05459**	**.00174**	**.08000**	**.00119**	**.06350**	**.00577**	**.01099**	**.00956**
Stddev	.00257	.00032	.00148	.00130	.00396	.07119	.00095	.00069	.00197
%RSD	99.717	.58150	84.971	1.6218	333.32	112.11	16.539	6.3020	20.578
#1	-.00439	.05482	.00278	.07908	-.00161	.01316	.00645	.01050	.01095
#2	-.00076	.05437	.00069	.08092	.00399	.11384	.00510	.01148	.00817
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3562.4**	**42794.**	**3015.4**
Stddev	10.9	48.	.9
%RSD	.30505	.11204	.03041
#1	3570.1	42760.	3016.1
#2	3554.7	42828.	3014.8

Sample Name: CCVH-5408055 Acquired: 11/7/2018 5:11:14 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00314**	**47.043**	**-.00114**	**.00367**	**.00027**	**-.00002**	**.96226**	**.00120**	**-.00074**	**.00158**	**.00089**	**.00248**	**48.257**
Stddev	.00061	.254	.00446	.00007	.00002	.00020	.01078	.00722	.00001	.00058	.00003	.00042	.285
%RSD	19.470	.54052	390.68	1.8324	5.5505	1293.2	1.1200	600.16	1.5303	36.802	3.2890	16.957	.59129
#1	-.00271	46.863	-.00430	.00362	.00026	-.00016	.96988	-.00390	-.00074	.00199	.00091	.00218	48.055
#2	-.00357	47.223	.00201	.00372	.00028	.00013	.95464	.00631	-.00073	.00117	.00087	.00277	48.458
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.03852**	**-.00290**	**-.08966**	**.00253**	**-.00085**	**245.72**	**.00286**	**-.00056**	**-.00190**	**4.8011**	**.00541**	**.00003**	**.00208**
Stddev	.02760	.00135	.00782	.00004	.00061	1.59	.00014	.00141	.00030	.0437	.00383	.00165	.00053
%RSD	71.657	46.671	8.7272	1.6353	71.636	.64664	4.9937	252.37	15.579	.91005	70.835	5172.5	25.461
#1	-.01900	-.00385	-.09519	.00256	-.00042	244.60	.00276	.00044	-.00211	4.8320	.00813	-.00113	.00171
#2	-.05803	-.00194	-.08412	.00250	-.00129	246.85	.00296	-.00156	-.00169	4.7702	.00270	.00120	.00246
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00446**	**-.00149**	**.00029**	**4.8714**	**.01710**	**-.00042**	**9.7869**	**-.00961**	**.00076**	**.07917**
Stddev	.00113	.00065	.00011	.0008	.00047	.00415	.0750	.00015	.00043	.00489
%RSD	25.461	43.283	37.606	.01658	2.7283	989.07	.76639	1.5411	56.928	6.1737
#1	.00365	-.00195	.00036	4.8719	.01677	-.00336	9.7338	-.00950	.00045	.07571
#2	.00526	-.00104	.00021	4.8708	.01743	.00252	9.8399	-.00971	.00106	.08262
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3409.0**	**40791.**	**2964.1**
Stddev	7.0	32.	5.6
%RSD	.20388	.07899	.18847
#1	3404.1	40814.	2968.1
#2	3413.9	40768.	2960.2

Sample Name: CCV-5407546 Acquired: 11/7/2018 5:13:48 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50201**	F **.59369**	**.99728**	**.49982**	**.51247**	**.48863**	**.00491**	**4.9026**	**.50155**	**.49764**	**.49502**	**.50988**
Stddev	.00094	.00716	.01333	.00274	.00080	.00012	.00366	.0150	.00482	.00487	.00690	.00120
%RSD	.18681	1.2059	1.3371	.54784	.15620	.02461	74.578	.30597	.96117	.97846	1.3933	.23437
#1	.50267	.59876	1.0067	.50175	.51303	.48855	.00750	4.8920	.50495	.50108	.49990	.51072
#2	.50134	.58863	.98785	.49788	.51190	.48872	.00232	4.9132	.49814	.49420	.49014	.50903
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4283**	**50.646**	**1.0166**	**19.962**	**.49704**	**.49353**	**5.3810**	**.49752**	**1.0607**	**1.0040**	**-.01774**	**1.0102**
Stddev	.0122	.104	.0058	.111	.00191	.00395	.0223	.00490	.0058	.0089	.00311	.0076
%RSD	.50381	.20617	.57472	.55754	.38415	.80101	.41359	.98453	.54738	.88456	17.534	.75286
#1	2.4369	50.573	1.0208	20.041	.49839	.49632	5.3968	.50098	1.0648	1.0103	-.01994	1.0155
#2	2.4196	50.720	1.0125	19.883	.49569	.49073	5.3653	.49406	1.0566	.99770	-.01554	1.0048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.97157**	**4.9346**	**10.560**	**.99397**	**.49566**	**.00751**	**.49448**	**1.0198**	**.01738**	**.50639**	**.49914**	**.49977**
Stddev	.00491	.0764	.163	.00596	.00020	.00085	.00103	.0063	.00817	.00131	.00285	.00044
%RSD	.50516	1.5473	1.5473	.59919	.04018	11.357	.20826	.61371	46.994	.25848	.57083	.08719
#1	.97504	4.8806	10.444	.99818	.49580	.00691	.49521	1.0243	.02315	.50731	.50115	.50008
#2	.96810	4.9886	10.676	.98975	.49552	.00811	.49375	1.0154	.01160	.50546	.49712	.49946
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3444.5**	**41415.**	**2950.6**
Stddev	7.8	84.	9.5
%RSD	.22768	.20241	.32094
#1	3438.9	41356.	2943.9
#2	3450.0	41474.	2957.3

Sample Name: CCB Acquired: 11/7/2018 5:16:11 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00133**	**.02238**	**.00649**	**.00315**	**-.00091**	**.00019**	**.00102**	**-.00851**	**-.00031**	**.00036**	**.00045**	**.00105**	**-.00384**
Stddev	.00041	.00023	.00237	.00026	.00007	.00014	.00496	.00566	.00003	.00030	.00017	.00026	.00068
%RSD	30.988	1.0295	36.617	8.1643	8.1602	74.224	486.93	66.504	10.744	83.342	36.835	24.773	17.784
#1	-.00162	.02222	.00481	.00333	-.00086	.00029	-.00249	-.01251	-.00034	.00015	.00057	.00124	-.00336
#2	-.00104	.02255	.00816	.00296	-.00096	.00009	.00453	-.00451	-.00029	.00057	.00034	.00087	-.00432
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.07796**	**-.00077**	**.00258**	**.00018**	**.00092**	**.18542**	**-.00016**	**-.00001**	**-.00043**	**-.02041**	**.00130**	**.00149**	**.03451**
Stddev	.03813	.00355	.00538	.00012	.00001	.00744	.00063	.00004	.00178	.00210	.00026	.00319	.02790
%RSD	48.908	462.94	208.77	67.702	1.1575	4.0134	399.54	291.54	413.39	10.277	20.270	213.65	80.841
#1	-.10492	.00175	-.00123	.00027	.00093	.19069	.00029	.00001	-.00169	-.02189	.00111	.00375	.01478
#2	-.05100	-.00328	.00638	.00009	.00091	.18016	-.00061	-.00004	.00083	-.01892	.00148	-.00076	.05423
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07385**	**-.00261**	**.00010**	**-.00150**	**.00028**	**.00329**	**.03474**	**.00065**	**.00005**	**.00339**
Stddev	.05970	.00022	.00043	.00300	.00007	.00064	.02360	.00035	.00031	.00103
%RSD	80.841	8.3330	430.44	200.39	23.286	19.404	67.934	54.262	666.93	30.266
#1	.03163	-.00276	-.00020	.00062	.00024	.00284	.05143	.00040	.00027	.00266
#2	.11606	-.00245	.00040	-.00362	.00033	.00374	.01805	.00090	-.00017	.00412
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3410.2**	**40847.**	**2847.6**
Stddev	4.0	22.	15.4
%RSD	.11851	.05508	.54002
#1	3413.0	40831.	2858.5
#2	3407.3	40863.	2836.7

Sample Name: ccvl-5413446 Acquired: 11/7/2018 5:18:47 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00949**	**.11830**	**.01679**	**.09847**	**.00994**	**.00125**	**.10856**	**.19847**	**.00457**	**.01046**	**.00991**	**.01682**
Stddev	.00044	.00306	.00158	.00171	.00129	.00015	.00169	.00045	.00016	.00031	.00004	.00061
%RSD	4.6725	2.5896	9.4287	1.7353	12.950	11.920	1.5586	.22646	3.4221	2.9549	.41512	3.6344
#1	.00980	.12047	.01567	.09968	.01085	.00115	.10736	.19879	.00446	.01068	.00988	.01639
#2	.00918	.11614	.01791	.09726	.00903	.00136	.10976	.19815	.00468	.01024	.00994	.01726
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09980**	**3.0865**	**.02107**	**.20466**	**.01027**	**.01917**	**1.2043**	**.03940**	**3.0035**	**.00826**	**.07197**	**.01533**
Stddev	.00069	.0568	.00067	.00618	.00008	.00016	.0051	.00163	.0662	.00054	.00178	.00627
%RSD	.69199	1.8399	3.1802	3.0184	.82550	.83896	.42248	4.1248	2.2040	6.5176	2.4783	40.892
#1	.10028	3.1266	.02154	.20903	.01033	.01928	1.2079	.04055	3.0503	.00864	.07323	.01089
#2	.09931	3.0463	.02059	.20029	.01021	.01906	1.2007	.03825	2.9566	.00788	.07071	.01976
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01775**	**.52163**	**1.1163**	**.09607**	**.00976**	**.01504**	**.00998**	**.01927**	F **.11389**	**.00952**	**.02101**	**.01909**
Stddev	.00273	.04332	.0927	.00237	.00023	.00604	.00044	.00074	.04646	.00079	.00020	.00489
%RSD	15.381	8.3043	8.3043	2.4689	2.3734	40.171	4.4461	3.8298	40.794	8.3253	.97313	25.612
#1	.01968	.49100	1.0507	.09775	.00992	.01931	.00967	.01875	.08104	.00896	.02086	.01563
#2	.01582	.55226	1.1818	.09440	.00959	.01077	.01030	.01979	.14674	.01008	.02115	.02254
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3504.5**	**42565.**	**2957.8**
Stddev	.5	5.	82.7
%RSD	.01490	.01168	2.7952
#1	3504.2	42569.	2899.3
#2	3504.9	42562.	3016.2

Sample Name: 280-116482-C-4-A Acquired: 11/7/2018 5:21:21 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00098**	W **3.0030**	**.00026**	**.03037**	**.06014**	**.00047**	**-.00130**	**5.3196**	**-.00028**
Stddev	.00106	.0351	.00752	.00072	.00094	.00017	.00503	.0149	.00022
%RSD	108.07	1.1703	2919.7	2.3726	1.5556	37.034	388.33	.28093	81.372
#1	-.00023	3.0279	.00558	.03088	.05948	.00059	.00226	5.3301	-.00043
#2	-.00173	2.9782	-.00506	.02986	.06080	.00034	-.00485	5.3090	-.00012
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		500.00							
Low Limit		3.2000							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00095**	**.00341**	**.00455**	**1.9157**	**2.0909**	**-.00002**	**1.6960**	**.02734**	**.00026**
Stddev	.00017	.00027	.00067	.0001	.0400	.00283	.0107	.00005	.00024
%RSD	17.946	7.8279	14.641	.00658	1.9124	16097.	.63287	.19450	90.045
#1	.00107	.00322	.00502	1.9158	2.0626	-.00202	1.6884	.02730	.00010
#2	.00083	.00360	.00408	1.9156	2.1191	.00198	1.7036	.02737	.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.3430**	**.00385**	**.05948**	**-.00338**	**1.6582**	**-.00203**	**.00616**	**8.1566**	**17.455**
Stddev	.0275	.00008	.00441	.00410	.0439	.00246	.00108	.0245	.053
%RSD	.82216	1.9944	7.4096	121.19	2.6450	121.29	17.582	.30097	.30097
#1	3.3235	.00380	.06260	-.00628	1.6892	-.00376	.00692	8.1739	17.492
#2	3.3624	.00391	.05636	-.00048	1.6271	-.00029	.00539	8.1392	17.418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00209**	**.06195**	**-.00025**	**.07113**	**.00175**	**.06416**	**.00608**	**.01183**	**.00528**
Stddev	.00036	.00043	.00116	.00017	.00282	.08023	.00044	.00083	.00357
%RSD	17.302	.69076	473.27	.23351	160.52	125.05	7.3157	7.0076	67.569
#1	-.00235	.06165	-.00107	.07124	-.00024	.00743	.00577	.01125	.00780
#2	-.00183	.06226	.00058	.07101	.00374	.12089	.00639	.01242	.00276
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3564.6**	**43004.**	**3031.7**
Stddev	6.9	4.	7.3
%RSD	.19361	.01037	.23977
#1	3559.7	43007.	3026.6
#2	3569.4	43001.	3036.8

Sample Name: 280-116489-A-1-A Acquired: 11/7/2018 5:23:57 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **-.00125**	W **2.3250**	k **.00711**	**.01828**	**.06522**	k **.00039**	k **.00284**	**4.9734**	k **-.00023**
Stddev	.00019	.0226	.00743	.00010	.00026	.00003	.00185	.0033	.00011
%RSD	15.438	.97369	104.54	.56048	.39447	7.3654	65.054	.06616	48.753
#1	k -.00138	2.3410	k .01237	.01835	.06540	k .00041	k .00415	4.9711	k -.00031
#2	k -.00111	2.3090	k .00185	.01821	.06504	k .00037	k .00154	4.9757	k -.00015
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		500.00							
Low Limit		3.2000							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00109**	k **.00274**	k **.00393**	**1.4967**	**2.3614**	**-.00552**	k **1.3552**	k **.03062**	k **.00009**
Stddev	.00012	.00008	.00004	.0010	.0185	.00017	.0084	.00010	.00007
%RSD	11.070	3.0735	.92190	.06734	.78296	3.0176	.61874	.33562	77.395
#1	k .00101	k .00280	k .00396	1.4974	2.3744	-.00563	k 1.3611	k .03055	k .00014
#2	k .00118	k .00268	k .00390	1.4960	2.3483	-.00540	k 1.3492	k .03069	k .00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.9133**	k **.00332**	**.05503**	k **-.00310**	k **1.1299**	k **-.00104**	k **-.00447**	**7.4639**	**15.973**
Stddev	.0547	.00077	.00065	.00149	.0175	.00139	.00074	.0513	.110
%RSD	1.8779	23.290	1.1765	48.056	1.5486	133.96	16.549	.68689	.68689
#1	2.9520	k .00386	.05549	k -.00205	k 1.1423	k -.00005	k -.00394	7.5002	16.050
#2	2.8746	k .00277	.05457	k -.00416	k 1.1175	k -.00202	k -.00499	7.4277	15.895
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **-.00238**	**.06245**	k **.00166**	k **.05906**	k **.00186**	k **.02459**	k **.00513**	k **.00927**	k **.00612**
Stddev	.00078	.00046	.00181	.00006	.00121	.04918	.00015	.00011	.00055
%RSD	32.703	.73696	109.09	.10528	65.230	200.00	2.9463	1.1648	9.0452
#1	k -.00293	.06278	k .00038	k .05901	k .00100	k .05936	k .00502	k .00934	k .00572
#2	k -.00183	.06213	k .00295	k .05910	k .00272	k -.01018	k .00524	k .00919	k .00651
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3534.9**	**42889.**	**2999.5**
Stddev	3.6	199.	9.2
%RSD	.10186	.46342	.30827
#1	3532.4	42748.	2993.0
#2	3537.5	43029.	3006.0

Sample Name: 280-116489-A-2-A Acquired: 11/7/2018 5:26:32 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00192**	W **2.8221**	**.00325**	**.01876**	**.06475**	**.00037**	**.00431**	**4.8725**	**.00003**
Stddev	.00044	.0174	.00137	.00083	.00019	.00001	.00125	.0383	.00017
%RSD	22.966	.61779	42.266	4.4428	.29010	1.9770	29.118	.78588	637.60
#1	-.00223	2.8098	.00228	.01817	.06489	.00037	.00342	4.8996	-.00009
#2	-.00161	2.8344	.00423	.01935	.06462	.00036	.00519	4.8454	.00014
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		500.00							
Low Limit		3.2000							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00042**	**.00357**	**.00527**	**1.6925**	**2.3324**	**-.00012**	**1.3557**	**.03059**	**-.00044**
Stddev	.00008	.00037	.00003	.0020	.1073	.00102	.0118	.00008	.00046
%RSD	18.034	10.354	.48433	.11884	4.5989	828.35	.87155	.26041	104.48
#1	.00047	.00383	.00526	1.6939	2.2566	.00060	1.3474	.03065	-.00077
#2	.00036	.00331	.00529	1.6911	2.4083	-.00085	1.3641	.03053	-.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.8246**	**.00313**	**.05776**	**-.00365**	**1.1190**	**-.00299**	**-.01283**	**8.2244**	**17.600**
Stddev	.0015	.00047	.00126	.00061	.0169	.00165	.00544	.0666	.143
%RSD	.05210	14.872	2.1816	16.705	1.5085	55.282	42.376	.81022	.81022
#1	2.8256	.00280	.05865	-.00322	1.1309	-.00416	-.01668	8.2715	17.701
#2	2.8235	.00346	.05687	-.00408	1.1070	-.00182	-.00899	8.1773	17.499
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00283**	**.06060**	**.00001**	**.07455**	**-.00022**	**.05788**	**.00572**	**.01130**	**.00907**
Stddev	.00034	.00044	.00136	.00098	.00228	.02094	.00014	.00070	.00465
%RSD	12.002	.72566	10233.	1.3158	1016.5	36.168	2.3797	6.1937	51.296
#1	-.00259	.06091	-.00095	.07524	.00139	.04308	.00562	.01080	.01236
#2	-.00307	.06029	.00097	.07385	-.00184	.07269	.00581	.01179	.00578
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3552.9**	**43094.**	**3031.8**
Stddev	.4	48.	13.9
%RSD	.01117	.11079	.45693
#1	3553.2	43128.	3022.0
#2	3552.6	43060.	3041.6

Sample Name: 280-116489-A-3-A Acquired: 11/7/2018 5:29:07 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00098**	W **2.5694**	**.00494**	**.01828**	**.06457**	**.00042**	**-.00342**	**4.6565**	**.00013**
Stddev	.00003	.0630	.00089	.00100	.00031	.00035	.00452	.0072	.00003
%RSD	3.2367	2.4505	17.937	5.4700	.48324	81.627	132.02	.15484	25.276
#1	-.00100	2.6139	.00431	.01898	.06435	.00067	-.00023	4.6514	.00015
#2	-.00096	2.5249	.00556	.01757	.06479	.00018	-.00662	4.6616	.00010
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		500.00							
Low Limit		3.2000							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00095**	**.00286**	**.00357**	**1.6706**	**2.3779**	**-.00129**	**1.3471**	**.02995**	**.00023**
Stddev	.00017	.00012	.00029	.0042	.0720	.00589	.0135	.00001	.00015
%RSD	17.511	4.2057	7.9991	.25090	3.0261	458.20	1.0022	.03616	67.359
#1	.00107	.00278	.00337	1.6677	2.3271	-.00545	1.3566	.02994	.00012
#2	.00084	.00295	.00377	1.6736	2.4288	.00288	1.3375	.02995	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.8644**	**.00344**	**.06055**	**-.00411**	**1.1515**	**-.00354**	**-.00385**	**7.8379**	**16.773**
Stddev	.0222	.00024	.00241	.00105	.0180	.00190	.00162	.0388	.083
%RSD	.77498	7.0656	3.9818	25.407	1.5599	53.602	41.992	.49529	.49529
#1	2.8801	.00361	.06225	-.00485	1.1642	-.00488	-.00270	7.8653	16.832
#2	2.8487	.00327	.05884	-.00337	1.1388	-.00220	-.00499	7.8104	16.714
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00190**	**.06078**	**.00248**	**.06268**	**-.00001**	**.04047**	**.00534**	**.01101**	**.00824**
Stddev	.00286	.00001	.00498	.00441	.00309	.01983	.00058	.00062	.00154
%RSD	150.25	.01535	200.92	7.0281	38713.	48.994	10.847	5.6493	18.647
#1	-.00392	.06077	-.00104	.06579	-.00219	.05449	.00575	.01145	.00716
#2	.00012	.06078	.00600	.05956	.00218	.02645	.00493	.01057	.00933
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3563.0**	**43303.**	**3062.1**
Stddev	12.3	6.	8.4
%RSD	.34657	.01482	.27382
#1	3554.3	43298.	3068.0
#2	3571.7	43307.	3056.2

Sample Name: 280-116469-F-2-A Acquired: 11/7/2018 5:31:40 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00132**	**.00263**	**.00969**	**.24284**	**.05665**	**.00012**	**.00573**	**187.84**	**-.00011**
Stddev	.00028	.00008	.00116	.00392	.00061	.00027	.00145	.74	.00002
%RSD	21.142	2.8486	12.013	1.6155	1.0788	223.04	25.360	.39280	14.314
#1	-.00152	.00258	.00886	.24562	.05709	.00031	.00676	188.36	-.00010
#2	-.00112	.00269	.01051	.24007	.05622	-.00007	.00471	187.32	-.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.00077**	**.00227**	**7.8553**	**4.2660**	**.01460**	**23.155**	**.74435**	**.00037**
Stddev	.00043	.00002	.00100	.0184	.0781	.00067	.161	.00426	.00088
%RSD	653.66	2.0855	44.172	.23463	1.8317	4.5858	.69384	.57292	236.96
#1	-.00037	.00076	.00156	7.8684	4.3213	.01508	23.268	.74737	-.00025
#2	.00024	.00078	.00298	7.8423	4.2108	.01413	23.041	.74134	.00100
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.2118**	**.00057**	**.10040**	**-.00563**	**49.257**	**.00133**	**-.00079**	**9.7423**	**20.849**
Stddev	.0913	.00024	.00276	.00501	.555	.00255	.00053	.0501	.107
%RSD	1.1119	42.020	2.7455	89.097	1.1272	192.26	67.491	.51384	.51384
#1	8.2763	.00040	.10235	-.00917	49.650	-.00048	-.00117	9.7777	20.924
#2	8.1472	.00074	.09845	-.00208	48.864	.00313	-.00041	9.7069	20.773
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00340**	**1.5283**	**.00043**	**.00069**	**.00171**	**.05316**	**-.00010**	**.00105**	**.00534**
Stddev	.00108	.0041	.00179	.00072	.00038	.00146	.00058	.00045	.00473
%RSD	31.821	.26551	417.12	103.36	22.030	2.7492	610.77	43.006	88.584
#1	-.00263	1.5311	-.00084	.00019	.00197	.05212	-.00051	.00137	.00199
#2	-.00416	1.5254	.00169	.00120	.00144	.05419	.00032	.00073	.00868
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3369.7**	**41105.**	**2938.2**
Stddev	2.3	176.	2.0
%RSD	.06737	.42828	.06752
#1	3368.1	40980.	2936.8
#2	3371.3	41229.	2939.6

Sample Name: 280-116538-J-1-A Acquired: 11/7/2018 5:34:12 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00110**	**.07223**	**.00894**	**.17351**	**.10673**	**.00030**	**.00041**	**169.82**	**-.00000**
Stddev	.00010	.00050	.00431	.00255	.00073	.00000	.00174	.41	.00002
%RSD	9.3036	.69564	48.178	1.4682	.68191	.78725	428.69	.24371	1834.0
#1	-.00117	.07187	.01199	.17531	.10724	.00030	.00164	169.53	-.00002
#2	-.00102	.07258	.00590	.17171	.10621	.00030	-.00083	170.11	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00229**	**.00098**	**.00368**	**.09399**	**4.5371**	**.01855**	**32.103**	**.19632**	**.00545**
Stddev	.00034	.00072	.00015	.00887	.0087	.00578	.016	.00015	.00025
%RSD	14.816	73.404	4.1955	9.4373	.19211	31.185	.05012	.07512	4.6479
#1	.00253	.00149	.00379	.08772	4.5309	.02264	32.114	.19643	.00527
#2	.00205	.00047	.00357	.10026	4.5432	.01446	32.092	.19622	.00563
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.397**	**.01048**	**.00983**	**-.00391**	**74.060**	**.01999**	**-.00867**	**9.5359**	**20.407**
Stddev	.785	.00020	.00005	.00043	1.711	.00259	.00033	.1132	.242
%RSD	3.2189	1.8821	.50844	10.983	2.3096	12.938	3.8646	1.1872	1.1872
#1	24.952	.01062	.00979	-.00422	75.269	.02181	-.00843	9.4559	20.236
#2	23.842	.01034	.00986	-.00361	72.850	.01816	-.00890	9.6160	20.578
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00321**	**.88398**	**.00046**	**.00185**	**.00411**	**-.01376**	**-.00020**	**.00280**	**.00480**
Stddev	.00079	.00194	.00394	.00118	.00275	.03532	.00015	.00061	.00274
%RSD	24.545	.21988	861.15	64.093	66.900	256.69	76.107	21.638	57.052
#1	-.00376	.88260	.00325	.00268	.00216	.01121	-.00009	.00237	.00286
#2	-.00265	.88535	-.00233	.00101	.00605	-.03873	-.00031	.00323	.00674
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3383.4**	**41169.**	**2909.7**
Stddev	3.5	191.	.1
%RSD	.10320	.46472	.00345
#1	3380.9	41305.	2909.6
#2	3385.9	41034.	2909.7

Sample Name: 280-116538-J-2-A Acquired: 11/7/2018 5:36:45 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00059**	**.45602**	**.01715**	**.11091**	**.04279**	**.00015**	**.00619**	**116.57**	**.00040**
Stddev	.00021	.01473	.00976	.00256	.00003	.00022	.00000	.45	.00046
%RSD	35.397	3.2304	56.878	2.3064	.07790	146.29	.00461	.38369	115.22
#1	-.00074	.46643	.02405	.11272	.04281	-.00001	.00619	116.89	.00007
#2	-.00045	.44560	.01025	.10910	.04277	.00030	.00619	116.26	.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00647**	**.00093**	**.00325**	**.63217**	**5.5094**	**.05274**	**50.663**	**.24104**	**.00166**
Stddev	.00081	.00024	.00067	.00629	.0596	.00496	.052	.00025	.00075
%RSD	12.465	25.618	20.745	.99456	1.0811	9.4048	.10184	.10577	45.256
#1	.00704	.00076	.00372	.63661	5.5515	.04923	50.699	.24122	.00220
#2	.00590	.00110	.00277	.62772	5.4673	.05625	50.627	.24086	.00113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.643**	**.01346**	**.00851**	**-.00095**	**60.897**	**.00019**	**-.00530**	**7.4457**	**15.934**
Stddev	.071	.00026	.00101	.00089	1.298	.00244	.00600	.0346	.074
%RSD	.27596	1.9431	11.882	93.499	2.1308	1256.0	113.21	.46476	.46476
#1	25.693	.01327	.00923	-.00032	61.814	.00192	-.00954	7.4212	15.881
#2	25.593	.01364	.00780	-.00158	59.979	-.00153	-.00106	7.4702	15.986
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00107**	**.39866**	**-.00114**	**.01371**	**-.00056**	**.04195**	**.00097**	**.00401**	**.00688**
Stddev	.00013	.00081	.00063	.00602	.00211	.00591	.00029	.00058	.00267
%RSD	12.461	.20437	55.246	43.891	376.94	14.087	29.585	14.337	38.851
#1	-.00098	.39923	-.00069	.00946	-.00205	.03777	.00076	.00442	.00877
#2	-.00117	.39808	-.00158	.01797	.00093	.04612	.00117	.00361	.00499
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3407.6**	**41363.**	**2971.8**
Stddev	6.6	258.	14.6
%RSD	.19271	.62254	.49106
#1	3403.0	41545.	2961.4
#2	3412.3	41181.	2982.1

Sample Name: 280-116511-A-1-A Acquired: 11/7/2018 5:39:17 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00061**	**.00348**	**.00810**	**.00299**	**.00366**	**.00045**	**.00472**	**26.260**	**-.00045**
Stddev	.00069	.00009	.00625	.00051	.00063	.00009	.00553	.091	.00014
%RSD	112.50	2.5675	77.140	17.046	17.143	20.010	117.11	.34548	29.718
#1	-.00012	.00355	.00368	.00335	.00410	.00051	.00863	26.324	-.00036
#2	-.00109	.00342	.01252	.00263	.00321	.00038	.00081	26.196	-.00055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00042**	**.00076**	**.00472**	**.01026**	**3.2755**	**.00182**	**3.1549**	**.00049**	**.00009**
Stddev	.00009	.00013	.00076	.00449	.0396	.00295	.0018	.00016	.00042
%RSD	20.583	17.402	16.117	43.731	1.2105	161.61	.05749	32.592	443.57
#1	.00048	.00085	.00526	.00709	3.2474	.00391	3.1536	.00060	-.00020
#2	.00036	.00066	.00418	.01343	3.3035	-.00026	3.1562	.00037	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.2753**	**-.00027**	**.00461**	**-.00219**	**4.6027**	**-.00059**	**-.00083**	**6.2193**	**13.309**
Stddev	.0404	.00006	.00156	.00094	.1115	.00375	.00313	.0224	.048
%RSD	1.7764	21.359	33.765	43.080	2.4221	640.15	379.35	.36055	.36055
#1	2.3038	-.00023	.00351	-.00285	4.6815	-.00323	.00139	6.2351	13.343
#2	2.2467	-.00031	.00571	-.00152	4.5239	.00206	-.00304	6.2034	13.275
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00384**	**.09223**	**.00075**	**.00051**	**.00133**	**.03992**	**.00038**	**.00105**	**.00714**
Stddev	.00066	.00011	.00259	.00081	.00186	.00968	.00016	.00109	.00291
%RSD	17.088	.12373	345.25	159.35	140.13	24.237	42.915	103.86	40.747
#1	-.00338	.09231	-.00108	.00108	.00265	.04676	.00027	.00028	.00920
#2	-.00430	.09215	.00258	-.00006	.00001	.03308	.00050	.00183	.00508
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3501.6**	**42182.**	**2983.6**
Stddev	.4	175.	17.3
%RSD	.01038	.41537	.58090
#1	3501.8	42058.	2971.4
#2	3501.3	42306.	2995.9

Sample Name: 280-116511-A-2-A Acquired: 11/7/2018 5:41:51 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00132**	**.00658**	**.00446**	**.00224**	**.01017**	**.00034**	**-.00031**	**49.760**	**-.00023**
Stddev	.00080	.00021	.00686	.00019	.00038	.00016	.00838	.152	.00038
%RSD	60.692	3.2484	153.71	8.3614	3.6880	47.183	2665.0	.30610	163.08
#1	-.00075	.00673	.00932	.00237	.00991	.00022	-.00624	49.868	-.00050
#2	-.00189	.00643	-.00039	.00211	.01044	.00045	.00561	49.653	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.00075**	**.00845**	**.01913**	**4.4976**	**.00235**	**6.1332**	**.12047**	**.00081**
Stddev	.00031	.00011	.00030	.00452	.0250	.00649	.0128	.00008	.00043
%RSD	77.791	14.252	3.5041	23.645	.55701	275.80	.20904	.06326	52.566
#1	.00062	.00083	.00824	.02232	4.5153	-.00223	6.1242	.12052	.00051
#2	.00018	.00068	.00866	.01593	4.4799	.00694	6.1423	.12041	.00112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.5674**	**.00011**	**.01227**	**-.00313**	**16.789**	**-.00594**	**-.00273**	**5.0685**	**10.847**
Stddev	.0480	.00046	.00228	.00035	.265	.00002	.00171	.0391	.084
%RSD	1.0502	411.58	18.579	11.148	1.5781	.33889	62.588	.77177	.77177
#1	4.6013	.00044	.01388	-.00288	16.977	-.00592	-.00394	5.0962	10.906
#2	4.5335	-.00021	.01066	-.00337	16.602	-.00595	-.00152	5.0408	10.787
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00228**	**.20897**	**-.00149**	**.00105**	**-.00018**	**.07111**	**.00100**	**.01182**	**.00754**
Stddev	.00050	.00117	.00171	.00005	.00039	.00686	.00085	.00017	.00253
%RSD	22.117	.55802	114.83	4.7457	215.96	9.6442	85.460	1.4368	33.530
#1	-.00193	.20979	-.00270	.00109	-.00046	.07596	.00039	.01194	.00575
#2	-.00264	.20814	-.00028	.00102	.00010	.06626	.00160	.01170	.00933
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3538.7**	**42920.**	**3030.8**
Stddev	1.8	17.	2.0
%RSD	.05204	.04001	.06464
#1	3540.0	42932.	3029.4
#2	3537.4	42908.	3032.2

Sample Name: 280-116511-A-3-A Acquired: 11/7/2018 5:44:25 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00108**	**.01176**	**.00125**	**.00243**	**.00936**	**-.00014**	**.00787**	**29.426**	**-.00029**
Stddev	.00095	.00089	.00445	.00005	.00017	.00048	.00063	.115	.00021
%RSD	88.310	7.5790	356.73	1.9835	1.7878	348.66	7.9637	.38957	73.211
#1	-.00175	.01113	-.00190	.00240	.00924	-.00047	.00832	29.507	-.00014
#2	-.00040	.01239	.00439	.00247	.00948	.00020	.00743	29.345	-.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.00033**	**.01007**	**.13665**	**3.2658**	**-.00339**	**3.9049**	**.00163**	**.00005**
Stddev	.00007	.00021	.00042	.00211	.0704	.00170	.0295	.00004	.00010
%RSD	21.672	62.001	4.1651	1.5470	2.1557	50.075	.75557	2.4564	184.45
#1	.00029	.00048	.01037	.13516	3.3156	-.00459	3.9258	.00160	.00012
#2	.00040	.00019	.00978	.13815	3.2160	-.00219	3.8841	.00166	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.6012**	**-.00012**	**.00206**	**-.00383**	**6.2164**	**.00086**	**-.00090**	**4.8694**	**10.420**
Stddev	.0135	.00007	.00098	.00171	.1538	.00279	.00581	.0374	.080
%RSD	.37596	54.778	47.689	44.673	2.4740	325.02	646.93	.76819	.76819
#1	3.6108	-.00007	.00276	-.00504	6.3251	.00283	.00321	4.8958	10.477
#2	3.5916	-.00017	.00137	-.00262	6.1076	-.00111	-.00500	4.8429	10.364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00209**	**.44244**	**-.00079**	**.00074**	**.00264**	**.06403**	**-.00003**	**.00362**	**.00626**
Stddev	.00175	.00191	.00119	.00003	.00047	.04845	.00042	.00036	.00014
%RSD	83.794	.43118	151.64	3.8250	17.765	75.674	1662.9	9.9947	2.2112
#1	-.00085	.44379	-.00163	.00076	.00231	.09829	.00027	.00387	.00617
#2	-.00333	.44109	.00006	.00072	.00297	.02977	-.00032	.00336	.00636
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3498.2**	**42513.**	**2998.2**
Stddev	19.4	58.	17.6
%RSD	.55487	.13590	.58578
#1	3511.9	42472.	2985.8
#2	3484.5	42553.	3010.6

Sample Name: CCVH-5408055 Acquired: 11/7/2018 5:46:59 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00300**	**47.482**	**-.00274**	**.00200**	**-.00031**	**-.00009**	**.95398**	**.00586**	**-.00047**	**.00181**	**.00062**	**.00353**	**48.393**
Stddev	.00069	.025	.00201	.00076	.00004	.00002	.02797	.00538	.00008	.00069	.00002	.00033	.198
%RSD	22.869	.05357	73.507	37.874	12.324	25.985	2.9317	91.813	17.351	38.174	2.7039	9.4655	.41009
#1	-.00252	47.500	-.00131	.00147	-.00028	-.00008	.97375	.00205	-.00053	.00132	.00063	.00329	48.253
#2	-.00349	47.464	-.00416	.00254	-.00033	-.00011	.93420	.00966	-.00041	.00230	.00061	.00376	48.533
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04094**	**-.00073**	**-.08594**	**.00264**	**-.00091**	**248.16**	**.00287**	**.00185**	**-.00267**	**4.7485**	**.00175**	**.00172**	**-.01229**
Stddev	.02327	.00673	.00098	.00002	.00039	.68	.00007	.00087	.00121	.0556	.00125	.00196	.01407
%RSD	56.831	923.46	1.1350	.85975	42.369	.27504	2.3218	46.838	45.455	1.1720	71.676	114.08	114.55
#1	-.05739	.00403	-.08525	.00262	-.00064	247.67	.00292	.00246	-.00352	4.7879	.00086	.00310	-.02224
#2	-.02449	-.00548	-.08663	.00266	-.00118	248.64	.00283	.00124	-.00181	4.7092	.00263	.00033	-.00233
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02629**	**-.00122**	**.00025**	**4.8719**	**.01757**	**.00034**	**9.7692**	**-.00955**	**-.00005**	**.08089**
Stddev	.03012	.00053	.00004	.0213	.00039	.00106	.0638	.00004	.00041	.00093
%RSD	114.55	43.186	16.436	.43697	2.2361	313.43	.65301	.41136	910.51	1.1520
#1	-.04759	-.00085	.00022	4.8870	.01785	-.00041	9.7240	-.00952	-.00034	.08155
#2	-.00500	-.00159	.00028	4.8569	.01729	.00108	9.8143	-.00958	.00025	.08023
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3310.8**	**39432.**	**2867.5**
Stddev	4.1	72.	24.5
%RSD	.12308	.18259	.85288
#1	3308.0	39483.	2884.8
#2	3313.7	39381.	2850.2

Sample Name: CCV-5407546 Acquired: 11/7/2018 5:49:29 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50566**	F **.59021**	**.98214**	**.49752**	**.51399**	**.48752**	**.00248**	**4.9211**	**.49828**	**.49354**	**.49029**	**.51330**
Stddev	.00043	.00981	.00163	.00499	.00247	.00511	.00240	.0359	.00682	.00601	.00698	.00113
%RSD	.08487	1.6626	.16551	1.0026	.48085	1.0478	96.627	.72941	1.3690	1.2183	1.4238	.22042
#1	.50596	.59715	.98099	.50105	.51574	.49114	.00079	4.9465	.50310	.49779	.49522	.51250
#2	.50535	.58327	.98329	.49400	.51224	.48391	.00418	4.8957	.49345	.48929	.48535	.51410
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4351**	**50.871**	**1.0169**	**20.061**	**.49773**	**.48765**	**5.3843**	**.49325**	**1.0568**	**.99212**	**-.00895**	**1.0066**
Stddev	.0142	.361	.0106	.034	.00038	.00752	.0067	.00678	.0155	.01192	.00578	.0217
%RSD	.58256	.70949	1.0378	.17124	.07689	1.5412	.12367	1.3752	1.4672	1.2011	64.559	2.1523
#1	2.4451	51.126	1.0244	20.086	.49800	.49297	5.3795	.49805	1.0678	1.0005	-.01303	1.0219
#2	2.4250	50.615	1.0095	20.037	.49746	.48234	5.3890	.48846	1.0459	.98370	-.00486	.99123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.97188**	**4.8598**	**10.400**	**.98311**	**.49530**	**.01243**	**.49598**	**1.0101**	**.03367**	**.50523**	**.50066**	**.50016**
Stddev	.01876	.0090	.019	.01322	.00344	.00000	.00082	.0117	.07851	.00097	.00193	.00086
%RSD	1.9306	.18597	.18597	1.3443	.69488	.01730	.16446	1.1575	233.16	.19250	.38515	.17208
#1	.98514	4.8534	10.386	.99246	.49773	.01243	.49540	1.0184	-.02184	.50591	.49929	.50077
#2	.95861	4.8662	10.414	.97377	.49286	.01243	.49655	1.0019	.08919	.50454	.50202	.49955
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3435.2**	**40858.**	**2901.9**
Stddev	33.5	159.	15.8
%RSD	.97462	.38793	.54399
#1	3411.5	40970.	2890.8
#2	3458.9	40746.	2913.1

Sample Name: CCB Acquired: 11/7/2018 5:51:55 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00111**	**.00356**	**.00017**	**.00278**	**-.00039**	**.00018**	**.00668**	**-.00149**	**-.00026**	**.00043**	**.00024**	**.00135**	**.00025**
Stddev	.00034	.00703	.00355	.00008	.00024	.00001	.00343	.00117	.00015	.00001	.00025	.00131	.00141
%RSD	30.951	197.48	2074.4	3.0385	60.915	4.4360	51.278	78.316	57.584	3.2874	104.15	96.873	573.22
#1	-.00136	.00853	.00268	.00284	-.00022	.00018	.00911	-.00066	-.00015	.00042	.00042	.00227	-.00075
#2	-.00087	-.00141	-.00234	.00272	-.00056	.00017	.00426	-.00231	-.00037	.00044	.00006	.00043	.00125
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01358**	**-.00217**	**-.00308**	**.00017**	**.00093**	**.16781**	**-.00054**	**.00203**	**.00010**	**-.01682**	**.00329**	**.00137**	**.01114**
Stddev	.01606	.00195	.00144	.00002	.00010	.00169	.00024	.00036	.00033	.00540	.00189	.00357	.00199
%RSD	118.20	89.845	46.762	10.975	11.251	1.0066	44.754	17.732	331.15	32.092	57.527	259.82	17.888
#1	-.00223	-.00354	-.00409	.00019	.00100	.16900	-.00071	.00177	-.00013	-.02064	.00463	-.00115	.00973
#2	-.02494	-.00079	-.00206	.00016	.00085	.16662	-.00037	.00228	.00034	-.01301	.00195	.00389	.01255
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02384**	**-.00221**	**-.00008**	**.00079**	**.00127**	**.00022**	**-.04293**	**.00062**	**.00006**	**.00576**
Stddev	.00426	.00071	.00003	.00161	.00147	.00023	.02961	.00011	.00011	.00215
%RSD	17.888	32.001	42.297	203.90	116.25	107.65	68.982	17.199	198.15	37.366
#1	.02082	-.00171	-.00010	-.00035	.00023	.00005	-.06387	.00054	-.00002	.00424
#2	.02686	-.00270	-.00005	.00193	.00231	.00038	-.02199	.00069	.00014	.00728
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3431.5**	**41761.**	**2897.6**
Stddev	4.6	142.	21.4
%RSD	.13533	.34099	.73924
#1	3428.2	41661.	2882.5
#2	3434.8	41862.	2912.8

Sample Name: ccvl-5413446 Acquired: 11/7/2018 5:54:30 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00873**	**.11924**	**.01297**	**.09696**	**.00998**	**.00094**	**.10467**	**.20145**	**.00479**	**.01011**	**.01021**	**.01675**
Stddev	.00020	.00380	.00447	.00158	.00017	.00018	.00093	.00036	.00017	.00032	.00006	.00084
%RSD	2.2341	3.1891	34.436	1.6331	1.7218	18.784	.88562	.17668	3.5037	3.1797	.54616	5.0412
#1	.00887	.12193	.00981	.09808	.01010	.00106	.10533	.20120	.00491	.00988	.01025	.01734
#2	.00859	.11656	.01613	.09584	.00986	.00082	.10401	.20170	.00467	.01034	.01017	.01615
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09954**	**3.0573**	**.02290**	**.20381**	**.01024**	**.01892**	**1.2150**	**.03926**	**3.0112**	**.00676**	**.07185**	F **.02758**
Stddev	.00234	.1149	.00758	.00096	.00010	.00062	.0074	.00118	.0667	.00050	.00398	.00128
%RSD	2.3484	3.7568	33.095	.47138	1.0250	3.2557	.60688	3.0091	2.2136	7.3264	5.5424	4.6553
#1	.10119	3.1385	.02826	.20449	.01031	.01936	1.2098	.04009	3.0583	.00711	.07466	.02849
#2	.09788	2.9761	.01754	.20313	.01016	.01849	1.2202	.03842	2.9641	.00641	.06903	.02668
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value												.02000
Range												30.000%

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01541**	**.49928**	**1.0685**	**.09536**	**.00982**	**.01490**	**.01044**	**.01734**	F **.13342**	**.01036**	**.02173**	F **.02282**
Stddev	.00028	.02636	.0564	.00281	.00033	.00226	.00034	.00192	.02426	.00067	.00044	.00013
%RSD	1.8479	5.2802	5.2802	2.9511	3.3492	15.168	3.2887	11.063	18.183	6.4238	2.0043	.55854
#1	.01521	.51792	1.1083	.09735	.00959	.01650	.01019	.01599	.11626	.00989	.02204	.02291
#2	.01562	.48064	1.0286	.09337	.01006	.01330	.01068	.01870	.15057	.01083	.02142	.02273
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3486.2**	**42415.**	**2955.6**
Stddev	.6	30.	24.8
%RSD	.01820	.07093	.83873
#1	3485.8	42437.	2938.1
#2	3486.7	42394.	2973.2

Sample Name: 280-116489-A-4-A Acquired: 11/7/2018 5:57:03 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00156**	W **2.5156**	**.00233**	**.01717**	**.06480**	**.00026**	**.00670**	**5.0763**	**-.00040**
Stddev	.00030	.0065	.00429	.00030	.00071	.00032	.00162	.0246	.00009
%RSD	19.251	.25709	184.24	1.7421	1.0925	124.08	24.173	.48539	23.421
#1	-.00178	2.5111	-.00070	.01738	.06430	.00049	.00555	5.0589	-.00047
#2	-.00135	2.5202	.00536	.01696	.06530	.00003	.00784	5.0937	-.00033
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		500.00							
Low Limit		3.2000							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00130**	**.00291**	**.00445**	**1.5626**	**2.3865**	**-.00096**	**1.3457**	**.02991**	**-.00045**
Stddev	.00028	.00013	.00079	.0061	.0602	.00215	.0108	.00014	.00029
%RSD	21.380	4.4177	17.815	.39287	2.5209	223.07	.80471	.46516	63.221
#1	.00150	.00282	.00501	1.5582	2.3439	-.00248	1.3534	.03001	-.00066
#2	.00110	.00300	.00389	1.5669	2.4290	.00056	1.3381	.02981	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.8573**	**.00290**	**.05474**	**-.00337**	**1.0988**	**-.00171**	**-.00483**	**7.6790**	**16.433**
Stddev	.0308	.00058	.00358	.00237	.0212	.00289	.00434	.0923	.197
%RSD	1.0764	20.131	6.5372	70.215	1.9257	168.60	90.009	1.2017	1.2017
#1	2.8355	.00332	.05727	-.00170	1.1137	-.00375	-.00175	7.6138	16.293
#2	2.8790	.00249	.05221	-.00504	1.0838	.00033	-.00790	7.7443	16.573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00185**	**.06201**	**-.00001**	**.06555**	**-.00002**	**.02649**	**.00461**	**.01004**	**.00366**
Stddev	.00026	.00033	.00207	.00014	.00041	.03544	.00146	.00077	.00182
%RSD	13.891	.53561	29905.	.21741	2527.7	133.75	31.707	7.6264	49.547
#1	-.00167	.06177	-.00147	.06545	-.00031	.00144	.00358	.00950	.00495
#2	-.00203	.06224	.00145	.06565	.00027	.05155	.00564	.01058	.00238
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3596.3**	**43325.**	**3019.5**
Stddev	9.7	375.	36.6
%RSD	.26962	.86531	1.2106
#1	3603.1	43060.	3045.3
#2	3589.4	43590.	2993.6

Sample Name: 280-116489-A-4-B MS Acquired: 11/7/2018 5:59:36 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04329**	**5.4554**	**1.0081**	**1.0522**	**2.1783**	**.05071**	**1.9373**	**55.406**	**.09728**
Stddev	.00151	.0445	.0251	.0107	.0077	.00010	.0194	.053	.00158
%RSD	3.4950	.81502	2.4938	1.0172	.35499	.19935	1.0002	.09598	1.6289
#1	.04222	5.4868	1.0259	1.0598	2.1837	.05064	1.9510	55.444	.09840
#2	.04436	5.4240	.99034	1.0447	2.1728	.05078	1.9236	55.369	.09616
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49736**	**.20394**	**.26583**	**2.8029**	**54.554**	**1.0324**	**51.989**	**.53572**	**1.0251**
Stddev	.00600	.00253	.00122	.0066	.080	.0007	.085	.00032	.0162
%RSD	1.2067	1.2383	.45717	.23531	.14673	.06518	.16346	.05903	1.5840
#1	.50160	.20573	.26497	2.8075	54.611	1.0329	52.049	.53550	1.0366
#2	.49311	.20216	.26669	2.7982	54.498	1.0319	51.929	.53595	1.0136
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.969**	**.49595**	**11.166**	**.50085**	**3.1396**	**.51983**	**2.0095**	**18.843**	**40.324**
Stddev	.537	.00720	.151	.00419	.0300	.00865	.0271	.004	.009
%RSD	.97626	1.4524	1.3493	.83647	.95577	1.6645	1.3490	.02139	.02139
#1	54.590	.50104	11.273	.50381	3.1608	.52595	2.0286	18.840	40.317
#2	55.349	.49086	11.060	.49789	3.1184	.51372	1.9903	18.846	40.330
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0202**	**1.0896**	**1.0187**	**1.0774**	**2.0261**	**2.0524**	**.53564**	**.52672**	**.53237**
Stddev	.0217	.0022	.0034	.0035	.0350	.0384	.00077	.00027	.00144
%RSD	1.0724	.20061	.33394	.32491	1.7274	1.8714	.14456	.05166	.27017
#1	2.0355	1.0912	1.0163	1.0750	2.0508	2.0796	.53509	.52653	.53339
#2	2.0049	1.0881	1.0211	1.0799	2.0013	2.0252	.53619	.52692	.53135
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3440.2**	**40976.**	**2965.9**
Stddev	2.9	9.	1.3
%RSD	.08493	.02181	.04331
#1	3438.1	40982.	2966.8
#2	3442.2	40969.	2965.0

Sample Name: 280-116489-A-4-C MSD Acquired: 11/7/2018 6:01:57 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04337**	**5.4111**	**1.0081**	**1.0684**	**2.1577**	**.05026**	**1.9502**	**55.104**	**.09879**
Stddev	.00130	.0239	.0038	.0109	.0023	.00035	.0130	.127	.00132
%RSD	3.0040	.44247	.38035	1.0159	.10606	.69305	.66386	.23108	1.3411
#1	.04245	5.3942	1.0108	1.0760	2.1561	.05002	1.9593	55.014	.09973
#2	.04429	5.4281	1.0054	1.0607	2.1594	.05051	1.9410	55.194	.09785
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50150**	**.20578**	**.26644**	**2.7624**	**54.354**	**1.0299**	**52.316**	**.54056**	**1.0384**
Stddev	.00480	.00221	.00029	.0086	.078	.0098	.085	.00109	.0108
%RSD	.95651	1.0742	.10901	.31319	.14354	.95448	.16243	.20162	1.0376
#1	.50490	.20735	.26623	2.7562	54.299	1.0369	52.376	.54133	1.0460
#2	.49811	.20422	.26664	2.7685	54.409	1.0230	52.256	.53979	1.0307
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**53.649**	**.49999**	**11.260**	**.50451**	**3.1540**	**.52848**	**2.0011**	**19.011**	**40.683**
Stddev	.347	.00365	.093	.00356	.0036	.00867	.0108	.012	.026
%RSD	.64746	.72984	.82775	.70649	.11526	1.6412	.53850	.06462	.06462
#1	53.404	.50257	11.326	.50703	3.1514	.53462	2.0087	19.002	40.665
#2	53.895	.49741	11.194	.50199	3.1566	.52235	1.9934	19.020	40.702
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0426**	**1.0808**	**1.0247**	**1.0899**	**2.0408**	**2.0710**	**.53995**	**.53116**	**.53396**
Stddev	.0229	.0012	.0007	.0009	.0149	.0032	.00268	.00148	.00249
%RSD	1.1228	.10668	.06697	.08345	.73090	.15661	.49724	.27858	.46624
#1	2.0588	1.0800	1.0242	1.0905	2.0513	2.0733	.54185	.53220	.53220
#2	2.0264	1.0816	1.0251	1.0892	2.0302	2.0687	.53805	.53011	.53572
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3385.0**	**40672.**	**2927.6**
Stddev	11.6	8.	54.8
%RSD	.34408	.02062	1.8711
#1	3376.8	40666.	2888.8
#2	3393.3	40677.	2966.3

Sample Name: 280-116469-F-3-A Acquired: 11/7/2018 6:04:18 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**.00827**	**.01428**	**.24957**	**.05866**	**.00053**	**.00566**	**194.36**	**-.00035**
Stddev	.00012	.00048	.00501	.00101	.00033	.00018	.00117	.26	.00033
%RSD	46.618	5.7690	35.103	.40593	.56707	33.497	20.750	.13468	96.377
#1	-.00017	.00860	.01074	.25028	.05890	.00065	.00483	194.54	-.00011
#2	-.00034	.00793	.01783	.24885	.05843	.00040	.00649	194.17	-.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00019**	**.00106**	**.00284**	**7.9257**	**4.4873**	**.01019**	**23.650**	**.73916**	**.00292**
Stddev	.00033	.00011	.00081	.0152	.0233	.00172	.022	.00086	.00011
%RSD	175.72	10.259	28.627	.19176	.52022	16.868	.09176	.11658	3.6597
#1	.00042	.00098	.00227	7.9150	4.5038	.01141	23.635	.73977	.00300
#2	-.00005	.00113	.00342	7.9365	4.4708	.00898	23.665	.73855	.00285
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.2160**	**.00036**	**.10649**	**-.00329**	**50.989**	**.00212**	**-.00343**	**10.087**	**21.586**
Stddev	.0171	.00002	.00252	.00099	.497	.00073	.00415	.011	.024
%RSD	.20768	4.4116	2.3670	30.145	.97477	34.541	120.90	.11318	.11318
#1	8.2281	.00037	.10827	-.00400	51.341	.00264	-.00050	10.079	21.569
#2	8.2039	.00035	.10471	-.00259	50.638	.00160	-.00637	10.095	21.603
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00170**	**1.5869**	**.00554**	**.00182**	**.00184**	**-.02002**	**.00049**	**.00141**	**.00521**
Stddev	.00137	.0034	.00098	.00010	.00022	.07537	.00010	.00029	.00339
%RSD	80.653	.21411	17.693	5.4447	11.814	376.43	20.987	20.732	64.997
#1	-.00267	1.5893	.00623	.00175	.00200	-.07332	.00056	.00161	.00281
#2	-.00073	1.5845	.00485	.00189	.00169	.03327	.00042	.00120	.00760
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3403.2**	**40688.**	**2934.4**
Stddev	6.0	153.	3.2
%RSD	.17524	.37518	.10754
#1	3407.5	40796.	2936.6
#2	3399.0	40580.	2932.1

Sample Name: 280-116469-F-3-B MS Acquired: 11/7/2018 6:06:50 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04394**	**2.2979**	**1.0338**	**1.2839**	**2.1468**	**.05017**	**1.9381**	**237.57**	**.09794**
Stddev	.00126	.0229	.0178	.0117	.0053	.00030	.0113	.29	.00095
%RSD	2.8668	.99471	1.7236	.91141	.24747	.59235	.58412	.12400	.96611
#1	.04483	2.3141	1.0464	1.2921	2.1431	.04996	1.9461	237.36	.09861
#2	.04305	2.2818	1.0212	1.2756	2.1506	.05038	1.9301	237.78	.09727
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48853**	**.19956**	**.26024**	**8.7996**	**56.707**	**1.0462**	**72.211**	**1.2098**	**1.0331**
Stddev	.00535	.00177	.00116	.0199	.183	.0001	.107	.0015	.0122
%RSD	1.0960	.88689	.44427	.22619	.32220	.00549	.14804	.12426	1.1790
#1	.49232	.20081	.26105	8.7855	56.578	1.0463	72.286	1.2109	1.0417
#2	.48475	.19831	.25942	8.8137	56.836	1.0462	72.135	1.2088	1.0245
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**59.342**	**.48626**	**11.476**	**.49187**	**52.897**	**.53093**	**2.0067**	**19.391**	**41.497**
Stddev	.060	.00412	.116	.00469	.556	.00668	.0229	.048	.104
%RSD	.10091	.84779	1.0083	.95310	1.0514	1.2586	1.1412	.24998	.24998
#1	59.299	.48917	11.558	.49519	53.290	.53566	2.0229	19.357	41.424
#2	59.384	.48334	11.395	.48856	52.504	.52621	1.9905	19.426	41.571
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0259**	**2.5551**	**1.0124**	**1.0273**	**1.9723**	**2.0182**	**.52718**	**.50634**	**.52562**
Stddev	.0227	.0009	.0035	.0017	.0290	.0371	.00079	.00250	.00062
%RSD	1.1219	.03648	.34206	.16785	1.4677	1.8397	.15041	.49378	.11864
#1	2.0420	2.5545	1.0099	1.0261	1.9928	2.0444	.52775	.50811	.52606
#2	2.0098	2.5558	1.0148	1.0286	1.9518	1.9919	.52662	.50457	.52518
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3356.1**	**40636.**	**2978.5**
Stddev	.7	166.	6.9
%RSD	.01940	.40790	.23173
#1	3356.6	40753.	2973.6
#2	3355.7	40519.	2983.4

Sample Name: 280-116469-F-3-C MSD Acquired: 11/7/2018 6:09:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04447**	**2.2455**	**1.0053**	**1.2566**	**2.1006**	**.04867**	**1.8838**	**230.54**	**.09573**
Stddev	.00027	.0369	.0091	.0196	.0053	.00010	.0223	.75	.00177
%RSD	.60612	1.6423	.90185	1.5576	.25478	.20247	1.1865	.32682	1.8494
#1	.04466	2.2715	1.0118	1.2704	2.0968	.04874	1.8996	230.01	.09699
#2	.04428	2.2194	.99893	1.2427	2.1044	.04860	1.8680	231.08	.09448
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47642**	**.19462**	**.25453**	**8.4051**	**55.786**	**1.0154**	**70.451**	**1.1766**	**1.0130**
Stddev	.00661	.00380	.00117	.0014	.162	.0022	.184	.0029	.0170
%RSD	1.3883	1.9501	.45910	.01638	.29039	.21347	.26171	.24668	1.6817
#1	.48110	.19731	.25536	8.4042	55.671	1.0169	70.582	1.1786	1.0250
#2	.47175	.19194	.25370	8.4061	55.900	1.0138	70.321	1.1745	1.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**56.901**	**.47344**	**11.176**	**.47835**	**50.931**	**.51748**	**1.9584**	**19.053**	**40.774**
Stddev	.982	.00668	.185	.00481	.712	.00090	.0326	.001	.003
%RSD	1.7259	1.4105	1.6597	1.0045	1.3988	.17355	1.6624	.00774	.00774
#1	56.206	.47816	11.307	.48175	51.435	.51685	1.9815	19.054	40.776
#2	57.595	.46871	11.045	.47496	50.427	.51812	1.9354	19.052	40.772
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9865**	**2.4876**	**.98865**	**1.0154**	**1.9240**	**1.9962**	**.51609**	**.49717**	**.52089**
Stddev	.0310	.0046	.00221	.0045	.0283	.0025	.00288	.00066	.00080
%RSD	1.5592	.18426	.22344	.44573	1.4711	.12490	.55813	.13262	.15454
#1	2.0084	2.4843	.98709	1.0186	1.9440	1.9980	.51813	.49670	.52146
#2	1.9646	2.4908	.99021	1.0122	1.9040	1.9945	.51406	.49763	.52032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3377.4**	**40358.**	**2941.0**
Stddev	11.3	125.	2.9
%RSD	.33498	.30958	.09958
#1	3385.4	40446.	2939.0
#2	3369.4	40269.	2943.1

Sample Name: CCVH-5408055 Acquired: 11/7/2018 6:11:29 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00320**	**46.969**	**-.00196**	**.00712**	**.00083**	**.00039**	**.94752**	**.03408**	**-.00076**	**.00198**	**.00054**	**.00280**	**47.885**
Stddev	.00000	.120	.00004	.00002	.00053	.00006	.01714	.02167	.00019	.00004	.00006	.00036	.265
%RSD	.11460	.25569	2.2743	.24990	64.043	14.512	1.8089	63.577	24.489	2.0134	10.779	13.016	.55372
#1	-.00320	46.884	-.00199	.00711	.00120	.00043	.95963	.01876	-.00089	.00201	.00059	.00306	47.698
#2	-.00320	47.053	-.00193	.00713	.00045	.00035	.93540	.04941	-.00063	.00195	.00050	.00254	48.073
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00897**	**-.00458**	**-.06324**	**.00297**	**.00133**	**246.99**	**.00351**	**.00443**	**-.00259**	**4.7713**	**.00477**	**.00230**	**.01232**
Stddev	.00347	.00554	.00854	.00022	.00037	1.35	.00008	.00464	.00159	.0886	.00244	.00696	.03870
%RSD	38.676	120.99	13.508	7.3084	27.796	.54463	2.2891	104.75	61.148	1.8559	51.215	302.79	314.15
#1	.01142	-.00066	-.06928	.00281	.00106	247.94	.00356	.00771	-.00147	4.8339	.00650	.00722	-.01505
#2	.00652	-.00850	-.05720	.00312	.00159	246.04	.00345	.00115	-.00372	4.7087	.00304	-.00262	.03968
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02636**	**-.00084**	**.00078**	**4.8632**	**.01826**	**.00126**	**9.6819**	**-.01009**	**.00096**	**.08082**
Stddev	.08281	.00009	.00044	.0283	.00059	.00206	.0965	.00002	.00093	.00015
%RSD	314.15	10.364	56.679	.58151	3.2305	163.91	.99668	.17225	97.038	.18003
#1	-.03220	-.00090	.00047	4.8832	.01785	-.00020	9.7501	-.01010	.00030	.08072
#2	.08492	-.00078	.00109	4.8432	.01868	.00271	9.6136	-.01008	.00162	.08092
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3421.2**	**41033.**	**2960.1**
Stddev	3.5	76.	25.0
%RSD	.10264	.18410	.84345
#1	3418.8	40980.	2942.4
#2	3423.7	41086.	2977.7

Sample Name: CCV-5407546 Acquired: 11/7/2018 6:14:00 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50218**	F **.58897**	**.97816**	**.50086**	**.51305**	**.48549**	**.00576**	**4.9727**	**.49778**	**.49251**	**.48826**	**.50976**
Stddev	.00113	.00830	.00997	.00490	.00164	.00103	.00040	.0202	.00592	.00590	.00772	.00125
%RSD	.22517	1.4094	1.0192	.97898	.31942	.21198	6.9238	.40667	1.1888	1.1969	1.5807	.24577
#1	.50298	.59484	.98521	.50433	.51189	.48476	.00604	4.9870	.50197	.49668	.49372	.51064
#2	.50138	.58310	.97111	.49740	.51421	.48621	.00548	4.9584	.49360	.48835	.48280	.50887
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4302**	**50.475**	**1.0151**	**19.868**	**.49402**	**.48747**	**5.4812**	**.49191**	**1.0584**	**.99474**	**-.01061**	**1.0035**
Stddev	.0047	.192	.0025	.056	.00141	.00713	.0352	.00688	.0151	.01195	.00123	.0132
%RSD	.19458	.37956	.24615	.28352	.28593	1.4624	.64168	1.3982	1.4284	1.2011	11.627	1.3181
#1	2.4269	50.339	1.0134	19.908	.49502	.49251	5.5061	.49677	1.0691	1.0032	-.00974	1.0129
#2	2.4336	50.610	1.0169	19.828	.49302	.48243	5.4564	.48704	1.0477	.98629	-.01148	.99419
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.97673**	**4.9391**	**10.570**	**.98190**	**.49258**	**.01109**	**.49164**	**1.0093**	**.01680**	**.50199**	**.49695**	**.49146**
Stddev	.01210	.0448	.096	.01336	.00067	.00156	.00333	.0120	.00651	.00146	.00069	.00141
%RSD	1.2387	.90671	.90671	1.3607	.13526	14.054	.67813	1.1841	38.769	.29155	.13940	.28627
#1	.98528	4.9074	10.502	.99134	.49211	.00999	.49399	1.0177	.01219	.50302	.49744	.49047
#2	.96817	4.9707	10.637	.97245	.49305	.01219	.48928	1.0008	.02140	.50095	.49646	.49245
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3459.6**	**41722.**	**2961.6**
Stddev	4.1	289.	21.4
%RSD	.11929	.69290	.72399
#1	3462.5	41518.	2976.8
#2	3456.7	41927.	2946.5

Sample Name: CCB Acquired: 11/7/2018 6:16:24 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00096**	**-.00104**	**.00139**	**.00255**	**-.00041**	**-.00011**	**.00899**	**-.00376**	**.00001**	**.00045**	**.00069**	**.00171**	**-.00266**
Stddev	.00089	.00008	.00341	.00030	.00046	.00024	.00172	.00467	.00046	.00040	.00004	.00036	.00031
%RSD	92.632	8.0190	245.21	11.971	111.97	212.10	19.113	124.20	6629.5	89.462	5.7920	21.250	11.624
#1	-.00033	-.00110	.00381	.00276	-.00073	-.00028	.00777	-.00046	.00033	.00017	.00072	.00197	-.00244
#2	-.00158	-.00098	-.00102	.00233	-.00008	.00006	.01020	-.00706	-.00032	.00074	.00066	.00146	-.00288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.03127**	**-.00024**	**.00125**	**.00010**	**.00110**	**.19894**	**.00018**	**-.00059**	**-.00078**	**-.01147**	**.00259**	**-.00001**	**.00902**
Stddev	.07761	.00157	.00652	.00000	.00032	.00219	.00027	.00015	.00011	.00350	.00153	.00662	.05089
%RSD	248.17	658.97	522.27	.85751	28.963	1.1030	146.32	25.912	14.371	30.481	59.301	92416.	564.19
#1	-.08615	.00087	-.00336	.00010	.00087	.20050	.00037	-.00069	-.00071	-.00900	.00367	-.00469	.04500
#2	.02361	-.00135	.00586	.00010	.00132	.19739	-.00001	-.00048	-.00086	-.01394	.00150	.00467	-.02696
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01930**	**-.00082**	**.00005**	**.00100**	**.00105**	**-.00187**	**.01379**	**.00029**	**.00039**	**.00308**
Stddev	.10890	.00186	.00003	.00159	.00006	.00191	.04594	.00021	.00067	.00007
%RSD	564.19	227.73	59.825	158.93	5.5721	102.10	333.05	71.663	173.59	2.3728
#1	.09630	.00050	.00003	.00212	.00101	-.00052	-.01869	.00014	-.00009	.00313
#2	-.05770	-.00213	.00007	-.00012	.00109	-.00322	.04628	.00044	.00086	.00302
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3417.8**	**42373.**	**2958.7**
Stddev	5.8	88.	7.8
%RSD	.16935	.20673	.26360
#1	3413.7	42311.	2964.2
#2	3421.9	42435.	2953.2

Sample Name: ccvl-5413446 Acquired: 11/7/2018 6:19:01 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00817**	**.12151**	F **.02010**	**.10150**	**.00975**	**.00109**	**.10835**	**.20335**	**.00510**	**.01055**	**.01028**	**.01771**
Stddev	.00030	.00121	.00435	.00094	.00043	.00010	.00647	.01253	.00008	.00060	.00023	.00033
%RSD	3.6535	.99858	21.648	.92816	4.4588	9.1481	5.9748	6.1601	1.5949	5.6441	2.1975	1.8392
#1	.00796	.12236	.01702	.10216	.00944	.00117	.10377	.21221	.00516	.01097	.01044	.01794
#2	.00838	.12065	.02318	.10083	.01006	.00102	.11292	.19449	.00504	.01013	.01012	.01748
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09766**	**3.1236**	**.02042**	**.20333**	**.01029**	**.01982**	**1.2341**	**.04046**	**3.1143**	**.00876**	**.07227**	**.02140**
Stddev	.00330	.0310	.00342	.00324	.00012	.00008	.0159	.00091	.0279	.00119	.00543	.00993
%RSD	3.3822	.99135	16.752	1.5957	1.1261	.39665	1.2865	2.2561	.89627	13.573	7.5151	46.392
#1	.09533	3.1017	.02284	.20104	.01037	.01988	1.2229	.04111	3.1341	.00961	.06843	.02842
#2	.10000	3.1455	.01800	.20563	.01020	.01977	1.2453	.03982	3.0946	.00792	.07611	.01438
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.01308**	**.55499**	**1.1877**	**.09844**	**.01007**	**.01587**	**.01049**	**.01842**	F **.10885**	**.00991**	**.02045**	F **.01985**
Stddev	.00118	.03304	.0707	.00046	.00049	.00032	.00074	.00066	.02483	.00027	.00034	.00169
%RSD	9.0165	5.9535	5.9535	.46532	4.8592	1.9912	7.0153	3.5611	22.814	2.6774	1.6431	8.5157
#1	.01225	.53162	1.1377	.09876	.01041	.01609	.01101	.01888	.12641	.01010	.02069	.02105
#2	.01392	.57835	1.2377	.09812	.00972	.01565	.00997	.01795	.09129	.00972	.02021	.01866
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value	.02000								.06000			.01500
Range	-30.000%								30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3469.1**	**42030.**	**2927.2**
Stddev	4.5	248.	19.3
%RSD	.12852	.59091	.65932
#1	3472.2	41855.	2940.8
#2	3465.9	42206.	2913.5

Sample Name: MB 280-436426/1-A Acquired: 11/7/2018 6:21:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00122**	**.00356**	W **.00879**	**.00100**	**-.00003**	**.00014**	**.00256**	**-.00355**	**-.00019**
Stddev	.00002	.00008	.00018	.00069	.00024	.00003	.00403	.00436	.00027
%RSD	1.8806	2.1584	2.0286	69.319	689.25	21.491	157.83	122.99	141.45
#1	-.00120	.00350	.00892	.00149	-.00020	.00016	.00541	-.00663	-.00038
#2	-.00123	.00361	.00867	.00051	.00013	.00012	-.00030	-.00046	.00000
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.00750						
Low Limit			-.00750						

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00055**	**.00045**	**.00146**	**.00970**	**-.08843**	**-.00296**	**.00194**	**.00032**	**.00062**
Stddev	.00017	.00007	.00011	.00024	.03240	.00576	.00266	.00010	.00009
%RSD	31.450	15.714	7.4138	2.4500	36.642	194.63	137.05	31.165	14.712
#1	.00043	.00050	.00154	.00953	-.11135	.00111	.00006	.00025	.00055
#2	.00068	.00040	.00138	.00987	-.06552	-.00703	.00381	.00039	.00068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.14543**	**-.00054**	**-.00117**	**-.00076**	**-.01703**	**-.00010**	**.00185**	**.02646**	**.05662**
Stddev	.01104	.00101	.00210	.00067	.01044	.00374	.00597	.04296	.09194
%RSD	7.5924	186.77	179.41	88.541	61.279	3819.7	322.14	162.38	162.38
#1	.15324	-.00125	-.00265	-.00123	-.02442	-.00274	.00608	.05684	.12163
#2	.13762	.00017	.00031	-.00028	-.00965	.00255	-.00237	-.00392	-.00839
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00143**	**-.00000**	**.00207**	**.00032**	**.00140**	**.02073**	**.00022**	**.00086**	**.00260**
Stddev	.00212	.00001	.00085	.00008	.00176	.08767	.00076	.00051	.00317
%RSD	147.71	283.26	41.069	26.146	125.69	422.91	340.99	59.342	121.91
#1	.00293	.00000	.00147	.00026	.00264	.08272	-.00032	.00050	.00036
#2	-.00006	-.00001	.00267	.00038	.00016	-.04126	.00076	.00122	.00484
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3528.6**	**42892.**	**2993.2**
Stddev	8.3	129.	27.4
%RSD	.23653	.30088	.91677
#1	3534.5	42983.	2973.8
#2	3522.7	42800.	3012.6

Sample Name: LCS 280-436426/2-A Acquired: 11/7/2018 6:24:10 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.04220**	F **2.3370**	**1.0184**	**1.0590**	**2.0733**	**.04961**	**1.9448**	**49.502**	**.09825**
Stddev	.00075	.0073	.0034	.0003	.0141	.00019	.0014	.106	.00020
%RSD	1.7725	.31089	.33840	.02670	.68190	.38859	.07408	.21506	.20493
#1	.04167	2.3421	1.0208	1.0592	2.0633	.04975	1.9438	49.427	.09839
#2	.04273	2.3319	1.0160	1.0588	2.0833	.04948	1.9459	49.577	.09811
Check ?	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750	2.2299							
Low Limit	.04275	1.7300							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49742**	**.20072**	**.25640**	**1.0009**	**51.581**	**1.0176**	**49.947**	**.50128**	**1.0332**
Stddev	.00168	.00104	.00088	.0008	.221	.0049	.008	.00047	.0066
%RSD	.33771	.51695	.34310	.08397	.42923	.48228	.01622	.09297	.64122
#1	.49861	.19999	.25578	1.0003	51.425	1.0142	49.942	.50095	1.0379
#2	.49623	.20145	.25703	1.0015	51.738	1.0211	49.953	.50161	1.0285
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.897**	**.49339**	F **11.217**	**.50531**	**1.9984**	**.53362**	**2.0321**	**10.014**	**21.430**
Stddev	.519	.00291	.001	.00494	.0055	.00056	.0057	.118	.253
%RSD	1.0194	.59064	.01140	.97813	.27487	.10539	.28298	1.1806	1.1806
#1	50.530	.49545	11.216	.50880	2.0023	.53402	2.0362	9.9304	21.251
#2	51.264	.49133	11.218	.50181	1.9946	.53322	2.0281	10.098	21.609
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit			11.100						
Low Limit			9.1000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0482**	**1.0058**	**1.0043**	**1.0293**	**2.0356**	**2.0933**	**.52435**	**.51229**	**.52567**
Stddev	.0089	.0036	.0106	.0021	.0138	.0005	.00015	.00010	.00160
%RSD	.43379	.36052	1.0508	.20611	.67974	.02391	.02836	.01929	.30509
#1	2.0545	1.0033	.99686	1.0278	2.0454	2.0929	.52446	.51222	.52454
#2	2.0420	1.0084	1.0118	1.0308	2.0258	2.0936	.52425	.51236	.52680
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3471.4**	**41531.**	**2965.1**
Stddev	6.6	75.	25.2
%RSD	.18983	.18015	.84836
#1	3466.8	41584.	2982.9
#2	3476.1	41478.	2947.3

Sample Name: 280-116540-A-1-A Acquired: 11/7/2018 6:26:30 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00105**	**.04911**	**.01124**	**1.5869**	**.06870**	**.00053**	**.00678**	**32.996**	**-.00053**
Stddev	.00124	.00210	.00996	.0062	.00032	.00016	.00097	.093	.00050
%RSD	118.66	4.2850	88.644	.38980	.45863	29.629	14.284	.28309	94.523
#1	-.00193	.04762	.00419	1.5912	.06848	.00042	.00747	33.062	-.00018
#2	-.00017	.05060	.01829	1.5825	.06892	.00064	.00610	32.930	-.00088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00145**	**.00081**	**.00442**	**.09429**	**7.2623**	**.04356**	**26.798**	**.02831**	**.04069**
Stddev	.00042	.00004	.00028	.00392	.0584	.00263	.065	.00011	.00191
%RSD	29.271	4.8028	6.3980	4.1615	.80355	6.0328	.24225	.37254	4.7020
#1	.00115	.00079	.00422	.09706	7.3036	.04170	26.844	.02839	.03934
#2	.00175	.00084	.00461	.09151	7.2211	.04542	26.752	.02824	.04204
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**281.81**	**.00295**	**.01119**	**-.00149**	**45.400**	**.00820**	**.00404**	**5.7402**	**12.284**
Stddev	.46	.00053	.01097	.00220	.172	.00741	.00154	.0741	.159
%RSD	.16222	18.114	98.004	147.43	.37917	90.379	38.184	1.2909	1.2909
#1	282.13	.00257	.00344	-.00304	45.521	.00296	.00295	5.7926	12.396
#2	281.49	.00333	.01895	.00006	45.278	.01343	.00513	5.6878	12.172
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00087**	**.83318**	**-.00079**	**.00289**	**.00415**	**.02990**	**.00458**	**.00454**	**.00789**
Stddev	.00208	.00194	.00318	.00011	.00227	.09490	.00037	.00022	.00313
%RSD	239.21	.23240	400.15	3.6661	54.723	317.36	8.1759	4.7612	39.645
#1	-.00060	.83455	.00145	.00282	.00255	-.03720	.00484	.00439	.01010
#2	.00234	.83181	-.00304	.00297	.00576	.09701	.00431	.00469	.00568
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3481.0**	**41167.**	**3058.2**
Stddev	7.0	465.	.0
%RSD	.20249	1.1307	.00123
#1	3476.1	40838.	3058.2
#2	3486.0	41496.	3058.2

Sample Name: 280-116540-A-2-A Acquired: 11/7/2018 6:29:03 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00091**	**.17963**	**.00603**	**2.1115**	**.05151**	**.00018**	**.00723**	**43.132**	**-.00006**
Stddev	.00090	.00057	.00652	.0046	.00073	.00004	.00001	.118	.00052
%RSD	98.611	.31648	108.21	.21982	1.4188	20.634	.12948	.27464	925.10
#1	-.00155	.18003	.00142	2.1148	.05099	.00021	.00724	43.048	.00031
#2	-.00028	.17923	.01064	2.1082	.05203	.00016	.00723	43.215	-.00042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00115**	**.00111**	**.00873**	**.23686**	**20.784**	**.02814**	**47.644**	**.05860**	**.03697**
Stddev	.00001	.00044	.00077	.00240	.079	.00256	.029	.00019	.00024
%RSD	.60837	39.855	8.7642	1.0142	.37987	9.1049	.06003	.32472	.66168
#1	.00116	.00079	.00928	.23856	20.728	.02995	47.664	.05847	.03680
#2	.00115	.00142	.00819	.23516	20.840	.02633	47.624	.05874	.03714
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **585.40**	**.02934**	**1.4541**	**-.00368**	**71.105**	**-.00365**	**-.00911**	**6.1180**	**13.092**
Stddev	2.50	.00019	.0016	.00027	.359	.00276	.00780	.0324	.069
%RSD	.42734	.64756	.11157	7.3457	.50436	75.408	85.627	.52945	.52945
#1	583.63	.02947	1.4552	-.00349	71.358	-.00560	-.01463	6.0950	13.043
#2	587.17	.02920	1.4529	-.00387	70.851	-.00171	-.00360	6.1409	13.141
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00253**	**.87981**	**.00082**	**.00699**	**.00308**	**-.04160**	**.00338**	**.00912**	**.00731**
Stddev	.00102	.00105	.00210	.00001	.00130	.03349	.00017	.00109	.00066
%RSD	40.509	.11900	256.29	.08653	42.241	80.489	5.0093	11.942	9.0760
#1	-.00325	.87907	.00230	.00699	.00216	-.01793	.00350	.00989	.00778
#2	-.00181	.88055	-.00066	.00698	.00400	-.06528	.00326	.00835	.00684
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3379.2**	**39698.**	**2998.1**
Stddev	15.5	117.	4.7
%RSD	.45962	.29393	.15598
#1	3390.2	39781.	2994.8
#2	3368.2	39616.	3001.5

Sample Name: 280-116541-C-1-A Acquired: 11/7/2018 6:31:37 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00030**	**.00463**	**.00812**	**.17223**	**.00369**	**.00037**	**-.00201**	**85.774**	**.00047**
Stddev	.00047	.00068	.00645	.00122	.00051	.00010	.00418	.005	.00045
%RSD	155.29	14.719	79.371	.70546	13.963	27.180	207.96	.00557	95.959
#1	.00064	.00415	.01268	.17137	.00405	.00030	-.00496	85.777	.00015
#2	-.00003	.00511	.00356	.17309	.00332	.00044	.00095	85.770	.00078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.00183**	**.00420**	**.02846**	**19.097**	**.00331**	**111.85**	**.00300**	**.00068**
Stddev	.00037	.00026	.00047	.00370	.080	.00183	.41	.00000	.00013
%RSD	91.398	14.356	11.242	12.995	.41676	55.276	.36796	.01480	19.594
#1	.00014	.00201	.00387	.02585	19.040	.00460	112.14	.00300	.00078
#2	.00067	.00164	.00454	.03108	19.153	.00202	111.56	.00300	.00059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**380.48**	**.00257**	**.12558**	**-.01673**	**47.706**	**-.00431**	**-.00246**	**36.687**	**78.511**
Stddev	1.43	.00039	.00404	.00654	.039	.00007	.00347	.177	.378
%RSD	.37542	14.986	3.2194	39.086	.08197	1.7016	140.99	.48155	.48155
#1	381.49	.00285	.12273	-.01211	47.678	-.00436	-.00001	36.562	78.243
#2	379.47	.00230	.12844	-.02135	47.734	-.00426	-.00491	36.812	78.778
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00286**	**.90765**	**-.00197**	**.00064**	**-.00024**	**.01523**	**.02023**	**.00178**	**-.00006**
Stddev	.00004	.00163	.00175	.00064	.00209	.04754	.00054	.00064	.00001
%RSD	1.2308	.17918	88.884	99.801	864.81	312.12	2.6740	36.199	16.598
#1	-.00284	.90880	-.00320	.00019	-.00172	-.01838	.02061	.00133	-.00005
#2	-.00289	.90650	-.00073	.00109	.00123	.04885	.01985	.00224	-.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3335.5**	**39610.**	**2985.2**
Stddev	3.2	71.	7.1
%RSD	.09554	.17937	.23952
#1	3333.3	39560.	2980.1
#2	3337.8	39660.	2990.2

Sample Name: 280-116541-C-2-A Acquired: 11/7/2018 6:34:11 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00105**	**.01265**	**.00093**	**.12459**	**.00428**	**.00027**	**-.00049**	**91.391**	**.00067**
Stddev	.00074	.00192	.00385	.00102	.00075	.00034	.00068	.118	.00019
%RSD	69.947	15.168	415.71	.81654	17.483	126.71	138.73	.12901	28.959
#1	-.00157	.01129	.00364	.12387	.00481	.00051	-.00001	91.308	.00053
#2	-.00053	.01400	-.00179	.12531	.00375	.00003	-.00097	91.475	.00080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.00414**	**.00530**	**.04796**	**18.596**	**.00337**	**128.51**	**.00510**	**.00095**
Stddev	.00059	.00027	.00131	.00892	.032	.00139	.02	.00007	.00117
%RSD	168.57	6.6233	24.771	18.602	.17473	41.134	.01604	1.3048	122.98
#1	.00077	.00433	.00437	.05426	18.573	.00435	128.50	.00514	.00012
#2	-.00007	.00395	.00623	.04165	18.619	.00239	128.53	.00505	.00177
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**377.18**	**.01926**	**.12119**	**-.01311**	**45.244**	**-.00168**	**-.00200**	**36.821**	**78.796**
Stddev	.42	.00003	.00656	.00076	.004	.00665	.00204	.066	.141
%RSD	.11099	.15535	5.4144	5.8020	.00889	395.97	101.90	.17924	.17924
#1	376.88	.01924	.11655	-.01257	45.246	-.00638	-.00345	36.867	78.896
#2	377.47	.01928	.12583	-.01364	45.241	.00302	-.00056	36.774	78.696
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00220**	**.92144**	**-.00222**	**.00166**	**.00154**	**-.00227**	**.01216**	**.00225**	**.00939**
Stddev	.00310	.00260	.00379	.00071	.00143	.01673	.00018	.00082	.00312
%RSD	140.48	.28217	170.28	42.818	92.546	737.35	1.4917	36.299	33.184
#1	-.00440	.91960	-.00490	.00216	.00053	-.01410	.01203	.00168	.00719
#2	-.00001	.92328	.00045	.00116	.00255	.00956	.01228	.00283	.01159
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3311.7**	**39204.**	**2915.5**
Stddev	21.6	159.	2.0
%RSD	.65308	.40575	.06862
#1	3296.4	39092.	2914.1
#2	3327.0	39317.	2916.9

Sample Name: 280-116541-C-2-ASD@5 Acquired: 11/7/2018 6:36:44 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00082**	**.00141**	**-.00066**	**.02937**	**.00064**	**.00026**	**.00237**	**18.620**	**-.00025**
Stddev	.00092	.00126	.00104	.00111	.00051	.00026	.00216	.020	.00004
%RSD	112.21	89.008	157.39	3.7676	80.202	99.150	91.284	.10965	17.388
#1	-.00146	.00052	-.00140	.03015	.00100	.00044	.00390	18.606	-.00029
#2	-.00017	.00230	.00007	.02859	.00028	.00008	.00084	18.635	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00051**	**.00100**	**.00165**	**.00995**	**3.7439**	**-.00081**	**25.960**	**.00116**	**-.00038**
Stddev	.00000	.00044	.00088	.00160	.0374	.00423	.011	.00000	.00027
%RSD	.37292	43.791	53.604	16.117	1.0003	520.54	.04158	.24524	70.938
#1	.00051	.00069	.00102	.00882	3.7703	-.00380	25.952	.00116	-.00019
#2	.00051	.00131	.00227	.01108	3.7174	.00218	25.967	.00117	-.00056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**77.555**	**.00373**	**.02225**	**-.00547**	**8.8698**	**.00130**	**-.00465**	**7.3631**	**15.757**
Stddev	.430	.00047	.00122	.00452	.0173	.00009	.00163	.0192	.041
%RSD	.55421	12.632	5.4819	82.779	.19488	6.7286	34.960	.26114	.26114
#1	77.251	.00339	.02311	-.00227	8.8576	.00124	-.00350	7.3495	15.728
#2	77.859	.00406	.02139	-.00867	8.8820	.00136	-.00580	7.3767	15.786
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00252**	**.18555**	**-.00192**	**.00084**	**.00289**	**.03355**	**.00253**	**.00060**	**.00397**
Stddev	.00125	.00022	.00032	.00030	.00036	.02727	.00056	.00056	.00281
%RSD	49.533	.11774	16.733	36.138	12.517	81.257	21.996	92.881	70.792
#1	-.00341	.18571	-.00169	.00063	.00314	.05283	.00214	.00021	.00198
#2	-.00164	.18540	-.00214	.00106	.00263	.01427	.00293	.00100	.00596
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3373.3**	**41006.**	**2930.6**
Stddev	3.5	41.	19.7
%RSD	.10373	.10098	.67066
#1	3370.8	40976.	2916.7
#2	3375.7	41035.	2944.5

Sample Name: 280-116541-C-2-B MS Acquired: 11/7/2018 6:39:19 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04313**	**2.2315**	**1.0137**	**1.1391**	**2.0397**	**.04865**	**1.8732**	**138.04**	**.09758**
Stddev	.00021	.0002	.0011	.0007	.0037	.00045	.0006	.56	.00002
%RSD	.48985	.00793	.10729	.06277	.18356	.92263	.02911	.40819	.01942
#1	.04328	2.2317	1.0129	1.1396	2.0424	.04897	1.8728	138.44	.09759
#2	.04298	2.2314	1.0145	1.1386	2.0371	.04834	1.8736	137.64	.09757
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47859**	**.19956**	**.25291**	**1.0100**	**69.039**	**.99369**	**177.29**	**.49586**	**1.0221**
Stddev	.00088	.00073	.00053	.0068	.133	.01383	.13	.00041	.0015
%RSD	.18316	.36678	.21072	.67526	.19236	1.3919	.07590	.08251	.14792
#1	.47797	.20008	.25254	1.0148	69.133	1.0035	177.19	.49557	1.0231
#2	.47921	.19905	.25329	1.0052	68.945	.98391	177.38	.49614	1.0210
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**421.65**	**.49414**	**11.485**	**.46554**	**46.740**	**.52802**	**2.0017**	**44.492**	**95.214**
Stddev	.72	.00000	.020	.00105	.007	.00141	.0138	.254	.543
%RSD	.17159	.00078	.17681	.22586	.01579	.26615	.68882	.57060	.57060
#1	422.16	.49414	11.499	.46628	46.735	.52902	2.0114	44.672	95.598
#2	421.14	.49415	11.471	.46479	46.745	.52703	1.9919	44.313	94.830
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9907**	**1.8963**	**1.0025**	**1.0234**	**1.8463**	**1.9993**	**.53551**	**.50879**	**.51589**
Stddev	.0046	.0085	.0015	.0009	.0021	.0162	.00116	.00008	.00384
%RSD	.22908	.44664	.14681	.08700	.11417	.80992	.21702	.01506	.74421
#1	1.9939	1.9023	1.0014	1.0240	1.8478	1.9878	.53633	.50884	.51861
#2	1.9875	1.8904	1.0035	1.0228	1.8448	2.0107	.53468	.50873	.51318
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3198.6**	**37778.**	**2868.4**
Stddev	4.5	17.	13.9
%RSD	.14204	.04381	.48628
#1	3201.8	37789.	2878.3
#2	3195.4	37766.	2858.6

Sample Name: 280-116541-C-2-C MSD Acquired: 11/7/2018 6:41:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04490**	**2.2659**	**1.0436**	**1.1669**	**2.0795**	**.04976**	**1.8905**	**143.35**	**.09885**
Stddev	.00020	.0096	.0031	.0008	.0045	.00014	.0076	.21	.00039
%RSD	.44739	.42243	.29928	.06685	.21694	.28012	.40397	.14410	.39095
#1	.04504	2.2591	1.0458	1.1675	2.0827	.04966	1.8959	143.49	.09858
#2	.04476	2.2727	1.0414	1.1664	2.0763	.04986	1.8851	143.20	.09912
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48612**	**.20274**	**.25684**	**1.0283**	**70.977**	**1.0033**	**183.80**	**.50525**	**1.0469**
Stddev	.00011	.00018	.00187	.0257	.109	.0056	.22	.00004	.0005
%RSD	.02344	.08877	.72712	2.4977	.15327	.56255	.11717	.00798	.04863
#1	.48604	.20261	.25816	1.0465	71.054	1.0073	183.96	.50527	1.0472
#2	.48620	.20287	.25552	1.0102	70.900	.99936	183.65	.50522	1.0465
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**437.93**	**.50310**	**11.665**	**.47327**	**48.640**	**.53067**	**2.0361**	**45.738**	**97.880**
Stddev	.03	.00193	.016	.00214	.030	.01073	.0174	.195	.417
%RSD	.00726	.38425	.13762	.45245	.06203	2.0217	.85668	.42629	.42629
#1	437.96	.50174	11.677	.47176	48.661	.53826	2.0238	45.876	98.175
#2	437.91	.50447	11.654	.47478	48.618	.52308	2.0485	45.600	97.585
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0306**	**1.9618**	**1.0202**	**1.0457**	**1.8832**	**1.9572**	**.54439**	**.51924**	**.52690**
Stddev	.0083	.0055	.0089	.0007	.0010	.0339	.00092	.00212	.00424
%RSD	.41032	.28178	.86869	.06368	.05538	1.7309	.16981	.40836	.80440
#1	2.0365	1.9657	1.0265	1.0461	1.8825	1.9812	.54505	.52074	.52989
#2	2.0247	1.9579	1.0139	1.0452	1.8839	1.9333	.54374	.51774	.52390
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3227.0**	**38239.**	**2871.6**
Stddev	9.4	1.	20.5
%RSD	.29019	.00313	.71411
#1	3220.4	38240.	2857.1
#2	3233.7	38238.	2886.1

Sample Name: CCVH-5408055 Acquired: 11/7/2018 6:43:59 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00265**	**47.264**	**.00213**	**.00973**	**.00436**	**.00054**	**.99163**	**.44852**	**-.00054**	**.00356**	**.00151**	**.00396**	**48.658**
Stddev	.00056	.393	.00293	.00138	.00702	.00014	.00097	.53260	.00011	.00176	.00091	.00011	.305
%RSD	21.049	.83185	137.76	14.167	160.89	26.141	.09804	118.75	21.112	49.403	60.107	2.7138	.62766
#1	-.00304	46.986	.00006	.00876	.00933	.00065	.99095	.82512	-.00062	.00231	.00087	.00403	48.442
#2	-.00225	47.542	.00421	.01071	-.00060	.00044	.99232	.07191	-.00046	.00480	.00215	.00388	48.874
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.31218**	**.00250**	**.04768**	**.00340**	**.00872**	**250.33**	**.00506**	**.03338**	**-.00192**	**5.0535**	**.00244**	**.01416**	**.30680**
Stddev	.19055	.00820	.00880	.00006	.00437	.54	.00043	.02652	.00016	.0880	.00057	.00894	.15435
%RSD	61.037	327.83	18.462	1.6583	50.154	.21607	8.4467	79.465	8.5551	1.7407	23.316	63.137	50.308
#1	.44692	.00830	.04146	.00344	.00563	249.94	.00476	.01462	-.00181	4.9913	.00204	.00784	.41594
#2	.17745	-.00330	.05391	.00336	.01181	250.71	.00537	.05214	-.00204	5.1157	.00284	.02048	.19766
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.65656**	**.00683**	**.00628**	**4.9979**	**.01870**	**.01292**	**9.8787**	**-.00950**	**.00242**	**.08384**
Stddev	.33030	.00435	.00696	.0234	.00058	.01020	.0908	.00030	.00001	.00323
%RSD	50.308	63.665	110.70	.46920	3.0885	78.955	.91871	3.1330	.49154	3.8523
#1	.89012	.00376	.01120	5.0145	.01829	.00571	9.9429	-.00929	.00241	.08155
#2	.42300	.00991	.00137	4.9813	.01911	.02014	9.8145	-.00971	.00243	.08612
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3394.4**	**40655.**	**2925.1**
Stddev	10.5	293.	2.1
%RSD	.30958	.72084	.07110
#1	3386.9	40448.	2923.7
#2	3401.8	40863.	2926.6

Sample Name: CCV-5407546 Acquired: 11/7/2018 6:46:32 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50887**	F **.77919**	**1.0117**	**.51556**	**.51970**	**.49052**	**.00719**	**4.9612**	**.51321**	**.50812**	**.50432**	**.51673**
Stddev	.00073	.11458	.0030	.00298	.00274	.00199	.00279	.0134	.00179	.00072	.00073	.00058
%RSD	.14416	14.705	.29988	.57877	.52644	.40630	38.767	.27018	.34785	.14241	.14395	.11282
#1	.50835	.69817	1.0138	.51767	.51777	.48911	.00522	4.9517	.51447	.50864	.50483	.51632
#2	.50939	.86021	1.0095	.51345	.52164	.49193	.00916	4.9707	.51195	.50761	.50381	.51714
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4702**	**51.208**	**1.0245**	**20.206**	**.50441**	**.50426**	F **5.6866**	**.50700**	**1.0920**	**1.0244**	**.02346**	**1.0333**
Stddev	.0081	.026	.0138	.012	.00091	.00152	.0296	.00201	.0094	.0017	.00444	.0017
%RSD	.32896	.05166	1.3439	.05957	.18096	.30142	.52112	.39601	.85988	.16194	18.916	.16240
#1	2.4645	51.189	1.0148	20.197	.50377	.50534	5.6657	.50842	1.0986	1.0255	.02032	1.0321
#2	2.4760	51.226	1.0343	20.214	.50506	.50319	5.7076	.50558	1.0853	1.0232	.02659	1.0345
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.99142**	**5.1077**	**10.930**	**1.0170**	**.49888**	**.01542**	**.50250**	**1.0327**	**-.03725**	**.51280**	**.50858**	**.49994**
Stddev	.00386	.1080	.231	.0035	.00085	.00335	.00223	.0044	.03758	.00160	.00067	.00344
%RSD	.38926	2.1140	2.1140	.34407	.17075	21.749	.44412	.42245	100.88	.31199	.13197	.68837
#1	.98869	5.0313	10.767	1.0195	.49828	.01305	.50092	1.0296	-.01068	.51167	.50906	.49750
#2	.99415	5.1840	11.094	1.0146	.49948	.01780	.50408	1.0358	-.06383	.51393	.50811	.50237
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3505.5**	**41967.**	**2989.3**
Stddev	15.3	67.	12.8
%RSD	.43501	.15981	.42955
#1	3494.8	41920.	2998.4
#2	3516.3	42014.	2980.3

Sample Name: CCB Acquired: 11/7/2018 6:48:57 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00079**	**.01001**	W **.00999**	**.00543**	**-.00047**	**.00037**	**.00704**	**.00623**	**.00152**	**.00260**	W **.00283**	**.00126**
Stddev	.00024	.00501	.00018	.00201	.00055	.00014	.00573	.00365	.00177	.00189	.00173	.00037
%RSD	30.235	50.071	1.7723	36.977	116.33	38.125	81.340	58.567	116.72	72.664	60.957	29.730
#1	-.00062	.00646	.00987	.00401	-.00008	.00048	.00299	.00881	.00027	.00126	.00161	.00100
#2	-.00096	.01355	.01012	.00684	-.00086	.00027	.01109	.00365	.00277	.00393	.00405	.00153
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit			.00750								.00260	
Low Limit			-.01500								-.00260	

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00060**	**-.03822**	**-.00135**	**.03155**	**.00032**	**.00585**	**.34094**	**.00128**	**.00579**	**.00235**	**.00487**	**.00545**
Stddev	.00021	.10591	.00729	.00077	.00008	.00231	.02361	.00108	.00208	.00489	.00055	.00154
%RSD	36.015	277.13	541.12	2.4490	23.992	39.462	6.9241	84.254	35.837	208.53	11.197	28.310
#1	.00075	.03667	-.00650	.03101	.00027	.00422	.35763	.00052	.00432	-.00111	.00526	.00654
#2	.00044	-.11310	.00381	.03210	.00038	.00749	.32424	.00205	.00726	.00580	.00448	.00436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.01182**	**.05677**	**.12149**	**.00308**	**.00020**	**-.00143**	**.00145**	**.00400**	F **.12855**	**.00130**	**.00031**	**.00535**
Stddev	.01087	.01454	.03111	.00476	.00027	.00026	.00085	.00405	.02499	.00020	.00006	.00101
%RSD	91.954	25.610	25.610	154.31	135.40	17.938	58.433	101.26	19.442	15.636	18.998	18.920
#1	.00414	.06705	.14350	-.00028	.00001	-.00161	.00205	.00114	.14623	.00115	.00036	.00463
#2	.01951	.04649	.09949	.00645	.00039	-.00125	.00085	.00687	.11088	.00144	.00027	.00606
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit	.00750								.10000			
Low Limit	-.01500								-.10000			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3427.3**	**41863.**	**2930.7**
Stddev	18.8	319.	27.1
%RSD	.54739	.76239	.92504
#1	3414.0	42089.	2911.5
#2	3440.6	41638.	2949.8

Sample Name: ccvl-5413446 Acquired: 11/7/2018 6:51:33 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00895**	**.12816**	**.01611**	**.10464**	**.01024**	**.00123**	**.10939**	**.20254**	**.00481**	**.01106**	**.01062**	**.01613**
Stddev	.00112	.00144	.00178	.00223	.00045	.00013	.00221	.00640	.00002	.00083	.00024	.00031
%RSD	12.497	1.1215	11.078	2.1300	4.3912	10.360	2.0190	3.1608	.33588	7.4860	2.2153	1.9224
#1	.00816	.12714	.01485	.10307	.00992	.00114	.10782	.19801	.00482	.01048	.01079	.01592
#2	.00974	.12917	.01737	.10622	.01055	.00132	.11095	.20707	.00480	.01165	.01046	.01635
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10153**	**3.1222**	**.01772**	**.22293**	**.01049**	**.01982**	F **1.3531**	**.04196**	**3.1418**	**.00926**	**.07998**	**.01739**
Stddev	.00340	.0445	.00010	.00093	.00011	.00003	.0058	.00018	.0073	.00370	.00009	.00315
%RSD	3.3452	1.4246	.56732	.41903	1.0141	.14794	.42837	.43988	.23323	39.998	.11056	18.126
#1	.10394	3.0907	.01779	.22359	.01057	.01984	1.3572	.04183	3.1470	.00664	.08004	.01516
#2	.09913	3.1536	.01765	.22227	.01042	.01979	1.3490	.04209	3.1366	.01187	.07991	.01962
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							1.0000					
Range							30.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01848**	**.55910**	**1.1965**	**.10049**	**.01021**	**.01511**	**.01099**	**.01752**	F **.10218**	**.01009**	**.02095**	F **.02152**
Stddev	.00055	.04201	.0899	.00067	.00007	.00255	.00018	.00153	.03388	.00018	.00012	.00635
%RSD	3.0013	7.5147	7.5147	.66179	.70226	16.897	1.6536	8.7084	33.161	1.8253	.55111	29.504
#1	.01888	.52939	1.1329	.10096	.01026	.01691	.01111	.01644	.07822	.01022	.02086	.02601
#2	.01809	.58881	1.2601	.10002	.01016	.01330	.01086	.01860	.12614	.00996	.02103	.01703
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3507.1**	**42926.**	**2969.2**
Stddev	5.4	120.	23.1
%RSD	.15394	.27942	.77724
#1	3510.9	43011.	2985.5
#2	3503.3	42841.	2952.8

Sample Name: 280-116541-C-3-A Acquired: 11/7/2018 6:54:08 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00077**	**.00257**	**-.00189**	**.11320**	**.00237**	**.00026**	**-.00199**	**83.498**	**.00054**
Stddev	.00043	.00282	.00024	.00122	.00034	.00009	.00107	.705	.00016
%RSD	55.130	109.93	12.734	1.0749	14.231	35.726	54.071	.84378	29.005
#1	-.00047	.00456	-.00172	.11406	.00213	.00019	-.00275	83.996	.00066
#2	-.00108	.00057	-.00206	.11234	.00261	.00032	-.00123	83.000	.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00001**	**.00203**	**.00253**	**.00232**	**14.184**	**.00267**	**111.00**	**.00011**	**.00015**
Stddev	.00037	.00004	.00080	.00648	.120	.00134	1.13	.00004	.00046
%RSD	2565.5	2.1775	31.783	279.40	.84706	50.380	1.0146	35.822	305.83
#1	-.00028	.00207	.00310	.00691	14.269	.00362	110.20	.00014	.00048
#2	.00025	.00200	.00196	-.00226	14.099	.00172	111.80	.00008	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**350.41**	**.00009**	**.08047**	**-.01301**	**45.218**	**-.00430**	**-.00679**	**32.466**	**69.476**
Stddev	3.25	.00016	.00347	.00018	.671	.00099	.00189	.372	.797
%RSD	.92678	171.81	4.3093	1.3453	1.4834	23.043	27.814	1.1465	1.1465
#1	352.71	.00020	.08292	-.01289	45.692	-.00500	-.00813	32.729	70.040
#2	348.11	-.00002	.07802	-.01313	44.744	-.00360	-.00546	32.202	68.913
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00418**	**.79838**	**-.00237**	**.00096**	**.00226**	**-.00568**	**.01439**	**.00087**	**.00808**
Stddev	.00146	.00704	.00097	.00024	.00405	.03893	.00012	.00045	.00132
%RSD	34.799	.88166	40.783	25.138	179.74	685.97	.86806	51.859	16.294
#1	-.00315	.80335	-.00169	.00113	.00512	-.03320	.01448	.00118	.00901
#2	-.00521	.79340	-.00306	.00079	-.00061	.02185	.01431	.00055	.00715
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3352.6**	**40178.**	**3040.3**
Stddev	5.0	327.	8.1
%RSD	.14910	.81341	.26630
#1	3349.0	40409.	3034.6
#2	3356.1	39947.	3046.0

Sample Name: 280-116541-C-4-A Acquired: 11/7/2018 6:56:41 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00128**	**-.00108**	**.00280**	**.07418**	**.02565**	**.00023**	**-.00144**	**70.863**	**.00065**
Stddev	.00011	.00075	.00736	.00106	.00058	.00029	.00488	.102	.00027
%RSD	8.5861	69.814	262.80	1.4341	2.2675	126.52	340.06	.14449	40.869
#1	-.00136	-.00054	.00801	.07493	.02524	.00002	-.00489	70.791	.00046
#2	-.00120	-.00161	-.00240	.07343	.02606	.00043	.00202	70.936	.00084
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00158**	**.01169**	**.00498**	**.10416**	**12.616**	**.00696**	**113.85**	**.06356**	**.00018**
Stddev	.00023	.00016	.00045	.00313	.059	.00350	.07	.00013	.00032
%RSD	14.308	1.3567	9.0173	3.0069	.47010	50.251	.06246	.20479	184.42
#1	.00174	.01158	.00529	.10637	12.574	.00449	113.90	.06365	-.00005
#2	.00142	.01181	.00466	.10194	12.658	.00944	113.80	.06347	.00041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**202.13**	**.27961**	**.03695**	**-.01342**	**26.230**	**.00131**	**-.00700**	**35.149**	**75.218**
Stddev	1.02	.00537	.00176	.00046	.458	.00022	.00132	.092	.196
%RSD	.50520	1.9205	4.7611	3.4080	1.7451	16.494	18.844	.26107	.26107
#1	201.41	.28341	.03820	-.01310	26.554	.00116	-.00794	35.084	75.079
#2	202.85	.27581	.03571	-.01374	25.907	.00146	-.00607	35.214	75.357
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00389**	**.61584**	**-.00169**	**.00051**	**.00198**	**-.03535**	**.00741**	**.00041**	**.00265**
Stddev	.00160	.00039	.00425	.00035	.00199	.00532	.00013	.00006	.00304
%RSD	41.186	.06355	250.66	67.912	100.44	15.055	1.7322	13.363	115.03
#1	-.00502	.61557	-.00470	.00076	.00338	-.03158	.00732	.00037	.00049
#2	-.00275	.61612	.00131	.00027	.00057	-.03911	.00750	.00045	.00480
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3350.8**	**40205.**	**2978.8**
Stddev	11.1	172.	17.5
%RSD	.33209	.42776	.58721
#1	3342.9	40084.	2991.1
#2	3358.6	40327.	2966.4

Sample Name: 280-116541-C-5-A Acquired: 11/7/2018 6:59:12 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00082**	**.00839**	**-.00459**	**.13980**	**.00620**	**.00051**	**-.00381**	**105.96**	**.00116**
Stddev	.00085	.00034	.00176	.00328	.00013	.00008	.00602	.71	.00010
%RSD	103.88	4.0021	38.340	2.3492	2.0750	15.289	158.24	.67400	8.5941
#1	-.00142	.00863	-.00334	.14212	.00629	.00057	-.00807	106.46	.00123
#2	-.00022	.00816	-.00583	.13748	.00611	.00046	.00045	105.45	.00109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00037**	**.00241**	**.00508**	**.00329**	**19.430**	**.00851**	**133.14**	**.00059**	**-.00057**
Stddev	.00027	.00013	.00039	.00166	.102	.00020	.28	.00001	.00047
%RSD	72.348	5.4015	7.7627	50.558	.52723	2.2948	.20741	1.4004	82.402
#1	.00018	.00250	.00480	.00446	19.503	.00837	133.34	.00058	-.00090
#2	.00057	.00232	.00535	.00211	19.358	.00865	132.95	.00059	-.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**448.34**	**.00077**	**.09330**	**-.01437**	**52.553**	**-.00291**	**-.00134**	**37.285**	**79.790**
Stddev	3.10	.00030	.00292	.00094	1.322	.00022	.00403	.295	.631
%RSD	.69208	38.519	3.1337	6.5395	2.5159	7.3964	301.12	.79065	.79065
#1	450.54	.00098	.09537	-.01371	53.488	-.00307	.00151	37.493	80.236
#2	446.15	.00056	.09124	-.01503	51.618	-.00276	-.00419	37.076	79.344
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00100**	**1.0774**	**-.00365**	**.00068**	**.00154**	**.03278**	**.01660**	**.00249**	**.00518**
Stddev	.00068	.0083	.00002	.00042	.00219	.04339	.00086	.00029	.00119
%RSD	68.719	.77412	.49299	61.256	142.02	132.36	5.1599	11.800	22.869
#1	-.00051	1.0833	-.00367	.00039	.00309	.00210	.01720	.00228	.00434
#2	-.00148	1.0715	-.00364	.00098	-.00001	.06346	.01599	.00270	.00602
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3262.6**	**38899.**	**2956.1**
Stddev	4.8	54.	27.7
%RSD	.14796	.13999	.93747
#1	3259.2	38937.	2936.5
#2	3266.1	38860.	2975.7

Sample Name: 280-116541-C-6-A Acquired: 11/7/2018 7:01:45 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00114**	**-.00073**	**.00493**	**.09225**	**.01750**	**.00055**	**-.00209**	**83.000**	**.00082**
Stddev	.00030	.00022	.00382	.00138	.00009	.00013	.00719	.255	.00043
%RSD	26.702	30.355	77.513	1.4958	.49433	24.231	343.38	.30776	52.247
#1	-.00092	-.00057	.00223	.09323	.01744	.00046	.00299	83.181	.00052
#2	-.00135	-.00088	.00763	.09128	.01756	.00064	-.00718	82.820	.00112
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00023**	**.00186**	**.00394**	**-.00442**	**13.774**	**.00672**	**122.02**	**.00019**	**-.00034**
Stddev	.00022	.00020	.00056	.00572	.009	.00254	.41	.00016	.00089
%RSD	92.889	10.760	14.076	129.27	.06412	37.887	.33399	84.121	258.68
#1	-.00039	.00200	.00434	-.00038	13.780	.00492	122.31	.00030	.00029
#2	-.00008	.00172	.00355	-.00847	13.768	.00852	121.73	.00008	-.00097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**239.22**	**.00238**	**.09080**	**-.01306**	**29.052**	**-.00239**	**-.00576**	**36.135**	**77.328**
Stddev	1.09	.00029	.00095	.00164	.512	.00154	.00143	.002	.005
%RSD	.45388	12.161	1.0464	12.521	1.7635	64.445	24.847	.00670	.00670
#1	239.99	.00218	.09147	-.01422	29.415	-.00347	-.00475	36.136	77.332
#2	238.46	.00259	.09013	-.01191	28.690	-.00130	-.00677	36.133	77.325
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00188**	**.73939**	**-.00548**	**.00086**	**.00190**	**.00066**	**.01086**	**.00064**	**.00325**
Stddev	.00021	.00192	.00010	.00049	.00331	.01396	.00094	.00006	.00038
%RSD	10.990	.26018	1.8911	56.320	174.32	2109.8	8.6488	9.2166	11.787
#1	-.00173	.74075	-.00540	.00121	-.00044	-.00921	.01020	.00068	.00298
#2	-.00202	.73803	-.00555	.00052	.00424	.01054	.01152	.00060	.00352
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3340.8**	**40027.**	**2976.6**
Stddev	2.3	77.	8.7
%RSD	.06982	.19145	.29389
#1	3342.5	40081.	2982.8
#2	3339.2	39973.	2970.4

Sample Name: 280-116541-C-7-A Acquired: 11/7/2018 7:04:18 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00043**	**.00283**	**.00587**	**.16047**	**.00313**	**.00027**	**.00023**	**85.090**	**.00048**
Stddev	.00025	.00127	.00360	.00284	.00036	.00020	.00275	.397	.00002
%RSD	58.097	44.862	61.283	1.7699	11.586	73.496	1180.5	.46674	4.2491
#1	-.00061	.00372	.00841	.16248	.00339	.00013	.00218	85.371	.00047
#2	-.00026	.00193	.00333	.15846	.00288	.00041	-.00171	84.809	.00050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00032**	**.00161**	**.00334**	**.00756**	**19.053**	**.00141**	**110.71**	**.00276**	**.00034**
Stddev	.00040	.00040	.00040	.00019	.080	.00337	.21	.00010	.00082
%RSD	124.07	24.810	12.025	2.5363	.41740	239.06	.19124	3.5522	238.94
#1	.00060	.00133	.00362	.00743	18.997	-.00097	110.86	.00283	.00092
#2	.00004	.00189	.00305	.00770	19.109	.00379	110.56	.00269	-.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**381.03**	**.00178**	**.12380**	**-.01695**	**46.030**	**-.00105**	**-.00552**	**37.013**	**79.209**
Stddev	.78	.00039	.00123	.00105	1.109	.00060	.00878	.205	.439
%RSD	.20503	22.123	.99732	6.2083	2.4090	57.411	159.22	.55397	.55397
#1	381.58	.00150	.12293	-.01769	46.814	-.00062	.00069	37.158	79.519
#2	380.48	.00206	.12467	-.01620	45.246	-.00147	-.01173	36.868	78.898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00500**	**.89988**	**-.00087**	**.00095**	**.00080**	**-.00736**	**.01917**	**.00052**	**.00390**
Stddev	.00127	.00412	.00317	.00042	.00011	.07695	.00001	.00003	.00320
%RSD	25.322	.45762	363.77	44.081	13.488	1044.8	.05473	5.4419	82.160
#1	-.00411	.90279	.00137	.00066	.00072	-.06177	.01918	.00050	.00163
#2	-.00590	.89697	-.00311	.00125	.00087	.04704	.01916	.00054	.00617
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3320.9**	**38980.**	**2932.1**
Stddev	5.2	226.	2.3
%RSD	.15778	.57963	.07723
#1	3317.2	38820.	2930.5
#2	3324.6	39140.	2933.7

Sample Name: 280-116541-C-8-A Acquired: 11/7/2018 7:06:51 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00060**	**.01211**	**.00278**	**.00133**	**-.00001**	**.00027**	**.00278**	**.13240**	**-.00027**
Stddev	.00006	.00067	.00302	.00102	.00022	.00048	.00678	.00247	.00014
%RSD	10.591	5.5715	108.78	77.229	1535.0	178.95	243.94	1.8641	52.950
#1	-.00055	.01163	.00064	.00205	-.00017	-.00007	.00757	.13414	-.00017
#2	-.00064	.01259	.00492	.00060	.00014	.00061	-.00202	.13065	-.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.00051**	**.00083**	**.00456**	**.11921**	**-.00428**	**.02083**	**.00011**	**-.00031**
Stddev	.00048	.00012	.00053	.00131	.02263	.00256	.00095	.00002	.00001
%RSD	201.63	23.567	63.778	28.817	18.986	59.758	4.5392	17.580	4.1455
#1	.00057	.00059	.00046	.00549	.10321	-.00247	.02017	.00009	-.00032
#2	-.00010	.00042	.00121	.00363	.13521	-.00609	.02150	.00012	-.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0375**	**-.00038**	**-.00150**	**-.00171**	**.01201**	**.00004**	**-.00482**	**.38220**	**.81791**
Stddev	.0281	.00073	.00123	.00092	.00341	.00014	.00298	.03644	.07798
%RSD	2.7075	191.58	81.944	53.702	28.390	390.04	61.769	9.5338	9.5338
#1	1.0574	-.00090	-.00063	-.00106	.01442	.00013	-.00271	.35644	.76278
#2	1.0176	.00014	-.00238	-.00236	.00960	-.00006	-.00692	.40797	.87305
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00180**	**.00016**	**.00026**	**.00076**	**.00011**	**-.00726**	**.00031**	**.00187**	**.00217**
Stddev	.00267	.00019	.00303	.00026	.00015	.00397	.00025	.00028	.00283
%RSD	148.11	120.77	1150.7	34.160	136.88	54.708	79.065	14.784	130.52
#1	-.00369	.00029	-.00188	.00058	.00022	-.01007	.00014	.00207	.00417
#2	.00009	.00002	.00241	.00095	.00000	-.00445	.00049	.00168	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3561.8**	**43395.**	**3027.0**
Stddev	6.9	251.	24.1
%RSD	.19361	.57921	.79633
#1	3566.7	43218.	3044.0
#2	3556.9	43573.	3010.0

Sample Name: 280-116488-F-1-A Acquired: 11/7/2018 7:09:28 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00066**	**-.00528**	**.00646**	**.03500**	**.01275**	**.00009**	**-.00160**	W **613.07**	**-.00040**
Stddev	.00101	.00064	.00217	.00021	.00038	.00023	.00186	4.90	.00003
%RSD	153.88	12.063	33.528	.60620	2.9964	267.27	116.26	.80002	8.5622
#1	.00006	-.00483	.00799	.03515	.01302	.00025	-.00292	616.53	-.00042
#2	-.00138	-.00573	.00493	.03485	.01248	-.00008	-.00028	609.60	-.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00078**	**.00078**	**.00376**	**-.00056**	**18.483**	**.09591**	**64.119**	**.04269**	**-.00101**
Stddev	.00015	.00044	.00018	.00587	.051	.00496	.246	.00013	.00060
%RSD	19.812	56.353	4.8679	1040.4	.27395	5.1735	.38307	.29667	59.437
#1	.00089	.00047	.00363	-.00472	18.447	.09941	64.293	.04278	-.00058
#2	.00067	.00109	.00389	.00359	18.519	.09240	63.946	.04260	-.00143
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**417.80**	**.00411**	**.00811**	**-.00589**	F **587.46**	**.00175**	**.15497**	**10.827**	**23.169**
Stddev	4.10	.00043	.00030	.00314	19.59	.00285	.00302	.059	.126
%RSD	.98103	10.570	3.7412	53.317	3.3347	163.38	1.9518	.54407	.54407
#1	420.70	.00442	.00832	-.00811	601.31	-.00027	.15283	10.868	23.258
#2	414.91	.00381	.00790	-.00367	573.61	.00376	.15711	10.785	23.080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00444**	W **11.518**	**-.00302**	**.00134**	**-.00295**	**.03039**	**-.00047**	**.00489**	**.00566**
Stddev	.00102	.261	.00229	.00009	.00204	.01862	.00069	.00043	.00103
%RSD	22.973	2.2632	76.028	6.7033	69.052	61.284	145.97	8.8692	18.217
#1	-.00372	11.702	-.00139	.00128	-.00151	.04356	.00002	.00459	.00493
#2	-.00516	11.334	-.00464	.00140	-.00440	.01722	-.00096	.00520	.00639
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000							
Low Limit		-.02000							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3257.2**	**38919.**	**2946.8**
Stddev	28.0	220.	21.5
%RSD	.86003	.56535	.73097
#1	3237.4	38764.	2931.5
#2	3277.0	39075.	2962.0

Sample Name: 280-116490-C-1-A Acquired: 11/7/2018 7:12:12 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436426 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00121**	**-.00506**	**.00470**	**.02239**	**.00810**	**.00042**	**.00105**	W **591.04**	**-.00043**
Stddev	.00002	.00008	.00135	.00210	.00049	.00046	.00030	1.85	.00011
%RSD	1.2766	1.5683	28.807	9.3655	6.0149	109.39	28.405	.31297	25.680
#1	-.00120	-.00500	.00374	.02388	.00776	.00075	.00084	589.73	-.00051
#2	-.00122	-.00512	.00566	.02091	.00845	.00010	.00126	592.35	-.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00074**	**.00072**	**.00397**	**.00539**	**16.494**	**.11783**	**55.439**	**.00031**	**-.00080**
Stddev	.00007	.00039	.00083	.00043	.098	.00476	.175	.00008	.00014
%RSD	8.9049	53.944	20.955	8.0125	.59652	4.0427	.31533	25.151	17.560
#1	.00069	.00045	.00338	.00569	16.563	.12120	55.563	.00026	-.00090
#2	.00078	.00100	.00456	.00508	16.424	.11446	55.315	.00037	-.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**345.07**	**.00319**	**.00001**	**-.00451**	F **524.54**	**.00288**	**.09018**	**9.7840**	**20.938**
Stddev	.90	.00112	.00348	.00043	28.15	.00197	.00389	.0017	.004
%RSD	.26066	35.086	59800.	9.5349	5.3665	68.218	4.3183	.01747	.01747
#1	345.71	.00240	-.00245	-.00421	544.45	.00428	.09294	9.7828	20.935
#2	344.44	.00398	.00247	-.00482	504.64	.00149	.08743	9.7852	20.940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00370**	**9.5810**	**.00297**	**.00128**	**-.00030**	**-.01543**	**-.00036**	**.00435**	**.00603**
Stddev	.00031	.0582	.00056	.00034	.00405	.04629	.00016	.00015	.00176
%RSD	8.3389	.60789	18.755	26.656	1345.1	300.04	44.386	3.4874	29.123
#1	-.00391	9.5398	.00337	.00152	.00257	.01730	-.00047	.00424	.00727
#2	-.00348	9.6221	.00258	.00104	-.00317	-.04816	-.00025	.00446	.00479
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3294.0**	**38876.**	**3006.8**
Stddev	7.3	45.	14.0
%RSD	.22219	.11466	.46613
#1	3288.9	38908.	3016.7
#2	3299.2	38845.	2996.9

Sample Name: CCVH-5408055 Acquired: 11/7/2018 7:14:56 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00322**	**47.102**	**-.00186**	**.00213**	**-.00002**	**.00027**	**.96497**	**.42135**	**-.00030**	**.00171**	**.00065**	**.00348**	**48.296**
Stddev	.00068	.139	.00372	.00024	.00030	.00016	.01262	.06057	.00061	.00015	.00018	.00031	.213
%RSD	21.244	.29533	199.78	11.159	1282.2	59.699	1.3075	14.376	201.64	8.9230	27.328	8.9377	.44132
#1	-.00274	47.201	.00077	.00197	.00019	.00015	.97389	.46419	-.00073	.00160	.00052	.00370	48.145
#2	-.00371	47.004	-.00449	.00230	-.00023	.00038	.95605	.37852	.00013	.00182	.00077	.00326	48.447
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.13573**	**.00036**	**-.03972**	**.00268**	**-.00086**	**249.38**	**.00321**	**.00341**	**-.00307**	**5.0881**	**-.00080**	**.00393**	**.04119**
Stddev	.07489	.00029	.02325	.00004	.00041	1.01	.00045	.00071	.00069	.1709	.00383	.00950	.02769
%RSD	55.173	81.512	58.545	1.6662	48.017	.40605	13.958	20.827	22.537	3.3596	475.80	241.67	67.230
#1	.08278	.00057	-.02328	.00271	-.00057	248.66	.00289	.00392	-.00356	5.2090	-.00351	-.00279	.06077
#2	.18869	.00015	-.05617	.00265	-.00115	250.09	.00352	.00291	-.00258	4.9672	.00190	.01064	.02161
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08814**	**-.00310**	**.00708**	**4.9378**	**.01684**	**.00144**	**9.8949**	**-.01008**	**.00110**	**.08352**
Stddev	.05926	.00113	.00120	.0181	.00067	.00337	.0707	.00098	.00020	.00073
%RSD	67.230	36.461	16.889	.36574	3.9612	234.06	.71454	9.6817	18.185	.87656
#1	.13005	-.00230	.00793	4.9505	.01637	.00382	9.9449	-.00939	.00125	.08300
#2	.04624	-.00390	.00623	4.9250	.01731	-.00094	9.8449	-.01077	.00096	.08404
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3460.0**	**41013.**	**2990.4**
Stddev	25.2	38.	28.4
%RSD	.72731	.09258	.94897
#1	3442.2	41039.	2970.3
#2	3477.8	40986.	3010.4

Sample Name: CCV-5407546 Acquired: 11/7/2018 7:17:29 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51192**	F **.60085**	**1.0097**	**.51299**	**.52014**	**.49089**	**.00755**	**4.9602**	**.51160**	**.50658**	**.50103**	**.51931**
Stddev	.00028	.00468	.0069	.00220	.00129	.00014	.00198	.0276	.00354	.00408	.00434	.00011
%RSD	.05515	.77855	.68211	.42907	.24716	.02856	26.265	.55667	.69242	.80442	.86627	.02133
#1	.51172	.60416	1.0146	.51454	.52105	.49079	.00895	4.9798	.51411	.50946	.50410	.51939
#2	.51212	.59754	1.0048	.51143	.51923	.49099	.00615	4.9407	.50910	.50369	.49796	.51923
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4539**	**51.490**	**1.0247**	**20.312**	**.50722**	**.50020**	F **5.6454**	**.50673**	**1.0936**	**1.0172**	**.10537**	**1.0415**
Stddev	.0189	.083	.0024	.035	.00081	.00361	.0070	.00395	.0115	.0094	.01372	.0034
%RSD	.76863	.16163	.23505	.17305	.15995	.72204	.12395	.77918	1.0553	.92170	13.019	.32523
#1	2.4405	51.431	1.0229	20.287	.50665	.50275	5.6503	.50952	1.1018	1.0239	.11507	1.0439
#2	2.4672	51.549	1.0264	20.337	.50780	.49764	5.6404	.50394	1.0855	1.0106	.09567	1.0391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.99438**	**4.9308**	**10.552**	**1.0101**	**.50016**	**.00722**	**.50747**	**1.0412**	**.06350**	**.51457**	**.51073**	**.50720**
Stddev	.00636	.0242	.052	.0075	.00022	.00116	.00060	.0072	.02308	.00060	.00066	.00213
%RSD	.63944	.49156	.49156	.74405	.04426	16.136	.11800	.68787	36.348	.11729	.12899	.42039
#1	.99888	4.9137	10.515	1.0155	.50032	.00639	.50705	1.0463	.07982	.51414	.51026	.50569
#2	.98988	4.9479	10.589	1.0048	.50001	.00804	.50789	1.0361	.04718	.51499	.51119	.50871
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3505.3**	**42418.**	**3027.9**
Stddev	2.8	123.	3.8
%RSD	.07873	.29077	.12617
#1	3507.3	42505.	3025.2
#2	3503.4	42330.	3030.6

Sample Name: CCB Acquired: 11/7/2018 7:19:56 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00138**	**-.00161**	**.00410**	**.00185**	**-.00023**	**.00044**	**-.00121**	**-.00141**	**-.00029**	**.00016**	**.00008**	**.00101**
Stddev	.00008	.00068	.00279	.00137	.00018	.00017	.00400	.00067	.00043	.00045	.00019	.00053
%RSD	5.4720	42.310	68.113	74.203	75.391	38.744	329.72	47.446	151.31	287.67	249.87	52.378
#1	-.00133	-.00113	.00213	.00281	-.00036	.00032	-.00405	-.00189	.00002	.00048	.00022	.00064
#2	-.00144	-.00209	.00608	.00088	-.00011	.00056	.00162	-.00094	-.00059	-.00016	-.00006	.00138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00491**	**-.03621**	**-.00479**	**-.00075**	**.00006**	**.00072**	**.34938**	**-.00022**	**-.00247**	**-.00060**	W **.07154**	**.00017**
Stddev	.00186	.03672	.00596	.00235	.00009	.00060	.00091	.00045	.00198	.00027	.00773	.00535
%RSD	37.943	101.42	124.39	314.37	137.90	83.260	.26156	200.73	79.907	45.047	10.803	3118.0
#1	-.00623	-.06217	-.00901	-.00241	.00012	.00114	.34873	.00009	-.00108	-.00041	.07701	.00395
#2	-.00359	-.01024	-.00058	.00091	.00000	.00030	.35002	-.00054	-.00387	-.00079	.06608	-.00361
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit											.05000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00070**	**.01368**	**.02927**	**-.00199**	**.00019**	**.00102**	**.00043**	**.00183**	**.04677**	**-.00040**	**.00004**	W **.00766**
Stddev	.00255	.00874	.01871	.00020	.00011	.00065	.00068	.00055	.03363	.00003	.00045	.00250
%RSD	363.41	63.904	63.904	9.9247	59.660	64.031	156.95	30.255	71.907	7.4813	1065.3	32.673
#1	.00250	.01986	.04250	-.00185	.00011	.00056	.00091	.00222	.07055	-.00042	-.00028	.00943
#2	-.00110	.00750	.01604	-.00213	.00027	.00149	-.00005	.00144	.02299	-.00038	.00036	.00589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn
High Limit												.00750
Low Limit												-.00900

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3499.6**	**42877.**	**3017.1**
Stddev	7.7	40.	.0
%RSD	.21988	.09324	.00110
#1	3505.0	42849.	3017.1
#2	3494.1	42905.	3017.0

Sample Name: ccvl-5413446 Acquired: 11/7/2018 7:22:32 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00951**	**.11849**	**.01669**	**.09823**	**.00997**	F **.00155**	**.10849**	**.19500**	**.00474**	**.01058**	**.00968**	**.01715**
Stddev	.00073	.00421	.00071	.00215	.00106	.00013	.00412	.00238	.00004	.00028	.00006	.00020
%RSD	7.6556	3.5512	4.2408	2.1863	10.654	8.0665	3.7960	1.2215	.92365	2.6723	.59537	1.1671
#1	.01003	.12147	.01719	.09975	.00922	.00146	.11140	.19332	.00470	.01078	.00964	.01729
#2	.00900	.11552	.01619	.09671	.01072	.00164	.10558	.19669	.00477	.01038	.00972	.01701
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						.00100						
Range						30.000%						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09923**	**3.1118**	**.01846**	**.20049**	**.01037**	**.01913**	F **1.3420**	**.03993**	**3.0354**	F **.00610**	F **.13951**	**.01677**
Stddev	.00035	.0024	.00440	.00130	.00005	.00015	.0337	.00083	.0799	.00069	.00505	.00121
%RSD	.35719	.07703	23.838	.64636	.49018	.79628	2.5128	2.0669	2.6335	11.357	3.6175	7.2120
#1	.09898	3.1101	.02157	.19958	.01033	.01924	1.3181	.04051	3.0920	.00659	.14308	.01592
#2	.09948	3.1135	.01535	.20141	.01040	.01902	1.3658	.03935	2.9789	.00561	.13594	.01763
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass
Value							1.0000			.00900	.10000	
Range							30.000%			-30.000%	30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02047**	**.55222**	**1.1818**	**.09445**	**.00996**	**.01606**	**.01060**	**.01544**	F **.09224**	**.01004**	**.02118**	F **.02164**
Stddev	.01123	.01986	.0425	.00299	.00024	.00270	.00038	.00311	.04234	.00031	.00035	.00230
%RSD	54.874	3.5968	3.5968	3.1659	2.4220	16.825	3.5419	20.140	45.902	3.0991	1.6289	10.626
#1	.02841	.56627	1.2118	.09656	.01013	.01797	.01034	.01324	.06230	.01026	.02143	.02001
#2	.01253	.53818	1.1517	.09233	.00979	.01415	.01087	.01764	.12218	.00982	.02094	.02326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3573.3**	**43521.**	**3065.9**
Stddev	6.8	229.	14.9
%RSD	.18891	.52578	.48499
#1	3578.1	43682.	3076.5
#2	3568.6	43359.	3055.4

Sample Name: MB 280-436440/1-A Acquired: 11/7/2018 7:25:07 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00063**	**.00057**	**.00252**	**.00078**	**-.00051**	**.00011**	**.00768**	**.00704**	**-.00079**
Stddev	.00021	.00094	.00224	.00003	.00066	.00033	.00164	.00244	.00008
%RSD	33.736	164.59	88.977	4.3547	128.93	309.60	21.401	34.611	10.202
#1	-.00048	.00123	.00093	.00076	-.00005	-.00012	.00884	.00876	-.00074
#2	-.00078	-.00009	.00410	.00081	-.00098	.00034	.00652	.00532	-.00085
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00076**	**.00025**	**.00112**	**.00943**	**-.05747**	**-.00352**	**-.00658**	**.00023**	**.00001**
Stddev	.00034	.00014	.00012	.00175	.01601	.00656	.00184	.00003	.00011
%RSD	45.523	55.541	11.146	18.600	27.861	186.49	27.985	14.208	1991.3
#1	.00100	.00015	.00121	.01067	-.06880	-.00815	-.00528	.00021	-.00007
#2	.00051	.00035	.00103	.00819	-.04615	.00112	-.00788	.00026	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25913**	**.00010**	**.00217**	**-.00028**	**.03539**	**-.00380**	F **-.01760**	**.05514**	**.11799**
Stddev	.01550	.00056	.00251	.00058	.00058	.00149	.00691	.02511	.05374
%RSD	5.9799	559.95	115.79	206.95	1.6432	39.218	39.231	45.544	45.544
#1	.24817	.00050	.00395	.00013	.03580	-.00275	-.01272	.07289	.15599
#2	.27009	-.00030	.00039	-.00069	.03498	-.00485	-.02248	.03738	.07999
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	None
High Limit							.01500		
Low Limit							-.01500		

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00380**	**-.00023**	**.00102**	**.00075**	**-.00004**	**.01990**	**.00047**	**.00107**	**.00546**
Stddev	.00026	.00004	.00195	.00022	.00095	.01132	.00074	.00054	.00044
%RSD	6.9145	18.487	191.03	29.647	2160.5	56.877	156.68	50.336	8.0022
#1	-.00361	-.00026	.00240	.00091	-.00071	.01190	.00099	.00145	.00515
#2	-.00398	-.00020	-.00036	.00059	.00063	.02791	-.00005	.00069	.00577
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3638.8**	**44441.**	**3094.7**
Stddev	1.1	46.	24.9
%RSD	.02972	.10353	.80462
#1	3639.6	44474.	3077.1
#2	3638.1	44409.	3112.3

Sample Name: LCS 280-436440/2-A Acquired: 11/7/2018 7:27:43 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.04278**	F **2.2942**	**.99476**	**1.0529**	**2.0626**	**.04851**	**1.9219**	**48.980**	**.09725**
Stddev	.00085	.0269	.00969	.0128	.0047	.00013	.0241	.199	.00094
%RSD	1.9867	1.1722	.97416	1.2127	.22913	.27164	1.2541	.40606	.96720
#1	.04338	2.3132	1.0016	1.0620	2.0593	.04842	1.9390	48.839	.09791
#2	.04218	2.2752	.98791	1.0439	2.0660	.04860	1.9049	49.120	.09658
Check ?	Chk Warn	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750	2.2299							
Low Limit	.04300	1.7300							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48968**	**.19686**	**.25645**	**.97397**	**51.230**	**1.0090**	**49.607**	**.49647**	**1.0178**
Stddev	.00670	.00302	.00209	.00477	.113	.0066	.128	.00140	.0166
%RSD	1.3677	1.5333	.81525	.48939	.22019	.65890	.25730	.28234	1.6285
#1	.49442	.19900	.25793	.97060	51.150	1.0043	49.697	.49746	1.0295
#2	.48494	.19473	.25497	.97734	51.310	1.0137	49.516	.49548	1.0061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.817**	**.48493**	F **11.116**	**.49919**	**2.0399**	**.52884**	**2.0097**	**9.7987**	**20.969**
Stddev	.627	.00710	.153	.00956	.0180	.00359	.0308	.1435	.307
%RSD	1.2344	1.4651	1.3752	1.9146	.88245	.67870	1.5319	1.4641	1.4641
#1	50.373	.48996	11.224	.50595	2.0527	.53138	2.0315	9.6972	20.752
#2	51.260	.47991	11.008	.49243	2.0272	.52630	1.9879	9.9001	21.186
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit			11.100						
Low Limit			9.1000						

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0219**	**.99678**	**1.0005**	**1.0230**	**2.0151**	**2.0672**	**.52115**	**.50843**	**.52110**
Stddev	.0272	.00121	.0155	.0027	.0336	.0290	.00322	.00079	.00268
%RSD	1.3469	.12163	1.5537	.26180	1.6660	1.4003	.61847	.15547	.51366
#1	2.0411	.99592	1.0114	1.0249	2.0388	2.0876	.52343	.50899	.52299
#2	2.0026	.99764	.98946	1.0211	1.9914	2.0467	.51887	.50787	.51920
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3542.6**	**42419.**	**3081.7**
Stddev	7.7	207.	5.3
%RSD	.21857	.48839	.17319
#1	3548.1	42272.	3077.9
#2	3537.1	42565.	3085.5

Sample Name: 280-116516-F-1-A Acquired: 11/7/2018 7:30:03 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00206**	**.31289**	**.24253**	W **14.098**	**.34781**	**.00030**	**-.00047**	**57.331**	**-.00035**
Stddev	.00045	.00978	.00125	.344	.00259	.00011	.00237	.241	.00044
%RSD	21.750	3.1244	.51422	2.4411	.74445	35.289	504.23	.42048	126.58
#1	-.00175	.31980	.24341	14.342	.34964	.00023	.00121	57.502	-.00004
#2	-.00238	.30598	.24165	13.855	.34598	.00038	-.00215	57.161	-.00066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				10.000					
Low Limit				-.20000					

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04020**	**.26421**	**.01118**	**3.2967**	F **669.14**	**.07991**	**149.49**	**.27133**	**.00997**
Stddev	.00077	.00771	.00070	.0138	2.87	.00683	.25	.00014	.00091
%RSD	1.9172	2.9164	6.3011	.41847	.42928	8.5418	.16507	.05242	9.0905
#1	.04074	.26965	.01068	3.3064	671.17	.07508	149.66	.27143	.00933
#2	.03965	.25876	.01168	3.2869	667.11	.08473	149.31	.27123	.01061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					500.00				
Low Limit					-6.0000				

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2218.9**	**.13992**	**7.3948**	**-.01278**	**41.075**	**.02636**	**-.00088**	**33.516**	**71.725**
Stddev	8.0	.00381	.1974	.00009	1.147	.00122	.00220	.159	.339
%RSD	.36071	2.7234	2.6697	.68796	2.7933	4.6340	249.36	.47295	.47295
#1	2224.6	.14262	7.5344	-.01284	41.886	.02550	.00067	33.404	71.485
#2	2213.3	.13723	7.2552	-.01272	40.264	.02722	-.00244	33.629	71.965
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01821**	**1.1480**	**-.00193**	**.53921**	**.00087**	**-.00333**	**.19116**	**.06043**	**.13472**
Stddev	.00029	.0043	.00074	.00148	.00082	.01268	.00109	.00129	.00249
%RSD	1.5845	.37126	38.218	.27373	93.609	381.37	.57131	2.1330	1.8461
#1	.01841	1.1510	-.00245	.53816	.00145	.00564	.19193	.06134	.13648
#2	.01801	1.1449	-.00141	.54025	.00030	-.01229	.19038	.05952	.13296
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3180.9**	**37039.**	**2980.5**
Stddev	13.2	515.	23.0
%RSD	.41632	1.3892	.77208
#1	3171.6	36676.	2964.2
#2	3190.3	37403.	2996.8

Sample Name: 280-116516-E-2-A Acquired: 11/7/2018 7:32:40 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00271**	**.45537**	**.50065**	W **24.375**	**.39295**	**.00041**	**-.00113**	**34.343**	**-.00171**
Stddev	.00067	.00540	.01255	.212	.00665	.00017	.00838	.453	.00043
%RSD	24.780	1.1856	2.5065	.87163	1.6914	42.313	741.05	1.3196	24.864
#1	-.00319	.45919	.50953	24.525	.38825	.00029	.00479	34.023	-.00201
#2	-.00224	.45156	.49178	24.225	.39765	.00053	-.00705	34.664	-.00141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				10.000					
Low Limit				-.20000					

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04185**	**.48211**	**.00968**	**3.0812**	F **1134.2**	**.19612**	**160.94**	**.17313**	**.01629**
Stddev	.00072	.00393	.00099	.0589	14.0	.00086	.24	.00004	.00032
%RSD	1.7118	.81490	10.201	1.9118	1.2376	.43977	.15076	.02371	1.9527
#1	.04236	.48489	.01038	3.0396	1124.3	.19551	161.12	.17316	.01606
#2	.04135	.47933	.00898	3.1229	1144.1	.19673	160.77	.17310	.01651
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					500.00				
Low Limit					-6.0000				

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **3556.1**	**.11950**	**9.3117**	**-.01616**	**70.315**	**.02872**	**.01295**	**43.517**	**93.127**
Stddev	47.5	.00292	.1009	.00054	.729	.00096	.00051	.720	1.540
%RSD	1.3351	2.4396	1.0841	3.3594	1.0371	3.3509	3.9482	1.6537	1.6537
#1	3522.6	.12156	9.3831	-.01654	70.831	.02804	.01259	43.008	92.038
#2	3589.7	.11744	9.2403	-.01577	69.799	.02940	.01331	44.026	94.216
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02626**	**.71706**	**-.00066**	**.69640**	**-.00094**	**-.00422**	**.23753**	**.03892**	**.38654**
Stddev	.00009	.01057	.00079	.00119	.00257	.03275	.00111	.00002	.00573
%RSD	.35411	1.4737	119.35	.17051	273.65	776.41	.46774	.05138	1.4818
#1	.02632	.70959	-.00122	.69724	.00088	.01894	.23675	.03891	.38249
#2	.02619	.72453	-.00010	.69556	-.00275	-.02737	.23832	.03894	.39059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3057.1**	**35238.**	**3035.6**
Stddev	6.8	93.	26.5
%RSD	.22210	.26335	.87206
#1	3052.3	35304.	3054.3
#2	3062.0	35173.	3016.9

Sample Name: 280-116473-C-2-A Acquired: 11/7/2018 7:35:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00161**	**.23123**	**.00389**	**.12463**	**.00240**	**.00032**	**.00216**	**35.343**	**-.00038**
Stddev	.00029	.00438	.00130	.00949	.00045	.00006	.00023	.099	.00041
%RSD	17.983	1.8964	33.339	7.6181	18.857	17.310	10.584	.27895	108.62
#1	-.00181	.23433	.00480	.13135	.00208	.00036	.00200	35.273	-.00067
#2	-.00140	.22813	.00297	.11792	.00272	.00028	.00232	35.413	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00057**	**.00066**	**.00299**	**.17884**	**2.8157**	**.01046**	**4.6539**	**.02527**	**.00080**
Stddev	.00056	.00011	.00007	.00621	.2600	.00403	.0416	.00004	.00024
%RSD	98.801	16.837	2.2819	3.4738	9.2320	38.502	.89436	.17705	30.294
#1	.00097	.00073	.00294	.17445	2.6319	.01331	4.6833	.02524	.00097
#2	.00017	.00058	.00304	.18323	2.9996	.00761	4.6245	.02530	.00063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**107.91**	**-.00003**	**.01857**	**-.00338**	**20.052**	**-.00379**	**-.00373**	**8.5824**	**18.366**
Stddev	1.68	.00036	.00327	.00096	.448	.00093	.00286	.1136	.243
%RSD	1.5598	1221.8	17.584	28.261	2.2365	24.387	76.575	1.3237	1.3237
#1	106.72	-.00029	.02088	-.00406	20.369	-.00445	-.00171	8.6628	18.538
#2	109.10	.00023	.01626	-.00271	19.735	-.00314	-.00575	8.5021	18.194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00180**	**.03337**	**-.00062**	**.00537**	**.00095**	**.01301**	**.00001**	**.00189**	**.00683**
Stddev	.00106	.00025	.00367	.00043	.00056	.04669	.00087	.00002	.00273
%RSD	58.824	.74284	594.24	7.9281	58.268	358.81	6363.4	1.1418	40.001
#1	-.00255	.03319	.00198	.00567	.00135	-.02000	-.00060	.00191	.00490
#2	-.00105	.03354	-.00321	.00507	.00056	.04603	.00063	.00188	.00876
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3566.8**	**42936.**	**3132.5**
Stddev	7.2	209.	2.9
%RSD	.20185	.48648	.09223
#1	3561.7	43084.	3134.5
#2	3571.9	42788.	3130.4

Sample Name: 280-116473-C-2-ASD@5 Acquired: 11/7/2018 7:37:48 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00199**	**.04850**	**.00690**	**.05464**	**-.00017**	**.00041**	**.00381**	**7.1870**	**-.00059**
Stddev	.00029	.00229	.00082	.00135	.00002	.00037	.00096	.0117	.00032
%RSD	14.763	4.7210	11.940	2.4653	10.517	89.287	25.149	.16295	54.035
#1	-.00220	.05012	.00748	.05369	-.00016	.00015	.00313	7.1787	-.00036
#2	-.00178	.04688	.00631	.05559	-.00018	.00067	.00448	7.1953	-.00081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.00032**	**.00205**	**.04009**	**.94746**	**.00216**	**.96179**	**.00529**	**.00004**
Stddev	.00018	.00022	.00021	.00059	.11383	.00012	.00781	.00003	.00044
%RSD	77.751	70.796	9.9957	1.4822	12.014	5.5838	.81255	.59030	1020.2
#1	.00011	.00016	.00191	.03967	1.0280	.00224	.96731	.00531	.00035
#2	.00037	.00047	.00220	.04051	.86697	.00207	.95626	.00526	-.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**21.320**	**-.00054**	**.00453**	**-.00055**	**3.9816**	**-.00154**	**-.00278**	**1.7834**	**3.8164**
Stddev	.099	.00050	.00072	.00153	.0608	.00595	.00404	.0038	.0082
%RSD	.46310	92.572	15.792	278.65	1.5275	387.03	145.21	.21517	.21517
#1	21.250	-.00089	.00402	.00053	4.0246	.00267	.00007	1.7861	3.8222
#2	21.390	-.00019	.00503	-.00163	3.9385	-.00575	-.00564	1.7807	3.8106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00218**	**.00652**	**.00036**	**.00224**	**.00442**	**.04241**	**-.00032**	**.00047**	**.00567**
Stddev	.00105	.00013	.00381	.00051	.00011	.07713	.00057	.00029	.00271
%RSD	48.057	1.9469	1053.6	22.816	2.5454	181.85	180.32	62.266	47.706
#1	-.00144	.00661	.00306	.00260	.00450	.09695	-.00073	.00067	.00376
#2	-.00292	.00643	-.00233	.00188	.00434	-.01212	.00009	.00026	.00758
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3553.5**	**42790.**	**3080.5**
Stddev	6.8	97.	7.6
%RSD	.19159	.22757	.24640
#1	3548.7	42721.	3075.2
#2	3558.4	42859.	3085.9

Sample Name: 280-116473-C-2-B MS Acquired: 11/7/2018 7:40:21 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04285**	W **2.5756**	**1.0145**	**1.1343**	**2.0666**	**.04958**	**1.8939**	**83.898**	**.09775**
Stddev	.00042	.0325	.0030	.0110	.0018	.00013	.0206	.105	.00171
%RSD	.98324	1.2599	.29758	.97289	.08605	.26070	1.0882	.12545	1.7452
#1	.04315	2.5985	1.0166	1.1421	2.0653	.04949	1.9085	83.823	.09896
#2	.04255	2.5526	1.0124	1.1265	2.0678	.04967	1.8793	83.972	.09655
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		2.5000							
Low Limit		-.20000							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49035**	**.19671**	**.26169**	**1.1639**	**52.350**	**1.0155**	**54.137**	**.52585**	**1.0194**
Stddev	.00829	.00318	.00017	.0120	.003	.0027	.155	.00203	.0177
%RSD	1.6906	1.6173	.06495	1.0283	.00555	.26589	.28698	.38683	1.7404
#1	.49621	.19896	.26157	1.1555	52.348	1.0136	54.247	.52729	1.0320
#2	.48449	.19446	.26181	1.1724	52.352	1.0174	54.027	.52442	1.0069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**153.88**	**.48732**	**11.361**	**.48968**	**22.125**	**.53378**	**2.0013**	**18.366**	**39.303**
Stddev	.55	.00753	.146	.00880	.282	.00682	.0214	.221	.474
%RSD	.35419	1.5449	1.2819	1.7967	1.2728	1.2771	1.0690	1.2060	1.2060
#1	153.49	.49264	11.464	.49590	22.325	.53860	2.0165	18.209	38.968
#2	154.26	.48199	11.258	.48346	21.926	.52896	1.9862	18.522	39.638
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0132**	**1.0321**	**1.0167**	**1.0444**	**1.9531**	**2.0952**	**.52946**	**.51842**	**.52393**
Stddev	.0252	.0013	.0057	.0062	.0235	.0302	.00111	.00061	.00194
%RSD	1.2516	.12071	.55823	.59524	1.2054	1.4413	.20930	.11769	.37049
#1	2.0310	1.0330	1.0207	1.0488	1.9698	2.0739	.53024	.51885	.52255
#2	1.9954	1.0312	1.0126	1.0400	1.9365	2.1166	.52868	.51799	.52530
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3472.4**	**41676.**	**3094.2**
Stddev	10.2	124.	11.8
%RSD	.29423	.29670	.38248
#1	3465.1	41589.	3085.8
#2	3479.6	41764.	3102.6

Sample Name: 280-116473-C-2-C MSD Acquired: 11/7/2018 7:42:41 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04322**	W **2.5875**	**1.0171**	**1.1279**	**2.0743**	**.04980**	**1.9063**	**83.861**	**.09722**
Stddev	.00129	.0319	.0201	.0135	.0119	.00051	.0351	.373	.00150
%RSD	2.9850	1.2326	1.9723	1.1959	.57533	1.0263	1.8396	.44455	1.5434
#1	.04414	2.6100	1.0312	1.1375	2.0828	.05017	1.9311	84.125	.09828
#2	.04231	2.5649	1.0029	1.1184	2.0659	.04944	1.8815	83.597	.09615
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		2.5000							
Low Limit		-.20000							

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48994**	**.19657**	**.26137**	**1.1605**	**52.380**	**1.0201**	**54.125**	**.52559**	**1.0218**
Stddev	.00701	.00316	.00027	.0044	.349	.0089	.041	.00022	.0196
%RSD	1.4299	1.6054	.10290	.37535	.66699	.87460	.07528	.04172	1.9215
#1	.49490	.19880	.26156	1.1635	52.627	1.0264	54.154	.52544	1.0357
#2	.48499	.19434	.26118	1.1574	52.133	1.0138	54.096	.52575	1.0079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**153.46**	**.48434**	**11.357**	**.48864**	**22.161**	**.52850**	**2.0160**	**17.712**	**37.904**
Stddev	1.34	.00701	.172	.00387	.314	.00653	.0362	.071	.153
%RSD	.87287	1.4474	1.5137	.79106	1.4148	1.2347	1.7974	.40244	.40244
#1	154.41	.48929	11.478	.49137	22.383	.53312	2.0416	17.763	38.012
#2	152.52	.47938	11.235	.48591	21.940	.52389	1.9904	17.662	37.797
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0151**	**1.0350**	**1.0212**	**1.0469**	**1.9522**	**2.0348**	**.52752**	**.51846**	**.52711**
Stddev	.0274	.0063	.0052	.0001	.0352	.0361	.00174	.00245	.00427
%RSD	1.3618	.61099	.51187	.00902	1.8029	1.7751	.32998	.47260	.81019
#1	2.0345	1.0395	1.0175	1.0468	1.9771	2.0603	.52629	.51672	.52409
#2	1.9956	1.0306	1.0249	1.0470	1.9273	2.0093	.52875	.52019	.53013
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3467.0**	**41279.**	**3044.2**
Stddev	1.3	3.	2.5
%RSD	.03620	.00778	.08198
#1	3466.1	41282.	3042.4
#2	3467.9	41277.	3046.0

Sample Name: CCVH-5408055 Acquired: 11/7/2018 7:45:02 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00439**	**46.763**	**.00469**	**.02686**	**-.00047**	**.00036**	**.95762**	**-.00887**	**-.00059**	**.00174**	**.00085**	**.00422**	**48.116**
Stddev	.00033	.030	.00731	.00133	.00088	.00034	.01895	.00098	.00007	.00014	.00047	.00055	.446
%RSD	7.4952	.06439	155.95	4.9583	190.01	95.119	1.9789	10.994	11.352	7.9656	54.585	12.963	.92596
#1	-.00415	46.784	-.00048	.02780	-.00109	.00012	.97102	-.00956	-.00064	.00183	.00052	.00460	48.431
#2	-.00462	46.741	.00986	.02592	.00016	.00060	.94422	-.00818	-.00054	.00164	.00118	.00383	47.801
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.37101**	**-.00058**	**-.09121**	**.00288**	**.00078**	**250.84**	**.00330**	**.00013**	**-.00097**	**4.8795**	**.00293**	**.00509**	**.15625**
Stddev	.12036	.00318	.00180	.00016	.00021	.57	.00033	.00270	.00101	.0700	.00098	.00652	.02197
%RSD	32.442	547.01	1.9779	5.5479	26.745	.22658	10.095	2063.1	104.14	1.4340	33.433	128.11	14.062
#1	.45611	.00167	-.08994	.00300	.00093	251.24	.00306	.00204	-.00168	4.9289	.00223	.00048	.17179
#2	.28590	-.00283	-.09249	.00277	.00063	250.44	.00353	-.00178	-.00025	4.8300	.00362	.00970	.14071
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.33438**	**-.00177**	**.00042**	**4.9799**	**.01669**	**.00015**	**9.8615**	**-.01083**	**.00026**	**.08574**
Stddev	.04702	.00054	.00026	.0273	.00146	.00366	.1429	.00011	.00071	.00278
%RSD	14.062	30.727	61.718	.54848	8.7363	2449.2	1.4490	1.0468	276.46	3.2419
#1	.36763	-.00215	.00061	4.9993	.01772	-.00244	9.9626	-.01075	.00076	.08771
#2	.30113	-.00138	.00024	4.9606	.01566	.00274	9.7605	-.01091	-.00025	.08378
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3474.7**	**41157.**	**3011.2**
Stddev	10.3	704.	10.3
%RSD	.29718	1.7099	.34208
#1	3467.4	40660.	3018.5
#2	3482.0	41655.	3003.9

Sample Name: CCV-5407546 Acquired: 11/7/2018 7:47:32 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51195**	F **.59390**	**.99006**	**.52785**	**.51526**	**.48577**	**.00551**	**4.9664**	**.50598**	**.50007**	**.49344**	**.51952**
Stddev	.00030	.01786	.01814	.00979	.00221	.00081	.00120	.0273	.00929	.00907	.00932	.00023
%RSD	.05805	3.0068	1.8325	1.8552	.42797	.16735	21.843	.54942	1.8353	1.8138	1.8887	.04391
#1	.51216	.60653	1.0029	.53478	.51682	.48635	.00466	4.9856	.51255	.50648	.50003	.51968
#2	.51174	.58127	.97723	.52093	.51370	.48520	.00636	4.9471	.49941	.49365	.48685	.51936
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4640**	**51.220**	**1.0154**	**20.350**	**.50883**	**.49149**	F **5.9555**	**.49917**	**1.0733**	**1.0066**	**.01426**	**1.0281**
Stddev	.0020	.037	.0002	.045	.00201	.00981	.1059	.00992	.0223	.0191	.00382	.0329
%RSD	.08213	.07193	.01966	.22152	.39576	1.9959	1.7778	1.9876	2.0773	1.9013	26.757	3.2034
#1	2.4654	51.194	1.0152	20.382	.51025	.49842	6.0304	.50619	1.0890	1.0202	.01696	1.0514
#2	2.4626	51.246	1.0155	20.318	.50741	.48455	5.8806	.49216	1.0575	.99309	.01156	1.0048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.97293**	**5.1096**	**10.935**	**.99349**	**.49562**	**.00713**	**.50874**	**1.0239**	**.03916**	**.51388**	**.51346**	**.49966**
Stddev	.01609	.0584	.125	.02237	.00134	.00031	.00124	.0149	.01989	.00131	.00164	.00265
%RSD	1.6542	1.1427	1.1427	2.2514	.27058	4.3032	.24403	1.4585	50.780	.25518	.31855	.53112
#1	.98431	5.0684	10.846	1.0093	.49657	.00734	.50962	1.0344	.05323	.51481	.51461	.50154
#2	.96155	5.1509	11.023	.97768	.49468	.00691	.50786	1.0133	.02510	.51295	.51230	.49778
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3568.8**	**42375.**	**3058.5**
Stddev	11.1	209.	31.1
%RSD	.31230	.49268	1.0152
#1	3560.9	42228.	3080.4
#2	3576.7	42523.	3036.5

Sample Name: CCB Acquired: 11/7/2018 7:49:58 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00090**	**-.00252**	**-.00367**	W **.01827**	**-.00006**	**.00002**	**.00223**	**-.00869**	**-.00022**	**.00089**	**-.00010**	**.00071**
Stddev	.00015	.00026	.00057	.00029	.00084	.00029	.00399	.00056	.00034	.00002	.00029	.00063
%RSD	16.628	10.366	15.409	1.5844	1489.7	1443.0	178.85	6.4249	154.65	2.6149	282.00	88.534
#1	-.00079	-.00270	-.00327	.01807	-.00065	-.00018	-.00059	-.00908	.00002	.00091	.00010	.00026
#2	-.00100	-.00233	-.00407	.01848	.00054	.00022	.00506	-.00829	-.00046	.00087	-.00031	.00115
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.01500								
Low Limit				-.01500								

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00167**	**.20745**	**-.00210**	**-.00309**	**.00006**	**.00121**	W **.48286**	**-.00060**	**.00100**	**-.00227**	**.00728**	**.00090**
Stddev	.00396	.11855	.00336	.00589	.00004	.00072	.00460	.00020	.00204	.00088	.00378	.00153
%RSD	237.14	57.148	159.99	190.55	66.085	59.614	.95310	33.368	204.86	38.908	51.919	171.00
#1	-.00113	.29128	.00028	-.00725	.00003	.00070	.48612	-.00046	-.00045	-.00164	.00996	-.00019
#2	.00447	.12362	-.00448	.00107	.00009	.00172	.47961	-.00074	.00244	-.00289	.00461	.00198
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							.35000					
Low Limit							-.35000					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00151**	**.08321**	W **.17807**	**-.00155**	**-.00001**	**-.00183**	**.00070**	**.00285**	**.08382**	**.00017**	**.00053**	**.00515**
Stddev	.00501	.00956	.02046	.00010	.00016	.00211	.00021	.00047	.00501	.00030	.00116	.00041
%RSD	332.04	11.489	11.489	6.6946	1656.2	114.77	29.518	16.498	5.9821	174.00	216.31	7.9215
#1	-.00505	.08997	.19254	-.00162	-.00012	-.00035	.00084	.00251	.08027	-.00004	.00135	.00486
#2	.00204	.07645	.16361	-.00148	.00010	-.00332	.00055	.00318	.08737	.00038	-.00028	.00544
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.13000									
Low Limit			-.13000									

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3558.0**	**43271.**	**3063.5**
Stddev	18.7	3.	19.1
%RSD	.52511	.00705	.62312
#1	3544.8	43273.	3077.0
#2	3571.2	43269.	3050.0

Sample Name: ccvl-5413446 Acquired: 11/7/2018 7:52:34 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00842**	**.11920**	**.01842**	**.11557**	**.01002**	**.00127**	**.10493**	**.19025**	**.00464**	**.01073**	**.00984**	**.01761**
Stddev	.00016	.00257	.00280	.00088	.00026	.00006	.00166	.00371	.00044	.00059	.00000	.00020
%RSD	1.9556	2.1601	15.184	.76373	2.5732	4.4232	1.5777	1.9517	9.5160	5.4894	.04830	1.1367
#1	.00831	.12102	.01644	.11620	.00984	.00123	.10610	.18763	.00495	.01115	.00985	.01776
#2	.00854	.11738	.02040	.11495	.01020	.00131	.10376	.19288	.00433	.01032	.00984	.01747
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09956**	**3.2609**	**.01799**	**.20950**	**.01057**	**.01959**	F **1.5142**	**.04018**	**3.0942**	**.00796**	**.09338**	**.02028**
Stddev	.00165	.0295	.00595	.00606	.00012	.00040	.0191	.00139	.0618	.00062	.00286	.00045
%RSD	1.6587	.90417	33.060	2.8918	1.1070	2.0168	1.2589	3.4709	1.9969	7.8379	3.0670	2.2110
#1	.10073	3.2817	.01379	.20521	.01048	.01931	1.5277	.04117	3.1379	.00751	.09136	.01996
#2	.09840	3.2400	.02220	.21378	.01065	.01987	1.5008	.03920	3.0506	.00840	.09541	.02059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							1.0000					
Range							30.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.01321**	**.53766**	**1.1506**	**.09669**	**.00995**	**.01576**	**.01060**	**.01583**	F **.09328**	**.00999**	**.02116**	F **.02311**
Stddev	.00603	.00064	.0014	.00028	.00004	.00104	.00071	.00171	.04885	.00030	.00086	.00179
%RSD	45.667	.11874	.11874	.28701	.41485	6.6282	6.7455	10.794	52.368	3.0006	4.0463	7.7471
#1	.00895	.53811	1.1516	.09689	.00998	.01502	.01110	.01462	.12783	.01021	.02177	.02185
#2	.01748	.53721	1.1496	.09649	.00992	.01650	.01009	.01704	.05874	.00978	.02056	.02438
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value	.02000								.06000			.01500
Range	-30.000%								30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3588.7**	**43462.**	**3090.3**
Stddev	18.3	101.	9.4
%RSD	.50980	.23296	.30386
#1	3575.8	43390.	3096.9
#2	3601.7	43533.	3083.6

Sample Name: 280-116473-C-3-A Acquired: 11/7/2018 7:55:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00139**	**.16273**	**.00398**	**.04213**	**.02527**	**.00035**	**.00461**	**56.781**	**-.00034**
Stddev	.00010	.00502	.00432	.00147	.00077	.00031	.00070	.074	.00002
%RSD	7.3307	3.0836	108.58	3.4825	3.0417	88.452	15.193	.13076	5.6126
#1	-.00146	.16628	.00092	.04317	.02581	.00013	.00411	56.834	-.00032
#2	-.00132	.15918	.00704	.04109	.02472	.00057	.00510	56.729	-.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00052**	**.00006**	**.00226**	**.11214**	**1.5691**	**.01467**	**4.9408**	**.11979**	**.00231**
Stddev	.00041	.00003	.00019	.00324	.0829	.00068	.0023	.00005	.00051
%RSD	79.655	48.063	8.2051	2.8912	5.2813	4.6572	.04575	.04465	21.914
#1	.00023	.00009	.00213	.10984	1.5105	.01419	4.9392	.11983	.00267
#2	.00081	.00004	.00239	.11443	1.6277	.01515	4.9424	.11976	.00195
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**46.287**	**.00017**	**.02407**	**-.00383**	**20.286**	**-.00173**	**-.00112**	**9.0872**	**19.447**
Stddev	.753	.00032	.00123	.00176	.360	.00330	.01021	.0533	.114
%RSD	1.6270	185.31	5.0978	45.975	1.7737	190.58	911.95	.58655	.58655
#1	46.819	.00039	.02494	-.00259	20.541	.00060	-.00834	9.1249	19.527
#2	45.754	-.00005	.02320	-.00508	20.032	-.00406	.00610	9.0496	19.366
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00210**	**.11646**	**.00089**	**.00388**	**.00310**	**.00866**	**.00063**	**.00248**	**.00924**
Stddev	.00276	.00024	.00136	.00017	.00091	.05160	.00058	.00026	.00087
%RSD	131.25	.20510	152.49	4.2999	29.274	596.12	92.253	10.430	9.4605
#1	-.00015	.11662	-.00007	.00400	.00246	.04514	.00103	.00266	.00863
#2	-.00405	.11629	.00185	.00376	.00374	-.02783	.00022	.00230	.00986
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3549.2**	**42470.**	**3061.2**
Stddev	6.8	17.	33.1
%RSD	.19133	.03968	1.0799
#1	3554.0	42458.	3037.9
#2	3544.4	42482.	3084.6

Sample Name: 280-116473-C-4-E Acquired: 11/7/2018 7:57:44 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00136**	**.02495**	**.00531**	**.04996**	**.00390**	**.00050**	**-.00112**	**71.064**	**-.00045**
Stddev	.00120	.00182	.00816	.00075	.00026	.00019	.00003	.053	.00050
%RSD	88.306	7.2944	153.80	1.4926	6.6463	37.724	2.6894	.07450	110.49
#1	-.00221	.02624	.01108	.05049	.00372	.00037	-.00114	71.027	-.00081
#2	-.00051	.02366	-.00046	.04943	.00409	.00063	-.00110	71.102	-.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00002**	**.00086**	**.00189**	**.02076**	**1.2330**	**.01435**	**6.7412**	**.00151**	**.00116**
Stddev	.00015	.00013	.00021	.00348	.0360	.00338	.0150	.00015	.00060
%RSD	879.05	15.514	11.064	16.752	2.9188	23.533	.22252	9.9031	52.032
#1	-.00012	.00095	.00204	.02321	1.2584	.01674	6.7306	.00140	.00159
#2	.00009	.00076	.00174	.01830	1.2075	.01196	6.7518	.00161	.00073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**68.063**	**-.00008**	**.03356**	**-.00553**	**28.157**	**-.00193**	**.02596**	**9.5545**	**20.447**
Stddev	.573	.00047	.00368	.00245	.316	.00001	.00093	.0518	.111
%RSD	.84116	600.23	10.952	44.245	1.1205	.27931	3.5666	.54236	.54236
#1	67.658	-.00041	.03616	-.00727	28.380	-.00193	.02531	9.5911	20.525
#2	68.468	.00025	.03096	-.00380	27.934	-.00193	.02662	9.5179	20.368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00188**	**.13328**	**.00114**	**.00147**	**.00047**	**.00988**	**.00113**	**.00194**	**.00261**
Stddev	.00125	.00016	.00174	.00036	.00034	.01542	.00009	.00022	.00305
%RSD	66.486	.11692	152.32	24.205	72.190	156.17	8.1919	11.370	116.98
#1	-.00277	.13317	.00237	.00122	.00023	-.00103	.00106	.00178	.00045
#2	-.00100	.13339	-.00009	.00172	.00071	.02078	.00119	.00209	.00477
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3540.3**	**42312.**	**3070.1**
Stddev	9.8	92.	15.5
%RSD	.27572	.21716	.50616
#1	3533.4	42377.	3081.1
#2	3547.2	42247.	3059.1

Sample Name: 280-116473-C-5-A Acquired: 11/7/2018 8:00:18 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00143**	**.05200**	**.00521**	**.04674**	**.00760**	**.00025**	**.00963**	**45.755**	**.00012**
Stddev	.00053	.00005	.00572	.00143	.00032	.00040	.00125	.069	.00009
%RSD	37.434	.09485	109.80	3.0634	4.2665	159.94	12.949	.15097	78.679
#1	-.00180	.05196	.00925	.04775	.00737	-.00003	.00875	45.707	.00005
#2	-.00105	.05203	.00116	.04572	.00783	.00053	.01051	45.804	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**.00049**	**.00361**	**.03356**	**1.2651**	**.00880**	**.27129**	**.02732**	**.00293**
Stddev	.00038	.00034	.00025	.00108	.0564	.00446	.00365	.00005	.00087
%RSD	216.24	69.745	6.9784	3.2132	4.4564	50.731	1.3463	.19416	29.757
#1	-.00009	.00073	.00343	.03280	1.2252	.01196	.27387	.02729	.00231
#2	.00045	.00025	.00379	.03432	1.3049	.00564	.26871	.02736	.00355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**325.77**	**-.00055**	**.00887**	**-.00072**	F **252.07**	**-.00288**	**-.00989**	**4.0586**	**8.6855**
Stddev	.14	.00055	.00017	.00370	2.85	.00063	.00510	.0289	.0618
%RSD	.04258	100.42	1.9441	516.87	1.1311	21.934	51.500	.71204	.71204
#1	325.67	-.00093	.00899	-.00333	254.09	-.00244	-.01350	4.0791	8.7292
#2	325.87	-.00016	.00875	.00190	250.06	-.00333	-.00629	4.0382	8.6418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00243**	**.14687**	**-.00270**	**.00123**	**-.00044**	**.04989**	**-.00007**	**.00448**	**.00724**
Stddev	.00065	.00029	.00160	.00017	.00024	.08512	.00015	.00049	.00163
%RSD	26.673	.19417	59.305	13.623	54.766	170.61	210.75	10.881	22.487
#1	-.00197	.14667	-.00384	.00135	-.00027	.11009	.00003	.00413	.00839
#2	-.00289	.14708	-.00157	.00111	-.00062	-.01030	-.00018	.00482	.00609
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3467.3**	**41052.**	**3084.1**
Stddev	5.6	162.	2.7
%RSD	.16037	.39482	.08802
#1	3463.3	41166.	3082.2
#2	3471.2	40937.	3086.0

Sample Name: 280-116473-C-6-A Acquired: 11/7/2018 8:02:52 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00113**	**.00464**	**.00111**	**.04070**	**.01075**	**.00002**	**.00417**	**17.900**	**-.00015**
Stddev	.00040	.00032	.00020	.00056	.00012	.00019	.00380	.056	.00041
%RSD	35.135	6.8333	18.083	1.3733	1.1450	1146.1	91.154	.31127	273.17
#1	-.00141	.00486	.00125	.04109	.01084	-.00012	.00686	17.940	-.00044
#2	-.00085	.00441	.00097	.04030	.01067	.00015	.00148	17.861	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**.00017**	**.00231**	**.00898**	**.97350**	**.01093**	**.12326**	**.00568**	**.00227**
Stddev	.00033	.00016	.00021	.00544	.03289	.00421	.00102	.00018	.00068
%RSD	65.151	95.395	9.2273	60.563	3.3784	38.507	.82879	3.1028	29.794
#1	.00027	.00005	.00246	.01283	.99675	.00795	.12398	.00580	.00275
#2	.00073	.00028	.00216	.00514	.95024	.01390	.12254	.00555	.00179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**216.13**	**.00003**	**.02002**	**-.00289**	**131.45**	**-.00678**	**-.00292**	**2.8173**	**6.0290**
Stddev	.98	.00012	.00026	.00141	2.68	.00578	.00024	.0544	.1163
%RSD	.45500	406.52	1.3099	48.768	2.0397	85.199	8.2065	1.9293	1.9293
#1	216.82	.00012	.01984	-.00189	133.34	-.01087	-.00309	2.8557	6.1113
#2	215.43	-.00006	.02021	-.00388	129.55	-.00270	-.00275	2.7789	5.9468
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00228**	**.12911**	**-.00241**	**.00122**	**.00210**	**.04391**	**.00001**	**.00265**	**.01002**
Stddev	.00018	.00042	.00233	.00089	.00081	.01972	.00049	.00049	.00196
%RSD	7.9121	.32878	96.511	73.185	38.836	44.905	4534.5	18.336	19.598
#1	-.00240	.12941	-.00077	.00059	.00152	.02996	-.00034	.00299	.00863
#2	-.00215	.12881	-.00406	.00185	.00267	.05785	.00036	.00231	.01141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3551.0**	**42364.**	**3116.0**
Stddev	1.6	235.	38.8
%RSD	.04472	.55473	1.2439
#1	3552.2	42530.	3088.6
#2	3549.9	42198.	3143.4

Sample Name: 280-116473-C-7-A Acquired: 11/7/2018 8:05:27 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00158**	**.01079**	**.00738**	**.04682**	**.01431**	**.00025**	**.00353**	**92.677**	**-.00010**
Stddev	.00059	.00020	.00193	.00153	.00006	.00010	.00247	.284	.00021
%RSD	37.002	1.8865	26.105	3.2679	.43902	40.153	70.059	.30683	213.47
#1	-.00200	.01093	.00874	.04790	.01426	.00032	.00528	92.878	-.00025
#2	-.00117	.01064	.00602	.04574	.01435	.00018	.00178	92.476	.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00057**	**.00089**	**.00408**	**.02346**	**1.5913**	**.02241**	**.57383**	**.00216**	**.00715**
Stddev	.00012	.00019	.00046	.00176	.0710	.00198	.00618	.00005	.00030
%RSD	21.708	21.347	11.395	7.4926	4.4610	8.8371	1.0762	2.4911	4.2552
#1	.00066	.00076	.00375	.02470	1.5411	.02101	.57820	.00220	.00694
#2	.00049	.00103	.00441	.02222	1.6415	.02381	.56946	.00212	.00737
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**441.15**	**.00159**	**.00942**	**-.00205**	F **329.33**	**-.00026**	**-.00539**	**3.8548**	**8.2493**
Stddev	2.18	.00021	.00020	.00079	9.01	.00004	.00239	.0054	.0115
%RSD	.49513	12.983	2.0710	38.341	2.7366	14.655	44.413	.13954	.13954
#1	442.69	.00144	.00956	-.00261	335.70	-.00029	-.00708	3.8510	8.2412
#2	439.61	.00173	.00928	-.00150	322.96	-.00024	-.00370	3.8586	8.2575
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00362**	**.30253**	**-.00115**	**.00148**	**.00188**	**.05748**	**.00115**	**.00337**	**.00760**
Stddev	.00005	.00127	.00067	.00021	.00270	.00135	.00115	.00028	.00629
%RSD	1.4297	.41872	57.892	14.561	143.69	2.3531	100.47	8.4448	82.756
#1	-.00358	.30343	-.00068	.00132	.00379	.05652	.00033	.00317	.01204
#2	-.00366	.30163	-.00163	.00163	-.00003	.05843	.00196	.00357	.00315
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3472.7**	**41357.**	**3136.0**
Stddev	36.5	34.	14.1
%RSD	1.0500	.08139	.45037
#1	3446.9	41381.	3145.9
#2	3498.5	41333.	3126.0

Sample Name: 280-116544-D-1-A Acquired: 11/7/2018 8:08:00 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00106**	**.23206**	**.00082**	**.61525**	**.07062**	**.00021**	**.00093**	**70.451**	**-.00029**
Stddev	.00020	.00487	.00285	.01407	.00080	.00013	.00672	.001	.00052
%RSD	18.363	2.0976	348.13	2.2863	1.1368	61.997	725.50	.00127	182.62
#1	-.00092	.23551	-.00120	.62520	.07005	.00012	-.00383	70.452	-.00066
#2	-.00120	.22862	.00283	.60531	.07119	.00030	.00568	70.451	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00032**	**.00084**	**.00559**	**.21304**	**6.3947**	**.07065**	**30.505**	**.07860**	**.00019**
Stddev	.00014	.00007	.00098	.00711	.0001	.00162	.067	.00007	.00003
%RSD	44.040	7.8525	17.473	3.3383	.00134	2.2892	.22000	.08549	13.910
#1	.00042	.00089	.00628	.21807	6.3946	.06950	30.552	.07865	.00021
#2	.00022	.00079	.00490	.20801	6.3948	.07179	30.457	.07855	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**477.78**	**.00147**	**.01986**	**-.00255**	**142.61**	**-.00038**	**.00261**	**4.3957**	**9.4069**
Stddev	.59	.00027	.00174	.00091	3.94	.00446	.00405	.0182	.0389
%RSD	.12263	18.352	8.7633	35.759	2.7639	1175.0	155.53	.41314	.41314
#1	477.36	.00128	.01863	-.00319	145.40	-.00353	.00547	4.4086	9.4344
#2	478.19	.00166	.02109	-.00190	139.82	.00277	-.00026	4.3829	9.3794
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00300**	**4.1836**	**-.00201**	**.00669**	**.00011**	**.01567**	**.00003**	**.00576**	**.00587**
Stddev	.00036	.0108	.00392	.00223	.00102	.04345	.00107	.00081	.00729
%RSD	11.908	.25871	194.87	33.394	968.04	277.32	3645.8	14.091	124.08
#1	-.00325	4.1759	.00076	.00511	.00082	.04639	-.00073	.00633	.01102
#2	-.00274	4.1912	-.00478	.00827	-.00061	-.01506	.00079	.00518	.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3476.4**	**40620.**	**3064.9**
Stddev	24.7	60.	8.7
%RSD	.70962	.14852	.28545
#1	3493.8	40577.	3058.7
#2	3458.9	40663.	3071.1

Sample Name: 280-116544-D-2-A Acquired: 11/7/2018 8:10:33 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436440 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00162**	**.00090**	**.00233**	**.00845**	**-.00015**	**.00033**	**.00678**	**.06433**	**-.00042**
Stddev	.00001	.00010	.00426	.00056	.00009	.00031	.00602	.00325	.00027
%RSD	.65502	11.230	183.01	6.6774	62.866	93.386	88.911	5.0501	62.634
#1	-.00163	.00083	.00534	.00885	-.00021	.00011	.01104	.06203	-.00024
#2	-.00161	.00097	-.00068	.00805	-.00008	.00055	.00252	.06663	-.00061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00073**	**.00027**	**.00183**	**.00513**	**.26035**	**-.00170**	**.01162**	**.00042**	**-.00006**
Stddev	.00037	.00019	.00056	.00435	.04080	.00202	.00302	.00000	.00022
%RSD	50.886	69.346	30.407	84.907	15.673	118.39	25.967	.84568	343.69
#1	.00047	.00040	.00143	.00205	.23150	-.00028	.01376	.00042	-.00022
#2	.00099	.00014	.00222	.00820	.28920	-.00313	.00949	.00042	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.94363**	**-.00089**	**-.00024**	**-.00117**	**.07607**	**-.00446**	**-.00154**	**.04024**	**.08612**
Stddev	.03267	.00071	.00292	.00130	.00669	.00133	.00273	.01150	.02461
%RSD	3.4623	80.256	1235.7	111.71	8.7907	29.761	177.12	28.577	28.577
#1	.96674	-.00038	-.00230	-.00209	.08080	-.00540	.00039	.04838	.10352
#2	.92053	-.00139	.00183	-.00024	.07134	-.00352	-.00347	.03211	.06872
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00231**	**-.00003**	**-.00075**	**.00060**	**.00150**	**.04529**	**.00048**	**.00113**	**.00664**
Stddev	.00187	.00021	.00125	.00060	.00202	.01658	.00037	.00057	.00006
%RSD	81.068	837.42	166.41	100.52	134.55	36.605	77.334	50.202	.85043
#1	-.00364	.00012	-.00164	.00103	.00293	.03357	.00075	.00073	.00668
#2	-.00099	-.00018	.00013	.00017	.00007	.05702	.00022	.00153	.00660
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3671.9**	**44131.**	**3121.3**
Stddev	4.5	86.	18.1
%RSD	.12226	.19425	.57867
#1	3668.8	44070.	3134.1
#2	3675.1	44191.	3108.5

Sample Name: CCVH-5408055 Acquired: 11/7/2018 8:13:08 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00376**	**45.916**	**-.00524**	**.00770**	**-.00059**	**.00032**	**.94530**	**.03864**	**-.00020**	**.00227**	**.00079**	**.00426**	**47.160**
Stddev	.00129	.081	.00131	.00021	.00008	.00013	.02141	.04410	.00010	.00015	.00067	.00005	.205
%RSD	34.410	.17656	24.931	2.6650	14.270	41.395	2.2649	114.14	52.064	6.8004	84.301	1.2305	.43371
#1	-.00284	45.973	-.00616	.00755	-.00065	.00041	.96044	.00745	-.00027	.00238	.00126	.00429	47.304
#2	-.00467	45.859	-.00431	.00784	-.00053	.00023	.93016	.06983	-.00013	.00216	.00032	.00422	47.015
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05633**	**-.00403**	**-.08131**	**.00301**	**-.00142**	**246.82**	**.00251**	**.00587**	**-.00115**	**4.8378**	**.00004**	**.00693**	**.02653**
Stddev	.08667	.00180	.00736	.00013	.00024	1.23	.00064	.00199	.00049	.1244	.00367	.00652	.01301
%RSD	153.86	44.601	9.0547	4.4714	16.681	.49903	25.468	33.942	42.561	2.5717	8299.3	94.086	49.049
#1	-.00495	-.00276	-.07611	.00311	-.00158	247.69	.00296	.00727	-.00080	4.9258	-.00255	.01155	.01733
#2	.11762	-.00531	-.08652	.00292	-.00125	245.95	.00205	.00446	-.00150	4.7498	.00264	.00232	.03573
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05677**	**-.00221**	**.00096**	**4.9155**	**.01581**	**.00070**	**9.7217**	**-.01041**	**.00073**	**.08570**
Stddev	.02784	.00168	.00041	.0134	.00027	.00051	.0193	.00002	.00077	.00466
%RSD	49.049	76.204	43.181	.27336	1.7073	73.241	.19904	.16796	106.43	5.4354
#1	.03708	-.00102	.00067	4.9250	.01562	.00106	9.7080	-.01040	.00018	.08241
#2	.07645	-.00340	.00125	4.9060	.01600	.00034	9.7354	-.01043	.00127	.08900
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3465.1**	**41275.**	**3059.8**
Stddev	7.8	12.	7.5
%RSD	.22396	.02806	.24514
#1	3459.6	41267.	3065.1
#2	3470.6	41283.	3054.5

Sample Name: CCV-5407546 Acquired: 11/7/2018 8:15:39 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51014**	F **.58660**	**.98253**	**.50689**	**.50869**	**.48130**	**.00379**	**4.9024**	**.50264**	**.49752**	**.48900**	**.51472**
Stddev	.00216	.01014	.02671	.00491	.00310	.00183	.00327	.0107	.00789	.00921	.00827	.00212
%RSD	.42381	1.7279	2.7183	.96923	.60936	.38090	86.360	.21827	1.5704	1.8519	1.6921	.41175
#1	.51167	.59377	1.0014	.51037	.51088	.48260	.00611	4.9099	.50822	.50403	.49485	.51622
#2	.50861	.57943	.96365	.50342	.50650	.48000	.00148	4.8948	.49706	.49100	.48315	.51322
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4152**	**50.886**	**1.0122**	**20.307**	**.50768**	**.48742**	F **5.6155**	**.49895**	**1.0658**	**1.0037**	**.03787**	**1.0168**
Stddev	.0001	.319	.0051	.094	.00157	.00876	.0402	.00901	.0155	.0139	.00485	.0179
%RSD	.00428	.62699	.49948	.46211	.30930	1.7977	.71581	1.8066	1.4542	1.3805	12.811	1.7636
#1	2.4151	51.111	1.0157	20.374	.50879	.49361	5.6439	.50533	1.0768	1.0135	.04130	1.0295
#2	2.4153	50.660	1.0086	20.241	.50657	.48122	5.5871	.49258	1.0549	.99394	.03444	1.0041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.96269**	**4.8639**	**10.409**	**.98817**	**.49118**	**.00867**	**.50687**	**1.0113**	**.04127**	**.50895**	**.51217**	**.49578**
Stddev	.01945	.0286	.061	.01463	.00166	.00038	.00254	.0133	.02552	.00294	.00295	.00421
%RSD	2.0206	.58891	.58891	1.4800	.33748	4.4092	.50045	1.3102	61.853	.57831	.57696	.84880
#1	.97644	4.8436	10.365	.99851	.49235	.00894	.50867	1.0207	.02322	.51103	.51426	.49875
#2	.94893	4.8841	10.452	.97783	.49001	.00840	.50508	1.0020	.05931	.50687	.51008	.49280
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3503.6**	**42133.**	**3022.1**
Stddev	6.4	165.	7.0
%RSD	.18280	.39265	.23207
#1	3508.1	42016.	3017.2
#2	3499.1	42250.	3027.1

Sample Name: CCB Acquired: 11/7/2018 8:18:04 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00040**	**-.00046**	**-.00108**	**.00725**	**-.00009**	**.00025**	**-.00012**	**-.01467**	**-.00021**	**.00049**	**.00022**	**.00144**
Stddev	.00143	.00014	.00322	.00033	.00018	.00018	.00480	.00066	.00003	.00008	.00059	.00020
%RSD	356.92	30.443	299.64	4.5753	192.85	71.756	4002.4	4.5173	15.534	16.911	270.07	14.057
#1	-.00141	-.00056	-.00335	.00701	-.00022	.00013	.00327	-.01514	-.00023	.00043	-.00020	.00158
#2	.00061	-.00036	.00120	.00748	.00003	.00038	-.00351	-.01420	-.00019	.00055	.00064	.00130
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00337**	**.07429**	**-.00547**	**.00454**	**.00013**	**.00119**	W **.39261**	**-.00045**	**.00233**	**-.00229**	**.03696**	**-.00079**
Stddev	.00056	.03486	.00017	.00892	.00005	.00033	.00497	.00020	.00047	.00083	.00002	.00722
%RSD	16.468	46.920	3.0490	196.28	37.673	27.675	1.2662	43.410	20.148	36.003	.05120	916.15
#1	-.00298	.09894	-.00559	.01085	.00010	.00142	.39613	-.00059	.00266	-.00287	.03694	.00432
#2	-.00376	.04964	-.00535	-.00176	.00017	.00095	.38910	-.00031	.00200	-.00171	.03697	-.00589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							.35000					
Low Limit							-.35000					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00497**	**.02540**	**.05436**	**-.00226**	**-.00006**	**.00302**	**.00094**	**.00085**	**.05724**	**-.00081**	**.00036**	**.00666**
Stddev	.00471	.02580	.05520	.00032	.00017	.00042	.00010	.00075	.00902	.00081	.00016	.00010
%RSD	94.938	101.56	101.56	14.011	299.69	13.945	10.921	88.642	15.755	100.42	43.506	1.4424
#1	-.00830	.04364	.09339	-.00248	.00006	.00332	.00102	.00032	.05086	-.00023	.00047	.00672
#2	-.00163	.00716	.01532	-.00204	-.00017	.00273	.00087	.00138	.06361	-.00138	.00025	.00659
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3445.3**	**42173.**	**3013.7**
Stddev	7.7	601.	6.6
%RSD	.22448	1.4256	.21810
#1	3439.8	42598.	3018.4
#2	3450.7	41748.	3009.1

Sample Name: ccvl-5413446 Acquired: 11/7/2018 8:20:40 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00966**	**.11981**	F **.02109**	**.10438**	**.01002**	F **.00142**	**.10320**	**.19410**	**.00456**	**.01081**	**.01017**	**.01853**
Stddev	.00017	.00297	.00711	.00087	.00051	.00013	.00268	.00741	.00001	.00042	.00018	.00019
%RSD	1.7565	2.4813	33.712	.83638	5.0839	8.9440	2.5925	3.8202	.29379	3.8603	1.8025	1.0484
#1	.00954	.12191	.02611	.10500	.01038	.00151	.10131	.19934	.00455	.01110	.01030	.01839
#2	.00978	.11771	.01606	.10376	.00966	.00133	.10509	.18886	.00457	.01051	.01004	.01867
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500			.00100						
Range			30.000%			30.000%						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10202**	**3.2649**	**.01532**	**.20772**	**.01047**	**.01942**	F **1.3994**	**.04124**	**3.1145**	**.00821**	**.10663**	**.01918**
Stddev	.00304	.0197	.00487	.00090	.00008	.00065	.0295	.00079	.0516	.00167	.01212	.00124
%RSD	2.9830	.60347	31.777	.43136	.81044	3.3350	2.1058	1.9221	1.6571	20.356	11.366	6.4644
#1	.10418	3.2788	.01876	.20709	.01053	.01988	1.4202	.04180	3.1510	.00703	.11520	.02006
#2	.09987	3.2510	.01188	.20835	.01041	.01897	1.3786	.04067	3.0780	.00939	.09806	.01831
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							1.0000					
Range							30.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01547**	**.55040**	**1.1779**	**.09723**	**.01011**	**.01337**	**.01094**	**.01689**	F **.10951**	**.01058**	**.02116**	F **.02118**
Stddev	.00251	.03151	.0674	.00392	.00017	.00167	.00060	.00082	.01697	.00007	.00062	.00220
%RSD	16.195	5.7243	5.7243	4.0334	1.6902	12.506	5.4933	4.8441	15.493	.66497	2.9125	10.377
#1	.01370	.52812	1.1302	.10000	.01023	.01455	.01052	.01746	.09752	.01063	.02159	.01963
#2	.01725	.57268	1.2255	.09445	.00999	.01219	.01137	.01631	.12151	.01053	.02072	.02274
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3516.9**	**42673.**	**3008.6**
Stddev	8.5	214.	12.9
%RSD	.24038	.50222	.42777
#1	3510.9	42824.	2999.5
#2	3522.9	42521.	3017.7

Sample Name: ICIS Acquired: 11/7/2018 8:30:48 Type: Cal
Method: 6500_025 Mode: IR Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00174**	**.00140**	**.00610**	**-.00082**	**.00170**	**-.01364**	**-.00269**	**-.00383**	**.00885**	**.00127**	**-.00079**	**-.00032**
Stddev	.00015	.00004	.00087	.00015	.00020	.00238	.00052	.00015	.00034	.00008	.00031	.00008
%RSD	8.7848	2.5866	14.295	18.233	11.521	17.438	19.176	4.0251	3.8468	6.2281	39.661	26.395
#1	-.00163	.00142	.00671	-.00072	.00156	-.01532	-.00233	-.00373	.00909	.00121	-.00057	-.00038
#2	-.00185	.00137	.00548	-.00093	.00184	-.01196	-.00306	-.00394	.00861	.00132	-.00101	-.00026

Elem	Cu3247	Fe2599	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Na8183	Ni2316	P_1782
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00561**	**.00064**	**.00034**	**.01250**	**.00782**	**.00036**	**.00013**	**.00062**	**.03079**	**-.01429**	**.00051**	**.00028**
Stddev	.00011	.00022	.00003	.00064	.00055	.00010	.00011	.00001	.00027	.00436	.00032	.00018
%RSD	1.9168	33.675	7.9911	5.1484	7.0318	28.638	84.242	2.0932	.87722	30.481	62.155	65.128
#1	.00554	.00049	.00032	.01205	.00743	.00029	.00005	.00063	.03099	-.01737	.00074	.00041
#2	.00569	.00079	.00036	.01296	.00821	.00043	.00020	.00061	.03060	-.01121	.00029	.00015

Elem	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00040**	**.00140**	**.00117**	**.00021**	**.00133**	**.00133**	**-.00001**	**.00590**	**-.00025**	**-.00061**	**-.00068**	**-.00083**
Stddev	.00019	.00022	.00012	.00001	.00080	.00080	.00005	.00028	.00001	.00005	.00010	.00037
%RSD	46.794	15.698	10.574	4.3683	60.038	60.038	936.96	4.7821	2.7219	8.7434	14.869	44.494
#1	.00053	.00156	.00109	.00021	.00076	.00076	.00003	.00570	-.00026	-.00065	-.00075	-.00110
#2	.00027	.00125	.00126	.00022	.00189	.00189	-.00004	.00610	-.00025	-.00057	-.00061	-.00057

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**-.00075**	**.00017**	**-.00733**
Stddev	.00013	.00002	.00046
%RSD	17.638	9.6074	6.3016
#1	-.00066	.00018	-.00701
#2	-.00084	.00015	-.00766

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3660.9**	**44468.**	**3140.5**
Stddev	44.4	101.	10.3
%RSD	1.2134	.22695	.32890
#1	3692.3	44539.	3133.2
#2	3629.5	44396.	3147.8

Sample Name: ICIS Acquired: 11/7/2018 9:08:44 Type: Cal
Method: 6500_025 Mode: IR Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**-.00189**	**.00138**	**.00581**	**-.00081**	**.00129**	**-.01459**	**-.00323**	**-.00393**	**.00748**	**.00133**	**-.00069**	**-.00030**
Stddev	.00020	.00003	.00088	.00017	.00007	.00097	.00192	.00029	.00057	.00079	.00006	.00004
%RSD	10.708	2.1281	15.197	21.255	5.3567	6.6257	59.485	7.2845	7.5804	59.747	8.5898	14.352
#1	-.00175	.00140	.00519	-.00069	.00124	-.01390	-.00187	-.00413	.00788	.00077	-.00074	-.00027
#2	-.00204	.00136	.00644	-.00093	.00134	-.01527	-.00459	-.00373	.00708	.00189	-.00065	-.00033

Elem	Cu3247	Fe2599	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Na8183	Ni2316	P_1782
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00614**	**.00070**	**.00007**	**.00808**	**.01103**	**.00040**	**.00022**	**.00074**	**.01024**	**-.01585**	**.00015**	**.00025**
Stddev	.00011	.00030	.00027	.00040	.00188	.00005	.00002	.00018	.00042	.00042	.00054	.00009
%RSD	1.8704	43.023	405.13	5.0000	17.013	12.947	7.6634	24.682	4.1205	2.6253	347.21	34.950
#1	.00622	.00091	.00025	.00836	.00971	.00043	.00023	.00061	.00994	-.01556	.00053	.00031
#2	.00606	.00048	-.00012	.00779	.01236	.00036	.00021	.00087	.01054	-.01615	-.00023	.00019

Elem	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00082**	**.00099**	**.00127**	**.00028**	**.00158**	**.00158**	**.00033**	**.00582**	**-.00027**	**-.00075**	**-.00054**	**-.00096**
Stddev	.00010	.00010	.00006	.00005	.00177	.00177	.00003	.00219	.00000	.00011	.00021	.00027
%RSD	12.296	10.307	5.0240	19.635	111.55	111.55	8.7661	37.612	1.0884	14.392	39.467	28.533
#1	.00089	.00092	.00132	.00032	.00033	.00033	.00035	.00427	-.00027	-.00083	-.00069	-.00116
#2	.00075	.00106	.00123	.00024	.00283	.00283	.00031	.00737	-.00027	-.00068	-.00039	-.00077

Elem	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S
Avg	**-.00093**	**.00016**	**-.00767**
Stddev	.00001	.00002	.00121
%RSD	.95303	10.310	15.720
#1	-.00092	.00017	-.00682
#2	-.00093	.00015	-.00852

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3627.1**	**43608.**	**3074.9**
Stddev	14.3	26.	11.3
%RSD	.39544	.06043	.36681
#1	3616.9	43627.	3082.9
#2	3637.2	43590.	3066.9

Sample Name: ICAL1 Acquired: 11/7/2018 9:11:22 Type: Cal
Method: 6500_025 Mode: IR Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.22753**	**.18134**	**.06178**	**.22983**	**5.7053**	**4.0515**	**1.5034**	**1.4981**	**.84775**	**.80196**	**.30150**	**.55921**	**3.5092**
Stddev	.00124	.00147	.00038	.00053	.0184	.0109	.0075	.0093	.00737	.00524	.00187	.00302	.0119
%RSD	.54631	.80790	.61001	.23102	.32256	.26808	.49732	.62076	.86957	.65371	.62177	.54052	.34011
#1	.22665	.18238	.06204	.23020	5.6923	4.0438	1.4981	1.5047	.85296	.80567	.30018	.55708	3.5008
#2	.22841	.18031	.06151	.22945	5.7183	4.0592	1.5087	1.4915	.84254	.79825	.30283	.56135	3.5176

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	Sb2068	Se1960	Si2881	SiO2	Sn1899
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.5344**	**.95645**	**1.1557**	**.44099**	**1.6591**	**.67131**	**.09753**	**.42921**	**.15962**	**.05575**	**.22176**	**.22176**	**.18972**
Stddev	.0108	.00198	.0012	.00408	.0047	.00450	.00045	.00251	.00085	.00059	.00167	.00167	.00105
%RSD	.70384	.20669	.10521	.92601	.28599	.66962	.46548	.58455	.53373	1.0651	.75366	.75366	.55400
#1	1.5268	.95506	1.1566	.44388	1.6558	.67449	.09785	.43098	.16022	.05617	.22057	.22057	.19046
#2	1.5421	.95785	1.1549	.43811	1.6625	.66813	.09721	.42743	.15902	.05533	.22294	.22294	.18897

Elem	Sr4077	Ti3349	Tl1908	V_2924	Zn2062	Zr3391
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.7304**	**.27109**	**.15778**	**.22481**	**.02780**	**.30635**
Stddev	.0253	.00046	.00073	.00036	.00001	.00208
%RSD	.32715	.16934	.45964	.15984	.04617	.67903
#1	7.7126	.27077	.15829	.22507	.02779	.30488
#2	7.7483	.27142	.15726	.22456	.02780	.30782

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3583.5**	**42798.**	**3131.1**
Stddev	3.1	63.	21.8
%RSD	.08621	.14760	.69501
#1	3585.7	42754.	3146.5
#2	3581.3	42843.	3115.7

Sample Name: ICAL2 Acquired: 11/7/2018 9:13:45 Type: Cal
Method: 6500_025 Mode: IR Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Al3092	Bi2230	Fe2714	Na8183	S_1820	Th2837	U_3701
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.9748**	**.16006**	**.44486**	**2.1871**	**.25438**	**.43406**	**.10045**
Stddev	.0016	.00033	.00098	.0037	.00063	.00035	.00010
%RSD	.03951	.20746	.22090	.16946	.24736	.08061	.09482
#1	3.9737	.15983	.44556	2.1845	.25482	.43430	.10052
#2	3.9759	.16030	.44417	2.1897	.25393	.43381	.10038

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3390.7**	**40474.**	**3030.6**
Stddev	7.0	45.	.5
%RSD	.20547	.11027	.01804
#1	3385.7	40505.	3030.2
#2	3395.6	40442.	3031.0

Sample Name: S1-5407545 Acquired: 11/7/2018 9:16:20 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.99223**	**1.0195**	**1.9943**	**1.0006**	**1.0001**	**.99561**	**.00016**	**10.035**	**1.0034**	**1.0065**	**1.0073**	**.98791**	**5.1492**
Stddev	.00186	.0111	.0067	.0000	.0010	.00182	.00032	.029	.0039	.0052	.0032	.00174	.0203
%RSD	.18719	1.0891	.33503	.00296	.09671	.18271	196.21	.28668	.38484	.52035	.31766	.17620	.39510
#1	.99355	1.0116	1.9991	1.0006	.99947	.99433	.00038	10.014	1.0061	1.0102	1.0095	.98914	5.1636
#2	.99092	1.0273	1.9896	1.0006	1.0008	.99690	-.00006	10.055	1.0006	1.0028	1.0050	.98668	5.1348
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**100.22**	**2.0007**	**39.879**	**.99855**	**1.0089**	**11.026**	**1.0063**	**1.9998**	**2.0068**	**.00962**	**2.0009**	**1.9869**	**9.9884**
Stddev	.48	.0057	.063	.00056	.0042	.342	.0042	.0010	.0083	.00174	.0096	.0083	.0903
%RSD	.48367	.28630	.15827	.05579	.41274	3.1057	.42100	.05198	.41370	18.080	.48121	.41685	.90403
#1	99.876	1.9967	39.924	.99894	1.0119	11.268	1.0093	2.0005	2.0126	.01085	2.0078	1.9927	9.9246
#2	100.56	2.0048	39.835	.99815	1.0060	10.783	1.0033	1.9991	2.0009	.00839	1.9941	1.9810	10.052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**21.375**	**2.0052**	**.99877**	**.02180**	**1.0027**	**1.9979**	**-.01044**	**.99620**	**.99947**	**.99572**
Stddev	.193	.0027	.00325	.00257	.0010	.0080	.02056	.00338	.00559	.00932
%RSD	.90403	.13630	.32559	11.798	.09792	.40161	196.92	.33931	.55963	.93591
#1	21.239	2.0033	.99647	.01998	1.0033	2.0036	-.02497	.99859	1.0034	1.0023
#2	21.512	2.0071	1.0011	.02362	1.0020	1.9922	.00410	.99381	.99552	.98913
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3511.3**	**42033.**	**3051.7**
Stddev	4.0	211.	19.6
%RSD	.11317	.50112	.64131
#1	3514.1	41884.	3065.6
#2	3508.5	42182.	3037.9

Sample Name: S2-5408054 Acquired: 11/7/2018 9:18:42 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00466**	**99.696**	**-.01444**	**.00484**	**.00066**	**-.00039**	**1.9755**	**.02799**	**-.00013**	**.00296**	**.00035**	**.00248**	**100.08**
Stddev	.00112	.131	.00291	.00015	.00056	.00010	.0189	.00079	.00034	.00008	.00030	.00058	.03
%RSD	24.062	.13187	20.127	3.0839	85.942	26.689	.95444	2.8278	255.28	2.7993	83.624	23.290	.02826
#1	-.00546	99.789	-.01238	.00495	.00106	-.00031	1.9888	.02855	.00011	.00302	.00014	.00289	100.06
#2	-.00387	99.603	-.01649	.00474	.00026	-.00046	1.9622	.02743	-.00037	.00290	.00056	.00207	100.10
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.28708**	**.00278**	**-.18852**	**.00550**	**.00019**	**497.55**	**.00712**	**.00590**	**-.00439**	**10.036**	**.01507**	**.01158**	**-.02796**
Stddev	.03486	.00562	.00839	.00003	.00015	.62	.00006	.00169	.00102	.036	.00048	.00699	.01775
%RSD	12.142	202.09	4.4489	.55465	78.598	.12377	.80674	28.576	23.171	.36141	3.1961	60.356	63.503
#1	.26243	.00676	-.19445	.00552	.00008	497.98	.00708	.00471	-.00367	10.061	.01541	.00664	-.04051
#2	.31173	-.00119	-.18259	.00548	.00029	497.11	.00716	.00710	-.00511	10.010	.01472	.01652	-.01540
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05983**	**.00057**	**.00091**	**9.9203**	**.03107**	**-.00200**	**20.100**	**-.02093**	**.00122**	**.17497**
Stddev	.03799	.00039	.00011	.0023	.00028	.00039	.105	.00143	.00023	.00361
%RSD	63.503	68.839	11.921	.02320	.91154	19.652	.52027	6.8523	19.136	2.0658
#1	-.08670	.00029	.00084	9.9219	.03087	-.00172	20.173	-.02195	.00138	.17242
#2	-.03296	.00084	.00099	9.9186	.03128	-.00228	20.026	-.01992	.00105	.17753
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3437.4**	**40554.**	**3069.0**
Stddev	13.7	169.	11.1
%RSD	.39795	.41717	.36272
#1	3427.7	40435.	3076.9
#2	3447.1	40674.	3061.2

Sample Name: ICVH-5415526 Acquired: 11/7/2018 9:21:15 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00099**	**39.975**	**-.01001**	**.00085**	**.00091**	**.00016**	F **.57241**	**.01372**	**.00030**	**-.00126**	**.00028**	**.00016**
Stddev	.00012	.156	.00355	.00003	.00017	.00030	.00141	.00408	.00011	.00006	.00024	.00025
%RSD	12.659	.39048	35.508	3.4146	18.321	184.81	.24572	29.774	37.707	4.6382	84.004	163.35
#1	-.00090	40.085	-.00749	.00087	.00103	-.00005	.57340	.01083	.00022	-.00122	.00012	-.00002
#2	-.00107	39.865	-.01252	.00083	.00079	.00037	.57141	.01661	.00038	-.00130	.00045	.00034
Check ?	None	Chk Pass	None	None	None	None	Chk Fail	None	None	None	None	None
Value							.50000					
Range							10.490%					

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**80.211**	**.14724**	**.00067**	**-.05110**	**.00237**	**-.00061**	**41.951**	**.00218**	**-.00115**	**-.00371**	**3.8984**	**.00482**
Stddev	.019	.02683	.00199	.00769	.00006	.00012	.714	.00015	.00070	.00078	.0340	.00032
%RSD	.02336	18.220	295.62	15.047	2.5330	20.021	1.7026	6.9824	60.663	21.137	.87133	6.6883
#1	80.224	.16621	.00208	-.05653	.00241	-.00069	41.446	.00229	-.00165	-.00315	3.9225	.00459
#2	80.197	.12827	-.00074	-.04566	.00233	-.00052	42.456	.00207	-.00066	-.00426	3.8744	.00505
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00340**	**-.03531**	**-.07557**	**-.00038**	**.00032**	**2.9136**	**.00941**	**-.00282**	**5.0846**	**-.00489**	**-.00076**	**.05507**
Stddev	.00312	.01638	.03505	.00061	.00000	.0020	.00032	.00160	.0677	.00001	.00033	.00267
%RSD	91.537	46.381	46.381	159.62	.50953	.06883	3.3731	56.792	1.3308	.23427	43.809	4.8416
#1	-.00561	-.04689	-.10035	.00005	.00032	2.9122	.00963	-.00395	5.0368	-.00490	-.00099	.05695
#2	-.00120	-.02373	-.05078	-.00081	.00032	2.9150	.00918	-.00169	5.1325	-.00488	-.00052	.05318
Check ?	None	None	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3683.9**	**43790.**	**3153.1**
Stddev	2.8	20.	19.2
%RSD	.07612	.04655	.60903
#1	3685.8	43776.	3139.5
#2	3681.9	43804.	3166.7

Sample Name: ICVH-5415526 Acquired: 11/7/2018 9:23:48 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00103**	**39.715**	**-.00387**	**-.00035**	**.00061**	**-.00007**	F **.56663**	**.01109**	**.00036**	**-.00084**	**-.00005**	**.00275**
Stddev	.00186	.278	.00332	.00032	.00005	.00018	.01328	.00703	.00007	.00058	.00013	.00147
%RSD	180.86	.70068	85.760	92.394	7.3698	254.22	2.3440	63.411	20.144	68.836	274.84	53.649
#1	-.00029	39.912	-.00622	-.00057	.00058	.00006	.57602	.00612	.00041	-.00043	-.00014	.00170
#2	.00234	39.518	-.00152	-.00012	.00065	-.00020	.55724	.01606	.00031	-.00124	.00004	.00379
Check ?	None	Chk Pass	None	None	None	None	Chk Fail	None	None	None	None	None
Value							.50000					
Range							10.490%					

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**79.240**	**-.00097**	**.00149**	**.01052**	**.00358**	**-.00118**	**40.525**	**.00219**	**.00063**	**-.00209**	**3.8874**	**.00405**
Stddev	.376	.02412	.00475	.07984	.00202	.00024	1.138	.00011	.00057	.00140	.0355	.00029
%RSD	.47509	2486.6	319.13	758.71	56.350	20.586	2.8083	4.9076	91.396	67.189	.91376	7.1840
#1	79.506	-.01803	.00484	-.04593	.00215	-.00135	41.330	.00211	.00022	-.00308	3.9125	.00385
#2	78.974	.01609	-.00187	.06698	.00501	-.00101	39.720	.00227	.00103	-.00110	3.8623	.00426
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00511**	**-.03964**	**-.08483**	**-.00182**	**.00028**	**2.9048**	**.01010**	**-.00209**	**5.1149**	**-.00415**	**.00080**	**.05401**
Stddev	.00632	.02036	.04358	.00095	.00009	.0092	.00096	.00137	.0640	.00186	.00262	.00165
%RSD	123.61	51.373	51.373	52.024	30.355	.31824	9.5189	65.808	1.2521	44.971	327.70	3.0600
#1	.00064	-.05404	-.11564	-.00115	.00034	2.9113	.00942	-.00112	5.1602	-.00547	-.00105	.05518
#2	.00959	-.02524	-.05401	-.00249	.00022	2.8983	.01078	-.00306	5.0696	-.00283	.00265	.05285
Check ?	None	None	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3693.9**	**44129.**	**3204.8**
Stddev	14.4	459.	22.5
%RSD	.39066	1.0410	.70177
#1	3683.7	43804.	3188.9
#2	3704.1	44454.	3220.7

Sample Name: ICV-5415527 Acquired: 11/7/2018 9:26:21 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25283**	F **.27953**	**.26038**	**.25309**	**.25357**	**.24511**	**.00076**	**2.0381**	**.25621**	**.25425**	**.25171**	**.24964**
Stddev	.00050	.02378	.00320	.00103	.00148	.00030	.00040	.0002	.00129	.00150	.00107	.00014
%RSD	.19794	8.5057	1.2290	.40609	.58445	.12357	53.285	.00822	.50174	.58895	.42339	.05432
#1	.25319	.29635	.26265	.25382	.25462	.24490	.00047	2.0379	.25712	.25531	.25247	.24974
#2	.25248	.26272	.25812	.25237	.25252	.24533	.00104	2.0382	.25530	.25319	.25096	.24954
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.25000										
Range		10.490%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25693**	**20.476**	**.25491**	**10.231**	**.25894**	**.23933**	**2.1093**	**.25586**	**1.9483**	**.25989**	**.01096**	W **.22991**
Stddev	.00210	.110	.00123	.037	.00054	.00213	.0017	.00187	.0115	.00113	.00024	.00470
%RSD	.81729	.53811	.48069	.35811	.20823	.89168	.07936	.73109	.59114	.43310	2.2165	2.0463
#1	.25841	20.553	.25577	10.257	.25933	.24084	2.1081	.25719	1.9564	.25909	.01113	.23324
#2	.25544	20.398	.25404	10.205	.25856	.23782	2.1105	.25454	1.9401	.26068	.01079	.22658
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Warn
Value												.25000
Range												-5.4900%

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52296**	**1.9772**	**4.2312**	**.49238**	**.25303**	**.01122**	**.24126**	W **.53869**	**-.02843**	**.24594**	**.25129**	**.23918**
Stddev	.00763	.0243	.0519	.00122	.00038	.00174	.00100	.00101	.00180	.00157	.00007	.00306
%RSD	1.4597	1.2269	1.2269	.24718	.14954	15.521	.41603	.18824	6.3446	.63701	.02780	1.2784
#1	.52836	1.9600	4.1944	.49324	.25330	.00999	.24197	.53940	-.02716	.24705	.25134	.24134
#2	.51756	1.9943	4.2679	.49152	.25276	.01246	.24055	.53797	-.02971	.24484	.25124	.23702
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Warn	None	Chk Pass	Chk Pass	Chk Pass
Value								.50000				
Range								5.4900%				

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3686.7**	**44096.**	**3130.3**
Stddev	10.4	44.	.6
%RSD	.28308	.09977	.01891
#1	3694.1	44065.	3129.8
#2	3679.3	44127.	3130.7

Sample Name: ICV-5415527 Acquired: 11/7/2018 9:31:47 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25330**	W **.26770**	W **.26425**	**.25712**	**.25485**	**.24518**	**.00071**	**2.0509**	**.25966**	**.25767**	**.25460**	**.25333**
Stddev	.00065	.00182	.00289	.00000	.00142	.00029	.00362	.0092	.00092	.00027	.00025	.00042
%RSD	.25776	.67891	1.0953	.00066	.55618	.11709	509.75	.44880	.35316	.10652	.09710	.16454
#1	.25376	.26899	.26220	.25712	.25385	.24498	-.00185	2.0443	.26031	.25748	.25477	.25362
#2	.25284	.26642	.26630	.25712	.25585	.24539	.00327	2.0574	.25901	.25786	.25442	.25303
Check ?	Chk Pass	Chk Warn	Chk Warn	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.25000	.25000									
Range		5.4900%	5.4900%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25021**	**20.480**	**.25631**	**10.284**	**.26097**	**.24517**	**2.0732**	**.25797**	**1.9717**	W **.26657**	**.00015**	**.25852**
Stddev	.00200	.146	.00306	.007	.00039	.00133	.0142	.00098	.0065	.00155	.00178	.00242
%RSD	.79779	.71279	1.1924	.06608	.15119	.54391	.68539	.37957	.33133	.58125	1204.5	.93482
#1	.24880	20.377	.25847	10.289	.26125	.24611	2.0632	.25728	1.9763	.26767	.00141	.26023
#2	.25162	20.583	.25415	10.280	.26069	.24423	2.0833	.25866	1.9671	.26548	-.00111	.25681
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	None	Chk Pass
Value										.25000		
Range										5.4900%		

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52591**	**1.9032**	**4.0729**	**.50227**	**.25326**	**.00357**	**.24386**	W **.54220**	**-.03235**	**.24814**	**.25413**	**.24086**
Stddev	.00235	.0798	.1708	.00069	.00031	.00027	.00131	.00093	.02089	.00087	.00007	.00414
%RSD	.44605	4.1922	4.1922	.13803	.12396	7.4822	.53681	.17223	64.570	.35232	.02767	1.7197
#1	.52425	1.9597	4.1937	.50276	.25304	.00376	.24478	.54286	-.04712	.24876	.25418	.23793
#2	.52757	1.8468	3.9522	.50178	.25348	.00338	.24293	.54154	-.01758	.24752	.25408	.24378
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Warn	None	Chk Pass	Chk Pass	Chk Pass
Value								.50000				
Range								5.4900%				

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3685.1**	**44671.**	**3200.3**
Stddev	15.4	35.	7.6
%RSD	.41788	.07934	.23787
#1	3674.2	44646.	3194.9
#2	3696.0	44696.	3205.7

Sample Name: ICV-5415527 Acquired: 11/7/2018 9:33:57 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25449**	W **.26679**	**.25528**	**.25703**	**.25252**	**.24555**	**.00327**	**2.0548**	**.25992**	**.25846**	**.25570**	**.25258**
Stddev	.00100	.00101	.00994	.00114	.00026	.00122	.00263	.0131	.00049	.00016	.00063	.00083
%RSD	.39403	.37748	3.8934	.44460	.10414	.49610	80.361	.63656	.18745	.06274	.24510	.32833
#1	.25520	.26608	.26230	.25784	.25271	.24641	.00141	2.0456	.26026	.25834	.25614	.25200
#2	.25378	.26750	.24825	.25622	.25233	.24469	.00512	2.0641	.25957	.25857	.25525	.25317
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.25000										
Range		5.4900%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.24888**	**20.496**	**.26100**	**10.339**	**.26158**	**.24547**	**2.0607**	**.25908**	**1.9762**	W **.26501**	**.00056**	**.25667**
Stddev	.00678	.102	.00388	.008	.00030	.00003	.0046	.00121	.0052	.00261	.00488	.00215
%RSD	2.7245	.49993	1.4862	.07367	.11476	.01419	.22062	.46753	.26480	.98339	868.04	.83878
#1	.24408	20.568	.26374	10.333	.26137	.24544	2.0639	.25823	1.9799	.26317	.00401	.25515
#2	.25367	20.423	.25825	10.344	.26179	.24549	2.0574	.25994	1.9725	.26685	-.00289	.25819
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	None	Chk Pass
Value										.25000		
Range										5.4900%		

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.52124**	W **1.8627**	W **3.9862**	**.50466**	**.25248**	**.00386**	**.24483**	W **.54127**	**.00245**	**.24889**	**.25505**	**.24198**
Stddev	.00367	.0203	.0433	.00040	.00080	.00054	.00023	.00021	.01098	.00093	.00103	.00406
%RSD	.70317	1.0873	1.0873	.07915	.31875	14.026	.09486	.03902	448.25	.37187	.40212	1.6769
#1	.51865	1.8770	4.0168	.50494	.25305	.00425	.24466	.54142	-.00532	.24823	.25432	.23911
#2	.52383	1.8484	3.9555	.50438	.25191	.00348	.24499	.54112	.01022	.24954	.25577	.24485
Check ?	Chk Pass	Chk Warn	Chk Warn	Chk Pass	Chk Pass	None	Chk Pass	Chk Warn	None	Chk Pass	Chk Pass	Chk Pass
Value		2.0000	4.2800					.50000				
Range		-5.4900%	-5.4900%					5.4900%				

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3674.9**	**44049.**	**3152.0**
Stddev	15.7	278.	18.4
%RSD	.42756	.63071	.58263
#1	3686.0	44246.	3139.0
#2	3663.8	43853.	3165.0

Sample Name: ICVL-5415520 Acquired: 11/7/2018 9:38:13 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01287**	**.11353**	**.01078**	**.09953**	**.00794**	**.00078**	**.11682**	**.16880**	**.00534**	**.01085**	**.01012**	**.01584**
Stddev	.00102	.00538	.00003	.00147	.00296	.00006	.00770	.07103	.00007	.00030	.00015	.00259
%RSD	7.9135	4.7428	.26403	1.4801	37.243	8.3173	6.5925	42.079	1.2591	2.8011	1.4987	16.350
#1	.01359	.11734	.01076	.10058	.00585	.00073	.12227	.11858	.00529	.01064	.01001	.01767
#2	.01215	.10972	.01080	.09849	.01003	.00083	.11138	.21903	.00539	.01107	.01023	.01400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08520**	**2.4049**	**.01689**	**.25250**	**.01159**	**.02052**	**.80481**	**.04318**	**2.9358**	**.01093**	**.10190**	**.02283**
Stddev	.04487	1.0841	.00476	.04822	.00106	.00074	.38591	.00085	.0111	.00151	.00190	.00160
%RSD	52.661	45.077	28.183	19.097	9.1180	3.6053	47.951	1.9573	.37860	13.824	1.8637	6.9926
#1	.05347	1.6384	.01353	.28659	.01233	.02104	.53193	.04259	2.9436	.01200	.10325	.02396
#2	.11692	3.1715	.02026	.21840	.01084	.02000	1.0777	.04378	2.9279	.00986	.10056	.02170
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01449**	**.38817**	**.83068**	**.10162**	**.00778**	F **.02991**	**.01135**	**.01545**	**.04943**	**.01098**	**.02169**	**.01393**
Stddev	.00107	.14652	.31356	.00194	.00313	.01062	.00052	.00341	.01198	.00074	.00096	.00574
%RSD	7.4089	37.747	37.747	1.9045	40.210	35.500	4.6119	22.072	24.236	6.7286	4.4291	41.191
#1	.01373	.28456	.60896	.10299	.00557	.03742	.01172	.01786	.05790	.01150	.02236	.00987
#2	.01525	.49177	1.0524	.10026	.00999	.02240	.01098	.01304	.04096	.01046	.02101	.01799
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						.01500						
Range						30.000%						

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3600.9**	**43665.**	**3125.6**
Stddev	4.2	235.	30.3
%RSD	.11702	.53884	.96983
#1	3603.9	43831.	3104.2
#2	3597.9	43499.	3147.1

Sample Name: CCVH-5408055 Acquired: 11/7/2018 9:43:53 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00172**	**50.089**	**-.00916**	**.00040**	**.00016**	**-.00021**	**1.0135**	**.01523**	**-.00035**	**.00094**	**.00057**	**.00183**	**50.216**
Stddev	.00081	.030	.00742	.00096	.00061	.00005	.0016	.00786	.00022	.00031	.00006	.00046	.189
%RSD	47.210	.06089	80.959	239.60	389.78	25.028	.15515	51.591	63.452	33.327	10.061	25.354	.37582
#1	-.00230	50.068	-.01441	.00108	-.00028	-.00018	1.0124	.02079	-.00019	.00116	.00053	.00150	50.082
#2	-.00115	50.111	-.00392	-.00028	.00059	-.00025	1.0146	.00968	-.00051	.00072	.00061	.00216	50.349
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.06439**	**.00264**	**-.09985**	**.00272**	**-.00145**	**249.58**	**.00339**	**.00484**	**-.00127**	**4.9716**	**.00713**	**.00813**	**-.03210**
Stddev	.02854	.00202	.00317	.00012	.00013	1.40	.00016	.00096	.00058	.0177	.00041	.00224	.01092
%RSD	44.331	76.520	3.1718	4.4689	9.2713	.56246	4.8571	19.864	45.449	.35674	5.7205	27.587	34.012
#1	.08457	.00121	-.10209	.00264	-.00135	248.58	.00351	.00416	-.00168	4.9591	.00684	.00654	-.03982
#2	.04420	.00407	-.09761	.00281	-.00154	250.57	.00328	.00553	-.00086	4.9842	.00742	.00971	-.02438
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.06869**	**.00140**	**.00038**	**4.9657**	**.01559**	**-.00150**	**10.046**	**-.01110**	**.00081**	**.08819**
Stddev	.02336	.00050	.00002	.0012	.00019	.00063	.020	.00010	.00019	.00698
%RSD	34.012	35.972	5.9444	.02342	1.2011	41.689	.20132	.87808	23.846	7.9142
#1	-.08521	.00104	.00037	4.9649	.01546	-.00106	10.060	-.01116	.00094	.09313
#2	-.05217	.00175	.00040	4.9665	.01572	-.00195	10.031	-.01103	.00067	.08326
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3522.4**	**41803.**	**3087.0**
Stddev	5.3	32.	.4
%RSD	.15150	.07763	.01228
#1	3518.6	41826.	3086.8
#2	3526.1	41780.	3087.3

Sample Name: CCV-5407546 Acquired: 11/7/2018 9:46:24 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50090**	**.50866**	**.98602**	**.49322**	**.50280**	**.49832**	**-.00191**	**5.0460**	**.49531**	**.50231**	**.49717**	**.49856**	**2.5087**
Stddev	.00039	.00791	.01979	.00491	.00143	.00011	.00227	.0136	.00578	.00802	.00779	.00228	.0144
%RSD	.07875	1.5551	2.0074	.99573	.28393	.02135	118.52	.26999	1.1662	1.5957	1.5661	.45817	.57496
#1	.50063	.51425	1.0000	.49669	.50179	.49824	-.00351	5.0556	.49939	.50797	.50268	.50018	2.4985
#2	.50118	.50307	.97202	.48974	.50381	.49839	-.00031	5.0363	.49122	.49664	.49167	.49695	2.5189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.816**	**1.0191**	**20.155**	**.50472**	**.49431**	**5.1725**	**.50233**	**.97544**	**1.0091**	**.00918**	**.98412**	**.98411**	**4.9908**
Stddev	.172	.0012	.006	.00042	.00859	.0175	.00806	.01240	.0137	.00120	.01568	.01927	.0397
%RSD	.33846	.12194	.03053	.08277	1.7380	.33822	1.6046	1.2715	1.3533	13.112	1.5936	1.9579	.79582
#1	50.694	1.0199	20.160	.50502	.50038	5.1602	.50803	.98421	1.0187	.01003	.99521	.99773	4.9627
#2	50.938	1.0182	20.151	.50443	.48823	5.1849	.49663	.96667	.99940	.00833	.97303	.97049	5.0189
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.680**	**.99385**	**.50126**	**.01059**	**.50288**	**1.0088**	**-.04705**	**.49770**	**.50045**	**.49377**
Stddev	.085	.01594	.00122	.00036	.00051	.0098	.03148	.00147	.00467	.00217
%RSD	.79582	1.6043	.24426	3.3776	.10062	.97031	66.909	.29512	.93398	.43888
#1	10.620	1.0051	.50040	.01084	.50324	1.0157	-.06931	.49874	.49715	.49224
#2	10.740	.98257	.50213	.01033	.50253	1.0018	-.02479	.49666	.50376	.49530
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3575.4**	**43065.**	**3110.3**
Stddev	2.9	60.	21.3
%RSD	.08210	.13893	.68581
#1	3577.5	43107.	3125.4
#2	3573.3	43023.	3095.2

Sample Name: ICB Acquired: 11/7/2018 9:48:47 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00042**	**.00063**	**.00207**	**-.00066**	**.00009**	**-.00011**	**.00118**	**.02878**	**.00019**	**.00009**	**.00015**	**-.00229**	**.00703**
Stddev	.00031	.00055	.00070	.00034	.00002	.00028	.00324	.00523	.00007	.00005	.00026	.00040	.00081
%RSD	74.799	88.008	33.969	51.032	21.867	255.54	274.60	18.173	36.395	50.176	166.69	17.304	11.545
#1	.00020	.00102	.00257	-.00042	.00011	-.00031	.00347	.03248	.00024	.00006	.00033	-.00201	.00646
#2	.00064	.00024	.00157	-.00090	.00008	.00009	-.00111	.02508	.00014	.00012	-.00003	-.00257	.00760
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07678**	**-.00304**	**.00135**	**.00008**	**.00097**	**.04008**	**.00062**	**.00162**	**-.00006**	**.00435**	**.00372**	**-.00096**	**-.05172**
Stddev	.02010	.00324	.00065	.00015	.00055	.02766	.00064	.00116	.00159	.00676	.00108	.00141	.00434
%RSD	26.182	106.46	47.991	181.94	56.163	69.002	102.58	71.798	2780.8	155.47	29.125	145.95	8.3884
#1	.06257	-.00075	.00180	-.00002	.00059	.02052	.00017	.00244	.00107	-.00043	.00448	.00003	-.04865
#2	.09100	-.00533	.00089	.00019	.00136	.05963	.00107	.00080	-.00118	.00913	.00295	-.00196	-.05479
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.11068**	**.00084**	**.00011**	**.00191**	**.00005**	**-.00272**	**-.05091**	**.00022**	**.00185**	**.00355**
Stddev	.00928	.00166	.00001	.00098	.00036	.00001	.06239	.00083	.00042	.00019
%RSD	8.3884	198.81	13.071	51.224	742.47	.45231	122.54	383.19	22.976	5.3264
#1	-.10412	-.00034	.00010	.00261	-.00020	-.00273	-.00680	.00081	.00155	.00342
#2	-.11725	.00201	.00012	.00122	.00030	-.00271	-.09502	-.00037	.00215	.00369
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3583.1**	**43429.**	**3154.1**
Stddev	3.2	196.	15.8
%RSD	.08978	.45052	.50051
#1	3585.4	43290.	3142.9
#2	3580.9	43567.	3165.2

Sample Name: CRI-5415520 Acquired: 11/7/2018 9:51:23 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.01217**	**.11513**	W **.01004**	**.09829**	**.01055**	**.00114**	**.11111**	**.21814**	**.00553**	**.01095**	**.01031**	**.01480**
Stddev	.00035	.01117	.00611	.00278	.00021	.00005	.00205	.01066	.00047	.00007	.00040	.00071
%RSD	2.8458	9.7004	60.898	2.8310	1.9883	4.7143	1.8429	4.8847	8.5034	.61562	3.8460	4.8283
#1	.01241	.12303	.00572	.10025	.01070	.00110	.11255	.22567	.00586	.01100	.01059	.01429
#2	.01192	.10723	.01436	.09632	.01040	.00118	.10966	.21060	.00519	.01090	.01003	.01531
Check ?	Chk Warn	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value	.01000		.01500									
Range	20.490%		-20.490%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10084**	**3.1910**	**.02158**	**.21920**	**.01067**	**.02008**	**1.1018**	**.04330**	**2.9137**	**.01002**	**.09435**	**.02253**
Stddev	.00483	.0983	.00655	.00552	.00010	.00071	.0162	.00115	.0686	.00114	.00629	.00043
%RSD	4.7902	3.0799	30.338	2.5205	.94128	3.5245	1.4694	2.6625	2.3556	11.330	6.6715	1.8998
#1	.10426	3.2605	.02621	.21529	.01074	.02058	1.1132	.04412	2.9622	.01082	.09880	.02223
#2	.09743	3.1215	.01695	.22310	.01060	.01958	1.0903	.04249	2.8652	.00922	.08990	.02283
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01621**	**.50900**	**1.0893**	**.10108**	**.01053**	**.01592**	**.01016**	**.01607**	F **.00998**	**.01004**	**.02110**	W **.01893**
Stddev	.00002	.04324	.0925	.00082	.00010	.00077	.00069	.00074	.06193	.00030	.00058	.00485
%RSD	.13300	8.4953	8.4953	.80729	.90499	4.8525	6.8209	4.6164	620.53	2.9693	2.7348	25.635
#1	.01622	.47842	1.0238	.10165	.01060	.01647	.01065	.01554	-.03381	.01025	.02069	.01550
#2	.01619	.53958	1.1547	.10050	.01046	.01537	.00967	.01659	.05377	.00983	.02151	.02236
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Warn
Value									.06000			.01500
Range									-50.000%			20.490%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3539.2**	**42601.**	**3024.2**
Stddev	5.4	166.	7.1
%RSD	.15239	.39020	.23562
#1	3535.4	42718.	3019.1
#2	3543.1	42483.	3029.2

Sample Name: CRI- Acquired: 11/7/2018 9:58:37 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: Alt CRI Ag 10 As 15

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.01227**	**-.00037**	W **.01092**	**-.00136**	**.00003**	**-.00031**	**-.00487**	**.00632**	**-.00003**	**-.00028**	**-.00010**	**-.00253**
Stddev	.00036	.00040	.00536	.00083	.00025	.00003	.00272	.00548	.00001	.00028	.00022	.00037
%RSD	2.9383	106.88	49.087	60.873	951.67	8.6353	55.868	86.701	20.861	99.263	214.58	14.686
#1	.01253	-.00009	.01471	-.00195	-.00015	-.00029	-.00294	.00245	-.00002	-.00008	.00005	-.00279
#2	.01202	-.00066	.00713	-.00078	.00020	-.00033	-.00679	.01020	-.00003	-.00048	-.00026	-.00227
Check ?	Chk Fail	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.00200		.00750									
Low Limit	-.01000		-.01500									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00080**	**-.03611**	**-.00037**	**.01028**	**-.00007**	**-.00017**	**-.02491**	**.00029**	**.00170**	**-.00052**	**-.00117**	**-.00149**
Stddev	.00845	.08788	.00029	.00141	.00001	.00043	.00696	.00023	.00196	.00081	.00204	.00121
%RSD	1059.5	243.37	77.485	13.704	19.798	249.11	27.952	81.849	115.25	156.58	174.67	81.020
#1	-.00677	-.09825	-.00058	.01127	-.00006	-.00047	-.02984	.00045	.00309	-.00109	-.00261	-.00234
#2	.00518	.02603	-.00017	.00928	-.00008	.00013	-.01999	.00012	.00031	.00006	.00027	-.00064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00341**	**-.00778**	**-.01665**	**-.00032**	**-.00012**	**.00215**	**.00024**	**-.00348**	**-.07020**	**-.00045**	**-.00004**	**.00058**
Stddev	.00983	.00042	.00091	.00150	.00013	.00174	.00017	.00022	.01253	.00001	.00036	.00289
%RSD	287.99	5.4583	5.4583	472.28	107.42	80.859	73.967	6.2361	17.851	2.4909	873.89	502.74
#1	-.01036	-.00748	-.01601	.00074	-.00021	.00092	.00036	-.00363	-.06134	-.00045	-.00030	.00262
#2	.00354	-.00808	-.01729	-.00138	-.00003	.00338	.00011	-.00333	-.07906	-.00046	.00021	-.00147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3528.9**	**42970.**	**3083.7**
Stddev	12.2	204.	9.9
%RSD	.34610	.47520	.32134
#1	3537.6	42825.	3076.7
#2	3520.3	43114.	3090.7

Sample Name: ICSA-5374484 Acquired: 11/7/2018 10:06:32 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00113**	**509.29**	W **-.02323**	**-.00141**	**.00037**	**.00006**	F **.14327**	**490.01**	W **.00217**	**-.00188**	**.00258**
Stddev	.00017	3.27	.00436	.00095	.00020	.00001	.00166	2.06	.00012	.00039	.00026
%RSD	15.291	.64137	18.789	67.020	53.568	11.102	1.1577	.42019	5.4572	20.943	10.063
#1	.00101	506.98	-.02632	-.00208	.00052	.00005	.14445	488.56	.00209	-.00216	.00276
#2	.00126	511.60	-.02014	-.00074	.00023	.00006	.14210	491.47	.00225	-.00160	.00239
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit			.01500				.10000		.00180		
Low Limit			-.01500				-.10000		-.00180		

Elem	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00093**	**193.72**	**.11676**	**.00031**	**522.17**	W **.00111**	**-.00019**	**.22084**	W **.00718**	**-.00424**	**-.00136**
Stddev	.00029	.32	.05032	.00257	5.29	.00002	.00066	.04474	.00008	.00403	.00157
%RSD	31.122	.16512	43.096	819.86	1.0125	2.1532	353.85	20.257	1.0651	95.215	115.18
#1	.00114	193.49	.15234	.00213	518.44	.00110	.00028	.18921	.00712	-.00709	-.00247
#2	.00073	193.94	.08118	-.00151	525.91	.00113	-.00065	.25248	.00723	-.00138	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit						.00100			.00500		
Low Limit						-.00100			-.00500		

Elem	S_1820	Sb2068	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04780**	**.01077**	**-.00925**	**-.01887**	**-.04037**	**-.00124**	W **.00496**	**.01371**	**.00100**	**-.00149**	**.13967**
Stddev	.00131	.00921	.00257	.03072	.06573	.00047	.00009	.00259	.00083	.00318	.06441
%RSD	2.7393	85.493	27.770	162.81	162.81	38.366	1.8815	18.926	82.482	212.87	46.116
#1	.04687	.01728	-.00743	-.04059	-.08686	-.00090	.00503	.01187	.00042	.00075	.18521
#2	.04872	.00426	-.01106	.00285	.00611	-.00157	.00489	.01554	.00158	-.00374	.09412
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit							.00120				
Low Limit							-.00120				

Elem	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm
Avg	**-.00111**	**-.00779**	**.00027**
Stddev	.00039	.00009	.00079
%RSD	35.273	1.1829	291.92
#1	-.00138	-.00772	.00083
#2	-.00083	-.00785	-.00029
Check ?	Chk Pass	Chk Pass	Chk Pass
High Limit			
Low Limit			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3236.6**	**37375.**	**3044.5**
Stddev	10.5	192.	1.3
%RSD	.32395	.51294	.04257
#1	3244.0	37511.	3043.6
#2	3229.2	37239.	3045.4

Sample Name: ICSAB-5408059 Acquired: 11/7/2018 10:09:09 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0970**	**500.40**	**1.9974**	**1.8894**	**.49873**	**.48904**	**1.0754**	**481.40**	**.99784**	**.45601**	**.48037**	**.52679**	**190.89**	**52.315**
Stddev	.0042	1.95	.0382	.0303	.00098	.00274	.0172	1.98	.01653	.00773	.00978	.00213	.44	.232
%RSD	.38191	.38951	1.9137	1.6031	.19647	.56032	1.6032	.41210	1.6564	1.6950	2.0356	.40350	.22885	.44410
#1	1.1000	499.02	2.0245	1.9108	.49804	.48711	1.0876	480.00	1.0095	.46148	.48729	.52830	190.58	52.151
#2	1.0941	501.77	1.9704	1.8680	.49943	.49098	1.0632	482.80	.98615	.45055	.47346	.52529	191.19	52.479
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value														
Range														

Elem	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0347**	**518.79**	**.50670**	**.96656**	**51.970**	**.91654**	**1.9614**	**.92945**	**1.0286**	**.97751**	**4.8137**	**9.8703**	**21.123**	**9.2590**
Stddev	.0119	3.84	.00209	.01854	1.239	.01464	.0281	.01131	.0155	.02154	.0617	.0179	.038	.1473
%RSD	1.1520	.74108	.41196	1.9184	2.3844	1.5974	1.4337	1.2168	1.5091	2.2035	1.2815	.18087	.18087	1.5909
#1	1.0263	521.51	.50817	.97967	51.094	.92689	1.9813	.93745	1.0396	.99274	4.8573	9.8830	21.150	9.3632
#2	1.0431	516.07	.50522	.95345	52.847	.90619	1.9415	.92145	1.0176	.96228	4.7701	9.8577	21.096	9.1549
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value														
Range														

Elem	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0015**	**2.0348**	**1.0430**	**8.7269**	**.11948**	**.51790**	**.99112**	**1.0015**
Stddev	.0030	.0079	.0080	.1336	.03801	.00422	.00085	.0062
%RSD	.29791	.38902	.77004	1.5305	31.815	.81457	.08567	.61949
#1	.99936	2.0404	1.0486	8.8214	.14636	.52088	.99172	.99713
#2	1.0036	2.0292	1.0373	8.6325	.09260	.51492	.99052	1.0059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3273.8**	**37212.**	**3022.8**
Stddev	24.0	63.	12.2
%RSD	.73353	.16914	.40467
#1	3256.8	37167.	3031.5
#2	3290.8	37256.	3014.2

Sample Name: LRA-5413489 Acquired: 11/7/2018 10:11:32 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**-.18098**	**9.8925**	**9.6351**	**12.436**	**-.00155**	**.33689**	**.12116**	**1.9671**	**5.0105**	**10.019**	**10.494**	**513.81**
Stddev	.00011	.22776	.1666	.1349	.021	.00008	.01440	.10144	.0304	.0785	.173	.018	.14
%RSD	141.16	125.84	1.6843	1.4005	.16713	5.0023	4.2733	83.726	1.5455	1.5661	1.7283	.17239	.02691
#1	.00000	-.01993	10.010	9.7305	12.450	-.00161	.34707	.19289	1.9886	5.0660	10.142	10.507	513.91
#2	.00016	-.34203	9.7747	9.5397	12.421	-.00150	.32671	.04943	1.9456	4.9550	9.8968	10.482	513.72
Check ?	None	None	Chk Pass	Chk Pass	Chk Pass	None	None	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.20427**	**.00340**	**-.02272**	**10.007**	**4.8999**	**-.00860**	**10.091**	**-.02166**	**10.314**	**.03192**	**-.03639**	**4.9313**	**48.653**
Stddev	.04229	.00401	.01558	.035	.0881	.01766	.157	.00384	.153	.01129	.00703	.0679	.259
%RSD	20.705	117.85	68.573	.34901	1.7981	205.26	1.5557	17.736	1.4801	35.378	19.308	1.3775	.53297
#1	-.23417	.00057	-.01170	10.032	4.9622	.00388	10.202	-.01895	10.422	.03990	-.03143	4.9793	48.469
#2	-.17436	.00623	-.03374	9.9823	4.8376	-.02109	9.9804	-.02438	10.206	.02393	-.04136	4.8833	48.836
Check ?	None	None	None	Chk Pass	Chk Pass	None	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**104.12**	**-.00094**	**10.168**	**.02179**	**9.9694**	**5.1064**	**.62662**	**9.8994**	**9.8206**	**.00953**
Stddev	.55	.00344	.098	.00568	.0384	.0869	.04610	.0336	.0450	.00127
%RSD	.53297	367.05	.96295	26.045	.38535	1.7018	7.3576	.33971	.45798	13.289
#1	103.72	.00150	10.237	.02580	9.9966	5.1678	.59402	9.9232	9.8524	.01042
#2	104.51	-.00337	10.099	.01778	9.9423	5.0449	.65922	9.8756	9.7888	.00863
Check ?	None	None	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3587.9**	**43688.**	**3141.6**
Stddev	2.5	161.	3.4
%RSD	.07020	.36775	.10821
#1	3589.7	43574.	3139.2
#2	3586.1	43801.	3144.0

Sample Name: CCVH-5408055 Acquired: 11/7/2018 10:14:06 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00185**	**50.380**	**-.00836**	**.02244**	**.00106**	**-.00034**	**.99047**	**.02190**	**.00008**	**.00164**	**.00061**	**.00111**	**50.759**
Stddev	.00080	.146	.00050	.00298	.00015	.00030	.01491	.00261	.00014	.00027	.00026	.00025	.045
%RSD	43.245	.28959	5.9323	13.262	13.731	87.250	1.5056	11.904	178.59	16.461	42.861	22.649	.08836
#1	-.00241	50.483	-.00871	.02455	.00096	-.00056	1.0010	.02005	.00018	.00183	.00042	.00129	50.791
#2	-.00128	50.277	-.00801	.02034	.00117	-.00013	.97992	.02374	-.00002	.00145	.00079	.00093	50.727
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.13825**	**.00423**	**-.09455**	**.00298**	**.00636**	**252.41**	**.00379**	**.00238**	**-.00365**	**4.9040**	**.00774**	**.01064**	**.05105**
Stddev	.09658	.00326	.00339	.00004	.00085	.39	.00003	.00451	.00187	.0844	.00207	.00145	.02474
%RSD	69.857	77.109	3.5864	1.2521	13.386	.15508	.91532	189.36	51.139	1.7216	26.804	13.611	48.450
#1	.06996	.00654	-.09695	.00295	.00576	252.13	.00381	-.00081	-.00233	4.9637	.00920	.01167	.06854
#2	.20654	.00192	-.09215	.00301	.00697	252.69	.00376	.00557	-.00497	4.8443	.00627	.00962	.03356
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10925**	**-.00187**	**.00069**	**4.9899**	**.01785**	**-.00016**	**10.206**	**-.01024**	**.00030**	**.08787**
Stddev	.05293	.00041	.00016	.0366	.00032	.00251	.072	.00066	.00013	.00109
%RSD	48.450	22.034	23.645	.73260	1.7981	1557.1	.70259	6.4691	42.521	1.2348
#1	.14668	-.00158	.00057	5.0157	.01762	-.00194	10.256	-.00977	.00021	.08711
#2	.07182	-.00217	.00080	4.9640	.01807	.00162	10.155	-.01071	.00039	.08864
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3509.4**	**41562.**	**3051.3**
Stddev	.3	186.	2.9
%RSD	.00963	.44838	.09397
#1	3509.2	41430.	3049.3
#2	3509.7	41693.	3053.4

Sample Name: CCV-5407546 Acquired: 11/7/2018 10:16:39 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50439**	**.52134**	**.99775**	**.51146**	**.50808**	**.50307**	**.00745**	**5.0629**	**.50321**	**.50978**	**.50609**	**.50168**	**2.6026**
Stddev	.00031	.00688	.01378	.00198	.00028	.00165	.00265	.0240	.00319	.00225	.00468	.00054	.0287
%RSD	.06093	1.3198	1.3811	.38763	.05557	.32751	35.538	.47428	.63321	.44218	.92502	.10684	1.1015
#1	.50460	.52620	1.0075	.51286	.50828	.50423	.00557	5.0799	.50546	.51138	.50940	.50206	2.6229
#2	.50417	.51647	.98800	.51006	.50788	.50190	.00932	5.0459	.50096	.50819	.50278	.50130	2.5824
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.935**	**1.0259**	**20.223**	**.50640**	**.50292**	**5.0799**	**.50820**	**.99760**	**1.0218**	**.01717**	**.99848**	**.99943**	**5.1030**
Stddev	.172	.0131	.053	.00046	.00394	.0031	.00445	.00344	.0015	.00177	.00552	.00796	.0257
%RSD	.33861	1.2719	.26262	.09140	.78401	.06013	.87584	.34437	.14752	10.308	.55289	.79616	.50397
#1	51.057	1.0351	20.260	.50673	.50570	5.0778	.51134	.99517	1.0229	.01591	1.0024	1.0051	5.0848
#2	50.813	1.0167	20.185	.50608	.50013	5.0821	.50505	1.0000	1.0208	.01842	.99458	.99380	5.1212
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.920**	**1.0157**	**.50434**	**.01059**	**.50340**	**1.0218**	**-.08640**	**.50179**	**.50251**	**.50121**
Stddev	.055	.0034	.00397	.00037	.00040	.0092	.05132	.00070	.00018	.00185
%RSD	.50397	.33527	.78677	3.4584	.07901	.90530	59.391	.13880	.03536	.36902
#1	10.882	1.0181	.50715	.01085	.50312	1.0283	-.12269	.50129	.50263	.50252
#2	10.959	1.0133	.50153	.01034	.50368	1.0152	-.05012	.50228	.50238	.49990
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3554.6**	**42891.**	**3077.3**
Stddev	20.8	84.	7.3
%RSD	.58441	.19573	.23668
#1	3569.3	42950.	3072.2
#2	3539.9	42832.	3082.5

Sample Name: CCB Acquired: 11/7/2018 10:19:06 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00044**	**.00210**	**-.00151**	**.01002**	**-.00023**	**-.00020**	**-.00145**	**.02537**	**.00009**	**-.00039**	**-.00006**	**-.00216**	**.00076**
Stddev	.00123	.00024	.00326	.00028	.00025	.00012	.00676	.00110	.00002	.00031	.00043	.00000	.00162
%RSD	282.81	11.549	216.20	2.7607	112.30	62.293	465.74	4.3527	17.827	79.439	688.97	.05610	213.83
#1	-.00044	.00227	-.00381	.00983	-.00040	-.00011	.00333	.02615	.00010	-.00017	.00024	-.00216	-.00039
#2	.00131	.00192	.00080	.01022	-.00005	-.00028	-.00623	.02459	.00008	-.00061	-.00037	-.00217	.00190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00371**	**-.00069**	**-.00629**	**.00005**	**.00106**	**-.06385**	**.00053**	**-.00189**	**-.00080**	**.00335**	**-.00159**	**.00243**	**.04316**
Stddev	.01379	.00072	.00432	.00013	.00053	.00331	.00027	.00042	.00443	.00093	.00021	.00182	.06807
%RSD	371.40	103.46	68.566	255.98	49.810	5.1817	51.927	21.912	552.65	27.671	13.296	74.981	157.71
#1	-.01347	-.00120	-.00935	-.00004	.00069	-.06619	.00072	-.00160	-.00394	.00270	-.00144	.00114	-.00497
#2	.00604	-.00019	-.00324	.00014	.00144	-.06151	.00033	-.00219	.00233	.00401	-.00174	.00371	.09129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09236**	**-.00022**	**.00019**	**.00006**	**.00038**	**-.00325**	**-.02167**	**.00071**	**.00017**	**.00025**
Stddev	.14566	.00254	.00017	.00122	.00066	.00017	.06340	.00125	.00008	.00090
%RSD	157.71	1170.2	93.174	2154.3	175.06	5.2154	292.59	175.87	45.875	360.85
#1	-.01064	.00158	.00006	-.00081	-.00009	-.00337	.02316	.00159	.00011	.00089
#2	.19535	-.00202	.00031	.00092	.00085	-.00313	-.06650	-.00017	.00022	-.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3540.2**	**42997.**	**3014.9**
Stddev	8.0	218.	4.3
%RSD	.22595	.50668	.14364
#1	3534.5	43151.	3018.0
#2	3545.8	42843.	3011.8

Sample Name: CCVL-5415520 Acquired: 11/7/2018 10:21:44 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01222**	**.10957**	**.01288**	**.10528**	**.01061**	F **.00069**	**.11241**	**.22869**	**.00530**	**.01064**	**.01000**	**.01453**
Stddev	.00043	.00195	.00581	.00033	.00052	.00003	.00236	.00219	.00008	.00072	.00007	.00018
%RSD	3.5126	1.7804	45.107	.31510	4.8738	4.6927	2.1022	.95920	1.5889	6.7885	.70205	1.2616
#1	.01191	.11095	.01698	.10552	.01098	.00066	.11408	.22714	.00536	.01115	.00995	.01440
#2	.01252	.10819	.00877	.10505	.01024	.00071	.11073	.23024	.00525	.01013	.01005	.01466
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						.00100						
Range						-30.000%						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.11177**	**3.0858**	**.01821**	**.20982**	**.01045**	**.01979**	**.95885**	**.04216**	**2.8770**	**.00841**	**.09503**	**.02433**
Stddev	.00068	.1445	.00272	.00228	.00015	.00054	.01463	.00011	.0219	.00067	.00162	.00009
%RSD	.60907	4.6833	14.956	1.0860	1.4150	2.7513	1.5258	.26585	.75942	7.9206	1.7057	.38547
#1	.11225	3.1880	.01628	.21143	.01056	.02017	.94851	.04208	2.8925	.00888	.09389	.02427
#2	.11128	2.9836	.02014	.20821	.01035	.01940	.96920	.04224	2.8616	.00794	.09618	.02440
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02433**	**.45959**	**.98352**	**.10000**	**.01033**	**.01601**	**.00968**	**.01384**	F **-.01977**	**.01014**	**.02110**	**.01578**
Stddev	.00685	.01616	.03457	.00038	.00011	.00239	.00002	.00736	.03192	.00024	.00035	.00328
%RSD	28.153	3.5153	3.5153	.37611	1.1016	14.900	.19307	53.148	161.45	2.4089	1.6765	20.781
#1	.01948	.47101	1.0080	.10026	.01042	.01432	.00969	.00864	.00280	.01031	.02085	.01346
#2	.02917	.44816	.95907	.09973	.01025	.01770	.00967	.01904	-.04234	.00996	.02135	.01810
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3579.2**	**43582.**	**3052.9**
Stddev	11.5	23.	6.7
%RSD	.32117	.05198	.22001
#1	3587.3	43566.	3048.1
#2	3571.0	43598.	3057.6

Sample Name: 280-115907-A-46-A Acquired: 11/7/2018 10:48:48 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 10/31 Custom ID2: Custom ID3:
Comment: 434922 SOIL 6010C (As)

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00171**	**131.62**	**.04461**	**.02937**	**.78389**	**.00533**	**.13603**	**16.449**	**.00237**
Stddev	.00063	.21	.00294	.00011	.00257	.00044	.00329	.010	.00002
%RSD	36.948	.15702	6.5984	.37190	.32762	8.1923	2.4185	.06340	.82306
#1	-.00126	131.76	.04252	.02929	.78571	.00502	.13370	16.456	.00238
#2	-.00216	131.47	.04669	.02945	.78208	.00564	.13836	16.441	.00235
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10406**	**.14268**	**.19826**	**185.86**	**9.7117**	**.13340**	**29.095**	**9.6088**	**.00258**
Stddev	.00034	.00063	.00125	.41	.0803	.00061	.016	.0835	.00002
%RSD	.32792	.44017	.63086	.21884	.82717	.45774	.05575	.86855	.86963
#1	.10382	.14224	.19914	186.15	9.7685	.13384	29.107	9.6678	.00260
#2	.10430	.14313	.19737	185.58	9.6549	.13297	29.084	9.5498	.00257
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.63496**	**.15340**	**3.9218**	**.06036**	**.27853**	**-.00559**	**-.00238**	**5.7003**	**12.199**
Stddev	.00508	.00047	.0039	.00332	.00922	.00051	.00213	.2592	.555
%RSD	.79942	.30566	.10006	5.4968	3.3089	9.1341	89.776	4.5473	4.5473
#1	.63855	.15307	3.9246	.05802	.27202	-.00595	-.00389	5.8835	12.591
#2	.63137	.15374	3.9191	.06271	.28505	-.00523	-.00087	5.5170	11.806
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01107**	**.09307**	**.05319**	**1.5547**	**.00235**	**.16943**	**.24713**	**.33275**	**.07752**
Stddev	.00269	.00033	.00411	.0221	.00189	.05893	.00095	.00000	.00106
%RSD	24.339	.34930	7.7289	1.4216	80.452	34.779	.38294	.00011	1.3726
#1	.01297	.09330	.05029	1.5704	.00101	.21110	.24646	.33275	.07677
#2	.00916	.09284	.05610	1.5391	.00369	.12776	.24779	.33275	.07827
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**4088.0**	**47887.**	**3610.1**
Stddev	.3	74.	27.2
%RSD	.00835	.15521	.75438
#1	4087.8	47835.	3590.8
#2	4088.3	47940.	3629.4

Sample Name: MB 280-435536/1-A Acquired: 11/7/2018 10:51:20 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/3 Custom ID2: Custom ID3:
Comment: 435536 6010C (Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00134**	**.12713**	**-.00278**	**.00037**	**-.00029**	**-.00017**	**.00229**	**.02674**	**.00036**
Stddev	.00013	.07919	.00006	.00007	.00041	.00016	.00665	.00246	.00004
%RSD	9.8890	62.292	1.9882	19.644	142.48	93.570	290.03	9.1841	12.427
#1	.00143	.18312	-.00274	.00032	.00000	-.00006	-.00241	.02847	.00039
#2	.00124	.07113	-.00282	.00042	-.00058	-.00028	.00699	.02500	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00025**	**.00054**	**-.00039**	**.17166**	**.06588**	**-.00252**	**.00136**	**.00080**	**.00075**
Stddev	.00082	.00018	.00060	.00081	.10903	.00697	.00453	.00012	.00035
%RSD	328.80	33.597	152.73	.47232	165.50	276.60	333.21	14.515	47.217
#1	.00082	.00066	.00003	.17223	-.01122	-.00745	.00456	.00072	.00100
#2	-.00033	.00041	-.00082	.17109	.14297	.00241	-.00184	.00088	.00050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.07817**	**.00065**	**.00302**	**-.00029**	**.00790**	**-.00058**	**-.00924**	**.02329**	**.04984**
Stddev	.00768	.00010	.00268	.00058	.00182	.00043	.00277	.00172	.00368
%RSD	9.8210	15.776	88.725	201.34	23.099	73.316	30.015	7.3796	7.3796
#1	-.07274	.00073	.00491	-.00069	.00661	-.00028	-.00728	.02207	.04724
#2	-.08360	.00058	.00112	.00012	.00919	-.00088	-.01120	.02450	.05244
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00146**	**.00012**	**.00220**	**.00110**	**-.00092**	**-.04898**	**.00090**	**.00161**	**.00211**
Stddev	.00014	.00003	.00222	.00002	.00080	.05648	.00003	.00075	.00434
%RSD	9.4648	24.595	101.04	2.0086	87.161	115.32	3.1057	46.428	205.87
#1	-.00136	.00010	.00377	.00108	-.00148	-.08892	.00092	.00108	.00518
#2	-.00155	.00014	.00063	.00111	-.00035	-.00904	.00088	.00214	-.00096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3559.4**	**42755.**	**3010.1**
Stddev	16.7	191.	8.7
%RSD	.46853	.44600	.28956
#1	3571.2	42620.	3004.0
#2	3547.6	42889.	3016.3

Sample Name: 280-116141-B-4-A Acquired: 11/7/2018 10:53:56 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435536 6010C (Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00166**	**.03779**	**.00273**	**.14820**	**.08426**	**.00004**	**-.00420**	**167.85**	**.00066**
Stddev	.00027	.00008	.00360	.00146	.00076	.00017	.00169	.22	.00050
%RSD	15.933	.20878	131.75	.98331	.89844	461.72	40.151	.13221	75.848
#1	.00185	.03785	.00528	.14923	.08480	.00016	-.00539	167.69	.00030
#2	.00148	.03774	.00019	.14717	.08373	-.00008	-.00301	168.01	.00101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**.00083**	**.00093**	**.15393**	**6.8842**	**.03944**	**51.569**	**.03099**	**.00345**
Stddev	.00002	.00045	.00060	.02068	.0233	.00260	.018	.00003	.00061
%RSD	8.8378	54.267	64.044	13.432	.33808	6.5979	.03415	.08114	17.588
#1	-.00024	.00051	.00135	.16855	6.9007	.04128	51.581	.03101	.00388
#2	-.00027	.00115	.00051	.13931	6.8678	.03760	51.556	.03097	.00302
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**78.898**	**.00180**	**.04564**	**-.00787**	**143.90**	**.00141**	**-.01147**	**25.320**	**54.184**
Stddev	.161	.00023	.00231	.00178	1.83	.00910	.00211	.083	.177
%RSD	.20453	12.580	5.0661	22.617	1.2693	644.80	18.399	.32597	.32597
#1	78.783	.00196	.04727	-.00913	145.19	.00785	-.01297	25.378	54.309
#2	79.012	.00164	.04400	-.00661	142.60	-.00503	-.00998	25.261	54.059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00138**	**2.2151**	**-.00016**	**.00156**	**-.00298**	**-.03020**	**.00866**	**.00960**	**.00149**
Stddev	.00169	.0025	.00212	.00037	.00061	.01906	.00052	.00014	.00060
%RSD	122.67	.11436	1317.3	23.931	20.638	63.106	5.9612	1.4788	40.661
#1	-.00018	2.2134	.00134	.00129	-.00254	-.04368	.00903	.00950	.00106
#2	-.00257	2.2169	-.00166	.00182	-.00341	-.01673	.00830	.00970	.00192
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3528.4**	**42318.**	**3104.9**
Stddev	10.6	67.	11.5
%RSD	.30008	.15788	.36987
#1	3520.9	42365.	3096.8
#2	3535.9	42271.	3113.0

Sample Name: 280-116413-B-5-A Acquired: 11/7/2018 10:56:29 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/6 Custom ID2: Custom ID3:
Comment: 436150 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	**.19628**	**.00645**	**.78380**	**.03039**	**-.00002**	**-.00398**	**4.6666**	**.00031**
Stddev	.00081	.00290	.00310	.01239	.00101	.00017	.00457	.0097	.00007
%RSD	239.41	1.4775	48.122	1.5813	3.3301	1097.9	114.70	.20728	22.431
#1	.00091	.19833	.00425	.79257	.03111	.00010	-.00722	4.6735	.00035
#2	-.00023	.19423	.00864	.77504	.02968	-.00013	-.00075	4.6598	.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00040**	**.00071**	**.00604**	**.07684**	**2.2464**	**.12736**	**.25667**	**.00589**	**.02636**
Stddev	.00013	.00003	.00010	.00145	.0680	.00030	.00280	.00008	.00001
%RSD	32.043	3.7236	1.7082	1.8857	3.0289	.23657	1.0901	1.2854	.04484
#1	-.00031	.00069	.00597	.07787	2.1983	.12758	.25469	.00583	.02637
#2	-.00049	.00072	.00612	.07582	2.2945	.12715	.25864	.00594	.02635
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**424.96**	**.00115**	**.16722**	**-.00312**	**79.050**	**.00057**	**-.00117**	**11.569**	**24.757**
Stddev	1.35	.00048	.00446	.00038	1.374	.00022	.00175	.142	.304
%RSD	.31771	41.770	2.6683	12.077	1.7387	39.600	149.74	1.2267	1.2267
#1	425.92	.00149	.16406	-.00339	80.022	.00041	.00007	11.669	24.972
#2	424.01	.00081	.17037	-.00285	78.078	.00072	-.00240	11.469	24.543
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00157**	**.16312**	**-.00163**	**.00511**	**-.00280**	**.00463**	**.04789**	**.00561**	**.00399**
Stddev	.00165	.00045	.00030	.00112	.00035	.03410	.00063	.00023	.00438
%RSD	104.87	.27361	18.253	21.874	12.402	735.87	1.3163	4.0782	109.78
#1	-.00274	.16343	-.00184	.00591	-.00305	-.01948	.04833	.00577	.00089
#2	-.00041	.16280	-.00142	.00432	-.00256	.02874	.04744	.00544	.00709
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3525.9**	**42057.**	**3159.6**
Stddev	2.4	205.	9.2
%RSD	.06812	.48817	.29126
#1	3527.6	42202.	3153.1
#2	3524.2	41912.	3166.1

Sample Name: 280-116413-B-6-A Acquired: 11/7/2018 10:59:01 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00083**	**.12592**	**-.00555**	**.22023**	**.11399**	**-.00017**	**.00379**	**3.3653**	**.00017**
Stddev	.00014	.00162	.00155	.00331	.00068	.00001	.00629	.0330	.00023
%RSD	17.308	1.2887	27.951	1.5018	.59758	5.8365	166.14	.98142	138.67
#1	.00093	.12706	-.00445	.22257	.11447	-.00016	.00824	3.3887	.00000
#2	.00073	.12477	-.00664	.21789	.11350	-.00018	-.00066	3.3420	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00027**	**.00084**	**.00171**	**.10661**	**2.0008**	**.14540**	**.31974**	**.00320**	**.01019**
Stddev	.00038	.00034	.00022	.00598	.0277	.00418	.00363	.00002	.00064
%RSD	139.43	40.739	13.135	5.6048	1.3861	2.8724	1.1354	.53611	6.2619
#1	-.00000	.00109	.00155	.10239	2.0204	.14835	.31718	.00321	.01064
#2	-.00054	.00060	.00186	.11084	1.9812	.14245	.32231	.00319	.00974
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**398.57**	**.00057**	**.01385**	**-.00183**	**28.420**	**-.00094**	**.00698**	**4.9694**	**10.634**
Stddev	1.10	.00008	.00365	.00103	.378	.00073	.00995	.0021	.004
%RSD	.27695	13.690	26.371	56.263	1.3303	76.992	142.66	.04230	.04230
#1	399.35	.00063	.01643	-.00110	28.687	-.00146	.01401	4.9709	10.638
#2	397.79	.00052	.01127	-.00256	28.152	-.00043	-.00006	4.9679	10.631
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00327**	**.16518**	**-.00066**	**.00139**	**.00032**	**-.00704**	**.03487**	**.00341**	**.00113**
Stddev	.00091	.00060	.00267	.00047	.00002	.00223	.00020	.00033	.00529
%RSD	27.918	.36602	406.31	33.560	5.5403	31.726	.56461	9.5728	470.10
#1	-.00262	.16561	-.00255	.00172	.00030	-.00546	.03473	.00364	.00487
#2	-.00391	.16475	.00123	.00106	.00033	-.00862	.03501	.00317	-.00262
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3460.1**	**41589.**	**3119.4**
Stddev	1.2	270.	32.9
%RSD	.03482	.65007	1.0532
#1	3459.2	41398.	3096.1
#2	3460.9	41780.	3142.6

Sample Name: 280-116413-B-7-A Acquired: 11/7/2018 11:01:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.06468**	**.00889**	**1.2341**	**.03302**	**-.00020**	**.00174**	**6.8278**	**-.00016**
Stddev	.00014	.00100	.00246	.0199	.00066	.00005	.00712	.0275	.00027
%RSD	38.859	1.5408	27.608	1.6107	1.9841	26.772	409.88	.40306	167.80
#1	-.00026	.06539	.00716	1.2482	.03256	-.00016	.00677	6.8084	-.00035
#2	-.00046	.06398	.01063	1.2201	.03348	-.00024	-.00330	6.8473	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.00046**	**.00074**	**.05940**	**3.2586**	**.24797**	**1.0708**	**.05845**	**.02878**
Stddev	.00007	.00059	.00111	.00063	.0386	.00513	.0016	.00000	.00111
%RSD	27.915	127.20	149.12	1.0575	1.1842	2.0684	.14545	.00041	3.8609
#1	.00029	.00005	-.00004	.05896	3.2858	.24434	1.0697	.05845	.02957
#2	.00019	.00088	.00152	.05985	3.2313	.25159	1.0719	.05845	.02800
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **598.83**	**.00033**	**.15440**	**-.00356**	**78.219**	**-.00321**	**-.00535**	**5.3595**	**11.469**
Stddev	1.35	.00010	.00076	.00101	1.182	.00203	.00797	.0622	.133
%RSD	.22604	31.477	.49360	28.488	1.5112	62.995	149.10	1.1613	1.1613
#1	597.88	.00025	.15386	-.00284	79.055	-.00465	-.01098	5.3155	11.375
#2	599.79	.00040	.15494	-.00428	77.384	-.00178	.00029	5.4035	11.563
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00301**	**.37711**	**.00050**	**.00030**	**.00088**	**.02379**	**.00077**	**.00225**	**.00450**
Stddev	.00045	.00185	.00170	.00006	.00007	.01893	.00023	.00035	.00064
%RSD	14.836	.48943	340.80	18.721	7.5478	79.576	29.958	15.794	14.320
#1	-.00332	.37581	-.00070	.00026	.00083	.03718	.00061	.00200	.00404
#2	-.00269	.37842	.00170	.00034	.00093	.01041	.00093	.00250	.00495
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3449.5**	**40598.**	**3074.7**
Stddev	38.1	140.	23.3
%RSD	1.1034	.34409	.75732
#1	3422.6	40499.	3091.1
#2	3476.4	40697.	3058.2

Sample Name: 280-116413-B-8-A Acquired: 11/7/2018 11:04:07 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00059**	**.03456**	**-.00138**	**1.3341**	**.02053**	**-.00031**	**.00742**	**4.8829**	**.00014**
Stddev	.00113	.00034	.00347	.0151	.00024	.00013	.00983	.0330	.00003
%RSD	190.92	.99180	252.35	1.1318	1.1843	42.842	132.48	.67481	23.368
#1	-.00021	.03481	.00108	1.3448	.02071	-.00040	.01437	4.9062	.00012
#2	.00139	.03432	-.00383	1.3234	.02036	-.00021	.00047	4.8596	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00003**	**.00025**	**.00067**	**.06495**	**2.9577**	**.23295**	**.80190**	**.03315**	**.03259**
Stddev	.00082	.00022	.00057	.00480	.0541	.00710	.00639	.00024	.00057
%RSD	2742.2	88.469	85.731	7.3915	1.8277	3.0485	.79639	.72299	1.7568
#1	.00055	.00009	.00108	.06156	2.9195	.23797	.80642	.03332	.03299
#2	-.00061	.00041	.00026	.06835	2.9959	.22793	.79739	.03298	.03218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **552.27**	**.00003**	**.18893**	**-.00314**	**77.329**	**-.00378**	**.00196**	**4.9967**	**10.693**
Stddev	2.17	.00047	.00109	.00110	.995	.00138	.00445	.0396	.085
%RSD	.39318	1814.9	.57818	35.199	1.2865	36.591	226.80	.79243	.79243
#1	553.80	.00036	.18970	-.00392	78.032	-.00475	.00511	5.0247	10.753
#2	550.73	-.00031	.18816	-.00236	76.625	-.00280	-.00118	4.9687	10.633
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00264**	**.26451**	**-.00076**	**.00072**	**.00095**	**-.03262**	**.00017**	**.00375**	**.00093**
Stddev	.00088	.00093	.00137	.00026	.00261	.02835	.00002	.00127	.00169
%RSD	33.379	.35188	180.44	36.716	275.92	86.927	11.275	33.903	181.57
#1	-.00201	.26517	.00021	.00053	.00279	-.05267	.00016	.00465	-.00026
#2	-.00326	.26385	-.00173	.00090	-.00090	-.01257	.00018	.00285	.00212
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3464.3**	**40883.**	**3082.8**
Stddev	20.5	25.	35.9
%RSD	.59062	.06039	1.1643
#1	3449.8	40900.	3057.4
#2	3478.8	40865.	3108.2

Sample Name: 280-116413-B-9-A Acquired: 11/7/2018 11:06:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436150 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00037**	**.03628**	**.00037**	**1.2206**	**.03519**	**-.00031**	**.00227**	**18.539**	**.00002**
Stddev	.00014	.00035	.00429	.0150	.00029	.00001	.00041	.088	.00030
%RSD	38.845	.96945	1150.5	1.2305	.81845	1.8688	18.019	.47668	1843.1
#1	.00027	.03603	.00340	1.2312	.03499	-.00031	.00256	18.601	-.00020
#2	.00047	.03653	-.00266	1.2100	.03539	-.00031	.00198	18.476	.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.00024**	**.00085**	**.07837**	**5.7203**	**.55136**	**2.1861**	**.08008**	**.03119**
Stddev	.00036	.00040	.00069	.00025	.0134	.00294	.0040	.00030	.00071
%RSD	274.75	166.62	81.942	.32134	.23420	.53281	.18311	.37193	2.2883
#1	.00013	.00052	.00134	.07855	5.7297	.55344	2.1889	.08029	.03169
#2	-.00039	-.00004	.00036	.07819	5.7108	.54929	2.1832	.07987	.03068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **1179.8**	**.00087**	**.09331**	**-.00234**	**108.77**	**-.00463**	**-.00404**	**4.1652**	**8.9134**
Stddev	4.2	.00052	.00623	.00115	1.34	.00039	.00649	.0004	.0008
%RSD	.35642	60.051	6.6741	49.088	1.2338	8.4518	160.60	.00938	.00938
#1	1182.8	.00124	.09771	-.00153	109.72	-.00491	.00055	4.1649	8.9128
#2	1176.8	.00050	.08891	-.00315	107.83	-.00436	-.00863	4.1654	8.9140
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00220**	**1.7204**	**-.00030**	**.00024**	**.00001**	**-.02480**	**-.00055**	**.00495**	**-.00132**
Stddev	.00033	.0052	.00462	.00014	.00037	.04055	.00000	.00020	.00158
%RSD	14.930	.30326	1553.8	60.107	2993.4	163.53	.33884	4.0471	119.60
#1	-.00197	1.7241	-.00357	.00034	.00028	.00388	-.00055	.00481	-.00244
#2	-.00243	1.7167	.00297	.00014	-.00025	-.05348	-.00055	.00509	-.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3374.6**	**40187.**	**3135.0**
Stddev	3.2	18.	25.7
%RSD	.09428	.04473	.81870
#1	3372.4	40199.	3116.9
#2	3376.9	40174.	3153.2

Sample Name: CCVH-5408055 Acquired: 11/7/2018 11:09:17 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00252**	**50.112**	**-.00867**	**.00553**	**.00026**	**-.00051**	**1.0028**	**.01614**	**-.00010**	**.00135**	**.00056**	**.00064**	**49.534**
Stddev	.00001	.310	.00096	.00025	.00020	.00013	.0168	.00317	.00003	.00027	.00020	.00086	.275
%RSD	.38731	.61956	11.075	4.4889	78.973	25.396	1.6732	19.667	31.094	19.995	35.936	134.86	.55616
#1	-.00252	50.332	-.00799	.00535	.00011	-.00042	1.0146	.01390	-.00013	.00116	.00042	.00003	49.729
#2	-.00253	49.893	-.00935	.00570	.00040	-.00060	.99091	.01839	-.00008	.00155	.00070	.00125	49.339
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25974**	**.00288**	**-.08644**	**.00251**	**-.00124**	**248.14**	**.00343**	**.00106**	**-.00081**	**4.9566**	**.00669**	**.00823**	**-.00900**
Stddev	.17446	.00194	.00895	.00015	.00040	.39	.00013	.00145	.00027	.0632	.00012	.00642	.01269
%RSD	67.170	67.324	10.352	5.8390	32.534	.15723	3.6567	136.41	33.004	1.2751	1.7465	77.990	140.94
#1	.38310	.00425	-.08011	.00261	-.00152	248.42	.00351	.00004	-.00062	5.0013	.00661	.01276	-.00003
#2	.13637	.00151	-.09276	.00241	-.00095	247.86	.00334	.00208	-.00100	4.9119	.00677	.00369	-.01797
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01927**	**.00030**	**.00054**	**4.8406**	**.01660**	**-.00226**	**10.155**	**-.00944**	**.00007**	**.08497**
Stddev	.02715	.00143	.00008	.0385	.00030	.00155	.033	.00074	.00016	.00161
%RSD	140.94	473.92	15.380	.79572	1.8290	68.653	.32882	7.8857	213.87	1.8925
#1	-.00007	-.00071	.00048	4.8678	.01681	-.00336	10.179	-.00997	-.00004	.08383
#2	-.03847	.00131	.00060	4.8134	.01638	-.00116	10.131	-.00891	.00018	.08611
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3556.1**	**42644.**	**3112.4**
Stddev	31.4	45.	28.0
%RSD	.88372	.10511	.89857
#1	3533.9	42676.	3092.6
#2	3578.3	42612.	3132.2

Sample Name: CCV-5407546 Acquired: 11/7/2018 11:11:48 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49835**	**.51083**	**.99117**	**.49365**	**.50912**	**.50428**	**.00664**	**5.1410**	**.49289**	**.49867**	**.49980**	**.50146**
Stddev	.00154	.00619	.01611	.00464	.00548	.00626	.00371	.1618	.00678	.00708	.00993	.00322
%RSD	.30853	1.2119	1.6256	.93996	1.0773	1.2417	55.940	3.1465	1.3762	1.4201	1.9862	.64275
#1	.49943	.51521	1.0026	.49693	.50524	.49985	.00927	5.2554	.49769	.50368	.50682	.50374
#2	.49726	.50645	.97978	.49036	.51300	.50871	.00401	5.0267	.48809	.49366	.49278	.49918
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6927**	**50.402**	**1.0312**	**19.752**	**.49347**	**.49524**	F **7.7424**	**.49914**	**.97179**	**1.0040**	**.02929**	**.97502**
Stddev	.2601	.610	.0122	.083	.00191	.00925	3.3199	.00634	.01378	.0118	.01249	.00972
%RSD	9.6605	1.2106	1.1816	.42159	.38670	1.8677	42.879	1.2712	1.4176	1.1801	42.638	.99674
#1	2.8767	49.970	1.0226	19.811	.49482	.50178	10.090	.50363	.98153	1.0124	.03812	.98189
#2	2.5088	50.833	1.0398	19.693	.49212	.48870	5.3949	.49466	.96205	.99563	.02046	.96814
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0047**	**4.9762**	**10.649**	**.99687**	**.50958**	**.01050**	**.48645**	**1.0115**	**-.03829**	**.49394**	**.48547**	**.49844**
Stddev	.0208	.0265	.057	.01606	.00109	.00023	.00034	.0123	.02038	.00102	.00076	.00540
%RSD	2.0677	.53201	.53201	1.6107	.21317	2.2329	.06998	1.2196	53.226	.20694	.15753	1.0836
#1	1.0194	4.9950	10.689	1.0082	.50881	.01066	.48669	1.0202	-.05270	.49466	.48493	.49462
#2	.98998	4.9575	10.609	.98551	.51034	.01033	.48621	1.0027	-.02388	.49322	.48601	.50225
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3637.8**	**44331.**	**3220.9**
Stddev	40.9	79.	5.7
%RSD	1.1242	.17856	.17681
#1	3666.7	44275.	3224.9
#2	3608.9	44387.	3216.8

Sample Name: CCB Acquired: 11/7/2018 11:14:12 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00043**	**.00062**	**.00074**	**.00220**	**.00049**	**-.00020**	**.00125**	**.02631**	**-.00008**	**-.00008**	**.00007**	**-.00252**	**.00409**
Stddev	.00069	.00004	.00246	.00003	.00003	.00000	.00302	.00037	.00028	.00073	.00005	.00052	.00360
%RSD	159.46	6.0497	332.00	1.5205	6.2006	.65501	240.44	1.4144	340.96	923.16	75.260	20.550	88.126
#1	.00092	.00064	-.00100	.00222	.00052	-.00020	-.00088	.02658	.00012	-.00060	.00003	-.00216	.00154
#2	-.00006	.00059	.00248	.00217	.00047	-.00021	.00339	.02605	-.00028	.00044	.00011	-.00289	.00664
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01246**	**.00097**	**.00601**	**.00017**	**.00087**	**.20973**	**.00060**	**.00017**	**-.00056**	**.02222**	**.00005**	**.00337**	**-.00112**
Stddev	.13302	.00364	.00972	.00014	.00064	.02902	.00027	.00123	.00290	.00067	.00235	.00695	.05078
%RSD	1067.9	376.30	161.76	81.805	73.350	13.835	45.407	734.26	515.33	3.0367	4444.1	206.12	4543.2
#1	-.08160	.00355	.01288	.00026	.00133	.18921	.00079	.00104	-.00261	.02174	-.00161	.00829	.03479
#2	.10652	-.00161	-.00086	.00007	.00042	.23025	.00041	-.00070	.00149	.02270	.00171	-.00154	-.03702
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00239**	**-.00012**	**-.00002**	**.00246**	**.00099**	**-.00213**	**.00272**	**.00051**	**.00132**	**-.00039**
Stddev	.10866	.00013	.00023	.00062	.00037	.00328	.00227	.00003	.00017	.00086
%RSD	4543.2	107.20	953.85	25.334	37.138	154.28	83.300	5.3331	12.687	219.78
#1	.07444	-.00003	-.00018	.00290	.00125	.00019	.00433	.00049	.00144	.00022
#2	-.07923	-.00021	.00014	.00202	.00073	-.00445	.00112	.00053	.00120	-.00099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3630.2**	**44297.**	**3112.6**
Stddev	9.7	421.	3.7
%RSD	.26648	.95145	.11890
#1	3623.4	43999.	3115.2
#2	3637.1	44595.	3110.0

Sample Name: CCVL-5415520 Acquired: 11/7/2018 11:16:55 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01199**	**.10923**	**.01575**	**.09935**	**.01066**	**.00072**	**.11522**	**.21918**	**.00527**	**.01070**	**.01039**	**.01421**
Stddev	.00043	.00048	.00150	.00146	.00011	.00013	.00276	.00011	.00008	.00006	.00038	.00060
%RSD	3.6128	.43686	9.5481	1.4740	1.0411	18.386	2.3971	.05245	1.4563	.52802	3.6545	4.2427
#1	.01230	.10957	.01468	.10039	.01074	.00063	.11717	.21926	.00533	.01074	.01066	.01378
#2	.01168	.10889	.01681	.09832	.01058	.00082	.11326	.21910	.00522	.01066	.01012	.01464
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10301**	**3.1935**	**.02180**	**.20554**	**.01017**	**.01922**	**1.2737**	**.04243**	**2.8770**	**.00789**	**.11060**	**.02022**
Stddev	.00128	.0850	.00311	.00052	.00007	.00054	.1151	.00044	.0204	.00210	.00053	.00037
%RSD	1.2390	2.6617	14.263	.25271	.73341	2.7868	9.0366	1.0440	.70970	26.652	.47743	1.8125
#1	.10392	3.1334	.01961	.20590	.01022	.01959	1.3551	.04274	2.8914	.00640	.11023	.01996
#2	.10211	3.2536	.02400	.20517	.01012	.01884	1.1923	.04212	2.8625	.00937	.11097	.02048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.01229**	**.49413**	**1.0574**	**.10021**	**.01062**	**.01740**	**.01013**	**.01480**	F **-.05012**	**.01003**	**.01997**	**.01533**
Stddev	.00286	.00673	.0144	.00107	.00032	.00264	.00074	.00203	.01803	.00072	.00021	.00142
%RSD	23.283	1.3622	1.3622	1.0680	3.0034	15.182	7.3003	13.715	35.983	7.1635	1.0547	9.2896
#1	.01431	.49889	1.0676	.10096	.01085	.01927	.00961	.01336	-.06287	.00953	.02012	.01633
#2	.01027	.48937	1.0473	.09945	.01040	.01553	.01066	.01624	-.03737	.01054	.01982	.01432
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value	.02000								.06000			
Range	-30.000%								-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3745.3**	**45651.**	**3244.3**
Stddev	.7	216.	22.0
%RSD	.01932	.47408	.67857
#1	3745.8	45804.	3259.9
#2	3744.8	45498.	3228.7

Sample Name: MB 280-436364/1-A Acquired: 11/7/2018 11:20:10 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/6 Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00108**	**.00196**	**.00123**	**.00075**	**.00068**	**-.00043**	**.00035**	**.00732**	**.00009**
Stddev	.00043	.00017	.00058	.00015	.00056	.00002	.00052	.00362	.00016
%RSD	40.129	8.8016	47.312	20.528	83.535	5.0988	146.62	49.398	176.46
#1	.00077	.00183	.00082	.00086	.00107	-.00042	-.00001	.00988	.00021
#2	.00139	.00208	.00164	.00064	.00028	-.00045	.00072	.00477	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**-.00010**	**-.00234**	**.00936**	**-.06608**	**.00026**	**.00279**	**.00010**	**-.00015**
Stddev	.00034	.00017	.00009	.00032	.00790	.00230	.00323	.00002	.00041
%RSD	275.02	169.85	3.9685	3.4627	11.949	877.94	115.61	24.295	267.52
#1	.00012	-.00023	-.00241	.00959	-.07167	.00189	.00508	.00008	-.00045
#2	-.00036	.00002	-.00228	.00913	-.06050	-.00137	.00051	.00011	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10123**	**.00107**	**-.00126**	**-.00043**	**.00807**	**-.00409**	**.00083**	**-.04963**	**-.10621**
Stddev	.00221	.00057	.00057	.00218	.00919	.00131	.00434	.01110	.02376
%RSD	2.1785	53.088	45.470	500.49	113.87	32.154	525.20	22.369	22.369
#1	.09967	.00067	-.00167	-.00197	.01456	-.00316	.00389	-.05748	-.12301
#2	.10279	.00147	-.00086	.00110	.00157	-.00502	-.00224	-.04178	-.08941
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00138**	**.00003**	**.00215**	**.00055**	**-.00016**	**-.01559**	**.00041**	**-.00010**	**.00007**
Stddev	.00041	.00012	.00086	.00033	.00172	.01636	.00007	.00022	.00154
%RSD	29.694	383.28	39.916	60.076	1067.9	104.95	18.072	212.26	2275.3
#1	-.00109	-.00005	.00276	.00079	-.00138	-.00402	.00046	-.00026	.00116
#2	-.00167	.00011	.00154	.00032	.00105	-.02716	.00035	.00005	-.00102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3729.7**	**45510.**	**3171.9**
Stddev	37.4	123.	8.9
%RSD	1.0041	.27052	.27933
#1	3703.2	45597.	3165.6
#2	3756.2	45423.	3178.1

Sample Name: LCS 280-436364/2-A Acquired: 11/7/2018 11:22:45 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04802**	**2.0093**	**1.0116**	**1.0055**	**2.0466**	**.05022**	**2.0334**	**50.149**	**.09504**
Stddev	.00004	.0134	.0063	.0077	.0001	.00035	.0078	.084	.00148
%RSD	.07856	.66587	.62680	.76874	.00561	.68730	.38457	.16670	1.5530
#1	.04805	2.0187	1.0161	1.0110	2.0465	.04998	2.0389	50.090	.09609
#2	.04799	1.9998	1.0071	1.0000	2.0467	.05047	2.0279	50.208	.09400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49477**	**.20127**	**.24681**	**.98686**	**51.031**	**1.0231**	**48.624**	**.48453**	**1.0223**
Stddev	.00355	.00272	.00069	.00512	.221	.0022	.018	.00013	.0120
%RSD	.71799	1.3520	.27783	.51880	.43380	.21922	.03639	.02585	1.1718
#1	.49728	.20320	.24729	.99048	50.874	1.0247	48.612	.48445	1.0308
#2	.49226	.19935	.24632	.98324	51.187	1.0215	48.637	.48462	1.0138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.325**	**.48880**	**10.156**	**.50103**	**2.0115**	**.50040**	**2.0452**	F **8.1058**	**17.346**
Stddev	.326	.00393	.090	.00235	.0193	.00612	.0174	.0241	.051
%RSD	.63598	.80342	.88281	.46927	.95996	1.2224	.84843	.29685	.29685
#1	51.094	.49158	10.219	.50269	2.0252	.50473	2.0575	8.0888	17.310
#2	51.555	.48602	10.092	.49936	1.9979	.49608	2.0329	8.1228	17.383
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit								11.000	
Low Limit								9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0314**	**1.0298**	**.97457**	**.97760**	**2.0157**	**1.9874**	**.50379**	**.48751**	**.51889**
Stddev	.0241	.0016	.00218	.00244	.0163	.0157	.00218	.00050	.00218
%RSD	1.1842	.15462	.22329	.24940	.81049	.79066	.43343	.10232	.42037
#1	2.0484	1.0286	.97610	.97587	2.0272	1.9986	.50533	.48716	.51735
#2	2.0144	1.0309	.97303	.97932	2.0041	1.9763	.50224	.48786	.52044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3612.0**	**43661.**	**3178.7**
Stddev	.0	193.	14.2
%RSD	.00110	.44312	.44553
#1	3612.0	43524.	3168.7
#2	3612.0	43798.	3188.8

Sample Name: 280-115619-B-1-H Acquired: 11/7/2018 11:25:07 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00080**	**.00242**	**-.00002**	**.00196**	**.00081**	**-.00050**	**.00193**	**.03821**	**-.00011**
Stddev	.00139	.00014	.00054	.00053	.00002	.00008	.00020	.01659	.00014
%RSD	173.98	5.8330	2436.4	27.216	2.4672	16.836	10.152	43.409	125.45
#1	-.00018	.00252	-.00040	.00234	.00080	-.00056	.00207	.04994	-.00021
#2	.00179	.00232	.00036	.00159	.00083	-.00044	.00179	.02648	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00060**	**-.00295**	**.01177**	**.15632**	**.00078**	**.00169**	**.00027**	**.00220**
Stddev	.00009	.00008	.00055	.00335	.13583	.00627	.00104	.00005	.00002
%RSD	98.421	13.554	18.594	28.434	86.888	799.14	61.286	17.377	1.1047
#1	.00015	.00066	-.00334	.01413	.06028	-.00365	.00096	.00030	.00222
#2	.00003	.00054	-.00257	.00940	.25237	.00522	.00242	.00024	.00218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.15210**	**.00026**	**-.00256**	**-.00057**	**.01231**	**-.00197**	**.00371**	**.01466**	**.03138**
Stddev	.01505	.00088	.00123	.00059	.00643	.00126	.00997	.01156	.02474
%RSD	9.8957	337.47	48.168	103.10	52.259	64.297	268.96	78.823	78.823
#1	.16274	.00089	-.00169	-.00098	.01686	-.00107	-.00334	.02284	.04887
#2	.14145	-.00036	-.00343	-.00015	.00776	-.00286	.01076	.00649	.01389
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**.00006**	**.00243**	**.00114**	**-.00135**	**-.06155**	**.00074**	**.00036**	**.00030**
Stddev	.00033	.00013	.00070	.00038	.00065	.05456	.00043	.00003	.00151
%RSD	122.29	239.80	28.720	33.628	48.092	88.647	58.392	8.1119	505.31
#1	.00004	.00015	.00292	.00087	-.00181	-.02297	.00104	.00038	.00136
#2	.00050	-.00004	.00193	.00141	-.00089	-.10014	.00043	.00034	-.00077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3757.8**	**46054.**	**3235.6**
Stddev	6.4	24.	19.4
%RSD	.16923	.05143	.60056
#1	3762.3	46037.	3249.4
#2	3753.3	46070.	3221.9

Sample Name: 280-115619-B-2-P Acquired: 11/7/2018 11:27:43 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00125**	**.14625**	**.00500**	**.05054**	**.11190**	**-.00039**	**.00477**	**214.88**	**-.00022**
Stddev	.00091	.00279	.00495	.00170	.00003	.00022	.00294	1.08	.00010
%RSD	72.785	1.9075	98.939	3.3644	.02248	56.162	61.783	.50171	44.680
#1	.00189	.14822	.00850	.05174	.11188	-.00054	.00685	215.64	-.00029
#2	.00061	.14428	.00150	.04933	.11192	-.00024	.00268	214.11	-.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**.00150**	**.00173**	**1.3688**	**79.454**	**.00714**	**9.0024**	**.02015**	**.00028**
Stddev	.00007	.00010	.00078	.0013	.413	.00178	.0198	.00002	.00024
%RSD	158.24	6.8443	44.884	.09610	.51978	24.936	.21959	.08214	87.325
#1	-.00010	.00157	.00228	1.3678	79.746	.00840	9.0164	.02014	.00011
#2	.00001	.00142	.00118	1.3697	79.162	.00588	8.9884	.02017	.00045
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**242.53**	**.00129**	**.04896**	**.00047**	**3.2713**	**.00316**	**-.00490**	**4.4145**	**9.4471**
Stddev	1.48	.00053	.00084	.00015	.0561	.00094	.00313	.0547	.1170
%RSD	.60971	41.245	1.7228	31.579	1.7158	29.706	63.812	1.2383	1.2383
#1	243.57	.00091	.04955	.00036	3.3110	.00250	-.00269	4.4532	9.5298
#2	241.48	.00166	.04836	.00057	3.2316	.00383	-.00711	4.3759	9.3643
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00262**	**1.9745**	**.00239**	**.00072**	**-.00232**	**-.08052**	**.00132**	**.00368**	**.00054**
Stddev	.00141	.0117	.00020	.00011	.00712	.06727	.00013	.00023	.00013
%RSD	53.651	.59377	8.3202	15.190	306.47	83.542	9.7465	6.2120	24.740
#1	-.00163	1.9828	.00253	.00064	-.00735	-.12808	.00141	.00384	.00063
#2	-.00361	1.9662	.00225	.00079	.00271	-.03295	.00122	.00352	.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3579.7**	**43199.**	**3181.8**
Stddev	7.0	119.	11.6
%RSD	.19572	.27577	.36386
#1	3584.7	43115.	3173.6
#2	3574.8	43284.	3190.0

Sample Name: 280-115619-B-3-H Acquired: 11/7/2018 11:30:16 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00143**	**.01373**	**.00838**	**.07902**	**.11163**	**-.00036**	**.00628**	**332.61**	**-.00047**
Stddev	.00003	.00026	.00681	.00068	.00062	.00013	.00883	.07	.00024
%RSD	1.9945	1.9179	81.327	.85774	.55670	35.224	140.60	.02031	50.457
#1	.00141	.01354	.00356	.07949	.11207	-.00027	.00004	332.66	-.00064
#2	.00145	.01392	.01320	.07854	.11119	-.00045	.01253	332.56	-.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00041**	**.00080**	**.00049**	**1.0808**	W **163.44**	**.00867**	**14.115**	**.05833**	**.00328**
Stddev	.00034	.00022	.00017	.0034	.06	.00116	.016	.00015	.00024
%RSD	84.206	27.475	35.734	.30962	.03799	13.324	.11316	.25842	7.2175
#1	-.00065	.00065	.00036	1.0785	163.40	.00785	14.126	.05843	.00311
#2	-.00017	.00096	.00061	1.0832	163.49	.00949	14.104	.05822	.00345
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					100.00				
Low Limit					-6.0000				

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**411.15**	**.00232**	**.03259**	**-.00333**	**3.0977**	**-.00039**	**.00345**	**5.1891**	**11.105**
Stddev	1.71	.00033	.00186	.00160	.0570	.00462	.00059	.0161	.035
%RSD	.41708	14.041	5.7171	47.988	1.8412	1171.3	17.131	.31095	.31095
#1	412.36	.00255	.03127	-.00446	3.1381	.00287	.00387	5.1776	11.080
#2	409.94	.00209	.03391	-.00220	3.0574	-.00366	.00304	5.2005	11.129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00251**	**3.2751**	**.00321**	**.00031**	**-.00269**	**-.07288**	**.00116**	**.00149**	**.00270**
Stddev	.00129	.0017	.00407	.00022	.00025	.00436	.00024	.00125	.01024
%RSD	51.225	.05327	126.87	69.437	9.1874	5.9867	20.888	83.847	379.56
#1	-.00160	3.2764	.00609	.00016	-.00286	-.06979	.00134	.00237	.00994
#2	-.00342	3.2739	.00033	.00047	-.00251	-.07596	.00099	.00061	-.00454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3516.8**	**42057.**	**3175.7**
Stddev	3.2	109.	14.8
%RSD	.08978	.25813	.46493
#1	3514.5	41980.	3165.2
#2	3519.0	42134.	3186.1

Sample Name: 115619-B-3-H SD@5 Acquired: 11/7/2018 11:32:50 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00096**	**.00156**	**.00237**	**.01635**	**.02241**	**-.00045**	**-.00181**	**64.375**	**.00023**
Stddev	.00038	.00063	.00832	.00032	.00030	.00028	.00404	.252	.00020
%RSD	39.713	40.210	350.78	1.9430	1.3274	60.991	223.13	.39075	85.175
#1	.00069	.00200	.00825	.01657	.02262	-.00065	-.00467	64.553	.00009
#2	.00123	.00111	-.00351	.01612	.02220	-.00026	.00105	64.197	.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00007**	**-.00157**	**.21110**	**31.935**	**.00101**	**2.8600**	**.01235**	**-.00024**
Stddev	.00009	.00017	.00014	.00073	.125	.00220	.0000	.00012	.00056
%RSD	250.78	226.65	8.7735	.34385	.39050	217.70	.00091	.98120	228.55
#1	-.00003	-.00004	-.00148	.21162	32.023	-.00055	2.8600	.01226	.00015
#2	.00010	.00019	-.00167	.21059	31.847	.00257	2.8600	.01243	-.00064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**81.969**	**.00022**	**.00887**	**-.00116**	**.58517**	**.00197**	**-.00710**	**.98398**	**2.1057**
Stddev	.588	.00058	.00161	.00264	.00005	.00100	.00441	.04096	.0877
%RSD	.71784	266.24	18.205	228.06	.00807	50.561	62.095	4.1630	4.1630
#1	82.385	.00063	.00773	.00071	.58514	.00268	-.01022	.95501	2.0437
#2	81.553	-.00019	.01001	-.00302	.58520	.00127	-.00399	1.0129	2.1677
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00094**	**.62584**	**.00202**	**.00006**	**-.00348**	**-.07724**	**.00012**	**-.00067**	**.00419**
Stddev	.00004	.00200	.00034	.00028	.00020	.05059	.00028	.00013	.00153
%RSD	4.2770	.31880	16.889	455.88	5.8837	65.494	228.62	19.640	36.489
#1	-.00091	.62725	.00177	-.00013	-.00333	-.11302	-.00007	-.00058	.00527
#2	-.00097	.62442	.00226	.00026	-.00362	-.04147	.00032	-.00076	.00311
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3588.4**	**43604.**	**3141.8**
Stddev	23.0	98.	11.8
%RSD	.64216	.22402	.37663
#1	3604.7	43674.	3133.4
#2	3572.1	43535.	3150.1

Sample Name: 280-115619-B-3-I MS Acquired: 11/7/2018 11:35:24 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05036**	**1.9458**	**1.0509**	**1.0232**	**2.1485**	**.05144**	**1.9893**	**372.32**	**.09583**
Stddev	.00053	.0163	.0180	.0030	.0000	.00041	.0125	.79	.00057
%RSD	1.0432	.83677	1.7120	.29225	.00009	.79333	.62683	.21322	.59924
#1	.05074	1.9573	1.0636	1.0253	2.1485	.05172	1.9981	372.88	.09624
#2	.04999	1.9343	1.0381	1.0211	2.1485	.05115	1.9805	371.75	.09542
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48571**	**.20086**	**.25178**	**2.0440**	W **211.00**	**1.0144**	**61.030**	**.54199**	**1.0138**
Stddev	.00393	.00212	.00232	.0122	.28	.0063	.101	.00149	.0112
%RSD	.80885	1.0546	.92133	.59487	.13158	.62089	.16577	.27467	1.0996
#1	.48849	.20236	.25342	2.0526	211.20	1.0099	61.102	.54304	1.0217
#2	.48293	.19936	.25014	2.0354	210.81	1.0188	60.959	.54094	1.0059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					100.00				
Low Limit					-6.0000				

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**449.95**	**.48290**	**10.701**	**.48067**	**5.1295**	**.48240**	**2.0798**	**11.211**	**23.991**
Stddev	1.03	.00299	.087	.00161	.0406	.00599	.0075	.065	.140
%RSD	.22831	.61836	.81050	.33465	.79112	1.2423	.36156	.58301	.58301
#1	449.22	.48501	10.762	.48181	5.1582	.48664	2.0851	11.257	24.090
#2	450.67	.48079	10.639	.47953	5.1008	.47816	2.0744	11.165	23.892
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9396**	**4.2312**	**.99111**	**.98041**	**1.8292**	**2.0040**	**.51546**	**.49520**	**.50988**
Stddev	.0140	.0052	.00326	.00368	.0111	.0106	.00064	.00247	.00141
%RSD	.72178	.12271	.32857	.37505	.60559	.52976	.12513	.49953	.27669
#1	1.9495	4.2348	.98881	.98301	1.8371	1.9965	.51591	.49695	.50888
#2	1.9297	4.2275	.99341	.97781	1.8214	2.0115	.51500	.49345	.51088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3409.7**	**40899.**	**3109.7**
Stddev	6.7	38.	8.9
%RSD	.19534	.09196	.28737
#1	3414.4	40872.	3103.4
#2	3405.0	40925.	3116.0

Sample Name: 280-115619-B-3-J MSD Acquired: 11/7/2018 11:37:44 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04854**	**1.9240**	**1.0352**	**1.0242**	**2.1441**	**.05082**	**1.9701**	**372.89**	**.09351**
Stddev	.00021	.0214	.0254	.0054	.0125	.00082	.0299	2.66	.00017
%RSD	.43877	1.1111	2.4578	.52671	.58156	1.6140	1.5177	.71375	.17791
#1	.04839	1.9391	1.0532	1.0280	2.1529	.05140	1.9913	374.77	.09362
#2	.04869	1.9089	1.0172	1.0204	2.1352	.05024	1.9490	371.01	.09339
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47824**	**.19805**	**.24649**	**2.0357**	W **211.66**	**1.0093**	**60.455**	**.53353**	**1.0232**
Stddev	.00420	.00192	.00018	.0135	1.16	.0013	.008	.00019	.0113
%RSD	.87884	.97149	.07106	.66488	.54976	.12802	.01363	.03559	1.1026
#1	.48121	.19942	.24637	2.0453	212.48	1.0103	60.461	.53366	1.0312
#2	.47527	.19669	.24662	2.0261	210.84	1.0084	60.450	.53339	1.0152
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					100.00				
Low Limit					-6.0000				

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**451.80**	**.47691**	**10.519**	**.47252**	**5.1631**	**.48304**	**2.0721**	**10.208**	**21.844**
Stddev	1.82	.00499	.087	.00174	.0537	.00027	.0199	.076	.162
%RSD	.40369	1.0466	.82480	.36861	1.0398	.05508	.95991	.73986	.73986
#1	453.09	.48044	10.580	.47375	5.2011	.48285	2.0861	10.261	21.959
#2	450.51	.47338	10.457	.47129	5.1251	.48323	2.0580	10.154	21.730
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9577**	**4.2436**	**.98272**	**.98441**	**1.8031**	**1.9492**	**.51096**	**.48840**	**.51919**
Stddev	.0279	.0275	.00309	.00076	.0175	.0124	.00129	.00229	.00408
%RSD	1.4253	.64793	.31416	.07694	.97006	.63520	.25288	.46916	.78534
#1	1.9774	4.2631	.98491	.98494	1.8155	1.9404	.51005	.48678	.52207
#2	1.9380	4.2242	.98054	.98387	1.7908	1.9579	.51187	.49002	.51630
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3392.7**	**40417.**	**3049.9**
Stddev	2.5	69.	1.3
%RSD	.07225	.17116	.04127
#1	3394.4	40368.	3049.0
#2	3391.0	40465.	3050.7

Sample Name: 280-115619-B-3-H PDS Acquired: 11/7/2018 11:40:04 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04854**	**.96030**	**.20838**	**.17318**	**.21376**	**.04895**	**.00466**	**344.34**	**.04771**
Stddev	.00108	.01548	.00086	.00408	.00026	.00018	.00475	.23	.00056
%RSD	2.2156	1.6117	.41365	2.3581	.12103	.36226	101.96	.06793	1.1725
#1	.04778	.97125	.20899	.17606	.21394	.04882	.00801	344.17	.04810
#2	.04930	.94936	.20777	.17029	.21357	.04907	.00130	344.50	.04731
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04699**	**.04919**	**.05031**	**2.0269**	W **180.89**	**.10677**	**31.966**	**.10523**	**.05640**
Stddev	.00105	.00051	.00014	.0047	.38	.00146	.010	.00006	.00088
%RSD	2.2253	1.0303	.28746	.23364	.21016	1.3680	.03056	.05361	1.5554
#1	.04773	.04955	.05041	2.0303	180.62	.10781	31.959	.10519	.05702
#2	.04625	.04884	.05021	2.0236	181.16	.10574	31.973	.10527	.05578
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					100.00				
Low Limit					-6.0000				

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**423.31**	**.04922**	**2.0721**	**.08777**	**3.0637**	**.09777**	**.20448**	**10.000**	**21.401**
Stddev	.24	.00075	.0284	.00025	.0551	.00540	.00201	.016	.034
%RSD	.05694	1.5262	1.3695	.28395	1.7968	5.5274	.98155	.16076	.16076
#1	423.14	.04975	2.0922	.08759	3.1026	.09395	.20306	10.012	21.425
#2	423.48	.04868	2.0520	.08795	3.0247	.10159	.20590	9.9891	21.377
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09682**	**3.2683**	**.19515**	**.05098**	**.17874**	**.41451**	**.05029**	**.19352**	**.05854**
Stddev	.00330	.0071	.00012	.00104	.00362	.06943	.00032	.00249	.00250
%RSD	3.4065	.21824	.06078	2.0329	2.0244	16.749	.63639	1.2857	4.2629
#1	.09916	3.2633	.19507	.05172	.18129	.36542	.05006	.19176	.05678
#2	.09449	3.2734	.19523	.05025	.17618	.46360	.05052	.19528	.06031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3423.1**	**41163.**	**3107.5**
Stddev	5.3	204.	5.2
%RSD	.15456	.49581	.16804
#1	3426.8	41307.	3103.9
#2	3419.3	41019.	3111.2

Sample Name: CCVH-5408055 Acquired: 11/7/2018 11:42:33 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00255**	**50.843**	**-.00456**	**.00303**	**.00110**	**-.00030**	**1.0139**	**.03667**	**.00004**	**.00151**	**.00020**	**.00065**	**50.233**
Stddev	.00102	.296	.00316	.00167	.00048	.00021	.0263	.00356	.00038	.00005	.00007	.00112	.427
%RSD	40.068	.58156	69.372	55.138	43.624	70.558	2.5984	9.7034	961.06	3.3052	36.345	171.30	.84994
#1	-.00327	50.634	-.00232	.00185	.00076	-.00045	1.0326	.03415	-.00023	.00148	.00015	.00144	49.931
#2	-.00183	51.052	-.00680	.00422	.00144	-.00015	.99531	.03918	.00031	.00155	.00025	-.00014	50.535
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.65180**	**.00077**	**.15628**	**.00424**	**-.00065**	**249.99**	**.00415**	**.00207**	**-.00234**	**4.8808**	**.00558**	**.00094**	**-.00923**
Stddev	.07566	.00209	.32022	.00266	.00016	1.50	.00016	.00397	.00153	.0974	.00043	.00096	.00915
%RSD	11.608	271.55	204.91	62.724	25.072	.60179	3.7762	191.77	65.385	1.9947	7.6580	101.51	99.165
#1	.70530	.00224	.38271	.00613	-.00077	248.92	.00426	-.00074	-.00126	4.9497	.00528	.00162	-.01570
#2	.59830	-.00071	-.07016	.00236	-.00054	251.05	.00404	.00488	-.00343	4.8120	.00588	.00027	-.00276
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01974**	**.00001**	**.00073**	**4.7190**	**.01965**	**-.00210**	**10.089**	**-.00736**	**.00159**	**.08387**
Stddev	.01958	.00061	.00007	.0659	.00405	.00337	.122	.00123	.00292	.00431
%RSD	99.165	5411.0	10.159	1.3958	20.597	160.55	1.2058	16.648	183.18	5.1392
#1	-.03359	.00044	.00078	4.6725	.02251	.00028	10.003	-.00649	.00365	.08691
#2	-.00590	-.00042	.00068	4.7656	.01679	-.00448	10.175	-.00823	-.00047	.08082
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3588.2**	**43202.**	**3078.5**
Stddev	4.7	495.	8.9
%RSD	.13014	1.1452	.28956
#1	3591.5	43552.	3072.2
#2	3584.9	42852.	3084.8

Sample Name: CCV-5407546 Acquired: 11/7/2018 11:45:06 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49280**	**.52203**	**1.0157**	**.49201**	**.51143**	**.50893**	**.00536**	**5.0448**	**.49274**	**.50197**	**.50564**	**.50215**	**2.4788**
Stddev	.00086	.00552	.0082	.00268	.00268	.00189	.00297	.0137	.00432	.00483	.00527	.00201	.0076
%RSD	.17532	1.0572	.80891	.54497	.52420	.37095	55.440	.27078	.87643	.96228	1.0419	.40022	.30777
#1	.49341	.52594	1.0215	.49390	.51333	.51026	.00326	5.0544	.49579	.50539	.50937	.50357	2.4734
#2	.49219	.51813	1.0099	.49011	.50954	.50759	.00746	5.0351	.48968	.49856	.50192	.50073	2.4842
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.682**	**1.0289**	**19.683**	**.48795**	**.50034**	**5.3676**	**.49999**	**.98425**	**1.0085**	**.00864**	**.97054**	**1.0101**	**4.8838**
Stddev	.162	.0034	.059	.00144	.00743	.0553	.00524	.00434	.0075	.00256	.00750	.0008	.0665
%RSD	.32021	.32704	.30136	.29534	1.4855	1.0302	1.0490	.44068	.74413	29.667	.77299	.08169	1.3609
#1	50.797	1.0313	19.725	.48897	.50560	5.4067	.50369	.98118	1.0138	.01045	.97585	1.0107	4.8368
#2	50.567	1.0266	19.641	.48693	.49508	5.3285	.49628	.98731	1.0032	.00683	.96524	1.0096	4.9308
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.451**	**1.0049**	**.51042**	**.01403**	**.47989**	**1.0260**	**-.09730**	**.49215**	**.47979**	**.49916**
Stddev	.142	.0125	.00140	.00023	.00285	.0052	.00506	.00101	.00300	.00124
%RSD	1.3609	1.2442	.27457	1.6152	.59403	.50216	5.1979	.20605	.62590	.24873
#1	10.351	1.0137	.51141	.01387	.48191	1.0297	-.10088	.49287	.48191	.50004
#2	10.552	.99605	.50943	.01419	.47788	1.0224	-.09372	.49144	.47766	.49829
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3726.5**	**45162.**	**3200.5**
Stddev	18.6	75.	19.4
%RSD	.49919	.16534	.60619
#1	3713.4	45215.	3186.8
#2	3739.7	45110.	3214.2

Sample Name: CCB Acquired: 11/7/2018 11:47:29 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00016**	**-.00071**	**.00081**	**.00079**	**.00079**	**-.00041**	**.00440**	**.02983**	**-.00008**	**-.00020**	**-.00003**	**-.00260**	**-.00042**
Stddev	.00140	.00040	.00010	.00053	.00005	.00001	.00803	.00166	.00014	.00017	.00013	.00004	.00159
%RSD	864.66	56.173	12.762	67.988	5.9503	2.8164	182.41	5.5714	183.00	82.528	417.35	1.6092	377.53
#1	-.00083	-.00099	.00088	.00116	.00083	-.00040	.01008	.02866	.00002	-.00032	.00006	-.00257	-.00155
#2	.00115	-.00043	.00074	.00041	.00076	-.00042	-.00128	.03101	-.00018	-.00009	-.00013	-.00263	.00070
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.20103**	**-.00549**	**.00077**	**.00002**	**.00030**	**.20629**	**.00020**	**.00125**	**-.00075**	**.00310**	**.00528**	**-.00321**	**-.00101**
Stddev	.11072	.00087	.00455	.00008	.00058	.02716	.00065	.00006	.00011	.00294	.00211	.00310	.00400
%RSD	55.079	15.783	593.73	466.61	197.36	13.167	333.94	4.7642	14.949	94.792	39.944	96.787	396.96
#1	.12273	-.00487	-.00245	.00007	-.00012	.18708	-.00027	.00129	-.00083	.00518	.00379	-.00101	-.00384
#2	.27932	-.00610	.00399	-.00004	.00071	.22549	.00066	.00121	-.00067	.00102	.00677	-.00540	.00182
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00216**	**-.00243**	**.00014**	**.00207**	**.00047**	**-.00141**	**-.05351**	**.00050**	**.00085**	**.00141**
Stddev	.00856	.00225	.00009	.00100	.00031	.00220	.00603	.00031	.00097	.00233
%RSD	396.96	92.488	67.792	48.336	67.227	156.79	11.262	62.937	115.02	165.96
#1	-.00821	-.00402	.00007	.00278	.00069	.00015	-.05777	.00072	.00016	.00305
#2	.00390	-.00084	.00020	.00137	.00024	-.00296	-.04925	.00028	.00153	-.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3688.8**	**45208.**	**3178.6**
Stddev	1.1	98.	13.8
%RSD	.02910	.21765	.43478
#1	3688.1	45277.	3168.8
#2	3689.6	45138.	3188.4

Sample Name: CCVL-5415520 Acquired: 11/7/2018 11:50:05 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01092**	**.10766**	F **.00780**	**.09605**	**.01119**	**.00084**	**.11335**	**.22319**	**.00497**	**.01019**	**.01012**	**.01331**
Stddev	.00148	.00327	.01400	.00063	.00018	.00001	.00101	.00017	.00004	.00041	.00017	.00067
%RSD	13.576	3.0329	179.42	.65997	1.5690	1.7367	.89069	.07654	.88786	4.0189	1.7143	5.0494
#1	.01197	.10997	.01770	.09649	.01131	.00085	.11406	.22331	.00494	.00990	.01025	.01283
#2	.00987	.10535	-.00210	.09560	.01106	.00083	.11263	.22307	.00500	.01048	.01000	.01378
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			-30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10169**	**3.4119**	**.01984**	**.20843**	**.01039**	**.01935**	**1.2005**	**.04135**	**2.8182**	**.00875**	**.09480**	**.01777**
Stddev	.00634	.1002	.00388	.00509	.00002	.00046	.0066	.00078	.0362	.00018	.00477	.00163
%RSD	6.2369	2.9364	19.555	2.4407	.19096	2.3720	.55401	1.8903	1.2842	2.0318	5.0361	9.1941
#1	.10617	3.3411	.02258	.20484	.01041	.01967	1.1958	.04191	2.8438	.00888	.09142	.01893
#2	.09721	3.4828	.01710	.21203	.01038	.01902	1.2052	.04080	2.7926	.00863	.09817	.01661
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01881**	**.45409**	**.97176**	**.09813**	**.01087**	**.01769**	**.01006**	**.01425**	F **.03299**	**.00950**	**.02023**	**.01560**
Stddev	.00209	.02503	.05357	.00325	.00013	.00017	.00010	.00320	.05630	.00029	.00026	.00393
%RSD	11.116	5.5123	5.5123	3.3081	1.2134	.96282	1.0215	22.445	170.63	3.0802	1.2929	25.211
#1	.01733	.43639	.93388	.10042	.01077	.01757	.01014	.01199	-.00681	.00929	.02005	.01838
#2	.02029	.47179	1.0096	.09583	.01096	.01781	.00999	.01652	.07280	.00971	.02042	.01282
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3728.2**	**44998.**	**3198.7**
Stddev	1.3	.	16.4
%RSD	.03387	.00069	.51183
#1	3727.3	44998.	3210.3
#2	3729.1	44997.	3187.1

Sample Name: 280-115619-B-4-H Acquired: 11/7/2018 11:52:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00095**	**.01278**	**-.00662**	**.21514**	**.13536**	**-.00007**	**.00318**	**291.19**	**.00038**
Stddev	.00039	.00123	.00457	.00446	.00081	.00004	.00326	.37	.00041
%RSD	41.341	9.6023	69.088	2.0712	.59820	64.778	102.40	.12769	107.03
#1	.00123	.01365	-.00986	.21829	.13593	-.00004	.00549	290.93	.00067
#2	.00067	.01191	-.00339	.21199	.13479	-.00010	.00088	291.46	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.00068**	**.00057**	**3.8663**	**85.075**	**.00694**	**88.137**	**.06854**	**.00039**
Stddev	.00025	.00009	.00006	.0366	.199	.00027	.171	.00041	.00031
%RSD	68.662	12.775	10.042	.94733	.23419	3.8760	.19430	.59097	80.156
#1	-.00053	.00074	.00053	3.8404	84.935	.00675	88.258	.06882	.00017
#2	-.00018	.00062	.00061	3.8922	85.216	.00714	88.016	.06825	.00060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **910.41**	**.00223**	**.03853**	**-.00168**	**54.615**	**.00107**	**-.00903**	**4.4643**	**9.5537**
Stddev	.00	.00039	.00060	.00001	.991	.00067	.00050	.0072	.0155
%RSD	.00034	17.536	1.5483	.53345	1.8139	62.685	5.5294	.16204	.16204
#1	910.41	.00250	.03811	-.00167	55.316	.00154	-.00868	4.4695	9.5646
#2	910.41	.00195	.03896	-.00169	53.915	.00059	-.00938	4.4592	9.5427
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00229**	**2.8458**	**-.00239**	**.00036**	**-.00099**	**-.09249**	**.00033**	**.00041**	**.00149**
Stddev	.00080	.0076	.00185	.00044	.00371	.00197	.00050	.00113	.00108
%RSD	35.004	.26688	77.337	122.43	374.80	2.1326	148.64	272.75	72.386
#1	-.00173	2.8404	-.00370	.00068	-.00361	-.09388	.00068	-.00038	.00226
#2	-.00286	2.8511	-.00108	.00005	.00163	-.09109	-.00002	.00121	.00073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3398.8**	**40074.**	**3129.2**
Stddev	13.9	9.	18.6
%RSD	.40995	.02155	.59459
#1	3408.7	40068.	3116.0
#2	3389.0	40080.	3142.3

Sample Name: 280-115619-B-5-H Acquired: 11/7/2018 11:55:17 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00107**	**.00780**	**-.01001**	**.40502**	**.16631**	**-.00016**	**.00348**	**257.15**	**.00092**
Stddev	.00047	.00126	.00465	.00531	.00089	.00026	.00134	.18	.00006
%RSD	44.317	16.095	46.497	1.3107	.53531	169.15	38.536	.06989	6.4378
#1	.00073	.00869	-.01330	.40877	.16568	-.00034	.00442	257.27	.00097
#2	.00141	.00691	-.00672	.40126	.16694	.00003	.00253	257.02	.00088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.00156**	**.00184**	**2.3126**	**75.762**	**.01552**	**156.03**	**.03402**	**.00005**
Stddev	.00028	.00001	.00026	.0038	.186	.00247	1.55	.00028	.00011
%RSD	390.60	.77789	14.163	.16515	.24560	15.936	.99578	.82091	197.73
#1	.00012	.00157	.00202	2.3099	75.631	.01727	157.12	.03382	-.00002
#2	-.00027	.00155	.00166	2.3153	75.894	.01377	154.93	.03422	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **1437.3**	**.00116**	**.06074**	**-.00202**	**113.88**	**.00088**	**-.00193**	**4.5111**	**9.6537**
Stddev	3.8	.00019	.00115	.00199	1.49	.00391	.00059	.0156	.0334
%RSD	.26381	16.669	1.8898	98.628	1.3101	442.92	30.432	.34619	.34619
#1	1434.6	.00102	.06155	-.00343	114.94	-.00188	-.00152	4.5001	9.6301
#2	1440.0	.00130	.05993	-.00061	112.83	.00365	-.00235	4.5221	9.6774
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00223**	**2.7656**	**.00029**	**.00093**	**-.00260**	**-.11277**	**.00234**	**.00077**	**.00153**
Stddev	.00093	.0009	.00207	.00113	.00240	.00219	.00007	.00122	.00370
%RSD	41.524	.03198	703.83	121.14	92.082	1.9423	3.1497	158.51	241.77
#1	-.00288	2.7663	.00176	.00013	-.00091	-.11431	.00229	-.00009	.00415
#2	-.00158	2.7650	-.00117	.00173	-.00430	-.11122	.00239	.00163	-.00109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3290.7**	**39281.**	**3095.1**
Stddev	8.4	341.	2.0
%RSD	.25671	.86714	.06560
#1	3284.8	39040.	3096.5
#2	3296.7	39522.	3093.6

Sample Name: 280-115619-B-6-J Acquired: 11/7/2018 11:57:57 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00059**	**.02043**	**.00007**	**.05229**	**.04255**	**-.00033**	**.00478**	**146.07**	**.00016**
Stddev	.00052	.00011	.00165	.00163	.00085	.00009	.00344	.51	.00005
%RSD	88.359	.53899	2275.8	3.1081	1.9931	25.870	71.898	.35201	29.086
#1	.00096	.02051	.00124	.05344	.04195	-.00039	.00721	145.71	.00019
#2	.00022	.02036	-.00109	.05114	.04315	-.00027	.00235	146.43	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00013**	**.00067**	**-.00075**	**.25964**	**9.2202**	**.00184**	**10.488**	**.03892**	**.00094**
Stddev	.00021	.00014	.00071	.01077	.0408	.00712	.038	.00017	.00062
%RSD	159.10	21.114	94.502	4.1475	.44283	386.71	.36019	.44767	66.032
#1	.00002	.00057	-.00025	.26725	9.2491	.00688	10.515	.03904	.00050
#2	-.00028	.00077	-.00126	.25202	9.1913	-.00320	10.462	.03880	.00138
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**168.39**	**.00080**	**.08073**	**.00109**	**7.1586**	**.00246**	**-.01273**	**4.6030**	**9.8504**
Stddev	1.05	.00032	.00182	.00216	.0810	.00217	.00065	.0078	.0166
%RSD	.62356	40.374	2.2494	197.30	1.1320	88.178	5.1383	.16877	.16877
#1	167.65	.00103	.08201	.00262	7.2159	.00400	-.01227	4.5975	9.8387
#2	169.13	.00057	.07944	-.00043	7.1013	.00093	-.01319	4.6085	9.8622
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00230**	**1.2775**	**-.00101**	**.00034**	**-.00202**	**-.05339**	**.00069**	**.00150**	**-.00124**
Stddev	.00036	.0032	.00068	.00014	.00176	.03851	.00033	.00031	.00276
%RSD	15.811	.25125	68.059	40.452	87.034	72.142	47.831	20.433	222.81
#1	-.00255	1.2753	-.00149	.00024	-.00326	-.08062	.00046	.00128	.00071
#2	-.00204	1.2798	-.00052	.00043	-.00078	-.02615	.00092	.00172	-.00319
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3546.1**	**43000.**	**3166.6**
Stddev	5.0	188.	6.5
%RSD	.14180	.43645	.20591
#1	3549.6	42867.	3171.2
#2	3542.5	43132.	3162.0

Sample Name: 280-115619-B-7-G Acquired: 11/7/2018 12:00:30 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00120**	**.03117**	**-.00154**	**.16430**	**.11351**	**-.00032**	**.00438**	**298.90**	**.00040**
Stddev	.00020	.00182	.00110	.00191	.00022	.00011	.00443	.58	.00032
%RSD	16.987	5.8399	71.492	1.1636	.19252	35.944	100.99	.19383	79.707
#1	.00134	.03245	-.00232	.16565	.11335	-.00040	.00125	299.31	.00062
#2	.00105	.02988	-.00076	.16295	.11366	-.00024	.00751	298.50	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**.00076**	**.00264**	**8.4453**	**22.884**	**.00509**	**100.48**	**.06968**	**.00006**
Stddev	.00007	.00002	.00132	.0324	.004	.00375	.37	.00039	.00063
%RSD	129.47	2.7349	49.837	.38358	.01816	73.604	.36425	.56159	985.73
#1	-.00011	.00078	.00171	8.4682	22.881	.00244	100.74	.06995	.00051
#2	-.00000	.00075	.00357	8.4224	22.887	.00774	100.22	.06940	-.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **1260.2**	**.00210**	**.04094**	**-.00117**	**92.071**	**.00510**	**-.00127**	**4.6410**	**9.9316**
Stddev	.3	.00027	.00228	.00063	1.791	.00056	.01715	.0375	.0802
%RSD	.02042	12.928	5.5767	53.725	1.9451	10.947	1350.8	.80712	.80712
#1	1260.0	.00191	.04256	-.00161	93.337	.00470	-.01340	4.6145	9.8750
#2	1260.3	.00229	.03933	-.00073	90.805	.00549	.01086	4.6674	9.9883
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00520**	**3.4202**	**.00298**	**.00056**	**-.00428**	**-.11455**	**-.00079**	**.00159**	**-.00006**
Stddev	.00085	.0049	.00700	.00027	.00202	.03609	.00012	.00030	.00009
%RSD	16.279	.14451	234.86	48.975	47.193	31.503	15.392	19.039	151.07
#1	-.00461	3.4237	-.00197	.00075	-.00285	-.08903	-.00088	.00180	-.00012
#2	-.00580	3.4168	.00793	.00037	-.00571	-.14007	-.00070	.00137	.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3299.4**	**39327.**	**3083.9**
Stddev	8.0	92.	5.2
%RSD	.24314	.23322	.16761
#1	3293.7	39262.	3087.6
#2	3305.1	39392.	3080.3

Sample Name: 280-115619-B-8-K Acquired: 11/7/2018 12:03:08 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00160**	**.10220**	**-.00630**	**.22550**	**.66597**	**.00000**	**.00874**	**313.98**	**.00068**
Stddev	.00125	.00293	.00353	.00516	.00106	.00021	.00213	.84	.00045
%RSD	78.097	2.8686	56.007	2.2872	.15977	4445.3	24.379	.26649	66.468
#1	.00072	.10427	-.00879	.22914	.66672	.00016	.01025	314.57	.00100
#2	.00248	.10013	-.00380	.22185	.66521	-.00015	.00723	313.39	.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.00102**	**.00213**	**10.183**	**30.153**	**.00851**	**140.48**	**.05170**	**.00048**
Stddev	.00014	.00006	.00010	.040	.103	.00259	.22	.00016	.00036
%RSD	37.946	6.3130	4.7565	.39014	.34110	30.418	.15720	.31166	74.956
#1	-.00046	.00107	.00205	10.211	30.226	.01034	140.63	.05181	.00074
#2	-.00026	.00097	.00220	10.155	30.081	.00668	140.32	.05159	.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **1598.5**	**.00178**	**.05646**	**-.00094**	**122.68**	**.00235**	**-.00570**	**4.6684**	**9.9903**
Stddev	8.1	.00061	.00117	.00075	2.49	.00138	.01615	.0272	.0582
%RSD	.50521	34.295	2.0699	79.939	2.0305	58.636	283.36	.58266	.58266
#1	1604.2	.00135	.05564	-.00041	124.44	.00138	-.01712	4.6876	10.031
#2	1592.8	.00221	.05729	-.00147	120.92	.00333	.00572	4.6491	9.9491
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00191**	**3.4362**	**-.00327**	**.00096**	**-.00064**	**-.07709**	**.00061**	**.00302**	**-.00085**
Stddev	.00112	.0081	.00009	.00001	.00068	.05937	.00047	.00078	.00366
%RSD	58.676	.23706	2.8278	.56218	106.82	77.021	77.110	25.697	429.41
#1	-.00271	3.4419	-.00334	.00096	-.00112	-.03510	.00028	.00357	.00174
#2	-.00112	3.4304	-.00321	.00097	-.00016	-.11907	.00095	.00247	-.00344
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3274.6**	**38737.**	**3070.9**
Stddev	3.7	240.	3.2
%RSD	.11264	.62020	.10482
#1	3277.2	38567.	3073.2
#2	3272.0	38907.	3068.6

Sample Name: 280-115619-B-9-G Acquired: 11/7/2018 12:05:46 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00084**	**.01869**	**.00364**	**.04069**	**.02299**	**.00002**	**-.00208**	**97.644**	**.00002**
Stddev	.00027	.00033	.00234	.00152	.00017	.00003	.00579	.175	.00002
%RSD	32.598	1.7601	64.435	3.7445	.73039	175.40	277.67	.17896	127.52
#1	.00064	.01893	.00529	.04177	.02287	-.00000	.00201	97.768	.00003
#2	.00103	.01846	.00198	.03962	.02311	.00004	-.00617	97.521	.00000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.00045**	**-.00068**	**.43994**	**5.6721**	**-.00058**	**3.0554**	**.01601**	**.00168**
Stddev	.00019	.00003	.00027	.00153	.0146	.00015	.0165	.00012	.00014
%RSD	284.29	5.7576	39.203	.34717	.25729	26.109	.53954	.76777	8.4932
#1	.00007	.00047	-.00049	.43886	5.6617	-.00047	3.0670	.01610	.00178
#2	-.00020	.00043	-.00087	.44102	5.6824	-.00069	3.0437	.01592	.00158
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**36.048**	**.00071**	**.03067**	**-.00349**	**2.5394**	**-.00030**	**-.00251**	**3.3600**	**7.1904**
Stddev	.101	.00038	.00131	.00093	.0374	.00258	.00073	.0003	.0005
%RSD	.28051	54.336	4.2605	26.672	1.4715	858.84	29.183	.00749	.00749
#1	35.976	.00044	.03159	-.00415	2.5659	-.00212	-.00302	3.3602	7.1907
#2	36.119	.00098	.02974	-.00284	2.5130	.00152	-.00199	3.3598	7.1900
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00180**	**.74073**	**.00401**	**.00054**	**.00052**	**-.02179**	**.00124**	**.00230**	**.00139**
Stddev	.00260	.00101	.00125	.00014	.00054	.02317	.00002	.00019	.00368
%RSD	144.33	.13655	31.217	26.669	104.04	106.35	1.6278	8.2504	264.88
#1	-.00365	.74145	.00490	.00044	.00014	-.00540	.00123	.00243	-.00121
#2	.00004	.74002	.00313	.00064	.00090	-.03817	.00126	.00216	.00399
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3704.2**	**45153.**	**3210.2**
Stddev	8.9	3.	.3
%RSD	.24005	.00763	.00834
#1	3710.5	45155.	3210.1
#2	3697.9	45150.	3210.4

Sample Name: 280-115619-B-10-G Acquired: 11/7/2018 12:08:21 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00072**	**.01604**	**.00335**	**.03096**	**.01621**	**-.00005**	**-.00202**	**91.230**	**-.00029**
Stddev	.00041	.00031	.00272	.00137	.00000	.00050	.00572	.254	.00009
%RSD	56.557	1.9594	81.222	4.4194	.01763	1087.7	282.73	.27820	31.298
#1	.00100	.01626	.00143	.03193	.01621	.00031	.00202	91.409	-.00023
#2	.00043	.01581	.00527	.02999	.01621	-.00040	-.00607	91.050	-.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**.00049**	**-.00112**	**.26826**	**2.7249**	**.00107**	**3.1539**	**.01483**	**.00168**
Stddev	.00030	.00026	.00012	.00179	.0087	.00047	.0052	.00011	.00001
%RSD	241.46	53.144	10.696	.66911	.31989	43.748	.16355	.76512	.30784
#1	-.00034	.00031	-.00104	.26953	2.7311	.00074	3.1575	.01491	.00168
#2	.00009	.00067	-.00121	.26699	2.7187	.00140	3.1502	.01475	.00168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.183**	**.00078**	**.02326**	**-.00264**	**.32072**	**.00319**	**-.00470**	**3.7918**	**8.1145**
Stddev	.300	.00001	.00267	.00088	.01069	.00306	.00096	.0719	.1538
%RSD	1.1019	1.8597	11.470	33.360	3.3337	95.835	20.468	1.8957	1.8957
#1	26.971	.00079	.02137	-.00202	.32828	.00103	-.00538	3.8426	8.2232
#2	27.394	.00077	.02514	-.00327	.31316	.00535	-.00402	3.7410	8.0057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00194**	**.70138**	**.00524**	**.00055**	**-.00084**	**-.09290**	**.00085**	**.00294**	**-.00014**
Stddev	.00135	.00071	.00044	.00032	.00001	.02661	.00005	.00132	.00274
%RSD	69.250	.10120	8.3764	58.459	1.0123	28.647	5.2844	44.816	1950.2
#1	-.00290	.70188	.00493	.00078	-.00084	-.07408	.00082	.00387	-.00208
#2	-.00099	.70088	.00555	.00032	-.00083	-.11172	.00088	.00201	.00180
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3667.9**	**44537.**	**3130.1**
Stddev	3.4	73.	7.3
%RSD	.09308	.16483	.23332
#1	3670.3	44485.	3135.3
#2	3665.5	44589.	3124.9

Sample Name: 280-115619-B-11-E Acquired: 11/7/2018 12:10:55 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00080**	**.01036**	**-.00201**	**.05161**	**.10576**	**-.00038**	**.00043**	**183.98**	**.00004**
Stddev	.00083	.00036	.00402	.00117	.00041	.00008	.00463	.05	.00042
%RSD	104.07	3.4726	199.97	2.2605	.39047	20.640	1083.6	.02783	1116.6
#1	.00021	.01061	-.00486	.05243	.10606	-.00044	.00370	184.01	.00033
#2	.00139	.01010	.00083	.05078	.10547	-.00033	-.00285	183.94	-.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00056**	**.00060**	**.00024**	**3.4316**	**3.8015**	**.00213**	**23.513**	**.03105**	**.00012**
Stddev	.00006	.00021	.00104	.0109	.0199	.00049	.037	.00020	.00014
%RSD	10.309	35.162	425.77	.31760	.52207	23.256	.15920	.63250	119.95
#1	-.00052	.00045	.00098	3.4238	3.8156	.00248	23.540	.03092	.00002
#2	-.00060	.00074	-.00049	3.4393	3.7875	.00178	23.487	.03119	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**411.31**	**.00190**	**.02853**	**-.00453**	**25.787**	**.00127**	**-.00440**	**4.3349**	**9.2768**
Stddev	.81	.00017	.00364	.00106	.318	.00243	.00845	.0230	.0492
%RSD	.19593	8.8576	12.760	23.496	1.2322	191.73	191.72	.53058	.53058
#1	411.88	.00178	.03110	-.00377	26.012	-.00045	-.01038	4.3187	9.2419
#2	410.74	.00202	.02596	-.00528	25.563	.00299	.00157	4.3512	9.3116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00064**	**1.6605**	**.00319**	**.00017**	**-.00251**	**-.06770**	**.00125**	**.00103**	**.00075**
Stddev	.00154	.0005	.00693	.00085	.00127	.11279	.00085	.00048	.00380
%RSD	240.49	.02942	217.21	496.92	50.683	166.61	68.272	46.549	504.42
#1	-.00173	1.6609	.00809	.00077	-.00341	-.14746	.00065	.00136	-.00194
#2	.00045	1.6602	-.00171	-.00043	-.00161	.01206	.00185	.00069	.00344
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3509.8**	**42610.**	**3157.2**
Stddev	2.8	139.	11.3
%RSD	.07895	.32695	.35722
#1	3511.8	42709.	3165.2
#2	3507.9	42512.	3149.3

Sample Name: CCVH-5408055 Acquired: 11/7/2018 12:13:28 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00317**	**51.273**	**-.01327**	**.00122**	**.00069**	**-.00021**	**1.0219**	**.11850**	**-.00002**	**.00150**	**.00093**	**-.00174**	**50.126**
Stddev	.00076	.143	.00840	.00075	.00002	.00030	.0249	.10256	.00011	.00024	.00028	.00041	.370
%RSD	23.859	.27850	63.250	61.385	3.5718	145.59	2.4398	86.546	641.13	15.729	29.586	23.637	.73786
#1	-.00370	51.172	-.00734	.00069	.00070	.00001	1.0395	.19102	.00006	.00133	.00113	-.00203	49.864
#2	-.00263	51.374	-.01921	.00175	.00067	-.00042	1.0043	.04598	-.00010	.00167	.00074	-.00145	50.387
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.24614**	**-.00076**	**-.07955**	**.00235**	**-.00144**	**251.57**	**.00369**	**.00372**	**-.00333**	**5.0267**	**.00838**	**.00573**	**-.03580**
Stddev	.12357	.00480	.00394	.00012	.00012	1.33	.00033	.00202	.00092	.0130	.00051	.00247	.04696
%RSD	50.204	634.72	4.9525	5.1943	8.1525	.52854	8.8712	54.365	27.782	.25769	6.0580	43.219	131.17
#1	.15876	.00264	-.08234	.00244	-.00152	250.63	.00346	.00229	-.00267	5.0358	.00802	.00398	-.06900
#2	.33352	-.00415	-.07677	.00227	-.00135	252.51	.00392	.00515	-.00398	5.0175	.00874	.00747	-.00260
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.07661**	**.00161**	**.00146**	**4.7720**	**.01764**	**-.00101**	**10.245**	**-.00913**	**.00028**	**.08009**
Stddev	.10049	.00122	.00097	.0024	.00030	.00027	.065	.00044	.00060	.00093
%RSD	131.17	75.692	66.453	.05076	1.7114	26.189	.63097	4.7731	214.22	1.1568
#1	-.14767	.00075	.00215	4.7703	.01743	-.00120	10.290	-.00883	-.00014	.07943
#2	-.00556	.00248	.00078	4.7737	.01785	-.00083	10.199	-.00944	.00070	.08074
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3458.0**	**41580.**	**3025.8**
Stddev	4.7	145.	27.6
%RSD	.13702	.34864	.91335
#1	3454.7	41682.	3045.3
#2	3461.4	41477.	3006.2

Sample Name: CCV-5407546 Acquired: 11/7/2018 12:15:59 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49847**	**.53221**	**1.0317**	**.49531**	**.52132**	**.51880**	**.00345**	**5.1034**	**.49620**	**.50548**	**.51043**	**.50707**
Stddev	.00105	.00993	.0208	.00403	.00147	.00181	.00259	.0176	.00514	.00725	.00782	.00203
%RSD	.21107	1.8658	2.0171	.81309	.28127	.34848	75.195	.34522	1.0356	1.4349	1.5312	.40086
#1	.49772	.53924	1.0464	.49815	.52029	.51752	.00528	5.0910	.49983	.51061	.51595	.50563
#2	.49921	.52519	1.0170	.49246	.52236	.52007	.00161	5.1159	.49256	.50035	.50490	.50851
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4579**	**51.620**	**1.0557**	**19.821**	**.49118**	**.50464**	F **5.5459**	**.50454**	**.98831**	**1.0153**	**.03102**	**.97873**
Stddev	.0231	.192	.0010	.016	.00073	.00589	.0212	.00621	.01407	.0107	.00479	.00849
%RSD	.94107	.37237	.09814	.07829	.14937	1.1672	.38150	1.2299	1.4241	1.0490	15.429	.86752
#1	2.4416	51.484	1.0550	19.832	.49170	.50880	5.5609	.50893	.99827	1.0228	.02764	.98473
#2	2.4743	51.756	1.0564	19.810	.49066	.50047	5.5309	.50015	.97836	1.0078	.03441	.97273
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0363**	**4.9397**	**10.571**	**1.0194**	**.52239**	**.01403**	**.48206**	**1.0371**	**-.06113**	**.49639**	**.48370**	**.50563**
Stddev	.0170	.0751	.161	.0143	.00077	.00300	.00051	.0128	.01448	.00183	.00185	.00244
%RSD	1.6366	1.5195	1.5195	1.4071	.14798	21.414	.10480	1.2329	23.687	.36858	.38207	.48245
#1	1.0483	4.8867	10.457	1.0296	.52184	.01190	.48241	1.0462	-.07137	.49510	.48239	.50390
#2	1.0243	4.9928	10.685	1.0093	.52293	.01615	.48170	1.0281	-.05089	.49769	.48500	.50735
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3633.1**	**44394.**	**3145.1**
Stddev	16.2	216.	9.3
%RSD	.44540	.48707	.29411
#1	3644.5	44241.	3151.7
#2	3621.6	44547.	3138.6

Sample Name: CCB Acquired: 11/7/2018 12:18:23 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00167**	**-.00027**	**-.00145**	**-.00091**	**.00078**	**-.00054**	**.00419**	**.01639**	**.00012**	**.00015**	**.00024**	**-.00262**	**-.00232**
Stddev	.00021	.00039	.00800	.00038	.00081	.00015	.00335	.00514	.00000	.00025	.00025	.00100	.00280
%RSD	12.629	148.92	551.50	42.175	103.97	28.893	80.075	31.362	1.5953	165.28	105.05	38.315	120.65
#1	.00152	-.00054	-.00711	-.00118	.00021	-.00065	.00182	.01275	.00011	-.00003	.00006	-.00333	-.00430
#2	.00182	.00001	.00421	-.00064	.00136	-.00043	.00656	.02002	.00012	.00032	.00042	-.00191	-.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.14081**	**-.00065**	**.00380**	**-.00008**	**.00097**	**.32815**	**-.00005**	**-.00329**	**-.00101**	**.01635**	**.00476**	**.00267**	**-.02304**
Stddev	.08541	.00040	.00076	.00002	.00072	.02355	.00032	.00073	.00016	.00602	.00471	.00141	.00615
%RSD	60.656	60.769	19.892	27.299	74.439	7.1769	666.51	22.087	15.615	36.799	98.883	52.725	26.690
#1	.08042	-.00094	.00434	-.00006	.00046	.34480	.00018	-.00278	-.00090	.01209	.00143	.00168	-.02738
#2	.20120	-.00037	.00327	-.00009	.00148	.31149	-.00028	-.00381	-.00113	.02060	.00809	.00367	-.01869
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04930**	**-.00162**	**.00002**	**.00417**	**.00038**	**-.00169**	**-.09955**	**.00003**	**-.00153**	**-.00040**
Stddev	.01316	.00129	.00004	.00018	.00010	.00011	.01158	.00067	.00003	.00453
%RSD	26.690	79.520	250.79	4.4112	26.046	6.6608	11.629	2362.4	1.7631	1128.9
#1	-.05860	-.00253	.00004	.00404	.00031	-.00161	-.10773	-.00044	-.00152	-.00360
#2	-.03999	-.00071	-.00001	.00430	.00045	-.00177	-.09136	.00050	-.00155	.00280
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3672.1**	**44641.**	**3114.2**
Stddev	10.8	285.	1.9
%RSD	.29441	.63925	.06243
#1	3679.8	44842.	3115.6
#2	3664.5	44439.	3112.8

Sample Name: CCVL-5415520 Acquired: 11/7/2018 12:20:59 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01070**	**.10770**	F **.02457**	**.09496**	**.01119**	**.00088**	**.11897**	**.21407**	**.00480**	**.01043**	**.00972**	**.01364**
Stddev	.00026	.00175	.00203	.00244	.00019	.00024	.00345	.00360	.00006	.00000	.00049	.00049
%RSD	2.4038	1.6239	8.2633	2.5688	1.6784	27.165	2.8981	1.6812	1.2635	.01805	5.0041	3.5594
#1	.01051	.10893	.02601	.09668	.01133	.00071	.12141	.21153	.00476	.01044	.01006	.01399
#2	.01088	.10646	.02314	.09323	.01106	.00104	.11653	.21662	.00484	.01043	.00938	.01330
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09318**	**3.1448**	**.02078**	**.20152**	**.01006**	**.01840**	F **1.3080**	**.04125**	**2.7967**	**.00841**	**.10172**	**.02075**
Stddev	.00106	.0073	.00570	.00457	.00000	.00084	.0076	.00041	.0608	.00022	.00297	.00378
%RSD	1.1359	.23215	27.436	2.2702	.01127	4.5774	.58014	.99099	2.1731	2.5703	2.9179	18.224
#1	.09243	3.1499	.01675	.20476	.01006	.01899	1.3027	.04153	2.8397	.00825	.10382	.02343
#2	.09392	3.1396	.02481	.19829	.01007	.01780	1.3134	.04096	2.7537	.00856	.09962	.01808
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value							1.0000					
Range							30.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02376**	**.47365**	**1.0136**	**.09765**	**.01066**	**.01824**	**.00943**	**.01621**	F **.01944**	**.01013**	**.01966**	**.01750**
Stddev	.00354	.02155	.0461	.00313	.00027	.00123	.00068	.00082	.02034	.00090	.00053	.00243
%RSD	14.882	4.5506	4.5506	3.2009	2.5050	6.7569	7.2179	5.0573	104.64	8.8501	2.6924	13.891
#1	.02626	.48889	1.0462	.09986	.01047	.01737	.00992	.01563	.00506	.01076	.02004	.01578
#2	.02126	.45841	.98099	.09544	.01085	.01911	.00895	.01679	.03383	.00950	.01929	.01922
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3730.9**	**45683.**	**3171.4**
Stddev	4.9	84.	3.9
%RSD	.13211	.18384	.12366
#1	3734.4	45742.	3174.2
#2	3727.4	45623.	3168.7

Sample Name: 280-115713-B-1-F Acquired: 11/7/2018 12:23:36 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00114**	**.01265**	**.00777**	**.02837**	**.03880**	**-.00040**	**-.00062**	**167.08**	**-.00004**
Stddev	.00045	.00025	.00498	.00002	.00057	.00005	.00042	.04	.00027
%RSD	39.182	1.9954	64.082	.05441	1.4761	12.779	67.713	.02132	719.04
#1	.00082	.01247	.00425	.02836	.03920	-.00036	-.00092	167.05	.00015
#2	.00146	.01283	.01129	.02838	.03839	-.00043	-.00032	167.10	-.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.00064**	**-.00095**	**3.0074**	**2.1123**	**.00069**	**8.1771**	**.02017**	**.00036**
Stddev	.00018	.00039	.00075	.0094	.0570	.00161	.0087	.00008	.00019
%RSD	88.201	59.882	78.753	.31255	2.6959	231.79	.10665	.37488	53.993
#1	-.00008	.00092	-.00042	3.0008	2.1526	-.00044	8.1833	.02022	.00049
#2	-.00034	.00037	-.00148	3.0140	2.0720	.00183	8.1709	.02011	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**169.06**	**.00007**	**.01900**	**-.00141**	**9.3390**	**.00178**	**-.00974**	**4.7834**	**10.236**
Stddev	.56	.00040	.00446	.00077	.1032	.00119	.00118	.0343	.073
%RSD	.33163	571.45	23.456	54.582	1.1055	66.910	12.156	.71804	.71804
#1	168.66	-.00021	.02215	-.00195	9.4120	.00262	-.00890	4.8077	10.288
#2	169.45	.00035	.01585	-.00086	9.2660	.00094	-.01057	4.7591	10.185
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00070**	**1.6284**	**.00485**	**.00067**	**-.00018**	**-.04416**	**.00082**	**.00035**	**.00186**
Stddev	.00124	.0018	.00234	.00031	.00075	.02255	.00024	.00012	.00105
%RSD	177.46	.11040	48.277	45.782	424.91	51.075	29.447	34.149	56.253
#1	.00018	1.6271	.00651	.00089	-.00071	-.06010	.00065	.00027	.00112
#2	-.00158	1.6296	.00320	.00045	.00036	-.02821	.00099	.00043	.00260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3592.9**	**43458.**	**3177.1**
Stddev	21.6	111.	25.8
%RSD	.60226	.25529	.81194
#1	3577.6	43536.	3195.4
#2	3608.2	43380.	3158.9

Sample Name: 280-115713-B-2-J Acquired: 11/7/2018 12:26:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00150**	**.22279**	**.00055**	**.30858**	**.17833**	**-.00009**	**.00044**	**216.81**	**.00092**
Stddev	.00042	.00716	.00055	.00377	.00064	.00016	.00041	.35	.00010
%RSD	27.911	3.2144	100.46	1.2213	.36057	173.50	93.351	.16136	10.469
#1	.00121	.22785	.00016	.31124	.17879	.00002	.00015	217.06	.00085
#2	.00180	.21773	.00094	.30591	.17788	-.00021	.00073	216.56	.00099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00068**	**.00045**	**6.0022**	**37.911**	**.01117**	**121.85**	**.02611**	**-.00041**
Stddev	.00010	.00055	.00037	.0078	.275	.00348	.09	.00004	.00046
%RSD	382.03	80.622	81.587	.12958	.72592	31.132	.07101	.16527	111.40
#1	-.00004	.00107	.00019	5.9967	37.717	.01363	121.91	.02608	-.00073
#2	.00009	.00029	.00071	6.0077	38.106	.00871	121.79	.02614	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **1319.5**	**.00184**	**.06421**	**.00063**	**91.201**	**.00501**	**-.00158**	**5.1713**	**11.067**
Stddev	.8	.00096	.00740	.00050	1.569	.00817	.01948	.0346	.074
%RSD	.05749	52.473	11.528	78.698	1.7203	163.25	1233.6	.66832	.66832
#1	1319.0	.00252	.06945	.00098	92.310	-.00077	-.01536	5.1957	11.119
#2	1320.0	.00116	.05898	.00028	90.092	.01079	.01220	5.1469	11.014
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00271**	**2.2292**	**.00130**	**.00027**	**-.00362**	**-.10344**	**.00033**	**.00119**	**-.00054**
Stddev	.00136	.0034	.00434	.00014	.00280	.05002	.00044	.00003	.00031
%RSD	50.019	.15055	332.94	51.427	77.394	48.354	133.20	2.6160	56.985
#1	-.00175	2.2315	.00438	.00017	-.00561	-.13880	.00002	.00121	-.00076
#2	-.00367	2.2268	-.00177	.00037	-.00164	-.06807	.00064	.00117	-.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3340.6**	**39446.**	**3072.4**
Stddev	2.3	52.	8.5
%RSD	.06746	.13242	.27767
#1	3342.2	39483.	3078.4
#2	3339.0	39409.	3066.4

Sample Name: 280-115713-B-3-H Acquired: 11/7/2018 12:28:47 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00123**	**.01617**	**.00325**	**.03180**	**.11772**	**-.00029**	**.00119**	**204.32**	**-.00032**
Stddev	.00011	.00042	.00758	.00077	.00027	.00042	.00246	.31	.00006
%RSD	9.2041	2.5976	233.38	2.4366	.22961	145.54	206.06	.14950	17.995
#1	.00115	.01646	.00861	.03125	.11791	.00001	.00294	204.54	-.00028
#2	.00131	.01587	-.00211	.03235	.11752	-.00059	-.00055	204.11	-.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00030**	**.00105**	**-.00006**	**4.3292**	**2.9432**	**.00351**	**14.308**	**.02329**	**.00013**
Stddev	.00044	.00064	.00085	.0096	.0124	.00036	.066	.00010	.00052
%RSD	146.21	61.024	1406.1	.22102	.42276	10.129	.46019	.43446	405.59
#1	-.00061	.00150	-.00066	4.3360	2.9520	.00377	14.354	.02336	.00049
#2	.00001	.00059	.00054	4.3224	2.9344	.00326	14.261	.02321	-.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**315.86**	**.00135**	**.03240**	**-.00145**	**18.328**	**.00325**	**.00228**	**4.5333**	**9.7012**
Stddev	.27	.00055	.00089	.00126	.632	.00004	.00257	.0323	.0692
%RSD	.08626	41.094	2.7419	87.045	3.4478	1.3114	112.75	.71299	.71299
#1	315.67	.00095	.03177	-.00235	18.774	.00322	.00410	4.5104	9.6523
#2	316.05	.00174	.03303	-.00056	17.881	.00328	.00046	4.5561	9.7501
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00033**	**2.2883**	**.00312**	**.00069**	**-.00208**	**-.04589**	**.00067**	**.00339**	**-.00121**
Stddev	.00042	.0005	.00133	.00098	.00296	.03769	.00109	.00059	.00343
%RSD	129.43	.02248	42.736	143.06	142.18	82.116	162.75	17.306	283.90
#1	-.00003	2.2887	.00406	.00138	-.00418	-.07254	-.00010	.00381	-.00363
#2	-.00062	2.2880	.00218	-.00001	.00001	-.01925	.00145	.00298	.00122
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3565.7**	**42740.**	**3147.0**
Stddev	6.9	213.	11.3
%RSD	.19327	.49896	.35946
#1	3560.9	42589.	3155.0
#2	3570.6	42890.	3139.0

Sample Name: 280-115713-B-3-I MS Acquired: 11/7/2018 12:31:19 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04949**	**2.0083**	**1.0653**	**1.0271**	**2.2013**	**.05264**	W **2.0417**	**254.79**	**.09495**
Stddev	.00008	.0295	.0181	.0067	.0044	.00029	.0276	.00	.00171
%RSD	.16173	1.4668	1.7040	.65247	.19922	.55838	1.3511	.00108	1.7999
#1	.04955	2.0291	1.0782	1.0319	2.1982	.05243	2.0612	254.79	.09616
#2	.04943	1.9875	1.0525	1.0224	2.2044	.05285	2.0222	254.79	.09374
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49005**	**.20368**	**.25333**	**5.3089**	**55.062**	**1.0449**	**61.931**	**.50461**	**1.0434**
Stddev	.00573	.00282	.00024	.0164	.061	.0005	.040	.00013	.0154
%RSD	1.1702	1.3843	.09479	.30801	.11123	.04669	.06518	.02505	1.4768
#1	.49410	.20567	.25316	5.2973	55.018	1.0452	61.960	.50470	1.0543
#2	.48599	.20168	.25350	5.3205	55.105	1.0446	61.902	.50452	1.0325
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**368.21**	**.48622**	**10.664**	**.48935**	**21.306**	**.49976**	**2.1152**	**10.648**	**22.786**
Stddev	.02	.00713	.111	.00515	.264	.01307	.0148	.014	.030
%RSD	.00655	1.4659	1.0448	1.0523	1.2398	2.6158	.69980	.13168	.13168
#1	368.22	.49126	10.743	.49300	21.493	.50901	2.1257	10.658	22.807
#2	368.19	.48118	10.585	.48571	21.119	.49052	2.1047	10.638	22.765
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0262**	**3.3718**	**.98557**	**.98381**	**1.8876**	**2.0594**	**.51372**	**.49087**	**.52748**
Stddev	.0310	.0038	.00872	.00005	.0209	.0560	.00108	.00367	.00340
%RSD	1.5306	.11191	.88522	.00465	1.1074	2.7188	.21064	.74771	.64366
#1	2.0481	3.3745	.97940	.98384	1.9024	2.0990	.51449	.48828	.52988
#2	2.0043	3.3691	.99174	.98377	1.8729	2.0198	.51296	.49347	.52508
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3480.1**	**41964.**	**3140.5**
Stddev	10.9	64.	27.5
%RSD	.31218	.15196	.87405
#1	3487.8	42009.	3159.9
#2	3472.4	41919.	3121.1

Sample Name: 280-115713-B-3-J MSD Acquired: 11/7/2018 12:33:38 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04848**	**2.0282**	**1.0475**	**1.0228**	**2.1978**	**.05210**	W **2.0172**	**257.82**	**.09368**
Stddev	.00041	.0333	.0216	.0083	.0162	.00015	.0239	1.49	.00138
%RSD	.84976	1.6415	2.0582	.81662	.73471	.27901	1.1860	.57950	1.4721
#1	.04819	2.0518	1.0628	1.0287	2.2092	.05221	2.0342	258.88	.09466
#2	.04877	2.0047	1.0323	1.0169	2.1864	.05200	2.0003	256.77	.09271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48252**	**.20116**	**.25116**	**5.3662**	**54.970**	**1.0403**	**61.623**	**.50056**	**1.0384**
Stddev	.00414	.00225	.00022	.0435	.323	.0015	.013	.00060	.0089
%RSD	.85863	1.1201	.08769	.81039	.58701	.14277	.02132	.12047	.85886
#1	.48545	.20275	.25131	5.3969	55.198	1.0414	61.633	.50099	1.0447
#2	.47959	.19957	.25100	5.3354	54.741	1.0393	61.614	.50014	1.0321
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**373.73**	**.47918**	**10.515**	**.47947**	**21.569**	**.49820**	**2.0928**	**12.290**	**26.301**
Stddev	2.13	.00653	.093	.00724	.289	.00720	.0143	.036	.078
%RSD	.57098	1.3630	.88635	1.5106	1.3407	1.4448	.68347	.29636	.29636
#1	375.24	.48380	10.581	.48459	21.774	.50329	2.1029	12.316	26.356
#2	372.22	.47456	10.449	.47435	21.365	.49311	2.0827	12.264	26.246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0090**	**3.4074**	**.97926**	**.98119**	**1.8625**	**2.0364**	**.51240**	**.48338**	**.52932**
Stddev	.0158	.0178	.00984	.00140	.0158	.0281	.00118	.00122	.00835
%RSD	.78544	.52215	1.0050	.14292	.84569	1.3809	.23024	.25323	1.5773
#1	2.0202	3.4200	.97231	.98219	1.8736	2.0563	.51323	.48251	.53523
#2	1.9978	3.3948	.98622	.98020	1.8514	2.0166	.51157	.48425	.52342
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3488.0**	**41915.**	**3111.6**
Stddev	11.7	98.	13.1
%RSD	.33414	.23343	.42116
#1	3496.2	41984.	3102.3
#2	3479.8	41846.	3120.8

Sample Name: 280-115713-B-4-F Acquired: 11/7/2018 12:35:57 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00016**	**.00482**	**.00063**	**.03497**	**.01307**	**-.00024**	**.00330**	**76.010**	**-.00003**
Stddev	.00020	.00022	.00137	.00144	.00020	.00008	.00274	.265	.00003
%RSD	125.41	4.5017	217.30	4.1212	1.5423	33.361	83.078	.34859	109.78
#1	.00002	.00497	-.00034	.03599	.01322	-.00030	.00523	76.198	-.00001
#2	.00029	.00467	.00160	.03395	.01293	-.00019	.00136	75.823	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00049**	**.00073**	**-.00156**	**.21264**	**4.7621**	**.00353**	**2.4890**	**.00836**	**.00553**
Stddev	.00008	.00023	.00065	.00068	.0717	.00111	.0055	.00012	.00016
%RSD	15.701	32.307	41.424	.31880	1.5055	31.593	.22091	1.3942	2.8469
#1	-.00054	.00089	-.00202	.21312	4.7114	.00274	2.4851	.00828	.00542
#2	-.00044	.00056	-.00111	.21216	4.8128	.00431	2.4929	.00844	.00564
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.859**	**.00035**	**.01778**	**-.00017**	**.56923**	**.00097**	**-.00455**	**3.2417**	**6.9371**
Stddev	.165	.00014	.00031	.00031	.00794	.00059	.00118	.0147	.0315
%RSD	.83274	40.061	1.7676	182.69	1.3951	60.973	25.876	.45360	.45360
#1	19.742	.00025	.01800	.00005	.57484	.00055	-.00372	3.2521	6.9594
#2	19.976	.00045	.01756	-.00039	.56361	.00138	-.00539	3.2313	6.9149
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00104**	**.58085**	**.00261**	**.00093**	**.00166**	**-.04724**	**.00040**	**.00234**	**.00216**
Stddev	.00024	.00162	.00211	.00001	.00182	.00896	.00041	.00024	.00115
%RSD	22.842	.27881	81.051	.53982	110.10	18.963	103.24	10.274	53.175
#1	-.00088	.58199	.00410	.00094	.00295	-.04091	.00069	.00217	.00135
#2	-.00121	.57970	.00111	.00093	.00037	-.05357	.00011	.00251	.00297
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3694.3**	**45271.**	**3198.9**
Stddev	13.3	197.	4.9
%RSD	.35941	.43558	.15261
#1	3703.7	45132.	3195.4
#2	3684.9	45411.	3202.3

Sample Name: 280-115713-B-5-F Acquired: 11/7/2018 12:38:31 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00149**	**.01111**	**.00274**	**.06086**	**.30944**	**-.00030**	**.00588**	**294.17**	**-.00012**
Stddev	.00013	.00218	.00541	.00460	.00140	.00039	.00222	.41	.00021
%RSD	8.5989	19.586	197.33	7.5663	.45279	129.22	37.771	.13876	177.28
#1	.00159	.01265	-.00108	.06411	.30845	-.00003	.00745	293.88	.00003
#2	.00140	.00957	.00657	.05760	.31044	-.00057	.00431	294.45	-.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00025**	**.00055**	**.00073**	**8.4558**	**6.2103**	**.00365**	**28.556**	**.04532**	**.00053**
Stddev	.00013	.00036	.00021	.0176	.0705	.00280	.037	.00013	.00060
%RSD	53.732	64.405	28.086	.20797	1.1359	76.651	.12937	.27777	112.50
#1	-.00016	.00030	.00088	8.4433	6.1604	.00167	28.582	.04541	.00011
#2	-.00035	.00081	.00059	8.4682	6.2602	.00563	28.530	.04524	.00096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **616.71**	**.00219**	**.01910**	**-.00277**	**34.712**	**.00249**	**.00088**	**4.9752**	**10.647**
Stddev	3.67	.00005	.00344	.00236	1.272	.00269	.00220	.0106	.023
%RSD	.59530	2.3491	18.007	85.286	3.6648	108.25	251.04	.21353	.21353
#1	614.11	.00215	.02153	-.00443	35.612	.00439	-.00068	4.9827	10.663
#2	619.30	.00222	.01667	-.00110	33.813	.00058	.00243	4.9677	10.631
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00092**	**3.6868**	**-.00003**	**.00044**	**-.00305**	**-.07513**	**.00081**	**.00110**	**.00212**
Stddev	.00089	.0091	.00380	.00010	.00338	.02423	.00056	.00038	.00028
%RSD	96.436	.24768	12724.	23.624	110.89	32.254	68.926	34.880	13.156
#1	-.00154	3.6804	-.00272	.00051	-.00544	-.05800	.00120	.00083	.00193
#2	-.00029	3.6933	.00266	.00036	-.00066	-.09227	.00041	.00137	.00232
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3382.8**	**40497.**	**3079.1**
Stddev	4.3	10.	5.9
%RSD	.12777	.02522	.19266
#1	3385.8	40490.	3083.3
#2	3379.7	40505.	3074.9

Sample Name: 280-115713-B-6-F Acquired: 11/7/2018 12:41:10 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00042**	**.01530**	**.00319**	**.03982**	**.02130**	**-.00031**	**-.00095**	**109.30**	**-.00012**
Stddev	.00100	.00147	.00170	.00143	.00026	.00039	.00514	.20	.00018
%RSD	239.83	9.5782	53.238	3.5885	1.2088	126.52	542.64	.18516	150.27
#1	-.00029	.01634	.00199	.04083	.02112	-.00058	.00269	109.45	.00001
#2	.00113	.01426	.00439	.03881	.02149	-.00003	-.00458	109.16	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**.00055**	**-.00165**	**1.3947**	**2.3670**	**.00128**	**3.5884**	**.01305**	**.00225**
Stddev	.00046	.00001	.00014	.0047	.0155	.00023	.0056	.00013	.00032
%RSD	161.09	2.3829	8.2584	.33700	.65475	17.662	.15631	.98807	14.253
#1	-.00004	.00055	-.00155	1.3913	2.3779	.00144	3.5924	.01314	.00202
#2	.00061	.00054	-.00174	1.3980	2.3560	.00112	3.5845	.01296	.00247
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.785**	**.00028**	**.02482**	**-.00303**	**4.6673**	**.00118**	**-.00415**	**5.5676**	**11.915**
Stddev	.044	.00010	.00116	.00096	.0807	.00183	.00116	.0029	.006
%RSD	.37068	34.086	4.6818	31.646	1.7281	155.53	28.041	.05159	.05159
#1	11.816	.00035	.02564	-.00235	4.7243	.00247	-.00497	5.5696	11.919
#2	11.754	.00022	.02400	-.00371	4.6103	-.00012	-.00333	5.5656	11.910
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00141**	**.81798**	**.00163**	**.00061**	**.00062**	**.00832**	**.00169**	**-.00025**	**.00057**
Stddev	.00024	.00275	.00018	.00001	.00184	.00427	.00069	.00021	.00297
%RSD	16.860	.33654	10.996	1.9627	295.17	51.316	41.005	82.224	520.56
#1	-.00124	.81993	.00176	.00060	.00192	.01134	.00120	-.00011	-.00153
#2	-.00158	.81603	.00151	.00062	-.00068	.00530	.00218	-.00040	.00267
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3728.5**	**45759.**	**3245.3**
Stddev	16.4	157.	3.6
%RSD	.43872	.34361	.11095
#1	3740.0	45648.	3247.9
#2	3716.9	45870.	3242.8

Sample Name: 280-115713-B-7-F Acquired: 11/7/2018 12:43:43 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00170**	**.01509**	**.00739**	**.04181**	**.02134**	**-.00040**	**-.00198**	**111.78**	**-.00018**
Stddev	.00012	.00002	.00073	.00010	.00054	.00003	.00370	.29	.00019
%RSD	7.2228	.12002	9.9347	.23238	2.5249	6.9410	187.17	.26073	105.74
#1	.00179	.01511	.00687	.04174	.02096	-.00042	.00064	111.98	-.00032
#2	.00161	.01508	.00791	.04188	.02172	-.00038	-.00459	111.57	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00029**	**.00108**	**-.00229**	**1.2981**	**2.4964**	**.00150**	**3.7270**	**.01076**	**.00187**
Stddev	.00019	.00007	.00099	.0083	.0300	.00677	.0126	.00020	.00062
%RSD	65.512	6.5413	42.983	.63722	1.2029	451.16	.33686	1.8722	33.115
#1	-.00016	.00113	-.00160	1.3040	2.5176	-.00329	3.7359	.01090	.00230
#2	-.00043	.00103	-.00299	1.2923	2.4751	.00629	3.7181	.01062	.00143
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.761**	**.00024**	**.02794**	**-.00295**	**5.1310**	**.00022**	**-.00315**	**5.1323**	**10.983**
Stddev	1.018	.00032	.00377	.00288	.0629	.00432	.00765	.0177	.038
%RSD	8.6542	133.84	13.499	97.799	1.2266	1954.4	242.33	.34495	.34495
#1	11.041	.00046	.03061	-.00498	5.1755	-.00284	-.00856	5.1448	11.010
#2	12.480	.00001	.02528	-.00091	5.0865	.00328	.00225	5.1197	10.956
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00102**	**.85942**	**.00723**	**.00053**	**-.00304**	F **-.12016**	**.00179**	**.00089**	**.00072**
Stddev	.00401	.00180	.00231	.00015	.00259	.05229	.00015	.00031	.00056
%RSD	392.98	.20970	31.897	27.544	85.156	43.520	8.5519	34.931	77.411
#1	-.00386	.86069	.00560	.00063	-.00486	-.15714	.00190	.00111	.00033
#2	.00182	.85814	.00886	.00042	-.00121	-.08319	.00168	.00067	.00111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						20.000			
Low Limit						-.12000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3660.5**	**44974.**	**3201.2**
Stddev	9.6	87.	14.2
%RSD	.26122	.19273	.44427
#1	3653.8	44913.	3191.1
#2	3667.3	45035.	3211.3

Sample Name: 280-115713-B-8-F Acquired: 11/7/2018 12:46:16 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436364 200.7 (Be)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00078**	**.00898**	**.00415**	**.04096**	**.02108**	**.00018**	**-.00226**	**135.26**	**-.00007**
Stddev	.00090	.00036	.00656	.00111	.00024	.00025	.00092	.10	.00025
%RSD	116.15	4.0244	158.11	2.7116	1.1365	136.40	40.839	.07739	368.78
#1	.00141	.00873	-.00049	.04175	.02125	.00036	-.00291	135.34	.00011
#2	.00014	.00924	.00879	.04018	.02091	.00001	-.00160	135.19	-.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00085**	**-.00204**	**.92416**	**2.1407**	**.00197**	**3.5634**	**.02591**	**.00213**
Stddev	.00027	.00014	.00075	.00338	.0529	.00310	.0082	.00014	.00026
%RSD	1118.0	16.518	36.865	.36566	2.4731	157.49	.23065	.55415	12.404
#1	.00022	.00095	-.00151	.92177	2.1033	-.00022	3.5576	.02580	.00194
#2	-.00017	.00076	-.00257	.92655	2.1782	.00416	3.5692	.02601	.00231
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.7655**	**.00110**	**.01656**	**-.00194**	**2.2629**	**.00122**	**-.01239**	**5.4995**	**11.769**
Stddev	.0645	.00044	.00013	.00026	.0321	.00561	.00878	.0040	.009
%RSD	.83030	39.513	.75649	13.410	1.4167	459.38	70.824	.07245	.07245
#1	7.8110	.00141	.01647	-.00213	2.2856	-.00275	-.00619	5.4967	11.763
#2	7.7199	.00079	.01665	-.00176	2.2403	.00519	-.01860	5.5023	11.775
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00125**	**1.1027**	**.00467**	**.00070**	**-.00229**	**-.08257**	**.00059**	**-.00026**	**.00198**
Stddev	.00085	.0012	.00042	.00036	.00014	.03466	.00091	.00023	.00285
%RSD	67.759	.10887	8.8959	51.708	6.1184	41.984	154.87	88.968	144.08
#1	-.00065	1.1036	.00496	.00044	-.00239	-.10708	.00123	-.00042	-.00004
#2	-.00185	1.1019	.00437	.00095	-.00219	-.05806	-.00006	-.00010	.00399
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3723.2**	**45961.**	**3253.4**
Stddev	.7	228.	1.7
%RSD	.01844	.49632	.05140
#1	3722.8	46122.	3254.6
#2	3723.7	45799.	3252.2

Sample Name: CCVH-5408055 Acquired: 11/7/2018 12:48:50 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00399**	**50.945**	**-.00774**	**-.00044**	**.00064**	**-.00047**	**1.0249**	**.03306**	**-.00006**	**.00137**	**.00033**	**-.00235**	**49.518**
Stddev	.00044	.180	.00925	.00060	.00009	.00011	.0276	.02095	.00073	.00016	.00100	.00004	.090
%RSD	11.087	.35402	119.50	135.98	14.303	23.972	2.6931	63.359	1261.7	12.045	299.45	1.8883	.18154
#1	-.00430	50.817	-.00120	-.00086	.00071	-.00055	1.0444	.01825	-.00057	.00125	.00104	-.00231	49.582
#2	-.00368	51.072	-.01428	-.00002	.00058	-.00039	1.0054	.04787	.00046	.00149	-.00037	-.00238	49.455
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.11196**	**-.00399**	**-.07724**	**.00242**	**-.00140**	**250.57**	**.00426**	**.00063**	**-.00418**	**4.9652**	**.00387**	**.00756**	**-.05373**
Stddev	.11364	.00431	.00050	.00008	.00015	1.00	.00007	.00371	.00129	.0747	.00474	.00322	.02893
%RSD	101.50	107.93	.64843	3.4804	10.993	.39844	1.5568	588.97	30.937	1.5051	122.63	42.642	53.841
#1	.03161	-.00095	-.07759	.00247	-.00151	249.86	.00421	-.00199	-.00326	5.0181	.00722	.00984	-.07418
#2	.19232	-.00704	-.07688	.00236	-.00129	251.27	.00431	.00325	-.00509	4.9124	.00051	.00528	-.03327
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.11498**	**-.00092**	**.00069**	**4.7111**	**.01764**	**-.00276**	**10.158**	**-.00925**	**.00005**	**.08080**
Stddev	.06191	.00158	.00028	.0044	.00052	.00129	.103	.00086	.00104	.00104
%RSD	53.841	171.82	40.866	.09320	2.9293	46.629	1.0172	9.3535	2083.1	1.2835
#1	-.15875	.00020	.00049	4.7080	.01801	-.00367	10.231	-.00986	.00079	.08153
#2	-.07120	-.00204	.00089	4.7142	.01728	-.00185	10.085	-.00863	-.00069	.08007
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3656.1**	**44189.**	**3169.1**
Stddev	3.4	308.	15.2
%RSD	.09164	.69772	.48055
#1	3658.4	44407.	3158.3
#2	3653.7	43971.	3179.8

Sample Name: CCV-5407546 Acquired: 11/7/2018 12:51:22 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50684**	**.54471**	**1.0449**	**.49787**	**.54585**	**.54236**	**.00286**	**5.2868**	**.49973**	**.50957**	**.51852**	**.51746**
Stddev	.00338	.00660	.0141	.00648	.01452	.01300	.00504	.1293	.00631	.00628	.00888	.00007
%RSD	.66718	1.2124	1.3449	1.3011	2.6604	2.3969	175.92	2.4458	1.2617	1.2331	1.7127	.01448
#1	.50923	.54938	1.0549	.50245	.55612	.55155	.00642	5.3782	.50419	.51401	.52480	.51751
#2	.50445	.54004	1.0350	.49329	.53558	.53317	-.00070	5.1954	.49527	.50513	.51224	.51740
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5155**	**53.514**	F **1.1062**	**20.049**	**.49491**	**.51142**	F **5.6353**	**.50894**	**.99747**	**1.0275**	**.02064**	**.98495**
Stddev	.0653	1.727	.0304	.098	.00208	.00743	.1499	.00602	.01924	.0119	.00107	.01601
%RSD	2.5972	3.2273	2.7519	.48913	.42107	1.4531	2.6601	1.1838	1.9289	1.1593	5.1610	1.6250
#1	2.5617	54.736	1.1277	20.119	.49638	.51667	5.7413	.51320	1.0111	1.0359	.01989	.99627
#2	2.4693	52.293	1.0846	19.980	.49343	.50616	5.5293	.50468	.98386	1.0191	.02139	.97364
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value			1.0000				5.0000					
Range			10.000%				10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0549**	**5.0913**	**10.895**	**1.0340**	**.54763**	**.01289**	**.48581**	**1.0483**	**-.05640**	**.50223**	**.48751**	**.52140**
Stddev	.0115	.1028	.220	.0140	.01246	.00069	.00009	.0068	.04053	.00206	.00084	.00886
%RSD	1.0882	2.0185	2.0185	1.3492	2.2761	5.3546	.01947	.65076	71.872	.40943	.17292	1.6999
#1	1.0630	5.1640	11.051	1.0439	.55644	.01240	.48588	1.0531	-.02774	.50368	.48810	.52766
#2	1.0468	5.0187	10.740	1.0241	.53882	.01338	.48575	1.0434	-.08506	.50077	.48691	.51513
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3585.9**	**43768.**	**3012.4**
Stddev	5.0	59.	116.5
%RSD	.14056	.13437	3.8679
#1	3589.5	43727.	2930.0
#2	3582.3	43810.	3094.8

Sample Name: CCB Acquired: 11/7/2018 12:53:45 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00108**	**.04433**	**.00192**	**.00074**	**.00040**	**-.00055**	**.00195**	**.01717**	**.00034**	**.00055**	**.00039**	**-.00321**	**-.00133**
Stddev	.00038	.06389	.00406	.00039	.00021	.00027	.00179	.00545	.00059	.00020	.00048	.00011	.00366
%RSD	35.539	144.11	211.95	53.346	53.232	49.652	91.474	31.741	171.39	37.341	123.60	3.4947	274.77
#1	.00081	.08951	.00479	.00101	.00025	-.00036	.00069	.02102	.00076	.00069	.00073	-.00313	.00126
#2	.00135	-.00084	-.00096	.00046	.00055	-.00074	.00322	.01332	-.00007	.00040	.00005	-.00329	-.00392
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02746**	**.00290**	**.00350**	**-.00003**	**.00101**	**.20660**	**.00080**	**.00057**	**.00098**	**.01273**	**.00485**	**.00348**	**.00088**
Stddev	.06790	.00102	.00736	.00011	.00053	.01475	.00135	.00007	.00004	.00664	.00060	.00518	.02549
%RSD	247.30	35.228	210.27	404.80	52.267	7.1379	168.05	12.548	4.0833	52.140	12.403	149.03	2890.4
#1	-.02056	.00362	-.00170	-.00010	.00138	.19617	.00175	.00052	.00101	.01742	.00528	.00714	-.01714
#2	.07547	.00218	.00870	.00005	.00063	.21703	-.00015	.00062	.00095	.00804	.00443	-.00019	.01891
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00189**	**-.00139**	**.00020**	**.00368**	**.00012**	**.00028**	**-.03968**	**.00063**	**-.00073**	**-.00171**
Stddev	.05455	.00002	.00015	.00228	.00008	.00079	.00778	.00020	.00060	.00283
%RSD	2890.4	1.5456	74.263	62.038	68.745	283.39	19.608	31.023	83.300	165.41
#1	-.03668	-.00141	.00031	.00206	.00006	-.00028	-.04519	.00049	-.00115	.00029
#2	.04046	-.00138	.00010	.00529	.00017	.00084	-.03418	.00077	-.00030	-.00371
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3648.3**	**45361.**	**3097.9**
Stddev	2.2	341.	6.9
%RSD	.06103	.75203	.22430
#1	3649.9	45603.	3102.8
#2	3646.8	45120.	3093.0

Sample Name: CCVL-5415520 Acquired: 11/7/2018 12:56:28 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01192**	**.11228**	F **.00992**	**.09797**	**.01117**	F **.00033**	**.11774**	**.21625**	**.00531**	**.01043**	**.01020**	**.01219**
Stddev	.00051	.00152	.00171	.00005	.00017	.00018	.00484	.00512	.00037	.00056	.00025	.00008
%RSD	4.2705	1.3507	17.194	.04687	1.4850	52.787	4.1145	2.3658	6.8949	5.3274	2.4673	.69108
#1	.01228	.11335	.00872	.09800	.01106	.00021	.11432	.21987	.00557	.01004	.01038	.01213
#2	.01156	.11121	.01113	.09794	.01129	.00046	.12117	.21264	.00505	.01083	.01002	.01225
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500			.00100						
Range			-30.000%			-30.000%						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09692**	**3.2354**	**.01874**	**.20706**	**.00990**	**.01998**	**1.2456**	**.04284**	**2.8708**	**.00810**	**.10029**	**.02039**
Stddev	.00014	.0852	.00475	.00081	.00002	.00043	.0092	.00018	.0274	.00014	.00358	.00292
%RSD	.14820	2.6335	25.342	.38977	.19935	2.1613	.74023	.42232	.95422	1.6783	3.5672	14.326
#1	.09682	3.1752	.01538	.20763	.00989	.01967	1.2522	.04297	2.8902	.00820	.10282	.01833
#2	.09702	3.2957	.02210	.20649	.00992	.02028	1.2391	.04271	2.8515	.00801	.09776	.02246
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02206**	**.46481**	**.99469**	**.10315**	**.01051**	**.01496**	**.00979**	**.01493**	F **.03967**	**.01049**	**.01852**	**.01710**
Stddev	.00174	.02412	.05161	.00068	.00007	.00157	.00031	.00214	.06181	.00063	.00038	.00550
%RSD	7.8859	5.1884	5.1884	.66264	.61913	10.502	3.2137	14.331	155.81	5.9794	2.0347	32.140
#1	.02083	.48186	1.0312	.10364	.01046	.01607	.01001	.01341	.08338	.01093	.01878	.01322
#2	.02329	.44775	.95819	.10267	.01056	.01385	.00957	.01644	-.00404	.01005	.01825	.02099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3784.0**	**46165.**	**3176.9**
Stddev	2.0	28.	7.1
%RSD	.05207	.06027	.22290
#1	3782.6	46145.	3171.9
#2	3785.3	46185.	3181.9

Sample Name: MB 280-434125/1-A Acquired: 11/7/2018 12:59:02 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/6 Custom ID2: Custom ID3:
Comment: 434125 6010D (P)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00129**	**.00251**	**-.00116**	**-.00040**	**.00066**	**-.00027**	**-.00052**	**.08970**	**-.00028**
Stddev	.00104	.00028	.00008	.00024	.00035	.00027	.00390	.10407	.00013
%RSD	80.400	11.311	7.0026	58.597	53.253	100.39	757.55	116.02	45.771
#1	.00056	.00271	-.00121	-.00024	.00091	-.00008	.00224	.16328	-.00019
#2	.00203	.00231	-.00110	-.00057	.00041	-.00046	-.00328	.01611	-.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00015**	**.00042**	**-.00324**	**.01690**	**.16703**	**-.00413**	**.00476**	**.00023**	**-.00023**
Stddev	.00007	.00015	.00017	.02141	.01148	.00209	.00303	.00000	.00030
%RSD	47.740	34.245	5.2439	126.65	6.8718	50.507	63.633	1.8417	132.31
#1	.00010	.00032	-.00336	.03204	.17515	-.00265	.00262	.00023	-.00045
#2	.00020	.00053	-.00312	.00177	.15891	-.00560	.00690	.00023	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.25659**	**.00057**	**.00061**	**-.00058**	**.00456**	**-.00335**	**-.00443**	**-.00253**	**-.00542**
Stddev	.13118	.00041	.00006	.00100	.00818	.00062	.00125	.03553	.07604
%RSD	51.125	71.860	9.0872	172.46	179.48	18.480	28.302	1404.3	1404.3
#1	.34935	.00086	.00057	-.00129	-.00123	-.00292	-.00531	.02260	.04835
#2	.16383	.00028	.00065	.00013	.01034	-.00379	-.00354	-.02766	-.05918
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00044**	**.00049**	**.00349**	**.00032**	**-.00238**	F **-.13467**	**.00019**	**.00081**	**.00244**
Stddev	.00083	.00101	.00015	.00064	.00298	.00076	.00028	.00003	.00879
%RSD	189.42	204.36	4.1536	201.74	125.24	.56789	143.60	3.9385	359.56
#1	-.00102	.00121	.00339	.00077	-.00449	-.13521	-.00000	.00083	.00866
#2	.00015	-.00022	.00360	-.00013	-.00027	-.13412	.00039	.00078	-.00377
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						.06000			
Low Limit						-.06000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3781.7**	**46433.**	**3169.8**
Stddev	5.2	101.	3.5
%RSD	.13688	.21654	.10908
#1	3785.4	46362.	3172.3
#2	3778.0	46504.	3167.4

Sample Name: LCS 280-434125/2-A Acquired: 11/7/2018 13:01:38 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04787**	**2.0664**	**1.0316**	**.98925**	**2.0918**	**.05211**	**2.0966**	**50.566**	**.09439**
Stddev	.00113	.0239	.0022	.00753	.0073	.00003	.0298	.071	.00161
%RSD	2.3676	1.1593	.21051	.76077	.34998	.05341	1.4209	.14083	1.7102
#1	.04867	2.0833	1.0332	.99458	2.0970	.05213	2.1177	50.616	.09553
#2	.04707	2.0494	1.0301	.98393	2.0867	.05209	2.0755	50.515	.09325
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49337**	**.20265**	**.25013**	**.96667**	**52.096**	**1.0517**	**48.715**	**.47825**	**1.0127**
Stddev	.00522	.00245	.00016	.00156	.211	.0070	.001	.00003	.0150
%RSD	1.0590	1.2070	.06519	.16130	.40435	.66214	.00209	.00584	1.4824
#1	.49706	.20438	.25024	.96557	52.245	1.0566	48.716	.47823	1.0234
#2	.48967	.20092	.25001	.96777	51.947	1.0467	48.714	.47827	1.0021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.261**	**.48966**	**10.195**	**.50374**	**2.0487**	**.48736**	**2.1191**	F **7.4113**	**15.860**
Stddev	.230	.00379	.115	.00757	.0195	.00714	.0190	.0047	.010
%RSD	.44024	.77440	1.1250	1.5032	.95064	1.4646	.89639	.06413	.06413
#1	52.098	.49234	10.276	.50910	2.0625	.49240	2.1325	7.4147	15.867
#2	52.423	.48698	10.114	.49839	2.0350	.48231	2.1057	7.4079	15.853
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit								11.000	
Low Limit								9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0186**	**1.0621**	**.96092**	**.94717**	**2.0351**	**2.1159**	**.49987**	**.48042**	**.51882**
Stddev	.0209	.0003	.00208	.00250	.0271	.1054	.00087	.00183	.00081
%RSD	1.0336	.02493	.21634	.26391	1.3304	4.9826	.17376	.38108	.15518
#1	2.0333	1.0623	.95945	.94541	2.0542	2.0414	.49926	.47913	.51825
#2	2.0038	1.0619	.96239	.94894	2.0159	2.1905	.50049	.48172	.51939
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3688.3**	**44499.**	**3156.4**
Stddev	20.3	236.	11.0
%RSD	.55077	.53087	.34704
#1	3673.9	44666.	3148.7
#2	3702.7	44332.	3164.1

Sample Name: 280-115729-A-1-B @5 Acquired: 11/7/2018 13:04:03 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 5x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00177**	**.29945**	**.00197**	**.00677**	**.02080**	**-.00047**	**.00769**	**8.5399**	**-.00011**
Stddev	.00044	.00655	.00664	.00036	.00014	.00027	.00264	.0101	.00015
%RSD	24.758	2.1884	336.48	5.3281	.69241	56.941	34.380	.11825	138.04
#1	.00208	.30408	.00667	.00651	.02070	-.00066	.00956	8.5328	-.00000
#2	.00146	.29481	-.00272	.00702	.02090	-.00028	.00582	8.5471	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00069**	**.00244**	**.00408**	**.36405**	**5.3040**	**.00164**	**2.4781**	**.01277**	**.00480**
Stddev	.00015	.00033	.00084	.00688	.1122	.00006	.0174	.00014	.00013
%RSD	22.423	13.530	20.562	1.8887	2.1161	3.7017	.70150	1.1301	2.7618
#1	.00080	.00220	.00349	.36891	5.2247	.00160	2.4904	.01288	.00490
#2	.00058	.00267	.00467	.35919	5.3834	.00169	2.4658	.01267	.00471
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.455**	**.00338**	**7.3512**	**.00006**	**3.7265**	**.00499**	**.00077**	**3.0326**	**6.4898**
Stddev	.331	.00045	.1240	.00054	.0628	.00342	.00856	.0074	.0158
%RSD	1.8985	13.458	1.6861	871.17	1.6858	68.516	1111.7	.24344	.24344
#1	17.690	.00306	7.4388	-.00032	3.7709	.00257	.00682	3.0274	6.4786
#2	17.221	.00370	7.2635	.00044	3.6821	.00740	-.00528	3.0378	6.5010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00376**	**.04555**	**.00154**	**.02219**	**.00009**	**.03768**	**.00510**	**.10420**	**.00667**
Stddev	.00148	.00002	.00003	.00050	.00173	.05686	.00004	.00059	.00029
%RSD	39.538	.04205	2.1738	2.2600	1921.4	150.91	.81691	.56710	4.3407
#1	.00271	.04556	.00151	.02184	-.00113	-.00253	.00513	.10462	.00647
#2	.00481	.04554	.00156	.02255	.00131	.07788	.00507	.10379	.00688
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3779.7**	**45979.**	**3207.4**
Stddev	6.6	216.	1.0
%RSD	.17420	.46955	.02975
#1	3775.1	45827.	3208.0
#2	3784.4	46132.	3206.7

Sample Name: 115729-A-2-D @5 Acquired: 11/7/2018 13:06:36 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 5x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00030**	**.08813**	**.00737**	**.00168**	**.00549**	**-.00036**	**.00237**	**2.0440**	**.00011**
Stddev	.00061	.00221	.00218	.00157	.00014	.00003	.00394	.0012	.00019
%RSD	199.96	2.5082	29.566	93.140	2.5267	7.3214	166.58	.05779	176.56
#1	-.00013	.08969	.00891	.00057	.00539	-.00038	-.00042	2.0448	.00024
#2	.00073	.08657	.00583	.00279	.00559	-.00034	.00515	2.0431	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00061**	**.00092**	**.00334**	**.16696**	**1.3877**	**-.00010**	**.58390**	**.00622**	**.00124**
Stddev	.00019	.00045	.00107	.00552	.0615	.00635	.00431	.00015	.00050
%RSD	31.135	48.941	32.195	3.3064	4.4339	6075.1	.73893	2.4604	40.596
#1	.00074	.00124	.00258	.17086	1.3442	-.00460	.58695	.00633	.00088
#2	.00047	.00060	.00410	.16306	1.4312	.00439	.58085	.00611	.00160
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.3213**	**.00257**	**1.4898**	**.00105**	**.93499**	**-.00249**	**-.00679**	**.59108**	**1.2649**
Stddev	.0217	.00087	.0362	.00165	.02140	.00240	.00596	.01435	.0307
%RSD	.50139	33.965	2.4299	157.33	2.2892	96.180	87.788	2.4276	2.4276
#1	4.3366	.00319	1.5154	-.00012	.95012	-.00419	-.00258	.60123	1.2866
#2	4.3060	.00195	1.4642	.00221	.91985	-.00080	-.01101	.58094	1.2432
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00217**	**.00961**	**.00536**	**.00557**	**-.00197**	**.01696**	**.00141**	**.13625**	**.00482**
Stddev	.00060	.00006	.00015	.00036	.00299	.00632	.00009	.00055	.00180
%RSD	27.710	.59488	2.7068	6.4212	152.12	37.240	6.4398	.40583	37.408
#1	.00260	.00957	.00526	.00532	.00015	.02143	.00148	.13664	.00610
#2	.00175	.00965	.00546	.00582	-.00408	.01250	.00135	.13586	.00355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3779.3**	**46283.**	**3199.9**
Stddev	19.8	223.	9.4
%RSD	.52437	.48271	.29242
#1	3793.3	46125.	3206.5
#2	3765.3	46441.	3193.2

Sample Name: 115729-A-2-D SD@25 Acquired: 11/7/2018 13:09:10 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 5x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01036**	**.84834**	**.21171**	**.19979**	**.44412**	**.01013**	**.42008**	**18.822**	**.01843**
Stddev	.00017	.01392	.00211	.00141	.00032	.00023	.01147	.061	.00015
%RSD	1.6840	1.6408	.99592	.70663	.07307	2.3124	2.7299	.32206	.79858
#1	.01024	.85818	.21320	.20079	.44435	.00996	.42819	18.864	.01853
#2	.01048	.83850	.21022	.19879	.44389	.01029	.41197	18.779	.01833
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10002**	**.04252**	**.05124**	**.54604**	**15.711**	**.21544**	**12.356**	**.10894**	**.20276**
Stddev	.00104	.00055	.00007	.00707	.020	.00365	.056	.00042	.00526
%RSD	1.0417	1.2846	.12719	1.2952	.12899	1.6920	.45634	.38163	2.5948
#1	.10076	.04291	.05129	.55104	15.725	.21286	12.395	.10924	.20648
#2	.09929	.04213	.05119	.54104	15.696	.21802	12.316	.10865	.19904
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.642**	**.10021**	**9.6571**	**.10033**	**4.0610**	**.09438**	**.41092**	**3.1317**	**6.7018**
Stddev	.349	.00260	.1837	.00293	.0822	.00092	.00961	.0330	.0706
%RSD	1.3103	2.5964	1.9025	2.9216	2.0235	.97553	2.3375	1.0535	1.0535
#1	26.395	.10205	9.7870	.10240	4.1191	.09373	.41771	3.1550	6.7518
#2	26.889	.09837	9.5272	.09825	4.0029	.09503	.40412	3.1084	6.6519
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40675**	**.26106**	**.19445**	**.21739**	**.41651**	**.35961**	**.10490**	**.09984**	**.11182**
Stddev	.00826	.00142	.00138	.00128	.00857	.12190	.00191	.00004	.00840
%RSD	2.0307	.54373	.70956	.58806	2.0576	33.896	1.8247	.04421	7.5100
#1	.41259	.26206	.19347	.21829	.42257	.44580	.10625	.09987	.10588
#2	.40091	.26006	.19542	.21648	.41045	.27342	.10354	.09981	.11776
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3624.3**	**44581.**	**3108.6**
Stddev	1.1	66.	15.5
%RSD	.03006	.14900	.49775
#1	3623.6	44628.	3097.6
#2	3625.1	44534.	3119.5

Sample Name: 115729-A-2-E MS @5 Acquired: 11/7/2018 13:11:38 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 5x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01095**	**.84474**	**.20601**	**.20194**	**.45073**	**.01027**	**.42061**	**18.998**	**.01853**
Stddev	.00056	.01770	.00811	.00368	.00043	.00051	.00811	.081	.00037
%RSD	5.1356	2.0950	3.9381	1.8247	.09523	4.9428	1.9289	.42536	2.0174
#1	.01055	.85725	.21175	.20454	.45104	.01063	.42635	19.055	.01879
#2	.01135	.83222	.20027	.19933	.45043	.00991	.41487	18.941	.01826
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09957**	**.04185**	**.05124**	**.56245**	**15.927**	**.22087**	**12.412**	**.11029**	**.20473**
Stddev	.00234	.00082	.00022	.00333	.199	.00922	.020	.00061	.00533
%RSD	2.3509	1.9499	.42338	.59173	1.2504	4.1762	.16367	.55266	2.6016
#1	.10123	.04242	.05139	.56481	16.068	.22739	12.426	.11072	.20850
#2	.09792	.04127	.05108	.56010	15.786	.21435	12.398	.10985	.20097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.178**	**.10137**	**9.5646**	**.09963**	**4.0225**	**.09604**	**.40342**	**3.8906**	**8.3258**
Stddev	.511	.00260	.2246	.00233	.1111	.00250	.01062	.0368	.0788
%RSD	1.8804	2.5655	2.3487	2.3384	2.7626	2.6058	2.6319	.94611	.94611
#1	26.817	.10321	9.7234	.10128	4.1011	.09781	.41093	3.8645	8.2701
#2	27.540	.09954	9.4057	.09799	3.9439	.09427	.39591	3.9166	8.3815
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.40646**	**.26319**	**.19688**	**.22023**	**.41249**	**.32372**	**.10552**	**.10211**	**.11186**
Stddev	.00924	.00144	.00497	.00147	.00748	.04352	.00077	.00226	.00141
%RSD	2.2734	.54900	2.5242	.66952	1.8134	13.445	.72867	2.2126	1.2595
#1	.41299	.26421	.20040	.22127	.41778	.35449	.10607	.10371	.11286
#2	.39993	.26216	.19337	.21919	.40720	.29294	.10498	.10051	.11087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3638.4**	**44216.**	**3089.4**
Stddev	.3	82.	13.9
%RSD	.00957	.18513	.45037
#1	3638.1	44158.	3079.6
#2	3638.6	44274.	3099.3

Sample Name: 115729-A-2-F MSD @5 Acquired: 11/7/2018 13:14:05 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 5x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04618**	**1.2990**	**.20328**	**.10049**	**.12173**	**.04997**	**.00570**	**27.812**	**.04773**
Stddev	.00028	.0211	.00205	.00216	.00065	.00035	.00304	.083	.00068
%RSD	.59884	1.6233	1.0091	2.1481	.53138	.70150	53.298	.29931	1.4287
#1	.04638	1.3139	.20183	.10201	.12128	.04973	.00355	27.753	.04822
#2	.04598	1.2840	.20473	.09896	.12219	.05022	.00784	27.871	.04725
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04822**	**.05133**	**.04991**	**1.2496**	**25.254**	**.10390**	**21.600**	**.05769**	**.05052**
Stddev	.00050	.00066	.00033	.0032	.142	.00389	.066	.00027	.00116
%RSD	1.0294	1.2871	.66714	.25169	.56385	3.7427	.30670	.47331	2.2971
#1	.04857	.05180	.04968	1.2519	25.153	.10115	21.647	.05788	.05135
#2	.04786	.05087	.05015	1.2474	25.354	.10665	21.553	.05749	.04970
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**36.124**	**.04898**	**9.4252**	**.09430**	**3.5992**	**.08986**	**.20424**	**7.7682**	**16.624**
Stddev	.301	.00096	.1698	.00106	.0328	.00171	.00320	.0405	.087
%RSD	.83433	1.9544	1.8011	1.1222	.91017	1.9024	1.5674	.52074	.52074
#1	35.911	.04966	9.5453	.09505	3.6224	.09107	.20650	7.7396	16.563
#2	36.337	.04831	9.3052	.09355	3.5760	.08865	.20197	7.7968	16.685
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09754**	**.09621**	**.19077**	**.06805**	**.20355**	**.43956**	**.05253**	**.19658**	**.06061**
Stddev	.00131	.00038	.00000	.00024	.00625	.03903	.00033	.00137	.00171
%RSD	1.3413	.39750	.00003	.35977	3.0685	8.8785	.62511	.69755	2.8191
#1	.09846	.09594	.19077	.06788	.20797	.46716	.05230	.19561	.06182
#2	.09661	.09648	.19077	.06823	.19913	.41197	.05276	.19755	.05940
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3633.4**	**44611.**	**3147.5**
Stddev	5.1	403.	6.3
%RSD	.14075	.90414	.20066
#1	3637.0	44326.	3151.9
#2	3629.7	44897.	3143.0

Sample Name: 115729-A-2-D PDS @5 Acquired: 11/7/2018 13:16:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 5x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00091**	**.00054**	**.00383**	**.00465**	**.00630**	**-.00046**	**.00012**	**8.1210**	**.00036**
Stddev	.00072	.00095	.00267	.00053	.00015	.00018	.00017	.0116	.00006
%RSD	79.223	176.01	69.811	11.318	2.3255	38.634	136.00	.14284	17.328
#1	.00142	-.00013	.00194	.00503	.00640	-.00034	.00024	8.1128	.00032
#2	.00040	.00121	.00572	.00428	.00620	-.00059	.00000	8.1292	.00041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00014**	**-.00212**	**.00514**	**5.1771**	**.00425**	**2.5066**	**.00128**	**.00168**
Stddev	.00016	.00016	.00053	.00061	.1312	.00584	.0282	.00038	.00001
%RSD	932.23	117.33	24.964	11.913	2.5340	137.23	1.1266	29.304	.53910
#1	.00013	.00002	-.00249	.00471	5.2699	.00838	2.4866	.00102	.00167
#2	-.00009	.00025	-.00175	.00558	5.0843	.00013	2.5266	.00155	.00169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.738**	**-.00017**	**7.5037**	**-.00335**	**3.7703**	**.00235**	**-.00094**	**2.9398**	**6.2911**
Stddev	.524	.00009	.1176	.00081	.0448	.00000	.00117	.0586	.1255
%RSD	2.9537	52.588	1.5676	24.218	1.1886	.17234	124.13	1.9946	1.9946
#1	17.368	-.00023	7.5869	-.00277	3.8019	.00236	-.00177	2.9812	6.3798
#2	18.109	-.00010	7.4205	-.00392	3.7386	.00235	-.00012	2.8983	6.2024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00025**	**.04032**	**.00264**	**.00052**	**.00098**	**-.01645**	**.00493**	**.00114**	**.00059**
Stddev	.00061	.00013	.00216	.00082	.00094	.04276	.00029	.00098	.00217
%RSD	240.03	.31204	81.661	158.96	95.718	259.95	5.7837	85.987	365.98
#1	.00018	.04023	.00416	-.00006	.00032	-.04668	.00514	.00045	.00213
#2	-.00068	.04041	.00112	.00110	.00164	.01379	.00473	.00183	-.00094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3741.8**	**45775.**	**3182.9**
Stddev	7.4	646.	9.8
%RSD	.19749	1.4114	.30721
#1	3747.1	45318.	3189.8
#2	3736.6	46232.	3176.0

Sample Name: CCVH-5408055 Acquired: 11/7/2018 13:19:08 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00213**	**51.622**	**-.01135**	**.00060**	**.00091**	**-.00038**	**1.0421**	**.01784**	**.00011**	**.00148**	**.00036**	**-.00172**	**50.470**
Stddev	.00079	.003	.00722	.00047	.00009	.00035	.0108	.00108	.00007	.00007	.00031	.00033	.469
%RSD	37.000	.00620	63.605	78.054	9.7597	90.298	1.0334	6.0604	65.814	4.5598	85.220	19.424	.92836
#1	-.00157	51.625	-.00624	.00027	.00098	-.00014	1.0497	.01861	.00016	.00143	.00014	-.00196	50.139
#2	-.00268	51.620	-.01645	.00093	.00085	-.00063	1.0344	.01708	.00006	.00152	.00058	-.00149	50.801
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.21191**	**.00060**	**-.07878**	**.00229**	**-.00122**	**254.89**	**.00358**	**.00108**	**-.00456**	**5.0552**	**.00668**	**.00946**	**-.04116**
Stddev	.02821	.00226	.00162	.00004	.00012	1.90	.00068	.00034	.00073	.0811	.00372	.00123	.04676
%RSD	13.313	374.90	2.0565	1.8599	9.8995	.74640	19.100	31.357	16.050	1.6050	55.718	12.987	113.59
#1	.19196	.00220	-.07992	.00232	-.00131	253.54	.00309	.00084	-.00507	5.1126	.00932	.01033	-.00810
#2	.23186	-.00100	-.07763	.00226	-.00114	256.23	.00406	.00132	-.00404	4.9978	.00405	.00859	-.07423
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.08809**	**.00018**	**.00020**	**4.7683**	**.01839**	**-.00520**	**10.264**	**-.00958**	**-.00066**	**.07560**
Stddev	.10006	.00168	.00022	.0001	.00004	.00067	.041	.00058	.00011	.00197
%RSD	113.59	944.34	110.57	.00140	.22285	12.838	.39964	6.0426	16.377	2.6036
#1	-.01733	.00136	.00004	4.7682	.01841	-.00567	10.235	-.00999	-.00059	.07421
#2	-.15885	-.00101	.00036	4.7683	.01836	-.00473	10.293	-.00917	-.00074	.07699
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3601.8**	**43515.**	**3110.4**
Stddev	16.0	134.	10.0
%RSD	.44333	.30878	.32184
#1	3590.5	43420.	3117.5
#2	3613.1	43610.	3103.3

Sample Name: CCV-5407546 Acquired: 11/7/2018 13:21:40 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49070**	**.52779**	**1.0111**	**.48541**	**.51690**	**.51468**	**.00204**	**5.0165**	**.48432**	**.49533**	**.50135**	**.49966**	**2.3925**
Stddev	.00208	.00649	.0127	.00565	.00303	.00065	.00505	.0228	.00639	.00748	.00872	.00021	.0152
%RSD	.42296	1.2288	1.2613	1.1635	.58591	.12540	247.44	.45369	1.3192	1.5098	1.7392	.04119	.63411
#1	.49217	.53238	1.0201	.48941	.51904	.51513	-.00153	5.0326	.48884	.50062	.50752	.49951	2.4033
#2	.48923	.52321	1.0021	.48142	.51476	.51422	.00561	5.0004	.47980	.49004	.49519	.49980	2.3818
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.132**	**1.0514**	**19.498**	**.47943**	**.49416**	**5.2421**	**.49521**	**.97362**	**.99624**	**-.00104**	**.94789**	**1.0225**	**4.8370**
Stddev	.017	.0032	.043	.00105	.00677	.0289	.00769	.01438	.01410	.00447	.01455	.0094	.0192
%RSD	.03275	.30651	.21925	.21833	1.3696	.55080	1.5520	1.4774	1.4152	429.06	1.5355	.91925	.39762
#1	51.144	1.0537	19.528	.48017	.49894	5.2625	.50064	.98379	1.0062	.00212	.95818	1.0292	4.8506
#2	51.120	1.0491	19.468	.47869	.48937	5.2217	.48977	.96345	.98627	-.00420	.93760	1.0159	4.8234
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.351**	**1.0020**	**.52035**	**.01210**	**.47120**	**1.0188**	**-.03290**	**.48541**	**.47251**	**.49546**
Stddev	.041	.0144	.00179	.00291	.00097	.0092	.03848	.00130	.00377	.00590
%RSD	.39762	1.4358	.34337	24.020	.20681	.90008	116.93	.26681	.79846	1.1916
#1	10.380	1.0122	.52162	.01416	.47189	1.0253	-.00570	.48633	.47518	.49964
#2	10.322	.99184	.51909	.01005	.47051	1.0123	-.06011	.48450	.46984	.49129
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3634.1**	**44395.**	**3084.7**
Stddev	14.3	272.	8.5
%RSD	.39263	.61165	.27500
#1	3644.2	44203.	3078.7
#2	3624.0	44587.	3090.7

Sample Name: CCB Acquired: 11/7/2018 13:24:03 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00116**	**.00050**	**-.00857**	**-.00022**	W **.00207**	**-.00007**	**.00145**	**.01097**	**.00021**	**.00005**	**.00012**	**-.00309**
Stddev	.00013	.00059	.00149	.00079	.00007	.00006	.00356	.00314	.00026	.00016	.00003	.00100
%RSD	11.191	118.08	17.355	362.58	3.1747	84.443	245.92	28.596	120.94	282.51	25.995	32.333
#1	.00107	.00008	-.00962	.00034	.00202	-.00012	-.00107	.00875	.00039	.00016	.00014	-.00238
#2	.00125	.00092	-.00752	-.00077	.00211	-.00003	.00396	.01318	.00003	-.00005	.00010	-.00379
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					.00200							
Low Limit					-.00200							

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.08243**	**.09103**	W **.00730**	**-.00323**	**.00088**	**.00073**	**.15061**	**.00030**	**-.00219**	**-.00236**	**-.00213**	**.00031**
Stddev	.01524	.02688	.00566	.00274	.00008	.00006	.05089	.00012	.00079	.00222	.00032	.00015
%RSD	18.494	29.527	77.514	84.733	8.9417	7.6767	33.787	38.968	36.247	93.946	15.077	49.240
#1	.09321	.11003	.00330	-.00129	.00093	.00077	.18659	.00022	-.00275	-.00079	-.00236	.00020
#2	.07165	.07202	.01130	-.00516	.00082	.00069	.11463	.00038	-.00163	-.00393	-.00190	.00042
Check ?	Chk Warn	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.05000		.00500									
Low Limit	-.05000		-.01000									

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00266**	**-.04006**	**-.08573**	**-.00005**	**.00025**	**.00204**	**.00022**	**-.00284**	**-.04921**	**-.00044**	**-.00009**	**.00226**
Stddev	.00032	.06508	.13928	.00220	.00051	.00022	.00029	.00483	.01019	.00076	.00021	.00206
%RSD	12.091	162.45	162.45	4005.9	201.69	10.733	135.24	169.89	20.702	171.35	227.45	91.067
#1	-.00289	-.08608	-.18422	-.00161	.00061	.00220	.00043	-.00626	-.05642	-.00098	-.00024	.00080
#2	-.00243	.00596	.01275	.00150	-.00011	.00189	.00001	.00057	-.04201	.00009	.00005	.00371
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3698.0**	**45721.**	**3127.4**
Stddev	1.6	171.	26.9
%RSD	.04303	.37489	.85907
#1	3696.9	45600.	3108.4
#2	3699.1	45842.	3146.4

Sample Name: CCVL-5415520 Acquired: 11/7/2018 13:26:39 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01167**	**.11312**	**.01598**	**.09579**	**.01147**	F **.00061**	**.11532**	**.20666**	**.00490**	**.01046**	**.01010**	**.01383**
Stddev	.00037	.00381	.00125	.00239	.00025	.00022	.00021	.00417	.00005	.00030	.00064	.00027
%RSD	3.1356	3.3666	7.8231	2.4970	2.1443	35.683	.18278	2.0179	1.1006	2.8384	6.3809	1.9717
#1	.01141	.11581	.01687	.09748	.01130	.00045	.11517	.20961	.00486	.01067	.01056	.01402
#2	.01192	.11042	.01510	.09410	.01164	.00076	.11547	.20372	.00494	.01025	.00965	.01364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						.00100						
Range						-30.000%						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09849**	**3.2653**	**.02258**	**.20700**	**.01006**	**.01908**	**1.1238**	**.04130**	**2.8187**	**.00793**	**.09004**	**.02211**
Stddev	.00115	.0196	.01052	.00461	.00013	.00019	.0368	.00057	.0583	.00192	.00957	.00022
%RSD	1.1701	.59998	46.565	2.2273	1.3203	.98041	3.2727	1.3908	2.0678	24.245	10.627	1.0079
#1	.09767	3.2792	.01515	.21026	.01015	.01921	1.0977	.04170	2.8599	.00929	.09680	.02195
#2	.09930	3.2515	.03002	.20374	.00996	.01895	1.1498	.04089	2.7775	.00657	.08327	.02227
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02255**	**.48738**	**1.0430**	**.09982**	**.01078**	**.01558**	**.00956**	**.01557**	F **.00545**	**.01033**	**.01927**	**.01722**
Stddev	.00178	.00547	.0117	.00088	.00017	.00228	.00009	.00368	.00560	.00053	.00059	.00345
%RSD	7.8892	1.1221	1.1221	.87665	1.5512	14.656	.99361	23.642	102.82	5.1647	3.0712	20.026
#1	.02381	.48352	1.0347	.10044	.01066	.01720	.00962	.01818	.00941	.01071	.01885	.01478
#2	.02129	.49125	1.0513	.09920	.01090	.01397	.00949	.01297	.00149	.00996	.01969	.01966
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3732.5**	**46077.**	**3186.0**
Stddev	3.7	61.	22.5
%RSD	.10025	.13159	.70769
#1	3735.1	46120.	3170.1
#2	3729.8	46034.	3202.0

Sample Name: 280-115729-A-3-B @5 Acquired: 11/7/2018 13:29:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 5x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00087**	**1.9977**	**.00940**	**.00326**	**.03468**	**-.00019**	**.00424**	**10.628**	**.00023**
Stddev	.00006	.0483	.00435	.00077	.00068	.00033	.00226	.024	.00002
%RSD	6.6158	2.4183	46.253	23.569	1.9504	175.85	53.288	.22630	10.504
#1	.00083	2.0319	.00632	.00380	.03516	.00005	.00584	10.645	.00021
#2	.00091	1.9636	.01247	.00272	.03420	-.00043	.00264	10.611	.00024
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00093**	**.00275**	**-.00025**	**2.4273**	**3.5930**	**.00830**	**3.2513**	**.05335**	**.00070**
Stddev	.00029	.00017	.00044	.0204	.1721	.00306	.0165	.00059	.00026
%RSD	30.638	6.2816	171.79	.84208	4.7901	36.887	.50716	1.0994	36.590
#1	.00073	.00288	.00005	2.4417	3.7147	.00614	3.2630	.05376	.00052
#2	.00113	.00263	-.00056	2.4128	3.4713	.01047	3.2396	.05294	.00088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.887**	**.00184**	**7.3132**	**-.00284**	**3.4464**	**-.00127**	**.00009**	**4.9207**	**10.530**
Stddev	.104	.00027	.1575	.00157	.0777	.00130	.00353	.0834	.179
%RSD	.69926	14.484	2.1536	55.312	2.2555	102.39	4116.3	1.6954	1.6954
#1	14.813	.00203	7.4245	-.00173	3.5014	-.00035	-.00241	4.9796	10.656
#2	14.961	.00165	7.2018	-.00395	3.3915	-.00219	.00258	4.8617	10.404
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00122**	**.05511**	**.00571**	**.17694**	**.00073**	**-.08164**	**.00826**	**.04938**	**.00423**
Stddev	.00078	.00007	.00258	.00100	.00269	.04463	.00032	.00095	.00063
%RSD	63.872	.12273	45.251	.56333	369.75	54.663	3.9099	1.9141	14.899
#1	-.00067	.05516	.00754	.17765	.00263	-.11320	.00804	.05005	.00378
#2	-.00176	.05506	.00388	.17624	-.00117	-.05009	.00849	.04871	.00467
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3742.3**	**45056.**	**3137.0**
Stddev	8.6	157.	2.4
%RSD	.23098	.34801	.07573
#1	3748.5	44945.	3138.7
#2	3736.2	45167.	3135.4

Sample Name: 280-115729-A-4-B @5 Acquired: 11/7/2018 13:31:45 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 5x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00072**	**.00318**	**.00724**	**.00300**	**.01191**	**-.00023**	**-.00056**	**10.136**	**.00014**
Stddev	.00019	.00003	.00236	.00005	.00014	.00007	.00656	.077	.00003
%RSD	26.662	.84016	32.617	1.6296	1.2144	32.911	1168.8	.75655	19.650
#1	.00059	.00316	.00891	.00297	.01201	-.00017	.00408	10.190	.00012
#2	.00086	.00320	.00557	.00303	.01180	-.00028	-.00520	10.081	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00010**	**.00051**	**-.00294**	**.00246**	**3.3442**	**.00091**	**2.8172**	**.00029**	**.00048**
Stddev	.00003	.00008	.00041	.00146	.0881	.00461	.0078	.00008	.00027
%RSD	32.291	15.524	13.818	59.429	2.6344	506.75	.27707	26.727	56.773
#1	.00007	.00057	-.00265	.00143	3.4065	-.00235	2.8227	.00024	.00029
#2	.00012	.00045	-.00322	.00350	3.2819	.00417	2.8117	.00035	.00067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.638**	**.00065**	**7.3582**	**-.00292**	**3.5442**	**.00233**	**-.00300**	**2.9717**	**6.3595**
Stddev	.187	.00004	.2153	.00230	.0833	.00235	.00104	.0682	.1460
%RSD	1.2777	6.8731	2.9258	78.745	2.3495	100.56	34.762	2.2952	2.2952
#1	14.771	.00062	7.5105	-.00129	3.6031	.00399	-.00226	3.0199	6.4627
#2	14.506	.00069	7.2060	-.00454	3.4853	.00067	-.00374	2.9235	6.2563
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00141**	**.04971**	**-.00181**	**.00058**	**.00020**	**.01679**	**.00464**	**.00363**	**.00295**
Stddev	.00144	.00019	.00163	.00030	.00134	.01958	.00018	.00066	.00008
%RSD	102.49	.37922	89.992	50.748	661.58	116.56	3.9841	18.208	2.7039
#1	-.00039	.04984	-.00066	.00079	.00115	.00295	.00477	.00410	.00301
#2	-.00243	.04958	-.00296	.00037	-.00075	.03064	.00451	.00316	.00290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3749.5**	**45714.**	**3238.6**
Stddev	11.0	5.	8.9
%RSD	.29297	.01047	.27370
#1	3741.7	45711.	3244.8
#2	3757.2	45718.	3232.3

Sample Name: 280-115729-A-5-B @5 Acquired: 11/7/2018 13:34:17 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 5x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00098**	**.01868**	**.00914**	**.00391**	**.01127**	**-.00032**	**.00208**	**7.1044**	**-.00008**
Stddev	.00083	.00037	.00178	.00001	.00060	.00021	.00215	.0175	.00004
%RSD	84.934	2.0040	19.469	.30813	5.3529	66.088	102.95	.24659	53.747
#1	.00157	.01894	.00788	.00392	.01170	-.00017	.00360	7.1168	-.00005
#2	.00039	.01841	.01040	.00390	.01085	-.00047	.00057	7.0920	-.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00040**	**.00057**	**-.00229**	**.01963**	**1.5755**	**.00446**	**1.7728**	**.00102**	**.00121**
Stddev	.00021	.00001	.00031	.00293	.1025	.00137	.0131	.00004	.00041
%RSD	52.903	2.3806	13.473	14.942	6.5068	30.812	.74144	3.8051	33.635
#1	-.00054	.00058	-.00207	.02171	1.6480	.00543	1.7821	.00105	.00150
#2	-.00025	.00056	-.00251	.01756	1.5030	.00349	1.7636	.00100	.00092
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.565**	**.00006**	**8.2784**	**-.00364**	**3.5979**	**-.00150**	**-.00231**	**3.3626**	**7.1960**
Stddev	.127	.00053	.2138	.00118	.0745	.00280	.00210	.0113	.0242
%RSD	.56189	858.70	2.5825	32.339	2.0694	186.56	90.977	.33670	.33670
#1	22.476	-.00031	8.4296	-.00447	3.6505	-.00348	-.00380	3.3706	7.2131
#2	22.655	.00044	8.1272	-.00281	3.5452	.00048	-.00082	3.3546	7.1788
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00068**	**.03439**	**.00173**	**.00009**	**-.00108**	**-.07121**	**.00563**	**.00196**	**.00285**
Stddev	.00148	.00032	.00098	.00071	.00376	.00925	.00100	.00000	.00004
%RSD	217.80	.93671	56.677	824.21	347.87	12.996	17.703	.04365	1.4440
#1	-.00172	.03416	.00242	-.00042	.00158	-.06466	.00634	.00196	.00282
#2	.00037	.03462	.00103	.00059	-.00374	-.07775	.00493	.00197	.00288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3756.5**	**46129.**	**3209.6**
Stddev	8.7	68.	4.0
%RSD	.23144	.14840	.12475
#1	3750.3	46081.	3206.8
#2	3762.6	46177.	3212.5

Sample Name: 280-115729-A-6-B @5 Acquired: 11/7/2018 13:36:51 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 5x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00039**	**-.00042**	**.00506**	**.00375**	**.01087**	**-.00050**	**.00649**	**7.1430**	**.00004**
Stddev	.00013	.00001	.00011	.00027	.00004	.00003	.00141	.0513	.00003
%RSD	33.299	1.7706	2.2551	7.2558	.36275	6.0660	21.764	.71870	92.123
#1	.00030	-.00042	.00514	.00394	.01090	-.00048	.00549	7.1793	.00001
#2	.00048	-.00041	.00498	.00356	.01084	-.00052	.00749	7.1067	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00042**	**.00086**	**-.00320**	**-.00137**	**1.5925**	**.00074**	**1.7740**	**-.00010**	**.00090**
Stddev	.00004	.00026	.00033	.00040	.1288	.00029	.0146	.00005	.00011
%RSD	9.5901	30.819	10.304	29.373	8.0875	38.591	.82388	48.465	12.652
#1	-.00039	.00105	-.00297	-.00109	1.5014	.00094	1.7843	-.00013	.00098
#2	-.00045	.00067	-.00344	-.00166	1.6836	.00054	1.7637	-.00006	.00082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.737**	**.00074**	**8.2832**	**-.00197**	**3.5840**	**-.00135**	**.00188**	**3.4185**	**7.3155**
Stddev	.149	.00031	.2045	.00150	.0938	.00350	.01260	.0312	.0668
%RSD	.65739	42.144	2.4690	76.123	2.6162	259.55	670.57	.91275	.91275
#1	22.843	.00052	8.4278	-.00091	3.6503	-.00382	-.00703	3.4405	7.3627
#2	22.631	.00096	8.1386	-.00303	3.5177	.00113	.01079	3.3964	7.2683
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00086**	**.03474**	**-.00109**	**-.00002**	**-.00073**	**.01880**	**.00559**	**-.00058**	**.00083**
Stddev	.00076	.00018	.00219	.00032	.00132	.00009	.00048	.00023	.00292
%RSD	89.051	.51812	200.82	1576.4	182.00	.48393	8.5516	39.807	351.03
#1	-.00140	.03486	.00046	.00021	-.00166	.01874	.00525	-.00042	.00290
#2	-.00032	.03461	-.00264	-.00025	.00021	.01887	.00593	-.00074	-.00123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3738.5**	**45857.**	**3189.7**
Stddev	8.2	129.	19.5
%RSD	.21920	.28215	.61178
#1	3744.3	45766.	3203.5
#2	3732.7	45948.	3175.9

Sample Name: 280-115729-A-7-B @2 Acquired: 11/7/2018 13:39:24 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 2x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00120**	**.00601**	**.00934**	**.00974**	**.02539**	**-.00034**	**.00064**	**20.551**	**-.00012**
Stddev	.00064	.00019	.00436	.00105	.00042	.00011	.00296	.006	.00009
%RSD	53.397	3.1235	46.694	10.803	1.6494	32.441	460.48	.02747	77.001
#1	.00075	.00588	.01242	.01048	.02510	-.00026	.00274	20.555	-.00005
#2	.00166	.00615	.00626	.00899	.02569	-.00042	-.00145	20.547	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**.00155**	**-.00218**	**.00755**	**12.041**	**.00693**	**5.9956**	**.00062**	**.00225**
Stddev	.00045	.00019	.00083	.00020	.066	.00372	.0031	.00009	.00016
%RSD	224.51	12.211	38.032	2.7087	.54998	53.653	.05175	14.878	7.0952
#1	-.00052	.00168	-.00277	.00769	12.088	.00956	5.9934	.00056	.00214
#2	.00012	.00142	-.00160	.00740	11.995	.00430	5.9978	.00069	.00236
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**31.767**	**-.00010**	**12.150**	**-.00302**	**9.3432**	**-.00320**	**.00378**	**6.8316**	**14.620**
Stddev	.205	.00052	.182	.00093	.1598	.00223	.00139	.1006	.215
%RSD	.64682	526.63	1.4981	30.891	1.7106	69.742	36.849	1.4723	1.4723
#1	31.912	.00027	12.279	-.00236	9.4562	-.00162	.00476	6.9027	14.772
#2	31.621	-.00047	12.022	-.00367	9.2302	-.00478	.00279	6.7605	14.467
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00076**	**.10329**	**.00331**	**.00074**	**.00031**	**-.02488**	**.00889**	**.00536**	**.00171**
Stddev	.00071	.00009	.00027	.00027	.00002	.01919	.00053	.00015	.00486
%RSD	93.609	.08854	8.1976	36.484	7.2014	77.149	5.9123	2.8755	284.54
#1	-.00127	.10335	.00312	.00055	.00032	-.03845	.00926	.00525	-.00173
#2	-.00026	.10323	.00350	.00093	.00029	-.01131	.00852	.00547	.00514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3779.1**	**46129.**	**3268.9**
Stddev	.2	6.	10.1
%RSD	.00538	.01286	.30800
#1	3779.3	46124.	3276.0
#2	3779.0	46133.	3261.8

Sample Name: 280-115729-A-8-B @2 Acquired: 11/7/2018 13:41:57 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P) 2x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00082**	**.02486**	**.00523**	**.00950**	**.02558**	**-.00042**	**.00115**	**20.640**	**.00017**
Stddev	.00009	.00156	.00392	.00044	.00024	.00023	.00342	.065	.00003
%RSD	10.620	6.2652	74.926	4.5952	.93738	54.368	296.30	.31288	20.223
#1	.00088	.02597	.00246	.00981	.02541	-.00026	-.00126	20.685	.00020
#2	.00076	.02376	.00800	.00919	.02575	-.00059	.00357	20.594	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.00169**	**-.00169**	**.00670**	**12.042**	**.00990**	**5.9989**	**.00037**	**.00202**
Stddev	.00021	.00041	.00019	.00088	.180	.00090	.0594	.00000	.00020
%RSD	59.014	24.003	11.301	13.125	1.4943	9.0895	.99053	.61602	9.8304
#1	-.00021	.00198	-.00182	.00608	12.169	.01053	6.0409	.00037	.00216
#2	-.00051	.00141	-.00155	.00732	11.914	.00926	5.9569	.00036	.00188
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**32.006**	**.00059**	**12.149**	**-.00277**	**9.2755**	**.00223**	**.00380**	**6.8127**	**14.579**
Stddev	.031	.00065	.172	.00062	.1406	.00347	.00511	.0806	.172
%RSD	.09720	110.15	1.4188	22.511	1.5154	155.41	134.60	1.1831	1.1831
#1	32.028	.00013	12.271	-.00321	9.3749	-.00022	.00018	6.8697	14.701
#2	31.984	.00106	12.027	-.00233	9.1761	.00468	.00741	6.7557	14.457
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00182**	**.10376**	**.00231**	**.00070**	**-.00197**	**.03062**	**.00920**	**.00521**	**.00362**
Stddev	.00116	.00014	.00083	.00018	.00357	.00076	.00126	.00012	.00020
%RSD	63.801	.13593	35.915	26.383	181.08	2.4695	13.712	2.2115	5.6278
#1	-.00264	.10386	.00289	.00083	.00055	.03116	.00830	.00529	.00347
#2	-.00100	.10366	.00172	.00057	-.00449	.03009	.01009	.00512	.00376
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3742.6**	**45516.**	**3220.2**
Stddev	31.1	71.	6.2
%RSD	.83027	.15527	.19235
#1	3764.6	45566.	3215.8
#2	3720.7	45466.	3224.6

Sample Name: 280-115729-A-9-B Acquired: 11/7/2018 13:44:29 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00108**	**.02835**	**.00609**	**.01911**	**.08365**	**-.00025**	**.00235**	**51.467**	**-.00024**
Stddev	.00034	.00065	.00022	.00043	.00036	.00009	.00164	.053	.00017
%RSD	31.612	2.2782	3.5310	2.2609	.43402	36.495	70.021	.10241	69.410
#1	.00084	.02881	.00594	.01942	.08339	-.00031	.00351	51.505	-.00036
#2	.00132	.02790	.00625	.01881	.08391	-.00018	.00118	51.430	-.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00025**	**.00371**	**-.00251**	**.05237**	**5.0194**	**.00679**	**12.168**	**.00125**	**.00389**
Stddev	.00007	.00004	.00049	.00245	.0419	.00324	.008	.00001	.00021
%RSD	28.216	.99256	19.703	4.6810	.83503	47.643	.06295	.71545	5.4850
#1	-.00020	.00374	-.00286	.05063	4.9897	.00450	12.174	.00124	.00374
#2	-.00031	.00369	-.00216	.05410	5.0490	.00908	12.163	.00125	.00404
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.995**	**.00053**	**.09128**	**-.00482**	**18.637**	**-.00615**	**.00535**	**10.887**	**23.299**
Stddev	.271	.00039	.00193	.00185	.352	.00116	.00007	.151	.322
%RSD	1.1775	72.934	2.1135	38.465	1.8913	18.887	1.2965	1.3831	1.3831
#1	23.187	.00080	.09264	-.00351	18.886	-.00533	.00530	10.994	23.527
#2	22.804	.00026	.08991	-.00613	18.388	-.00697	.00539	10.781	23.071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00139**	**.25461**	**-.00016**	**.00288**	**-.00237**	**.05713**	**.00723**	**.04018**	**-.00089**
Stddev	.00040	.00022	.00579	.00027	.00038	.01970	.00090	.00016	.00159
%RSD	28.540	.08552	3550.6	9.4219	15.955	34.483	12.486	.40838	177.28
#1	-.00167	.25476	.00393	.00307	-.00264	.04320	.00787	.04030	-.00202
#2	-.00111	.25446	-.00426	.00269	-.00210	.07106	.00659	.04007	.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3758.9**	**45166.**	**3158.7**
Stddev	2.3	127.	20.8
%RSD	.06028	.28151	.65903
#1	3760.5	45077.	3144.0
#2	3757.3	45256.	3173.5

Sample Name: 280-115729-A-10-B Acquired: 11/7/2018 13:47:02 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 434125 6010D (P)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00053**	**.00512**	**.00359**	**.02115**	**.08471**	**-.00057**	**.00112**	**52.793**	**.00001**
Stddev	.00014	.00025	.00640	.00007	.00006	.00037	.00024	.049	.00002
%RSD	26.573	4.8640	178.03	.30775	.06795	65.555	21.751	.09358	414.24
#1	.00063	.00530	-.00093	.02110	.08475	-.00031	.00129	52.828	-.00001
#2	.00043	.00495	.00812	.02119	.08467	-.00083	.00095	52.758	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00019**	**.00366**	**-.00234**	**.00542**	**5.1137**	**.00395**	**12.461**	**.00052**	**.00423**
Stddev	.00040	.00018	.00025	.00427	.0067	.00183	.003	.00002	.00005
%RSD	213.85	4.9916	10.880	78.783	.13147	46.329	.02226	4.4649	1.2923
#1	.00010	.00353	-.00216	.00240	5.1185	.00265	12.463	.00051	.00419
#2	-.00047	.00379	-.00252	.00844	5.1090	.00524	12.459	.00054	.00427
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.671**	**.00125**	**.09474**	**-.00664**	**19.179**	**-.00339**	**-.00355**	**11.239**	**24.052**
Stddev	.198	.00021	.00075	.00130	.132	.00096	.00518	.140	.300
%RSD	.80143	17.173	.79417	19.627	.68825	28.253	145.95	1.2487	1.2487
#1	24.531	.00140	.09527	-.00572	19.272	-.00407	-.00721	11.338	24.264
#2	24.811	.00109	.09421	-.00756	19.085	-.00271	.00011	11.140	23.839
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00085**	**.26033**	**.00369**	**-.00039**	**-.00047**	**-.00929**	**.00679**	**.03964**	**.00537**
Stddev	.00069	.00064	.00203	.00036	.00181	.01688	.00084	.00029	.00069
%RSD	81.616	.24583	55.095	92.028	387.91	181.80	12.371	.73782	12.758
#1	-.00036	.26078	.00225	-.00014	-.00175	.00265	.00620	.03984	.00489
#2	-.00134	.25988	.00512	-.00065	.00081	-.02122	.00738	.03943	.00586
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3683.9**	**45064.**	**3183.1**
Stddev	10.6	123.	11.8
%RSD	.28867	.27219	.37160
#1	3691.5	45151.	3191.5
#2	3676.4	44978.	3174.8

Sample Name: CCVH-5408055 Acquired: 11/7/2018 13:49:35 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00240**	**51.546**	**-.00816**	**-.00021**	**.00137**	**-.00032**	**1.0297**	**.02334**	**-.00010**	**.00174**	**.00062**	**-.00211**	**49.785**
Stddev	.00088	.005	.00184	.00060	.00018	.00015	.0218	.00333	.00014	.00036	.00072	.00037	.216
%RSD	36.617	.01055	22.481	282.48	13.177	47.453	2.1141	14.276	141.58	20.476	117.33	17.349	.43427
#1	-.00302	51.543	-.00946	.00021	.00150	-.00021	1.0451	.02570	.00000	.00199	.00113	-.00185	49.938
#2	-.00178	51.550	-.00687	-.00064	.00124	-.00042	1.0143	.02099	-.00020	.00149	.00011	-.00237	49.632
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09387**	**.00621**	**-.07643**	**.00244**	**-.00119**	**253.94**	**.00438**	**-.00019**	**-.00230**	**5.0329**	**.00383**	**.00960**	**.03235**
Stddev	.06107	.00290	.00550	.00003	.00026	.23	.00086	.00084	.00033	.1190	.00465	.00386	.01521
%RSD	65.052	46.630	7.1999	1.1413	22.033	.09004	19.617	435.55	14.177	2.3647	121.43	40.151	47.008
#1	.13705	.00826	-.07254	.00242	-.00100	254.10	.00499	.00040	-.00253	5.1171	.00712	.00688	.04311
#2	.05069	.00416	-.08032	.00246	-.00137	253.77	.00378	-.00079	-.00207	4.9488	.00054	.01233	.02160
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.06923**	**-.00119**	**.00030**	**4.7735**	**.01847**	**.00039**	**10.260**	**-.00932**	**.00071**	**.07818**
Stddev	.03255	.00230	.00024	.0042	.00068	.00176	.030	.00103	.00028	.00445
%RSD	47.008	193.28	82.546	.08868	3.7010	454.75	.29185	11.075	39.237	5.6940
#1	.09225	-.00281	.00047	4.7765	.01798	.00163	10.281	-.01005	.00091	.08133
#2	.04622	.00044	.00012	4.7705	.01895	-.00086	10.239	-.00859	.00051	.07503
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3552.2**	**42850.**	**3050.7**
Stddev	33.2	179.	5.1
%RSD	.93491	.41839	.16748
#1	3528.7	42977.	3047.1
#2	3575.7	42723.	3054.3

Sample Name: CCV-5407546 Acquired: 11/7/2018 13:52:06 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48798**	**.52618**	**1.0105**	**.48115**	**.51132**	**.51070**	**.00600**	**4.9932**	**.47910**	**.49264**	**.49860**	**.49468**	**2.3622**
Stddev	.00049	.00978	.0131	.00719	.00017	.00062	.00839	.0170	.00811	.00897	.00791	.00286	.0050
%RSD	.10090	1.8578	1.2974	1.4941	.03241	.12234	139.71	.34041	1.6930	1.8212	1.5872	.57748	.21348
#1	.48832	.53309	1.0198	.48623	.51144	.51114	.01193	5.0052	.48483	.49898	.50420	.49670	2.3657
#2	.48763	.51927	1.0012	.47607	.51120	.51026	.00007	4.9812	.47336	.48629	.49301	.49266	2.3586
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.811**	**1.0439**	**19.383**	**.47655**	**.49056**	**5.1507**	**.49278**	**.96422**	**.99427**	**.00890**	**.94884**	**1.0128**	**4.8445**
Stddev	.068	.0008	.015	.00085	.00976	.0020	.00659	.01807	.01502	.00340	.01718	.0252	.0025
%RSD	.13446	.07525	.07852	.17737	1.9888	.03888	1.3366	1.8740	1.5110	38.263	1.8103	2.4882	.05070
#1	50.763	1.0445	19.393	.47715	.49746	5.1493	.49744	.97699	1.0049	.01131	.96099	1.0307	4.8427
#2	50.860	1.0434	19.372	.47596	.48366	5.1521	.48812	.95144	.98364	.00649	.93670	.99501	4.8462
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.367**	**.99264**	**.51503**	**.01475**	**.46597**	**1.0123**	**-.03689**	**.48221**	**.46935**	**.49702**
Stddev	.005	.02181	.00175	.00437	.00012	.0187	.06432	.00160	.00139	.00604
%RSD	.05070	2.1970	.33925	29.655	.02657	1.8450	174.36	.33237	.29511	1.2144
#1	10.363	1.0081	.51626	.01166	.46588	1.0255	.00859	.48334	.47033	.50129
#2	10.371	.97722	.51379	.01785	.46606	.99908	-.08237	.48108	.46837	.49275
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3596.4**	**44243.**	**3100.1**
Stddev	9.9	274.	14.7
%RSD	.27418	.62011	.47424
#1	3603.4	44437.	3110.5
#2	3589.5	44049.	3089.7

Sample Name: CCB Acquired: 11/7/2018 13:54:31 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00121**	**.00071**	**-.00137**	**-.00090**	**.00025**	**-.00038**	**.00323**	**.00770**	**.00026**	**.00007**	**-.00004**	**-.00338**	**.00277**
Stddev	.00116	.00019	.00296	.00092	.00065	.00019	.00157	.00176	.00013	.00013	.00010	.00018	.00352
%RSD	95.553	27.177	215.70	102.25	264.06	50.803	48.564	22.819	50.704	185.43	280.94	5.3333	127.30
#1	.00203	.00057	.00072	-.00025	.00071	-.00025	.00435	.00895	.00017	-.00002	-.00011	-.00326	.00028
#2	.00039	.00085	-.00346	-.00156	-.00021	-.00052	.00212	.00646	.00035	.00016	.00004	-.00351	.00525
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09811**	**.00269**	**-.00009**	**-.00004**	**.00035**	**.07390**	**.00097**	**-.00436**	**-.00044**	**.00915**	**.00167**	**.00164**	**.02969**
Stddev	.02235	.00098	.00085	.00014	.00034	.00579	.00031	.00013	.00089	.00422	.00472	.01268	.01435
%RSD	22.778	36.314	922.24	375.48	97.932	7.8394	32.519	2.9446	201.60	46.119	282.55	774.92	48.333
#1	.08231	.00337	-.00070	.00006	.00011	.07800	.00074	-.00427	.00019	.01214	-.00167	-.00733	.01954
#2	.11391	.00200	.00051	-.00013	.00059	.06981	.00119	-.00445	-.00107	.00617	.00501	.01060	.03983
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.06353**	**-.00017**	**-.00011**	**.00063**	**.00017**	**-.00139**	**-.00086**	**.00045**	**-.00141**	**-.00011**
Stddev	.03071	.00041	.00003	.00152	.00050	.00434	.00910	.00052	.00067	.00145
%RSD	48.333	241.54	29.095	241.36	303.92	312.92	1058.5	115.94	47.070	1332.0
#1	.04182	.00012	-.00008	.00171	.00052	-.00445	-.00730	.00008	-.00188	.00092
#2	.08524	-.00046	-.00013	-.00045	-.00019	.00168	.00558	.00081	-.00094	-.00114
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3683.4**	**45229.**	**3114.0**
Stddev	9.8	158.	23.8
%RSD	.26735	.34906	.76379
#1	3676.4	45117.	3097.2
#2	3690.4	45341.	3130.8

Sample Name: CCVL-5415520 Acquired: 11/7/2018 13:57:06 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01106**	**.11490**	**.01508**	**.09502**	**.01132**	F **.00056**	**.11535**	**.20844**	**.00479**	**.01016**	**.01021**	**.01263**
Stddev	.00048	.00195	.00551	.00169	.00011	.00039	.00290	.01084	.00071	.00017	.00005	.00010
%RSD	4.3473	1.6942	36.531	1.7816	.97272	70.314	2.5173	5.2027	14.776	1.6831	.48117	.81386
#1	.01072	.11628	.01898	.09622	.01124	.00084	.11741	.21611	.00530	.01028	.01025	.01256
#2	.01140	.11352	.01119	.09382	.01140	.00028	.11330	.20077	.00429	.01004	.01018	.01270
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						.00100						
Range						-30.000%						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10437**	**3.1943**	**.02015**	**.20668**	**.01009**	**.01920**	**1.0832**	**.04103**	**2.8263**	**.00801**	**.09745**	**.02198**
Stddev	.00597	.0122	.00298	.00530	.00002	.00034	.0101	.00047	.0637	.00054	.00359	.00082
%RSD	5.7168	.38181	14.792	2.5626	.15834	1.7648	.93733	1.1548	2.2549	6.7638	3.6808	3.7268
#1	.10859	3.2029	.01804	.21042	.01008	.01896	1.0903	.04136	2.8713	.00840	.09491	.02256
#2	.10015	3.1857	.02226	.20293	.01010	.01944	1.0760	.04069	2.7812	.00763	.09998	.02140
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02057**	**.46771**	**1.0009**	**.10033**	**.01050**	**.01862**	**.00997**	**.01397**	F **-.03237**	**.01016**	**.01995**	**.01583**
Stddev	.00301	.01833	.0392	.00100	.00038	.00040	.00019	.00071	.00816	.00004	.00089	.00329
%RSD	14.631	3.9185	3.9185	.99881	3.6028	2.1278	1.8996	5.0868	25.217	.40360	4.4419	20.804
#1	.01844	.45475	.97317	.10103	.01024	.01834	.00984	.01347	-.03814	.01019	.02058	.01816
#2	.02270	.48067	1.0286	.09962	.01077	.01890	.01010	.01447	-.02660	.01013	.01932	.01350
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3741.5**	**45758.**	**3189.6**
Stddev	9.8	12.	13.0
%RSD	.26169	.02664	.40834
#1	3748.4	45766.	3198.8
#2	3734.6	45749.	3180.4

Sample Name: MB 280-436442/1-A Acquired: 11/7/2018 13:59:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/6 Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00154**	**.00034**	**.00312**	**-.00161**	**.00027**	W **-.00054**	**.00141**	**.01828**	**-.00003**
Stddev	.00018	.00082	.00016	.00102	.00003	.00005	.00288	.00275	.00021
%RSD	11.670	241.33	5.1746	63.097	11.889	9.0248	204.46	15.056	837.31
#1	.00167	.00092	.00300	-.00233	.00029	-.00051	-.00063	.01633	.00012
#2	.00141	-.00024	.00323	-.00089	.00024	-.00058	.00344	.02023	-.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass
High Limit						.00050			
Low Limit						-.00050			

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00009**	**-.00002**	**-.00305**	**.02344**	**.04689**	**-.00029**	**-.00055**	**.00036**	**-.00018**
Stddev	.00074	.00017	.00110	.00308	.05937	.00481	.00140	.00010	.00041
%RSD	819.32	839.03	36.162	13.163	126.62	1659.2	256.26	28.145	222.89
#1	.00043	.00010	-.00382	.02125	.00491	-.00369	-.00153	.00043	-.00048
#2	-.00061	-.00014	-.00227	.02562	.08887	.00311	.00044	.00028	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07603**	**.00013**	**-.00321**	**-.00092**	**.00278**	**.00331**	**-.00043**	**-.00449**	**-.00960**
Stddev	.00695	.00030	.00113	.00203	.00733	.00539	.00716	.02466	.05278
%RSD	9.1381	227.56	34.996	220.97	264.01	162.97	1682.2	549.69	549.69
#1	.08095	.00035	-.00242	.00052	.00796	.00712	-.00549	.01295	.02772
#2	.07112	-.00008	-.00401	-.00235	-.00241	-.00050	.00464	-.02193	-.04692
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00185**	**-.00014**	W **.00539**	**.00016**	**-.00327**	F **-.11432**	**.00038**	**-.00056**	**.00085**
Stddev	.00016	.00009	.00146	.00050	.00164	.01753	.00131	.00051	.00349
%RSD	8.4804	63.626	27.136	316.47	50.192	15.332	341.71	90.766	409.57
#1	-.00174	-.00008	.00436	-.00020	-.00211	-.12671	-.00054	-.00020	.00332
#2	-.00196	-.00021	.00643	.00051	-.00443	-.10192	.00131	-.00093	-.00161
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit			.00500			.06000			
Low Limit			-.00500			-.06000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3671.5**	**45318.**	**3103.0**
Stddev	6.3	54.	9.3
%RSD	.17096	.11936	.30012
#1	3667.0	45357.	3109.6
#2	3675.9	45280.	3096.4

Sample Name: LCS 280-436442/2-A Acquired: 11/7/2018 14:02:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.04248**	**2.0490**	**1.0183**	**1.0307**	**2.0498**	**.05102**	**2.0651**	**49.503**	**.09315**
Stddev	.00044	.0245	.0200	.0074	.0032	.00047	.0181	.092	.00041
%RSD	1.0300	1.1980	1.9631	.72086	.15368	.91427	.87518	.18537	.43930
#1	.04217	2.0663	1.0324	1.0359	2.0476	.05069	2.0779	49.568	.09344
#2	.04279	2.0316	1.0042	1.0254	2.0521	.05135	2.0523	49.438	.09286
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750								
Low Limit	.04275								

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48748**	**.20048**	**.24722**	**.94595**	**50.940**	**1.0351**	**47.977**	**.47309**	**1.0378**
Stddev	.00645	.00254	.00035	.00312	.141	.0011	.082	.00143	.0153
%RSD	1.3239	1.2684	.14078	.32958	.27659	.10427	.17052	.30305	1.4781
#1	.49204	.20227	.24747	.94374	51.039	1.0343	48.034	.47410	1.0486
#2	.48292	.19868	.24697	.94815	50.840	1.0358	47.919	.47208	1.0269
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.977**	**.48366**	**10.058**	**.49517**	**2.0806**	**.50506**	**2.1076**	**9.8808**	**21.145**
Stddev	.156	.00656	.128	.01075	.0258	.00517	.0138	.0199	.043
%RSD	.30569	1.3556	1.2678	2.1709	1.2397	1.0245	.65296	.20136	.20136
#1	50.867	.48830	10.148	.50277	2.0988	.50872	2.1173	9.8667	21.115
#2	51.087	.47903	9.9679	.48757	2.0624	.50140	2.0978	9.8949	21.175
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0718**	**1.0411**	**.95515**	**.96711**	**2.0174**	**1.9846**	**.49646**	**.47504**	**.52165**
Stddev	.0276	.0005	.00496	.00250	.0155	.0106	.00002	.00015	.00482
%RSD	1.3336	.04682	.51944	.25854	.76690	.53592	.00369	.03130	.92475
#1	2.0914	1.0407	.95866	.96887	2.0283	1.9921	.49644	.47493	.51824
#2	2.0523	1.0414	.95164	.96534	2.0064	1.9770	.49647	.47514	.52506
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3628.1**	**44029.**	**3133.1**
Stddev	16.5	23.	.5
%RSD	.45542	.05112	.01587
#1	3616.4	44013.	3132.7
#2	3639.8	44045.	3133.4

Sample Name: LCSD 280-436442/3-A Acquired: 11/7/2018 14:04:35 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04386**	**2.0836**	**1.0372**	**1.0367**	**2.0965**	**.05262**	**2.0829**	**50.594**	**.09489**
Stddev	.00055	.0260	.0190	.0109	.0137	.00004	.0293	.276	.00101
%RSD	1.2454	1.2468	1.8286	1.0541	.65121	.08226	1.4080	.54493	1.0594
#1	.04424	2.1020	1.0506	1.0444	2.0869	.05265	2.1037	50.399	.09560
#2	.04347	2.0653	1.0237	1.0290	2.1062	.05259	2.0622	50.789	.09418
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49756**	W **.21461**	**.25291**	**1.1002**	**52.156**	**1.0561**	**48.966**	**.48415**	**1.0536**
Stddev	.00640	.00305	.00192	.0208	.467	.0033	.007	.00060	.0152
%RSD	1.2865	1.4206	.75875	1.8943	.89623	.31380	.01401	.12312	1.4397
#1	.50209	.21676	.25156	1.1149	51.826	1.0538	48.971	.48373	1.0643
#2	.49304	.21245	.25427	1.0854	52.487	1.0585	48.962	.48457	1.0429
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.21000							
Low Limit		.19000							

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.541**	**.49330**	**10.230**	**.50689**	**2.0945**	**.50676**	**2.1254**	**10.069**	**21.547**
Stddev	.110	.00471	.114	.00577	.0193	.00515	.0317	.124	.266
%RSD	.20910	.95532	1.1145	1.1383	.91905	1.0170	1.4934	1.2349	1.2349
#1	52.619	.49663	10.310	.51097	2.1081	.51040	2.1478	9.9806	21.359
#2	52.464	.48997	10.149	.50281	2.0809	.50311	2.1030	10.156	21.735
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0852**	**1.0633**	**.97813**	**.98272**	**2.0489**	**2.1076**	**.50882**	**.48605**	**.53615**
Stddev	.0288	.0060	.00583	.00315	.0253	.0847	.00119	.00379	.00347
%RSD	1.3795	.56091	.59605	.32010	1.2330	4.0203	.23319	.77955	.64742
#1	2.1056	1.0591	.97400	.98049	2.0667	2.0477	.50798	.48337	.53369
#2	2.0649	1.0675	.98225	.98494	2.0310	2.1675	.50966	.48873	.53860
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3571.5**	**43406.**	**3103.0**
Stddev	16.1	3.	43.5
%RSD	.45172	.00594	1.4022
#1	3582.9	43404.	3133.8
#2	3560.1	43408.	3072.3

Sample Name: 280-116327-D-1-D Acquired: 11/7/2018 14:06:55 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00188**	**.00335**	**.00473**	**.03843**	**.11532**	**-.00035**	**.00062**	**35.879**	**.00006**
Stddev	.00007	.00026	.00554	.00048	.00008	.00022	.00385	.027	.00009
%RSD	3.8186	7.6860	117.27	1.2440	.06785	61.458	617.31	.07584	156.07
#1	.00193	.00354	.00081	.03877	.11538	-.00020	-.00210	35.859	.00012
#2	.00183	.00317	.00865	.03810	.11527	-.00051	.00335	35.898	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00029**	**.00335**	**-.00220**	**-.00002**	**2.0941**	**.01706**	**5.6060**	**.00042**	**.00298**
Stddev	.00012	.00035	.00018	.00250	.0081	.00044	.0180	.00002	.00099
%RSD	42.606	10.536	8.0444	12484.	.38499	2.5987	.32129	5.2674	33.318
#1	-.00037	.00360	-.00233	-.00179	2.0884	.01675	5.5933	.00040	.00227
#2	-.00020	.00310	-.00208	.00175	2.0998	.01738	5.6187	.00043	.00368
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.728**	**.00046**	**.00947**	**-.00569**	**7.4066**	**.00308**	**-.00083**	**13.255**	**28.366**
Stddev	.336	.00054	.00346	.00010	.1182	.00055	.00201	.021	.045
%RSD	1.3572	118.10	36.511	1.7819	1.5960	17.767	243.65	.15860	.15860
#1	24.965	.00008	.00702	-.00576	7.4902	.00270	-.00225	13.240	28.334
#2	24.490	.00084	.01191	-.00562	7.3231	.00347	.00060	13.270	28.398
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00108**	**.26130**	**.00179**	**.00079**	**-.00080**	**-.05809**	**.00665**	**.00092**	**.00150**
Stddev	.00041	.00122	.00193	.00040	.00009	.01160	.00036	.00025	.00293
%RSD	37.366	.46575	108.12	50.491	11.537	19.975	5.3465	27.295	195.61
#1	.00080	.26216	.00042	.00051	-.00087	-.04988	.00640	.00110	.00357
#2	.00137	.26043	.00315	.00108	-.00074	-.06629	.00690	.00075	-.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3662.3**	**44472.**	**3088.1**
Stddev	8.2	72.	47.3
%RSD	.22267	.16223	1.5308
#1	3656.5	44523.	3054.6
#2	3668.0	44421.	3121.5

Sample Name: 280-116327-D-1-DSD@5 Acquired: 11/7/2018 14:09:28 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00139**	**-.00014**	**-.00074**	**.00829**	**.02366**	**-.00012**	**.00608**	**7.2835**	**-.00005**
Stddev	.00090	.00061	.00209	.00057	.00080	.00036	.00019	.0284	.00005
%RSD	64.379	426.47	282.64	6.8867	3.3971	307.47	3.0730	.38985	101.22
#1	.00076	.00029	-.00222	.00788	.02310	.00014	.00595	7.3035	-.00001
#2	.00202	-.00058	.00074	.00869	.02423	-.00038	.00621	7.2634	-.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00022**	**.00069**	**-.00300**	**.00190**	**.44586**	**-.00011**	**1.1452**	**.00007**	**.00004**
Stddev	.00024	.00013	.00030	.00160	.02776	.00243	.0028	.00003	.00085
%RSD	106.56	18.619	9.9814	84.507	6.2251	2204.5	.24681	35.126	2285.6
#1	.00006	.00060	-.00321	.00303	.42623	-.00183	1.1432	.00009	-.00056
#2	.00039	.00078	-.00279	.00076	.46548	.00161	1.1472	.00006	.00064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.8417**	**.00040**	**-.00061**	**-.00215**	**1.4632**	**.00023**	**.00102**	**2.5690**	**5.4978**
Stddev	.0030	.00040	.00033	.00001	.0259	.00166	.00205	.0432	.0924
%RSD	.06131	101.15	53.864	.37500	1.7687	716.74	200.84	1.6803	1.6803
#1	4.8438	.00011	-.00038	-.00214	1.4814	-.00094	.00247	2.5385	5.4324
#2	4.8396	.00068	-.00084	-.00215	1.4449	.00140	-.00043	2.5996	5.5631
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00118**	**.05264**	**.00262**	**.00039**	**-.00086**	**-.06758**	**.00147**	**.00068**	**.00341**
Stddev	.00022	.00037	.00362	.00020	.00338	.06601	.00004	.00015	.00125
%RSD	18.935	.70434	137.85	51.726	393.20	97.677	2.7257	22.254	36.729
#1	-.00134	.05291	.00518	.00054	-.00325	-.11425	.00150	.00078	.00429
#2	-.00102	.05238	.00007	.00025	.00153	-.02090	.00144	.00057	.00252
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3770.7**	**46016.**	**3219.7**
Stddev	5.7	189.	2.4
%RSD	.15102	.41150	.07411
#1	3766.7	45882.	3218.0
#2	3774.7	46150.	3221.4

Sample Name: 280-116327-D-1-E MS Acquired: 11/7/2018 14:12:03 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04147**	**2.0059**	**1.0148**	**1.0432**	**2.1716**	**.05145**	W **2.0172**	**84.732**	**.09184**
Stddev	.00125	.0321	.0073	.0112	.0102	.00014	.0226	.334	.00172
%RSD	3.0126	1.6011	.72152	1.0764	.46953	.26440	1.1210	.39399	1.8706
#1	.04236	2.0286	1.0200	1.0511	2.1788	.05135	2.0332	84.968	.09306
#2	.04059	1.9832	1.0097	1.0353	2.1643	.05155	2.0012	84.495	.09063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48122**	**.20119**	**.24631**	**.95941**	**53.072**	**1.0480**	**52.996**	**.47327**	**1.0170**
Stddev	.00790	.00240	.00171	.00312	.288	.0006	.060	.00052	.0168
%RSD	1.6425	1.1919	.69365	.32500	.54358	.06133	.11331	.11040	1.6517
#1	.48681	.20288	.24752	.96161	53.276	1.0476	53.039	.47364	1.0289
#2	.47563	.19949	.24510	.95720	52.868	1.0485	52.954	.47290	1.0052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**75.143**	**.47811**	**9.9996**	**.48389**	**9.4287**	**.49522**	**2.0632**	**22.798**	**48.787**
Stddev	.239	.00664	.1545	.00518	.1361	.00700	.0368	.142	.303
%RSD	.31830	1.3889	1.5452	1.0702	1.4435	1.4127	1.7850	.62183	.62183
#1	74.974	.48281	10.109	.48755	9.5250	.50017	2.0893	22.898	49.002
#2	75.313	.47342	9.8904	.48023	9.3325	.49028	2.0372	22.698	48.573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0284**	**1.3038**	**.95683**	**.96333**	**1.9629**	**2.0101**	**.50308**	**.47465**	**.52501**
Stddev	.0240	.0040	.00013	.00168	.0245	.0228	.00267	.00132	.00085
%RSD	1.1827	.30935	.01368	.17424	1.2457	1.1351	.53028	.27827	.16130
#1	2.0454	1.3067	.95692	.96452	1.9801	1.9939	.50497	.47559	.52441
#2	2.0114	1.3009	.95674	.96214	1.9456	2.0262	.50119	.47372	.52561
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3598.7**	**43517.**	**3140.3**
Stddev	6.9	132.	12.0
%RSD	.19092	.30353	.38340
#1	3593.8	43611.	3131.8
#2	3603.5	43424.	3148.8

Sample Name: 280-116327-D-1-F MSD Acquired: 11/7/2018 14:14:22 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04264**	**2.0493**	**1.0381**	**1.0638**	**2.2108**	**.05214**	W **2.0484**	**86.905**	**.09450**
Stddev	.00029	.0229	.0128	.0056	.0007	.00016	.0112	.197	.00113
%RSD	.69115	1.1195	1.2358	.53067	.03304	.31114	.54504	.22613	1.1994
#1	.04243	2.0656	1.0471	1.0678	2.2102	.05226	2.0563	87.044	.09530
#2	.04285	2.0331	1.0290	1.0598	2.2113	.05203	2.0405	86.766	.09370
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49260**	**.20585**	**.24832**	**.97383**	**54.139**	**1.0615**	**53.903**	**.48014**	**1.0374**
Stddev	.00393	.00241	.00100	.01033	.068	.0056	.275	.00175	.0123
%RSD	.79793	1.1685	.40082	1.0611	.12560	.53067	.51103	.36481	1.1845
#1	.49538	.20755	.24902	.96652	54.091	1.0575	53.708	.47891	1.0461
#2	.48982	.20415	.24762	.98114	54.187	1.0655	54.098	.48138	1.0287
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**76.476**	**.48827**	**10.231**	**.49267**	**9.8117**	**.50702**	**2.1004**	**23.539**	**50.373**
Stddev	.502	.00453	.100	.00301	.0908	.00118	.0365	.019	.041
%RSD	.65677	.92839	.97531	.61043	.92585	.23237	1.7385	.08102	.08102
#1	76.831	.49147	10.302	.49479	9.8759	.50786	2.1262	23.525	50.344
#2	76.121	.48506	10.161	.49054	9.7475	.50619	2.0746	23.552	50.402
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0634**	**1.3246**	**.96746**	**.97346**	**2.0038**	**2.0368**	**.50935**	**.48422**	**.52740**
Stddev	.0207	.0029	.00296	.00603	.0147	.0081	.00029	.00229	.00100
%RSD	1.0035	.21595	.30560	.61951	.73223	.39578	.05782	.47228	.19047
#1	2.0780	1.3267	.96955	.96920	2.0141	2.0425	.50956	.48260	.52669
#2	2.0487	1.3226	.96537	.97773	1.9934	2.0311	.50914	.48584	.52811
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3570.5**	**43479.**	**3135.9**
Stddev	7.3	215.	4.5
%RSD	.20571	.49439	.14405
#1	3575.7	43631.	3139.1
#2	3565.4	43327.	3132.7

Sample Name: 280-116327-D-1-D PDS Acquired: 11/7/2018 14:16:41 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04748**	**1.0311**	**.21061**	**.13413**	**.21340**	**.05043**	**-.00203**	**54.097**	**.04800**
Stddev	.00114	.0193	.00322	.00249	.00111	.00008	.00577	.003	.00119
%RSD	2.4046	1.8669	1.5311	1.8539	.52071	.15922	284.85	.00508	2.4864
#1	.04668	1.0447	.21289	.13589	.21262	.05037	.00206	54.095	.04884
#2	.04829	1.0174	.20833	.13237	.21419	.05049	-.00611	54.099	.04715
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04778**	**.05281**	**.04844**	**.95277**	**22.343**	**.11267**	**24.595**	**.04871**	**.05172**
Stddev	.00087	.00120	.00035	.00402	.080	.00237	.121	.00016	.00049
%RSD	1.8293	2.2679	.71489	.42225	.35755	2.0996	.49150	.33404	.94198
#1	.04840	.05366	.04819	.94992	22.399	.11435	24.681	.04882	.05206
#2	.04716	.05197	.04868	.95561	22.286	.11100	24.510	.04859	.05137
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**44.307**	**.04943**	**1.9905**	**.09245**	**7.2438**	**.09775**	**.20697**	**17.628**	**37.723**
Stddev	.028	.00103	.0362	.00048	.1298	.00636	.00612	.015	.032
%RSD	.06293	2.0935	1.8172	.52157	1.7924	6.5091	2.9571	.08492	.08492
#1	44.326	.05016	2.0161	.09279	7.3356	.09325	.21130	17.638	37.746
#2	44.287	.04869	1.9649	.09211	7.1520	.10225	.20264	17.617	37.701
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09904**	**.30116**	**.19264**	**.04817**	**.20149**	**.42974**	**.05551**	**.19332**	**.05406**
Stddev	.00190	.00003	.00602	.00026	.00413	.00606	.00049	.00156	.00072
%RSD	1.9165	.00879	3.1271	.53768	2.0476	1.4102	.88137	.80454	1.3275
#1	.10038	.30118	.18838	.04835	.20441	.43403	.05586	.19222	.05456
#2	.09770	.30114	.19690	.04799	.19858	.42546	.05517	.19442	.05355
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3713.5**	**44643.**	**3214.7**
Stddev	2.3	123.	6.2
%RSD	.06313	.27575	.19214
#1	3711.9	44556.	3219.1
#2	3715.2	44730.	3210.4

Sample Name: 280-116204-D-1-C Acquired: 11/7/2018 14:19:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00157**	**.00192**	**.00758**	**.03109**	**.05599**	**-.00040**	**.00299**	**140.43**	**.00033**
Stddev	.00103	.00064	.00364	.00179	.00018	.00001	.00230	.52	.00023
%RSD	65.711	33.240	47.976	5.7590	.32065	2.6159	76.997	.37342	69.815
#1	.00229	.00237	.01016	.03236	.05611	-.00040	.00136	140.80	.00050
#2	.00084	.00147	.00501	.02982	.05586	-.00039	.00462	140.06	.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.00218**	**-.00176**	**.00379**	**2.9096**	**.02856**	**24.199**	**.00027**	**.00055**
Stddev	.00018	.00012	.00060	.00669	.0250	.00054	.052	.00002	.00026
%RSD	83.226	5.6789	34.382	176.54	.85892	1.8893	.21552	8.9493	47.340
#1	-.00009	.00226	-.00219	-.00094	2.8920	.02895	24.236	.00029	.00036
#2	-.00034	.00209	-.00133	.00852	2.9273	.02818	24.162	.00026	.00073
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.238**	**.00139**	**.00589**	**-.00445**	**33.588**	**.00161**	**.00165**	**11.862**	**25.384**
Stddev	.405	.00035	.00440	.00030	.498	.00219	.00293	.044	.094
%RSD	1.4342	25.588	74.730	6.8258	1.4815	136.33	178.07	.37068	.37068
#1	28.524	.00114	.00278	-.00424	33.940	.00316	-.00043	11.831	25.318
#2	27.951	.00164	.00899	-.00467	33.236	.00006	.00372	11.893	25.451
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00125**	**1.1324**	**.00362**	**.00039**	**-.00084**	**-.09004**	**.00395**	**.00117**	**.00116**
Stddev	.00094	.0034	.00020	.00068	.00064	.03443	.00017	.00014	.00106
%RSD	75.381	.29630	5.3880	173.11	76.273	38.244	4.2963	11.865	91.197
#1	-.00192	1.1348	.00376	-.00009	-.00038	-.11438	.00407	.00127	.00041
#2	-.00058	1.1301	.00348	.00088	-.00129	-.06569	.00383	.00108	.00190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3654.9**	**44960.**	**3227.9**
Stddev	1.2	19.	7.6
%RSD	.03341	.04261	.23433
#1	3655.8	44974.	3222.5
#2	3654.1	44946.	3233.2

Sample Name: 280-116204-D-2-C Acquired: 11/7/2018 14:21:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00122**	**.00229**	**.00160**	**.02366**	**.08355**	**-.00032**	**-.00044**	**44.688**	**-.00026**
Stddev	.00071	.00034	.00375	.00035	.00078	.00029	.00003	.038	.00004
%RSD	58.132	14.748	233.65	1.4859	.93014	90.811	6.5778	.08401	17.032
#1	.00072	.00253	.00426	.02390	.08410	-.00052	-.00042	44.715	-.00029
#2	.00172	.00205	-.00105	.02341	.08300	-.00011	-.00046	44.662	-.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00053**	**.00297**	**-.00244**	**.02354**	**2.1171**	**.01098**	**6.8443**	**.00046**	**.00074**
Stddev	.00015	.00089	.00127	.00417	.0608	.00283	.0210	.00008	.00000
%RSD	28.541	29.951	52.064	17.707	2.8711	25.756	.30697	16.927	.25937
#1	-.00042	.00360	-.00334	.02060	2.0741	.01298	6.8295	.00040	.00073
#2	-.00063	.00234	-.00154	.02649	2.1601	.00898	6.8592	.00051	.00074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.810**	**.00030**	**.00682**	**-.00595**	**12.290**	**.00300**	**-.00171**	**12.794**	**27.380**
Stddev	.777	.00022	.00041	.00130	.146	.00042	.00216	.008	.017
%RSD	3.1306	74.142	5.9537	21.832	1.1914	14.035	126.69	.06075	.06075
#1	25.359	.00014	.00710	-.00503	12.394	.00330	-.00324	12.789	27.368
#2	24.261	.00046	.00653	-.00687	12.187	.00271	-.00018	12.800	27.392
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00187**	**.29878**	**.00643**	**.00030**	**-.00222**	**-.10345**	**.00487**	**.00046**	**.00038**
Stddev	.00004	.00026	.00016	.00022	.00082	.04377	.00048	.00139	.00190
%RSD	2.0401	.08854	2.4322	75.384	37.076	42.308	9.8606	300.76	496.01
#1	-.00190	.29897	.00654	.00014	-.00164	-.13440	.00521	-.00052	.00173
#2	-.00184	.29859	.00632	.00046	-.00281	-.07250	.00453	.00145	-.00096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3644.4**	**45611.**	**3224.8**
Stddev	1.1	228.	3.5
%RSD	.02923	.50022	.10898
#1	3645.2	45772.	3222.3
#2	3643.7	45449.	3227.3

Sample Name: CCVH-5408055 Acquired: 11/7/2018 14:24:15 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00252**	**51.373**	**-.00043**	**.00023**	**.00013**	**-.00032**	**1.0299**	**.01822**	**.00019**	**.00145**	**.00017**	**-.00216**	**49.812**
Stddev	.00127	.079	.00369	.00125	.00051	.00001	.0255	.00464	.00021	.00026	.00073	.00107	.002
%RSD	50.519	.15372	849.85	534.87	392.62	4.4887	2.4709	25.454	107.50	18.189	424.30	49.611	.00430
#1	-.00342	51.317	.00217	.00112	.00049	-.00033	1.0479	.02150	.00034	.00163	-.00034	-.00291	49.814
#2	-.00162	51.429	-.00304	-.00065	-.00023	-.00031	1.0119	.01494	.00005	.00126	.00069	-.00140	49.811
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.17462**	**.00201**	**-.08493**	**.00235**	**-.00123**	**254.45**	**.00359**	**.00331**	**-.00125**	**4.9887**	**.00294**	**.00527**	**-.02943**
Stddev	.01531	.00256	.00298	.00010	.00006	.69	.00100	.00005	.00191	.1037	.00253	.00293	.04578
%RSD	8.7667	127.19	3.5031	4.0910	5.1402	.27168	27.927	1.6475	153.30	2.0780	86.183	55.621	155.53
#1	.18545	.00020	-.08704	.00242	-.00127	253.96	.00430	.00335	-.00260	5.0620	.00115	.00734	-.06180
#2	.16380	.00382	-.08283	.00228	-.00118	254.94	.00288	.00327	.00010	4.9154	.00472	.00320	.00294
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.06299**	**-.00087**	**.00035**	**4.7648**	**.01822**	**-.00209**	**10.263**	**-.00858**	**.00029**	**.07734**
Stddev	.09796	.00211	.00014	.0040	.00065	.00196	.040	.00191	.00059	.00313
%RSD	155.53	241.53	40.504	.08465	3.5748	94.050	.38938	22.313	203.12	4.0526
#1	-.13225	.00062	.00045	4.7619	.01776	-.00070	10.291	-.00723	-.00013	.07513
#2	.00628	-.00236	.00025	4.7676	.01868	-.00348	10.234	-.00994	.00071	.07956
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3554.4**	**42747.**	**3063.0**
Stddev	9.3	102.	.1
%RSD	.26286	.23894	.00414
#1	3547.8	42674.	3063.1
#2	3561.0	42819.	3062.9

Sample Name: CCV-5407546 Acquired: 11/7/2018 14:26:46 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49022**	**.54710**	**1.0147**	**.48662**	**.51385**	**.51155**	**.00258**	**5.0244**	**.48437**	**.49647**	**.50336**	**.50007**	**2.3735**
Stddev	.00047	.01803	.0090	.00565	.00331	.00221	.00272	.0227	.00711	.00588	.00803	.00059	.0086
%RSD	.09668	3.2958	.88925	1.1611	.64420	.43137	105.47	.45110	1.4687	1.1848	1.5946	.11802	.36161
#1	.49055	.53435	1.0211	.49061	.51151	.50999	.00066	5.0083	.48940	.50063	.50904	.49965	2.3674
#2	.48988	.55985	1.0083	.48262	.51619	.51312	.00450	5.0404	.47934	.49231	.49769	.50049	2.3796
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.888**	**1.0422**	**19.515**	**.48096**	**.49566**	**5.1864**	**.49600**	**.97187**	**1.0007**	**.00780**	**.95568**	**1.0210**	**4.8731**
Stddev	.169	.0115	.081	.00183	.00918	.0194	.00685	.01567	.0138	.00776	.01730	.0165	.0607
%RSD	.33272	1.1025	.41410	.38036	1.8513	.37504	1.3815	1.6120	1.3810	99.535	1.8099	1.6128	1.2460
#1	50.769	1.0340	19.573	.48225	.50214	5.1726	.50084	.98295	1.0105	.00231	.96791	1.0327	4.8301
#2	51.008	1.0503	19.458	.47967	.48917	5.2001	.49115	.96079	.99094	.01329	.94345	1.0094	4.9160
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.428**	**1.0005**	**.51737**	**.01290**	**.47274**	**1.0206**	**-.07221**	**.48644**	**.47591**	**.49208**
Stddev	.130	.0132	.00226	.00161	.00097	.0091	.01611	.00246	.00156	.00943
%RSD	1.2460	1.3178	.43610	12.504	.20574	.88743	22.317	.50481	.32852	1.9160
#1	10.337	1.0098	.51577	.01176	.47342	1.0270	-.06081	.48817	.47701	.48541
#2	10.520	.99114	.51896	.01404	.47205	1.0142	-.08360	.48470	.47480	.49875
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3630.5**	**44192.**	**3111.7**
Stddev	5.9	413.	11.6
%RSD	.16219	.93405	.37433
#1	3626.3	43900.	3119.9
#2	3634.6	44484.	3103.5

Sample Name: CCB Acquired: 11/7/2018 14:29:10 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00169**	**.01391**	**.00011**	**.00045**	**.00080**	**-.00024**	**.00496**	**.01521**	**.00030**	**.00001**	**.00037**	**-.00330**	**-.00042**
Stddev	.00041	.01042	.00085	.00066	.00007	.00019	.00464	.00626	.00021	.00010	.00020	.00048	.00349
%RSD	24.232	74.912	808.27	146.97	8.6932	81.437	93.429	41.149	69.033	652.02	53.639	14.494	836.73
#1	.00140	.00654	-.00050	-.00002	.00075	-.00010	.00168	.01078	.00015	.00008	.00051	-.00296	.00205
#2	.00198	.02128	.00071	.00091	.00085	-.00037	.00824	.01964	.00044	-.00005	.00023	-.00364	-.00289
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04387**	**.00070**	**.00161**	**.00005**	**.00131**	**.05884**	**.00039**	**.00179**	**-.00134**	**.00090**	**.00260**	**.00053**	**.01496**
Stddev	.00510	.00052	.00148	.00001	.00014	.01188	.00006	.00168	.00039	.00351	.00209	.00118	.00970
%RSD	11.625	73.963	92.017	17.057	10.477	20.186	14.419	93.781	29.190	389.18	80.494	225.07	64.849
#1	.04748	.00033	.00056	.00006	.00121	.06724	.00043	.00060	-.00106	-.00158	.00112	-.00031	.00810
#2	.04027	.00107	.00265	.00005	.00141	.05044	.00035	.00297	-.00161	.00338	.00407	.00136	.02181
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03200**	**-.00089**	**.00012**	**.00500**	**.00062**	**-.00159**	**-.08432**	**-.00009**	**-.00157**	**-.00365**
Stddev	.02075	.00038	.00016	.00166	.00035	.00240	.05158	.00013	.00028	.00193
%RSD	64.849	42.984	127.88	33.277	56.954	151.37	61.164	151.20	17.636	52.946
#1	.01733	-.00062	.00023	.00383	.00087	.00011	-.12079	.00001	-.00137	-.00501
#2	.04668	-.00116	.00001	.00618	.00037	-.00328	-.04785	-.00018	-.00176	-.00228
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3665.0**	**45004.**	**3095.0**
Stddev	3.9	74.	4.2
%RSD	.10613	.16491	.13706
#1	3662.2	44951.	3092.0
#2	3667.7	45056.	3098.0

Sample Name: CCVL-5415520 Acquired: 11/7/2018 14:31:45 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01085**	**.11129**	**.01841**	**.09696**	**.01130**	**.00082**	**.11358**	**.21516**	**.00507**	**.01012**	**.01042**	**.01253**
Stddev	.00053	.00258	.00243	.00145	.00022	.00037	.00499	.00436	.00060	.00010	.00036	.00049
%RSD	4.9119	2.3214	13.195	1.4923	1.9073	44.734	4.3939	2.0249	11.938	1.0267	3.4814	3.9428
#1	.01047	.11311	.02012	.09798	.01115	.00108	.11711	.21208	.00550	.01005	.01068	.01288
#2	.01123	.10946	.01669	.09594	.01145	.00056	.11005	.21824	.00464	.01019	.01017	.01218
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09715**	**3.1921**	**.02149**	**.20887**	**.01005**	**.01909**	**1.0906**	**.04162**	**2.8325**	**.00908**	**.10308**	**.01735**
Stddev	.00191	.1129	.00082	.00842	.00008	.00012	.0072	.00026	.0625	.00120	.00573	.00142
%RSD	1.9681	3.5360	3.8159	4.0318	.76282	.63702	.65842	.63468	2.2073	13.191	5.5567	8.1758
#1	.09850	3.2719	.02091	.21482	.01000	.01918	1.0856	.04181	2.8767	.00993	.10713	.01835
#2	.09580	3.1122	.02207	.20291	.01011	.01901	1.0957	.04143	2.7883	.00824	.09903	.01635
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02146**	**.45279**	**.96897**	**.10083**	**.01063**	**.01696**	**.00973**	**.01466**	F **-.00161**	**.00995**	**.01903**	**.01680**
Stddev	.00373	.02802	.05996	.00323	.00003	.00236	.00007	.00109	.09170	.00079	.00101	.00577
%RSD	17.407	6.1877	6.1877	3.2005	.27291	13.889	.73734	7.4036	5696.6	7.9105	5.2918	34.351
#1	.02410	.43298	.92657	.10312	.01065	.01863	.00968	.01390	-.06645	.00939	.01832	.02088
#2	.01882	.47260	1.0114	.09855	.01061	.01529	.00978	.01543	.06323	.01050	.01974	.01272
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3746.1**	**46235.**	**3201.8**
Stddev	4.6	175.	.9
%RSD	.12228	.37777	.02691
#1	3742.9	46111.	3201.2
#2	3749.3	46358.	3202.4

Sample Name: 280-116533-A-1-A @2 Acquired: 11/7/2018 14:34:19 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 Mn 2x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00195**	**.02215**	**.00344**	**.00164**	**.01368**	**-.00060**	**.00033**	**14.364**	**-.00011**
Stddev	.00015	.00110	.00704	.00097	.00052	.00029	.00460	.075	.00005
%RSD	7.8357	4.9886	204.66	59.136	3.7731	47.368	1401.6	.52240	43.057
#1	.00206	.02137	.00842	.00233	.01331	-.00040	-.00292	14.417	-.00014
#2	.00185	.02293	-.00154	.00096	.01404	-.00080	.00358	14.311	-.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00012**	**.00468**	**-.00223**	**.03054**	**.89179**	**.00089**	**4.0505**	**5.5701**	**-.00032**
Stddev	.00009	.00046	.00005	.00555	.10807	.00737	.0066	.0675	.00009
%RSD	72.327	9.8124	2.4038	18.174	12.118	826.00	.16180	1.2118	29.142
#1	-.00019	.00501	-.00219	.03446	.81538	.00610	4.0552	5.6178	-.00026
#2	-.00006	.00436	-.00227	.02661	.96821	-.00432	4.0459	5.5224	-.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.947**	**.00004**	**.03545**	**-.00446**	**3.0954**	**.00048**	**-.00011**	**9.6306**	**20.610**
Stddev	.074	.00059	.00021	.00128	.1121	.00102	.00184	.0746	.160
%RSD	.41221	1644.6	.59020	28.707	3.6215	210.65	1665.9	.77454	.77454
#1	17.895	.00046	.03530	-.00355	3.1747	.00121	-.00141	9.6834	20.722
#2	17.999	-.00038	.03560	-.00536	3.0162	-.00024	.00119	9.5779	20.497
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00091**	**.07367**	**.00215**	**.00164**	**-.00021**	**-.09530**	**.00361**	**.00105**	**.00026**
Stddev	.00030	.00001	.00291	.00035	.00266	.04681	.00063	.00019	.00417
%RSD	32.592	.01682	135.03	21.550	1293.2	49.115	17.498	17.717	1584.8
#1	-.00112	.07366	.00421	.00139	.00168	-.12840	.00406	.00092	-.00269
#2	-.00070	.07368	.00010	.00189	-.00209	-.06221	.00317	.00118	.00321
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3678.4**	**44403.**	**3108.0**
Stddev	16.9	149.	17.2
%RSD	.46048	.33606	.55391
#1	3666.4	44297.	3095.8
#2	3690.4	44508.	3120.1

Sample Name: 280-116533-A-2-A @20 Acquired: 11/7/2018 14:36:59 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 Mn 20x

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00131**	**.01038**	**.00073**	**-.00002**	**.00457**	**-.00055**	**.00653**	**1.6382**	**.00017**
Stddev	.00092	.00009	.00760	.00030	.00065	.00003	.00399	.0167	.00037
%RSD	70.452	.89331	1048.0	1698.5	14.108	4.6322	61.060	1.0216	214.33
#1	.00066	.01031	-.00465	-.00023	.00412	-.00057	.00371	1.6501	-.00009
#2	.00196	.01044	.00610	.00020	.00503	-.00053	.00934	1.6264	.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00001**	**.00375**	**-.00317**	**.03972**	**.24650**	**.00210**	**.44652**	**7.1824**	**-.00090**
Stddev	.00025	.00024	.00057	.00098	.04137	.00418	.00141	.0558	.00016
%RSD	4138.5	6.2702	18.015	2.4678	16.781	199.19	.31550	.77672	17.748
#1	.00017	.00392	-.00277	.04041	.27575	-.00086	.44552	7.2219	-.00078
#2	-.00018	.00358	-.00358	.03903	.21725	.00505	.44752	7.1430	-.00101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.3073**	**.00041**	**-.00097**	**-.00051**	**.35412**	**-.00136**	**-.00411**	**.98745**	**2.1131**
Stddev	.0244	.00068	.00195	.00167	.01152	.00314	.00299	.01128	.0241
%RSD	.56655	162.75	199.89	329.68	3.2541	231.42	72.833	1.1425	1.1425
#1	4.3245	.00089	.00040	-.00168	.36227	-.00357	-.00199	.97947	2.0961
#2	4.2900	-.00006	-.00235	.00067	.34597	.00086	-.00623	.99543	2.1302
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00214**	**.00846**	**.00294**	**.00057**	**.00484**	**-.04076**	**.00202**	**.00157**	**.00149**
Stddev	.00021	.00018	.00202	.00054	.00074	.01754	.00056	.00030	.00461
%RSD	9.8977	2.1427	68.586	93.794	15.309	43.019	27.803	19.091	310.05
#1	-.00199	.00833	.00437	.00019	.00537	-.05316	.00163	.00178	-.00177
#2	-.00229	.00858	.00152	.00095	.00432	-.02836	.00242	.00135	.00475
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3700.8**	**45398.**	**3130.8**
Stddev	6.0	352.	.1
%RSD	.16324	.77444	.00212
#1	3696.6	45150.	3130.7
#2	3705.1	45647.	3130.8

Sample Name: 280-116511-B-1-A Acquired: 11/7/2018 14:39:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00136**	**.00709**	**.00807**	**.00074**	**.00528**	**-.00050**	**-.00080**	**26.911**	**.00022**
Stddev	.00006	.00041	.00909	.00033	.00008	.00005	.00339	.003	.00023
%RSD	4.3935	5.7428	112.73	44.506	1.4710	9.0093	425.15	.01059	104.94
#1	.00141	.00738	.01449	.00051	.00534	-.00053	-.00320	26.909	.00038
#2	.00132	.00680	.00164	.00098	.00523	-.00047	.00160	26.913	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00028**	**.00058**	**.00032**	**.01181**	**3.3973**	**.00257**	**3.1167**	**.00088**	**-.00058**
Stddev	.00059	.00021	.00128	.00197	.1175	.00116	.0244	.00004	.00022
%RSD	213.51	35.865	395.20	16.692	3.4594	45.076	.78255	4.7373	37.792
#1	-.00070	.00043	-.00058	.01042	3.3142	.00339	3.1339	.00091	-.00074
#2	.00014	.00072	.00123	.01320	3.4804	.00175	3.0994	.00085	-.00043
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.4579**	**.00104**	**.00010**	**-.00267**	**4.8162**	**.00284**	**-.00128**	**6.2588**	**13.394**
Stddev	.0287	.00020	.00178	.00201	.0900	.00297	.00224	.0625	.134
%RSD	1.1679	19.150	1779.9	75.386	1.8685	104.31	174.66	.99801	.99801
#1	2.4376	.00090	.00136	-.00125	4.8798	.00494	-.00286	6.3030	13.488
#2	2.4782	.00118	-.00116	-.00410	4.7525	.00075	.00030	6.2147	13.299
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00060**	**.09749**	**.00219**	**.00075**	**-.00074**	**.03049**	**.00066**	**.00146**	**.00268**
Stddev	.00066	.00037	.00061	.00084	.00008	.00783	.00025	.00019	.00009
%RSD	111.53	.38318	28.075	112.49	10.560	25.690	37.585	12.986	3.3034
#1	-.00013	.09775	.00262	.00015	-.00068	.02495	.00049	.00133	.00261
#2	-.00107	.09723	.00175	.00134	-.00079	.03603	.00084	.00160	.00274
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3713.0**	**45708.**	**3234.7**
Stddev	14.8	340.	6.5
%RSD	.39956	.74379	.19955
#1	3723.5	45949.	3239.3
#2	3702.5	45468.	3230.2

Sample Name: 280-116511-B-2-A Acquired: 11/7/2018 14:42:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00103**	**.00182**	**-.00458**	**.00044**	**.01117**	**-.00049**	**-.00283**	**49.773**	**-.00024**
Stddev	.00059	.00026	.00175	.00054	.00028	.00022	.00350	.170	.00010
%RSD	57.638	14.405	38.148	121.11	2.4990	44.075	123.46	.34153	42.677
#1	.00145	.00164	-.00581	.00006	.01137	-.00065	-.00036	49.894	-.00031
#2	.00061	.00201	-.00334	.00082	.01097	-.00034	-.00531	49.653	-.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00035**	**.00053**	**.00321**	**.00642**	**4.4715**	**.00372**	**5.9585**	**.00962**	**.00019**
Stddev	.00050	.00042	.00117	.00302	.0660	.00024	.0295	.00004	.00065
%RSD	145.23	78.471	36.303	47.096	1.4759	6.5495	.49518	.46020	335.62
#1	.00001	.00083	.00404	.00856	4.5182	.00355	5.9794	.00959	-.00027
#2	-.00070	.00024	.00239	.00428	4.4248	.00389	5.9377	.00966	.00066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.5358**	**.00078**	**.00854**	**-.00240**	**17.463**	**-.00283**	**-.00147**	**4.9293**	**10.549**
Stddev	.0081	.00042	.00208	.00258	.258	.00525	.00745	.0148	.032
%RSD	.17916	54.395	24.303	107.71	1.4775	185.26	505.92	.30071	.30071
#1	4.5416	.00108	.00707	-.00422	17.645	.00088	.00379	4.9398	10.571
#2	4.5301	.00048	.01001	-.00057	17.280	-.00655	-.00674	4.9188	10.526
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00149**	**.21417**	**.00286**	**.00047**	**-.00244**	**-.06205**	**.00052**	**.00686**	**.00242**
Stddev	.00070	.00033	.00171	.00002	.00041	.00672	.00012	.00053	.00082
%RSD	46.821	.15580	59.641	3.5799	16.967	10.828	23.851	7.6659	33.837
#1	-.00198	.21441	.00407	.00048	-.00273	-.06680	.00043	.00649	.00184
#2	-.00100	.21394	.00165	.00046	-.00215	-.05730	.00060	.00723	.00299
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3752.0**	**46157.**	**3260.3**
Stddev	7.2	72.	36.4
%RSD	.19307	.15514	1.1163
#1	3746.8	46208.	3234.6
#2	3757.1	46106.	3286.0

Sample Name: 280-116511-B-3-A Acquired: 11/7/2018 14:44:46 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00139**	**.00621**	**-.00108**	**.00075**	**.01131**	**-.00023**	**.00900**	**29.763**	**-.00010**
Stddev	.00037	.00037	.00358	.00076	.00032	.00009	.00093	.007	.00024
%RSD	26.312	5.9482	332.70	102.11	2.8042	39.232	10.316	.02345	230.52
#1	.00165	.00594	.00146	.00129	.01108	-.00030	.00834	29.768	.00007
#2	.00113	.00647	-.00361	.00021	.01153	-.00017	.00966	29.758	-.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00028**	**.00507**	**.01715**	**3.3957**	**.00102**	**3.8229**	**.00034**	**.00001**
Stddev	.00003	.00009	.00045	.00093	.0266	.00621	.0004	.00003	.00054
%RSD	30.233	31.281	8.9376	5.4141	.78420	610.94	.00977	10.120	5915.4
#1	.00010	.00022	.00475	.01781	3.3769	.00541	3.8232	.00036	-.00037
#2	.00007	.00035	.00539	.01649	3.4146	-.00338	3.8227	.00031	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.6996**	**.00140**	**.00070**	**-.00356**	**6.5490**	**-.00113**	**.00154**	**4.8697**	**10.421**
Stddev	.0062	.00043	.00121	.00159	.1087	.00166	.00150	.0001	.000
%RSD	.16699	31.052	173.26	44.627	1.6592	147.22	97.439	.00302	.00302
#1	3.7040	.00109	-.00016	-.00468	6.6258	.00005	.00048	4.8696	10.421
#2	3.6952	.00171	.00155	-.00243	6.4722	-.00230	.00260	4.8698	10.421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00171**	**.46074**	**.00182**	**.00031**	**-.00239**	**-.04899**	**-.00021**	**.00156**	**.00382**
Stddev	.00082	.00088	.00280	.00022	.00414	.07171	.00008	.00045	.00251
%RSD	47.755	.19016	153.79	70.512	173.35	146.36	37.694	28.633	65.601
#1	-.00113	.46136	.00379	.00047	.00054	-.09970	-.00026	.00187	.00559
#2	-.00229	.46012	-.00016	.00016	-.00531	.00171	-.00015	.00124	.00205
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3733.1**	**46170.**	**3264.3**
Stddev	1.5	105.	21.5
%RSD	.04108	.22794	.65823
#1	3732.0	46244.	3249.1
#2	3734.1	46095.	3279.5

Sample Name: 280-116336-F-6-B Acquired: 11/7/2018 14:47:20 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00178**	**2.1036**	**.02170**	**.03839**	**.03540**	**-.00015**	**.00378**	**75.255**	**.00027**
Stddev	.00107	.0328	.00019	.00004	.00090	.00019	.00446	.194	.00011
%RSD	60.201	1.5572	.87862	.11559	2.5559	126.08	118.03	.25751	41.305
#1	.00102	2.1268	.02157	.03842	.03604	-.00002	.00063	75.392	.00019
#2	.00254	2.0805	.02184	.03836	.03476	-.00029	.00693	75.118	.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00099**	**.00253**	**-.00004**	**2.9190**	**2.6992**	**.04949**	**46.895**	**.09399**	**.00173**
Stddev	.00046	.00037	.00065	.0043	.0009	.00158	.162	.00026	.00010
%RSD	46.743	14.505	1845.6	.14566	.03448	3.1858	.34499	.27442	6.0255
#1	.00132	.00278	.00043	2.9160	2.6985	.04837	47.010	.09417	.00165
#2	.00067	.00227	-.00050	2.9220	2.6999	.05060	46.781	.09381	.00180
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.616**	**.00327**	**.02491**	**-.00488**	**19.133**	**-.00155**	**.00020**	**10.888**	**23.301**
Stddev	.366	.00008	.00029	.00082	.301	.00013	.00221	.008	.018
%RSD	1.6194	2.5336	1.1650	16.828	1.5742	8.3830	1104.8	.07671	.07671
#1	22.875	.00332	.02470	-.00430	19.346	-.00164	-.00137	10.894	23.314
#2	22.357	.00321	.02511	-.00546	18.920	-.00146	.00177	10.882	23.288
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00144**	**.28109**	**.00105**	**.03785**	**-.00137**	**-.06238**	**.00404**	**.00534**	**.00200**
Stddev	.00102	.00097	.00026	.00012	.00242	.00612	.00021	.00019	.00173
%RSD	71.198	.34477	25.068	.32888	176.95	9.8040	5.3080	3.4739	86.650
#1	-.00071	.28177	.00086	.03794	-.00308	-.05806	.00420	.00521	.00322
#2	-.00216	.28040	.00124	.03776	.00034	-.06670	.00389	.00547	.00077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3719.1**	**45138.**	**3263.9**
Stddev	14.6	225.	18.8
%RSD	.39327	.49771	.57577
#1	3729.4	45297.	3250.6
#2	3708.8	44979.	3277.2

Sample Name: 280-116407-F-5-A Acquired: 11/7/2018 14:49:52 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436442 6010C Q5 (Al)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00105**	**1.6777**	**.00809**	**.07129**	**.03356**	**-.00027**	**.00205**	**164.98**	**.00065**
Stddev	.00129	.0288	.00123	.00460	.00063	.00022	.00388	1.05	.00007
%RSD	122.37	1.7151	15.172	6.4464	1.8771	80.807	189.14	.63721	11.340
#1	.00197	1.6980	.00723	.07454	.03401	-.00012	-.00069	164.23	.00070
#2	.00014	1.6573	.00896	.06804	.03311	-.00043	.00480	165.72	.00060
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00114**	**.00284**	**-.00123**	**2.9833**	**4.3201**	**.07571**	**75.956**	**.13904**	**.00247**
Stddev	.00015	.00011	.00102	.0065	.1044	.00171	.402	.00099	.00007
%RSD	13.443	3.8851	83.090	.21721	2.4174	2.2574	.52901	.71415	2.8377
#1	.00124	.00292	-.00051	2.9879	4.2463	.07692	76.241	.13974	.00252
#2	.00103	.00276	-.00195	2.9787	4.3940	.07450	75.672	.13834	.00242
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.670**	**.00445**	**.02888**	**-.00316**	**77.414**	**.00090**	**-.00418**	**11.890**	**25.445**
Stddev	.231	.00032	.00050	.00194	1.461	.00300	.00386	.130	.277
%RSD	.80581	7.1573	1.7359	61.438	1.8869	333.00	92.299	1.0893	1.0893
#1	28.833	.00422	.02924	-.00178	78.447	.00302	-.00145	11.799	25.249
#2	28.506	.00467	.02853	-.00453	76.381	-.00122	-.00691	11.982	25.641
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00234**	**.36756**	**.00245**	**.02696**	**.00114**	**-.08442**	**.00290**	**.00559**	**.00389**
Stddev	.00001	.00123	.00434	.00045	.00208	.01267	.00098	.00083	.00441
%RSD	.28651	.33375	177.00	1.6845	183.27	15.013	33.593	14.885	113.44
#1	-.00233	.36670	.00552	.02664	.00261	-.07546	.00359	.00500	.00701
#2	-.00234	.36843	-.00062	.02729	-.00034	-.09339	.00221	.00617	.00077
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3588.4**	**44068.**	**3190.9**
Stddev	9.1	143.	26.4
%RSD	.25382	.32547	.82883
#1	3594.9	43967.	3209.6
#2	3582.0	44170.	3172.2

Sample Name: CCVH-5408055 Acquired: 11/7/2018 14:52:23 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00312**	**51.474**	**.00204**	**-.00025**	**.00086**	**-.00031**	**1.0242**	**.02608**	**.00001**	**.00153**	**.00057**	**-.00180**	**50.238**
Stddev	.00026	.329	.00193	.00057	.00040	.00016	.0145	.00144	.00057	.00002	.00025	.00131	.338
%RSD	8.4491	.63847	94.632	230.95	46.233	51.357	1.4117	5.5037	5845.0	1.0495	43.586	72.713	.67214
#1	-.00293	51.241	.00341	.00016	.00058	-.00020	1.0344	.02710	-.00039	.00152	.00040	-.00087	49.999
#2	-.00330	51.706	.00068	-.00065	.00114	-.00042	1.0140	.02507	.00041	.00154	.00075	-.00272	50.477
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10498**	**.00133**	**-.07957**	**.00245**	**-.00189**	**253.06**	**.00364**	**-.00115**	**-.00009**	**5.0353**	**.00148**	**.00367**	**-.02385**
Stddev	.01075	.00051	.00226	.00004	.00036	1.46	.00059	.00203	.00008	.0616	.00229	.00150	.02715
%RSD	10.239	38.078	2.8456	1.4662	19.326	.57637	16.199	176.29	89.201	1.2233	154.86	40.884	113.82
#1	.11258	.00097	-.08117	.00242	-.00215	252.03	.00322	-.00259	-.00003	5.0788	-.00014	.00474	-.04304
#2	.09738	.00169	-.07797	.00247	-.00163	254.09	.00405	.00028	-.00014	4.9917	.00310	.00261	-.00466
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05104**	**-.00130**	**.00043**	**4.7711**	**.01822**	**-.00189**	**10.271**	**-.01042**	**.00012**	**.07665**
Stddev	.05809	.00238	.00028	.0114	.00046	.00762	.009	.00079	.00013	.00145
%RSD	113.82	183.25	65.899	.23891	2.4996	403.67	.09124	7.5355	109.26	1.8906
#1	-.09212	.00038	.00023	4.7792	.01854	.00350	10.278	-.01098	.00021	.07768
#2	-.00996	-.00298	.00063	4.7631	.01789	-.00728	10.265	-.00987	.00003	.07563
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3622.0**	**43695.**	**3137.4**
Stddev	11.0	126.	16.5
%RSD	.30279	.28911	.52639
#1	3629.8	43784.	3149.1
#2	3614.3	43605.	3125.7

Sample Name: CCV-5407546 Acquired: 11/7/2018 14:54:55 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48712**	**.52023**	**.99617**	**.47699**	**.51217**	**.50891**	**.00053**	**4.9933**	**.47485**	**.48514**	**.49094**	**.49531**	**2.3770**
Stddev	.00083	.00982	.02414	.00870	.00289	.00131	.00754	.0263	.01006	.01102	.01042	.00102	.0214
%RSD	.17086	1.8873	2.4228	1.8229	.56508	.25749	1417.7	.52636	2.1183	2.2719	2.1230	.20643	.90053
#1	.48653	.52717	1.0132	.48313	.51422	.50983	-.00480	5.0119	.48196	.49294	.49831	.49603	2.3921
#2	.48771	.51329	.97910	.47084	.51013	.50798	.00587	4.9747	.46774	.47735	.48357	.49459	2.3618
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.562**	**1.0373**	**19.343**	**.47736**	**.48287**	**5.1337**	**.48504**	**.95248**	**.98065**	**.00942**	**.93116**	**1.0033**	**4.8241**
Stddev	.181	.0021	.041	.00023	.01194	.0639	.00925	.02122	.02334	.00219	.02161	.0107	.0416
%RSD	.35728	.20379	.20936	.04768	2.4728	1.2439	1.9070	2.2283	2.3801	23.219	2.3205	1.0653	.86226
#1	50.690	1.0388	19.372	.47752	.49131	5.1789	.49159	.96749	.99716	.00787	.94644	1.0108	4.7947
#2	50.434	1.0358	19.314	.47720	.47442	5.0886	.47850	.93748	.96415	.01097	.91588	.99570	4.8535
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.324**	**.98028**	**.51332**	**.01129**	**.46892**	**.99552**	**-.06066**	**.48284**	**.47484**	**.49328**
Stddev	.089	.02330	.00257	.00320	.00063	.01876	.04216	.00081	.00221	.00015
%RSD	.86226	2.3764	.50100	28.374	.13382	1.8841	69.499	.16865	.46567	.03036
#1	10.261	.99675	.51514	.01356	.46936	1.0088	-.09048	.48341	.47328	.49318
#2	10.387	.96380	.51150	.00903	.46847	.98226	-.03085	.48226	.47640	.49339
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3667.7**	**44847.**	**3147.9**
Stddev	4.9	32.	15.0
%RSD	.13331	.07132	.47576
#1	3671.2	44870.	3137.3
#2	3664.3	44824.	3158.5

Sample Name: CCB Acquired: 11/7/2018 14:57:20 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00110**	**-.00011**	**.00399**	**-.00062**	**.00040**	**-.00039**	**-.00280**	**.01327**	**-.00005**	**-.00011**	**-.00006**	**-.00244**	**-.00044**
Stddev	.00023	.00042	.00293	.00049	.00000	.00038	.00299	.00566	.00013	.00034	.00013	.00042	.00234
%RSD	21.090	379.51	73.288	78.760	.03423	98.474	107.03	42.651	262.33	303.88	213.93	17.167	534.93
#1	.00094	.00019	.00607	-.00097	.00040	-.00012	-.00491	.00927	-.00015	.00013	.00003	-.00214	-.00209
#2	.00126	-.00041	.00192	-.00028	.00040	-.00066	-.00068	.01727	.00004	-.00035	-.00015	-.00274	.00122
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.07989**	**-.00189**	**.00844**	**.00026**	**.00080**	**.05230**	**-.00012**	**-.00065**	**-.00300**	**.00079**	**.00258**	**.00435**	**-.02107**
Stddev	.00076	.00051	.01061	.00020	.00011	.01416	.00048	.00152	.00046	.00262	.00381	.00748	.04633
%RSD	.95175	26.881	125.70	77.865	13.801	27.078	403.27	232.76	15.318	331.12	147.24	171.92	219.88
#1	.07935	-.00225	.00094	.00011	.00088	.06232	.00022	-.00173	-.00267	.00265	-.00011	.00964	-.05383
#2	.08043	-.00153	.01594	.00040	.00072	.04229	-.00046	.00042	-.00332	-.00106	.00528	-.00094	.01169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04509**	**-.00089**	**-.00008**	**.00388**	**.00045**	**-.00208**	**-.04219**	**.00118**	**-.00037**	**.00138**
Stddev	.09914	.00018	.00009	.00296	.00046	.00002	.03149	.00126	.00068	.00203
%RSD	219.88	20.294	113.43	76.269	101.47	1.0943	74.620	107.08	183.59	146.87
#1	-.11519	-.00077	-.00002	.00179	.00078	-.00210	-.06446	.00029	.00011	-.00005
#2	.02502	-.00102	-.00015	.00598	.00013	-.00207	-.01993	.00207	-.00085	.00282
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3687.1**	**45579.**	**3168.3**
Stddev	11.1	75.	16.6
%RSD	.29988	.16388	.52267
#1	3694.9	45632.	3180.0
#2	3679.3	45526.	3156.6

Sample Name: CCVL-5415520 Acquired: 11/7/2018 14:59:56 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01203**	**.10911**	**.01522**	**.09685**	**.01145**	**.00081**	**.11931**	**.20788**	**.00487**	**.01003**	**.01013**	**.01373**
Stddev	.00017	.00353	.00188	.00019	.00061	.00048	.00559	.00023	.00018	.00013	.00031	.00070
%RSD	1.3837	3.2338	12.376	.19224	5.3612	59.010	4.6833	.11072	3.7467	1.3196	3.0175	5.0660
#1	.01191	.11160	.01655	.09698	.01102	.00114	.12326	.20804	.00500	.00993	.01035	.01422
#2	.01215	.10661	.01388	.09672	.01189	.00047	.11536	.20772	.00474	.01012	.00992	.01323
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10209**	**3.2119**	**.02348**	**.20817**	**.01025**	**.01859**	**1.0643**	**.04099**	**2.8387**	**.00951**	**.09431**	**.02092**
Stddev	.00148	.0766	.00616	.00222	.00003	.00125	.0239	.00073	.0478	.00231	.00046	.00186
%RSD	1.4535	2.3844	26.243	1.0671	.33882	6.7023	2.2442	1.7865	1.6844	24.238	.48342	8.8732
#1	.10104	3.2660	.02784	.20660	.01023	.01947	1.0474	.04151	2.8725	.01114	.09399	.01960
#2	.10314	3.1577	.01913	.20974	.01028	.01771	1.0812	.04047	2.8049	.00788	.09463	.02223
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02087**	**.49706**	**1.0637**	**.10034**	**.01063**	**.01801**	**.00973**	**.01563**	F **-.04713**	**.01036**	**.01850**	F **.02045**
Stddev	.00338	.01388	.0297	.00161	.00014	.00199	.00011	.00295	.03532	.00038	.00016	.00050
%RSD	16.221	2.7930	2.7930	1.6063	1.3521	11.036	1.1607	18.865	74.944	3.6986	.88806	2.4637
#1	.02326	.48725	1.0427	.10148	.01073	.01941	.00965	.01354	-.02216	.01008	.01861	.02009
#2	.01847	.50688	1.0847	.09920	.01053	.01660	.00981	.01771	-.07211	.01063	.01838	.02081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									-30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3733.8**	**45172.**	**3135.7**
Stddev	15.4	93.	5.5
%RSD	.41307	.20612	.17615
#1	3744.7	45107.	3139.6
#2	3722.9	45238.	3131.8

Sample Name: MB 280-436445/1-A Acquired: 11/7/2018 15:02:30 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/6 Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00120**	**.00301**	**-.00535**	**-.00011**	**.00082**	**-.00039**	**.00359**	**.01910**	**-.00007**
Stddev	.00011	.00035	.00048	.00048	.00016	.00015	.00077	.00538	.00007
%RSD	9.2635	11.720	8.9968	423.33	19.065	38.216	21.426	28.167	99.634
#1	.00128	.00325	-.00501	.00022	.00071	-.00050	.00304	.02290	-.00012
#2	.00112	.00276	-.00569	-.00045	.00093	-.00029	.00413	.01530	-.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00031**	**.00014**	**-.00284**	**.00269**	**.03001**	**.00374**	**.00244**	**.00056**	**-.00058**
Stddev	.00040	.00018	.00020	.00680	.06619	.00149	.00035	.00011	.00038
%RSD	125.94	128.99	7.1458	252.28	220.52	39.912	14.271	19.854	64.337
#1	-.00003	.00001	-.00269	-.00211	-.01679	.00480	.00268	.00048	-.00085
#2	-.00059	.00026	-.00298	.00750	.07682	.00269	.00219	.00063	-.00032
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04619**	**.00088**	**.00051**	**-.00027**	**.00926**	**-.00113**	**-.00042**	**-.03458**	**-.07399**
Stddev	.00629	.00024	.00052	.00051	.00068	.00556	.00175	.00737	.01577
%RSD	13.609	27.068	102.21	190.31	7.3565	492.95	412.67	21.307	21.307
#1	.04175	.00071	.00088	.00009	.00974	.00280	-.00166	-.03979	-.08514
#2	.05064	.00105	.00014	-.00063	.00878	-.00506	.00081	-.02937	-.06285
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00151**	**.00014**	**.00265**	**.00094**	**-.00261**	F **-.07698**	**.00079**	**-.00023**	**-.00045**
Stddev	.00147	.00010	.00309	.00009	.00280	.07482	.00065	.00061	.00137
%RSD	97.338	71.760	116.59	9.5968	107.35	97.203	82.409	265.26	305.50
#1	-.00047	.00021	.00483	.00100	-.00459	-.12989	.00124	.00020	-.00142
#2	-.00255	.00007	.00047	.00087	-.00063	-.02407	.00033	-.00066	.00052
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						.06000			
Low Limit						-.06000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3684.2**	**45590.**	**3127.6**
Stddev	4.4	290.	.3
%RSD	.11813	.63691	.01060
#1	3687.3	45385.	3127.4
#2	3681.1	45796.	3127.8

Sample Name: LCS 280-436445/2-A Acquired: 11/7/2018 15:05:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04306**	**2.0066**	**1.0030**	**.98761**	**2.0395**	**.05031**	**2.0246**	**49.254**	**.09176**
Stddev	.00100	.0242	.0111	.00880	.0029	.00053	.0245	.084	.00097
%RSD	2.3173	1.2064	1.1031	.89096	.14076	1.0525	1.2128	.17028	1.0572
#1	.04376	2.0237	1.0108	.99383	2.0415	.05068	2.0420	49.314	.09244
#2	.04235	1.9895	.99520	.98139	2.0375	.04994	2.0073	49.195	.09107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48035**	**.19770**	**.24639**	**.93969**	**50.636**	**1.0308**	**47.591**	**.47122**	**1.0015**
Stddev	.00663	.00299	.00091	.00769	.011	.0015	.168	.00174	.0172
%RSD	1.3799	1.5101	.36772	.81810	.02165	.14587	.35322	.36857	1.7136
#1	.48504	.19981	.24703	.94513	50.644	1.0298	47.710	.47245	1.0136
#2	.47567	.19559	.24575	.93426	50.628	1.0319	47.472	.46999	.98935
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.200**	**.47627**	**9.8878**	**.48900**	**1.9929**	**.48481**	**2.0561**	**9.3559**	**20.022**
Stddev	.109	.00602	.1318	.00384	.0339	.00828	.0222	.0678	.145
%RSD	.21200	1.2634	1.3325	.78516	1.6992	1.7074	1.0794	.72435	.72435
#1	51.277	.48053	9.9810	.49172	2.0168	.49066	2.0718	9.3080	19.919
#2	51.124	.47202	9.7946	.48629	1.9689	.47896	2.0404	9.4039	20.124
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9941**	**1.0328**	**.95117**	**.94734**	**1.9816**	**1.9888**	**.49396**	**.46879**	**.51407**
Stddev	.0350	.0037	.00381	.00426	.0336	.0080	.00084	.00003	.00035
%RSD	1.7560	.36038	.40092	.45006	1.6968	.39963	.16999	.00614	.06783
#1	2.0189	1.0354	.95387	.95036	2.0054	1.9832	.49456	.46881	.51383
#2	1.9694	1.0301	.94847	.94433	1.9578	1.9945	.49337	.46877	.51432
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3594.2**	**43756.**	**3110.5**
Stddev	1.0	72.	7.0
%RSD	.02878	.16566	.22345
#1	3593.5	43705.	3115.4
#2	3594.9	43808.	3105.5

Sample Name: LCSD 280-436445/3-A Acquired: 11/7/2018 15:07:25 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04264**	**2.0517**	**1.0297**	**1.0220**	**2.0839**	**.05188**	W **2.0660**	**50.173**	**.09389**
Stddev	.00009	.0254	.0160	.0118	.0079	.00043	.0336	.297	.00140
%RSD	.20216	1.2397	1.5516	1.1494	.37851	.82287	1.6249	.59135	1.4943
#1	.04270	2.0697	1.0410	1.0303	2.0895	.05218	2.0897	50.383	.09488
#2	.04258	2.0337	1.0184	1.0137	2.0783	.05158	2.0423	49.963	.09290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49171**	**.20176**	**.25058**	**.95631**	**51.676**	**1.0492**	**48.418**	**.48083**	**1.0387**
Stddev	.00570	.00295	.00123	.01024	.197	.0061	.094	.00066	.0157
%RSD	1.1583	1.4618	.48994	1.0708	.38164	.58383	.19348	.13773	1.5158
#1	.49574	.20385	.24971	.96355	51.815	1.0535	48.484	.48130	1.0498
#2	.48768	.19967	.25144	.94907	51.537	1.0449	48.351	.48036	1.0275
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.071**	**.48880**	**10.134**	**.49944**	**2.0572**	**.50010**	**2.0858**	**9.8498**	**21.079**
Stddev	.078	.00656	.133	.00768	.0252	.00779	.0333	.0115	.025
%RSD	.14909	1.3425	1.3136	1.5384	1.2249	1.5577	1.5985	.11703	.11703
#1	52.017	.49344	10.228	.50488	2.0750	.50561	2.1094	9.8580	21.096
#2	52.126	.48416	10.040	.49401	2.0393	.49460	2.0623	9.8417	21.061
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0561**	**1.0531**	**.97039**	**.97336**	**2.0233**	**2.0519**	**.50356**	**.47987**	**.52694**
Stddev	.0263	.0064	.00122	.00094	.0301	.0495	.00093	.00252	.00348
%RSD	1.2812	.60617	.12583	.09612	1.4894	2.4108	.18491	.52590	.66123
#1	2.0747	1.0577	.97125	.97269	2.0446	2.0169	.50421	.48166	.52941
#2	2.0375	1.0486	.96953	.97402	2.0020	2.0869	.50290	.47809	.52448
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3590.0**	**43450.**	**3106.8**
Stddev	1.5	222.	4.9
%RSD	.04115	.51039	.15641
#1	3591.0	43294.	3110.2
#2	3589.0	43607.	3103.3

Sample Name: 280-116482-C-1-A Acquired: 11/7/2018 15:09:46 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00076**	**1.9012**	**.00227**	**.24706**	**.08742**	**-.00030**	**.00074**	**11.443**	**.00075**
Stddev	.00003	.0420	.00292	.00427	.00085	.00013	.00306	.027	.00037
%RSD	4.4279	2.2089	128.37	1.7288	.97494	42.339	415.11	.23995	49.291
#1	.00074	1.9309	.00434	.25008	.08802	-.00039	-.00143	11.462	.00049
#2	.00078	1.8715	.00021	.24404	.08682	-.00021	.00290	11.423	.00101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00022**	**.00222**	**.00861**	**1.5589**	**3.8910**	**.00113**	**4.8523**	**.02575**	**.00216**
Stddev	.00020	.00054	.00023	.0017	.0426	.00573	.0158	.00013	.00056
%RSD	91.090	24.154	2.6874	.10622	1.0957	509.62	.32458	.51516	25.997
#1	.00036	.00184	.00877	1.5600	3.9212	-.00293	4.8635	.02585	.00176
#2	.00008	.00260	.00845	1.5577	3.8609	.00518	4.8412	.02566	.00255
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.340**	**.00359**	**.05592**	**.00025**	**3.8658**	**-.00023**	**.00314**	**6.9709**	**14.918**
Stddev	.064	.00044	.00398	.00168	.0790	.00103	.01008	.0157	.034
%RSD	.48149	12.283	7.1218	659.02	2.0421	443.17	320.91	.22467	.22467
#1	13.385	.00328	.05874	-.00093	3.9216	.00050	.01027	6.9819	14.941
#2	13.295	.00391	.05310	.00144	3.8100	-.00096	-.00399	6.9598	14.894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00052**	**.24892**	**.00469**	**.02498**	**-.00343**	**-.06763**	**.00458**	**.02471**	**.00340**
Stddev	.00084	.00058	.00161	.00004	.00003	.05894	.00010	.00038	.00267
%RSD	161.25	.23221	34.387	.16477	.79430	87.151	2.1283	1.5256	78.548
#1	-.00007	.24932	.00583	.02495	-.00341	-.10931	.00465	.02498	.00528
#2	.00111	.24851	.00355	.02501	-.00344	-.02595	.00451	.02444	.00151
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3757.2**	**45851.**	**3219.3**
Stddev	2.0	319.	4.3
%RSD	.05414	.69631	.13424
#1	3758.7	45626.	3216.3
#2	3755.8	46077.	3222.4

Sample Name: 280-116482-C-1-ASD@5 Acquired: 11/7/2018 15:12:19 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00111**	**.63196**	**.00032**	**.05187**	**.01883**	**-.00057**	**.00628**	**2.4016**	**-.00016**
Stddev	.00072	.01220	.00814	.00195	.00050	.00036	.00333	.0035	.00001
%RSD	65.273	1.9304	2516.5	3.7678	2.6395	62.604	53.081	.14666	8.1985
#1	.00162	.64059	.00608	.05325	.01848	-.00032	.00863	2.3992	-.00016
#2	.00060	.62334	-.00543	.05049	.01918	-.00083	.00392	2.4041	-.00017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00035**	**.00095**	**-.00037**	**.35677**	**.84389**	**.00288**	**1.0371**	**.00551**	**-.00005**
Stddev	.00040	.00009	.00085	.00427	.00191	.00104	.0140	.00003	.00048
%RSD	114.91	9.2204	232.69	1.1979	.22576	36.190	1.3502	.54418	880.15
#1	.00063	.00089	.00024	.35375	.84255	.00362	1.0470	.00553	.00028
#2	.00006	.00101	-.00097	.35979	.84524	.00215	1.0272	.00548	-.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.5580**	**.00121**	**.01496**	**-.00086**	**.79876**	**.00285**	**-.00518**	**1.7622**	**3.7710**
Stddev	.0183	.00085	.00279	.00079	.01790	.00393	.00226	.0021	.0045
%RSD	.71391	70.475	18.628	91.767	2.2414	137.57	43.517	.11926	.11926
#1	2.5451	.00181	.01693	-.00142	.81142	.00008	-.00359	1.7636	3.7742
#2	2.5709	.00061	.01299	-.00030	.78611	.00563	-.00678	1.7607	3.7678
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00079**	**.05221**	**.00214**	**.01340**	**.00028**	**-.01059**	**.00154**	**.00590**	**.00533**
Stddev	.00206	.00015	.00225	.00050	.00051	.05764	.00012	.00083	.00223
%RSD	260.42	.29582	105.29	3.7361	179.71	544.02	8.0958	14.026	41.821
#1	-.00224	.05232	.00373	.01305	-.00008	-.05135	.00146	.00532	.00376
#2	.00066	.05210	.00055	.01376	.00064	.03016	.00163	.00649	.00691
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3779.4**	**46011.**	**3197.7**
Stddev	14.4	244.	6.8
%RSD	.37979	.53096	.21143
#1	3789.6	45838.	3193.0
#2	3769.3	46184.	3202.5

Sample Name: 280-116482-C-1-B MS Acquired: 11/7/2018 15:14:52 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04355**	**6.3546**	**1.0330**	**1.2583**	**2.1775**	**.05238**	W **2.0648**	**61.781**	**.09424**
Stddev	.00082	.0138	.0156	.0151	.0077	.00023	.0258	.076	.00125
%RSD	1.8831	.21800	1.5131	1.2023	.35254	.43319	1.2504	.12353	1.3296
#1	.04413	6.3448	1.0441	1.2690	2.1721	.05222	2.0830	61.727	.09513
#2	.04297	6.3644	1.0220	1.2476	2.1829	.05254	2.0465	61.835	.09336
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49459**	**.20652**	**.26444**	**2.8817**	**55.699**	**1.0549**	**53.808**	**.51068**	**1.0338**
Stddev	.00603	.00342	.00030	.0030	.187	.0047	.014	.00103	.0164
%RSD	1.2193	1.6545	.11414	.10463	.33554	.44153	.02608	.20146	1.5894
#1	.49885	.20894	.26423	2.8795	55.567	1.0516	53.818	.51141	1.0454
#2	.49032	.20410	.26465	2.8838	55.831	1.0582	53.798	.50996	1.0222
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**64.314**	**.49419**	**10.228**	**.50197**	**6.0195**	**.49359**	**2.0942**	**18.925**	**40.500**
Stddev	.067	.00617	.110	.00366	.0795	.00377	.0354	.043	.092
%RSD	.10372	1.2495	1.0760	.72846	1.3209	.76477	1.6906	.22631	.22631
#1	64.361	.49856	10.306	.50456	6.0757	.49626	2.1192	18.956	40.565
#2	64.267	.48982	10.150	.49939	5.9633	.49092	2.0692	18.895	40.436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0420**	**1.3107**	**.97573**	**1.0015**	**2.0132**	**2.0216**	**.51255**	**.51259**	**.52977**
Stddev	.0278	.0006	.00566	.0043	.0274	.0336	.00453	.00425	.00241
%RSD	1.3622	.04239	.58037	.42693	1.3614	1.6614	.88474	.82896	.45423
#1	2.0616	1.3111	.97973	1.0045	2.0326	2.0453	.51576	.51559	.52807
#2	2.0223	1.3103	.97172	.99846	1.9938	1.9978	.50934	.50958	.53147
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3651.8**	**44146.**	**3206.5**
Stddev	1.4	29.	8.8
%RSD	.03906	.06535	.27410
#1	3650.8	44126.	3212.8
#2	3652.8	44167.	3200.3

Sample Name: 280-116482-C-1-C MSD Acquired: 11/7/2018 15:17:10 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04452**	**6.2451**	**1.0397**	**1.2612**	**2.1648**	**.05203**	W **2.0545**	**61.411**	**.09431**
Stddev	.00043	.0067	.0232	.0156	.0010	.00027	.0328	.009	.00163
%RSD	.96357	.10692	2.2299	1.2349	.04586	.51944	1.5942	.01493	1.7270
#1	.04482	6.2498	1.0561	1.2722	2.1641	.05222	2.0777	61.405	.09546
#2	.04422	6.2404	1.0233	1.2502	2.1655	.05184	2.0314	61.418	.09316
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49256**	**.20627**	**.26208**	**2.8332**	**55.476**	**1.0453**	**53.481**	**.50794**	**1.0300**
Stddev	.00564	.00326	.00066	.0210	.167	.0082	.038	.00017	.0165
%RSD	1.1457	1.5828	.25177	.74302	.30160	.78802	.07131	.03308	1.6019
#1	.49655	.20858	.26162	2.8183	55.358	1.0511	53.454	.50806	1.0417
#2	.48857	.20396	.26255	2.8481	55.595	1.0395	53.508	.50782	1.0184
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**64.141**	**.49261**	**10.195**	**.50030**	**5.9792**	**.49706**	**2.0866**	**19.604**	**41.952**
Stddev	.048	.00673	.131	.00905	.0832	.01234	.0255	.007	.015
%RSD	.07474	1.3663	1.2887	1.8093	1.3911	2.4830	1.2224	.03599	.03599
#1	64.175	.49737	10.288	.50670	6.0380	.50578	2.1047	19.599	41.941
#2	64.107	.48785	10.102	.49390	5.9204	.48833	2.0686	19.609	41.962
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0348**	**1.3025**	**.96973**	**1.0031**	**2.0069**	**2.0149**	**.50934**	**.51035**	**.52296**
Stddev	.0329	.0003	.00057	.0018	.0272	.0123	.00007	.00268	.00339
%RSD	1.6177	.02562	.05836	.18061	1.3566	.60902	.01321	.52583	.64806
#1	2.0580	1.3027	.96933	1.0018	2.0261	2.0236	.50939	.51225	.52536
#2	2.0115	1.3022	.97013	1.0044	1.9876	2.0062	.50930	.50845	.52056
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3593.8**	**43526.**	**3168.7**
Stddev	1.7	183.	7.5
%RSD	.04856	.42088	.23673
#1	3592.5	43396.	3174.0
#2	3595.0	43655.	3163.4

Sample Name: 280-116482-C-1-A PDS Acquired: 11/7/2018 15:19:29 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04784**	**3.7633**	**.21018**	**.35143**	**.19288**	**.05137**	**.00684**	**31.295**	**.04906**
Stddev	.00004	.0022	.00303	.00271	.00071	.00016	.00512	.033	.00063
%RSD	.07994	.05952	1.4437	.77034	.36557	.30206	74.869	.10629	1.2806
#1	.04786	3.7649	.20804	.35335	.19238	.05148	.00322	31.271	.04950
#2	.04781	3.7617	.21233	.34952	.19338	.05126	.01046	31.318	.04861
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04928**	**.05391**	**.06027**	**2.6172**	**24.480**	**.10750**	**24.360**	**.07502**	**.05119**
Stddev	.00038	.00047	.00002	.0025	.173	.00357	.029	.00014	.00073
%RSD	.76910	.86346	.02831	.09588	.70565	3.3214	.11987	.18272	1.4291
#1	.04955	.05424	.06028	2.6154	24.358	.10498	24.380	.07492	.05171
#2	.04902	.05358	.06025	2.6190	24.602	.11003	24.339	.07512	.05067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**33.706**	**.05268**	**2.0499**	**.10003**	**3.9168**	**.09548**	**.19670**	**13.223**	**28.298**
Stddev	.155	.00047	.0107	.00137	.0269	.00274	.00152	.024	.052
%RSD	.46126	.88954	.52231	1.3689	.68696	2.8681	.77224	.18430	.18430
#1	33.816	.05301	2.0574	.10099	3.9358	.09742	.19563	13.241	28.335
#2	33.596	.05235	2.0423	.09906	3.8977	.09355	.19778	13.206	28.261
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09789**	**.30060**	**.19977**	**.10587**	**.20504**	**.41694**	**.05350**	**.22070**	**.05462**
Stddev	.00049	.00028	.00301	.00056	.00017	.01052	.00031	.00152	.00236
%RSD	.49733	.09153	1.5054	.52607	.08510	2.5238	.58479	.68981	4.3127
#1	.09823	.30041	.19764	.10627	.20492	.42438	.05327	.22178	.05296
#2	.09754	.30080	.20189	.10548	.20517	.40950	.05372	.21963	.05629
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3692.3**	**44843.**	**3203.3**
Stddev	1.4	9.	18.5
%RSD	.03813	.01918	.57634
#1	3691.3	44837.	3190.3
#2	3693.3	44849.	3216.4

Sample Name: 280-116482-C-2-A Acquired: 11/7/2018 15:21:57 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00074**	**2.3566**	**.00197**	**.02915**	**.05858**	**-.00009**	**.00038**	**5.3421**	**.00013**
Stddev	.00049	.0583	.00166	.00071	.00011	.00025	.00399	.0161	.00024
%RSD	66.037	2.4719	84.350	2.4341	.18821	284.38	1062.6	.30217	186.50
#1	.00040	2.3977	.00314	.02965	.05851	.00009	.00320	5.3307	.00030
#2	.00109	2.3154	.00079	.02864	.05866	-.00027	-.00245	5.3535	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	**.00258**	**.00041**	**1.6010**	**2.1805**	**.00004**	**1.5841**	**.02595**	**.00045**
Stddev	.00013	.00024	.00050	.0080	.0170	.00186	.0026	.00000	.00052
%RSD	36.945	9.1362	120.76	.49705	.77942	4637.1	.16444	.01406	117.42
#1	.00043	.00274	.00077	1.5954	2.1925	.00136	1.5859	.02595	.00008
#2	.00025	.00241	.00006	1.6067	2.1685	-.00128	1.5823	.02595	.00082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.0505**	**.00477**	**.04502**	**-.00004**	**1.7199**	**-.00368**	**-.00214**	**6.6702**	**14.274**
Stddev	.0485	.00067	.00001	.00004	.0323	.00056	.00190	.0101	.022
%RSD	1.5908	14.036	.01272	109.97	1.8795	15.218	88.790	.15218	.15218
#1	3.0162	.00429	.04502	-.00001	1.7427	-.00408	-.00080	6.6631	14.259
#2	3.0848	.00524	.04502	-.00007	1.6970	-.00329	-.00349	6.6774	14.290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00115**	**.06303**	**.00130**	**.04100**	**.00054**	**-.02203**	**.00455**	**.00974**	**.00324**
Stddev	.00082	.00009	.00162	.00093	.00341	.00282	.00000	.00034	.00015
%RSD	71.404	.15003	125.06	2.2590	635.75	12.796	.06940	3.5038	4.6015
#1	-.00173	.06310	.00244	.04165	-.00187	-.02403	.00455	.00950	.00314
#2	-.00057	.06296	.00015	.04034	.00295	-.02004	.00455	.00998	.00335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3856.1**	**46960.**	**3256.5**
Stddev	2.8	179.	1.5
%RSD	.07218	.38171	.04715
#1	3858.1	46833.	3255.4
#2	3854.2	47087.	3257.6

Sample Name: 280-116482-C-3-A Acquired: 11/7/2018 15:24:31 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Line	328.068 {103}	167.079 {502}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00094**	W **2.6172**	W **2.6097**	**.00242**	**.02100**	**.05874**	**-.00028**	**.00098**	**5.1532**
Stddev	.00001	.0394	.0053	.00441	.00004	.00051	.00042	.00067	.0254
%RSD	.73639	1.5072	.20299	182.08	.17904	.86160	148.26	68.714	.49197
#1	.00095	2.6451	2.6135	-.00070	.02103	.05909	-.00058	.00146	5.1711
#2	.00094	2.5894	2.6060	.00553	.02098	.05838	.00001	.00050	5.1353
Check ?	Chk Pass	Chk Warn	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		2.5000	500.00						
Low Limit		-.20000	3.2000						

Elem	Cd2288	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Line	228.802 {447}	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00061**	**.00282**	**.00009**	**1.7689**	**2.0228**	**-.00404**	**1.5258**	**.02630**
Stddev	.00030	.00006	.00030	.00005	.0003	.0404	.00831	.0070	.00016
%RSD	873.11	9.3971	10.718	47.942	.01707	1.9978	205.45	.45590	.58987
#1	.00024	.00065	.00303	.00013	1.7687	1.9942	-.00992	1.5209	.02619
#2	-.00018	.00057	.00260	.00006	1.7691	2.0514	.00183	1.5307	.02641
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Line	202.030 {467}	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**2.8466**	**.00461**	**.04940**	**-.00208**	**1.7370**	**-.00300**	**-.00282**	**7.0178**
Stddev	.00012	.0100	.00014	.00008	.00034	.0324	.00275	.00447	.0477
%RSD	60.540	.35144	3.0818	.17184	16.189	1.8629	91.703	158.94	.67930
#1	-.00029	2.8395	.00451	.04946	-.00184	1.7599	-.00495	-.00598	7.0515
#2	-.00012	2.8537	.00471	.04934	-.00232	1.7141	-.00106	.00035	6.9841
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062
Line	288.158 {117}2	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.018**	**-.00076**	**.05616**	**.00418**	**.03833**	**-.00438**	**-.05477**	**.00503**	**.00880**
Stddev	.102	.00006	.00003	.00033	.00018	.00292	.05052	.00018	.00029
%RSD	.67930	8.0058	.05952	8.0020	.45973	66.794	92.229	3.4942	3.3011
#1	15.090	-.00080	.05614	.00394	.03845	-.00231	-.01905	.00515	.00900
#2	14.946	-.00072	.05618	.00441	.03820	-.00645	-.09049	.00490	.00859
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Zr3391
Line	339.198 { 99}
Units	ppm
Avg	**.00573**
Stddev	.00040
%RSD	6.9471
#1	.00601
#2	.00545
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: 280-116482-C-3-A Acquired: 11/7/2018 15:24:31 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3852.0**	**47118.**	**3315.4**
Stddev	11.6	121.	.5
%RSD	.30111	.25721	.01533
#1	3860.3	47204.	3315.8
#2	3843.8	47032.	3315.1

Sample Name: CCVH-5408055 Acquired: 11/7/2018 15:27:04 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00318**	**51.555**	**-.00394**	**.00125**	**.00104**	**-.00054**	**1.0414**	**.01876**	**-.00016**	**.00106**	**.00085**	**-.00178**	**50.594**
Stddev	.00044	.129	.00403	.00063	.00033	.00009	.0094	.00366	.00010	.00024	.00030	.00174	.168
%RSD	13.768	.25100	102.38	50.350	31.438	16.800	.90627	19.490	65.921	22.668	35.456	98.037	.33208
#1	-.00349	51.463	-.00678	.00170	.00081	-.00048	1.0480	.01618	-.00023	.00089	.00106	-.00055	50.475
#2	-.00287	51.646	-.00109	.00081	.00127	-.00061	1.0347	.02135	-.00008	.00123	.00063	-.00301	50.713
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.18592**	**-.00199**	**-.07625**	**.00240**	**-.00076**	**254.65**	**.00335**	**.00018**	**-.00144**	**5.0384**	**.00581**	**.00242**	**-.04275**
Stddev	.06085	.00505	.00542	.00013	.00019	.55	.00032	.00211	.00047	.1012	.00181	.00107	.00784
%RSD	32.726	253.37	7.1031	5.5075	24.729	.21478	9.4072	1163.6	32.876	2.0088	31.126	44.016	18.331
#1	.14290	.00158	-.07242	.00231	-.00090	254.27	.00313	.00167	-.00110	5.1100	.00454	.00167	-.03721
#2	.22895	-.00557	-.08008	.00250	-.00063	255.04	.00358	-.00131	-.00177	4.9668	.00709	.00317	-.04829
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.09149**	**-.00142**	**.00027**	**4.8361**	**.01728**	**-.00112**	**10.365**	**-.00972**	**.00044**	**.07885**
Stddev	.01677	.00123	.00030	.0046	.00054	.00122	.038	.00031	.00061	.00131
%RSD	18.331	86.427	107.99	.09527	3.1065	109.71	.36212	3.1796	136.34	1.6626
#1	-.07963	-.00055	.00048	4.8394	.01766	-.00198	10.339	-.00950	.00087	.07793
#2	-.10335	-.00229	.00006	4.8329	.01690	-.00025	10.392	-.00994	.00002	.07978
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3644.5**	**44031.**	**3174.8**
Stddev	3.5	361.	4.8
%RSD	.09482	.81997	.15033
#1	3647.0	43775.	3178.2
#2	3642.1	44286.	3171.4

Sample Name: CCV-5407546 Acquired: 11/7/2018 15:29:36 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49057**	**.52182**	**1.0128**	**.48313**	**.51704**	**.51310**	**.00179**	**5.0239**	**.48236**	**.49226**	**.49934**	**.49983**	**2.3853**
Stddev	.00072	.01030	.0187	.00944	.00001	.00164	.00160	.0086	.00900	.00865	.00959	.00003	.0088
%RSD	.14754	1.9736	1.8411	1.9547	.00240	.31878	89.363	.17200	1.8653	1.7580	1.9197	.00693	.36798
#1	.49005	.52910	1.0260	.48981	.51705	.51425	.00066	5.0178	.48872	.49838	.50611	.49985	2.3791
#2	.49108	.51454	.99963	.47646	.51703	.51194	.00292	5.0300	.47600	.48614	.49256	.49980	2.3915
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.935**	**1.0443**	**19.486**	**.47905**	**.49155**	**5.1780**	**.49200**	**.96651**	**.99305**	**.00441**	**.95024**	**1.0053**	**4.8795**
Stddev	.321	.0105	.021	.00135	.00894	.0019	.00869	.01702	.01385	.00777	.02354	.0152	.0594
%RSD	.62993	1.0027	.10738	.28257	1.8197	.03771	1.7659	1.7615	1.3942	176.33	2.4768	1.5084	1.2180
#1	50.708	1.0369	19.501	.48001	.49788	5.1794	.49815	.97854	1.0028	-.00109	.96688	1.0161	4.8375
#2	51.161	1.0517	19.471	.47809	.48523	5.1766	.48586	.95447	.98326	.00991	.93360	.99461	4.9216
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.442**	**.99438**	**.51810**	**.01025**	**.47281**	**1.0134**	**-.01055**	**.48702**	**.47490**	**.49830**
Stddev	.127	.01977	.00146	.00084	.00271	.0147	.00786	.00234	.00228	.00232
%RSD	1.2180	1.9879	.28137	8.1929	.57407	1.4508	74.457	.48070	.47940	.46641
#1	10.352	1.0084	.51707	.01085	.47473	1.0237	-.01611	.48868	.47651	.49994
#2	10.532	.98040	.51913	.00966	.47089	1.0030	-.00500	.48537	.47329	.49665
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3698.2**	**45077.**	**3181.3**
Stddev	.5	47.	5.6
%RSD	.01350	.10525	.17649
#1	3697.8	45110.	3185.3
#2	3698.5	45043.	3177.3

Sample Name: CCB Acquired: 11/7/2018 15:31:59 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00175**	**.00047**	**.00099**	**.00066**	**.00151**	**-.00029**	**.00178**	**.00875**	**-.00016**	**-.00030**	**.00044**	**-.00314**	**.00751**
Stddev	.00032	.00080	.00686	.00086	.00046	.00001	.00177	.00101	.00009	.00006	.00029	.00044	.00152
%RSD	18.094	170.33	692.71	131.98	30.594	3.2117	99.315	11.551	56.024	19.967	65.331	13.926	20.239
#1	.00153	-.00010	.00584	.00127	.00118	-.00028	.00303	.00947	-.00022	-.00034	.00024	-.00283	.00643
#2	.00198	.00103	-.00386	.00004	.00184	-.00030	.00053	.00804	-.00009	-.00025	.00064	-.00345	.00858
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01235**	**-.00158**	**.00418**	**.00005**	**.00055**	**.03328**	**.00031**	**-.00135**	**-.00138**	**-.00876**	**.00301**	**.00045**	**-.00537**
Stddev	.05246	.00035	.00250	.00001	.00012	.02400	.00020	.00123	.00057	.00408	.00113	.00022	.03507
%RSD	424.89	22.067	59.861	25.485	22.249	72.111	64.794	90.935	41.469	46.593	37.593	48.460	652.68
#1	-.04944	-.00134	.00241	.00006	.00064	.05026	.00045	-.00222	-.00098	-.01165	.00381	.00061	.01942
#2	.02475	-.00183	.00595	.00004	.00047	.01631	.00017	-.00048	-.00179	-.00588	.00221	.00030	-.03017
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.01150**	**-.00197**	**-.00015**	**.00144**	**-.00009**	**-.00173**	**-.09727**	**.00072**	**-.00101**	**.00046**
Stddev	.07505	.00135	.00010	.00167	.00017	.00039	.01623	.00027	.00059	.00390
%RSD	652.68	68.600	64.125	116.23	197.28	22.550	16.683	37.923	58.263	853.37
#1	.04157	-.00102	-.00008	.00262	-.00021	-.00145	-.10874	.00091	-.00059	-.00230
#2	-.06456	-.00293	-.00022	.00026	.00003	-.00200	-.08579	.00053	-.00142	.00322
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3710.0**	**45367.**	**3146.1**
Stddev	24.8	149.	12.0
%RSD	.66855	.32732	.38098
#1	3692.4	45262.	3137.6
#2	3727.5	45472.	3154.6

Sample Name: CCVL-5415520 Acquired: 11/7/2018 15:34:35 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01201**	**.11004**	F **.01018**	**.09680**	**.01104**	F **.00031**	**.11523**	**.21236**	**.00514**	**.00970**	**.01021**	**.01280**
Stddev	.00028	.00201	.00116	.00090	.00021	.00018	.00358	.00586	.00020	.00057	.00013	.00055
%RSD	2.3467	1.8269	11.407	.93241	1.9010	57.883	3.1032	2.7601	3.8662	5.8932	1.3045	4.3015
#1	.01181	.11147	.01100	.09744	.01089	.00044	.11775	.21650	.00528	.01010	.01030	.01241
#2	.01221	.10862	.00936	.09616	.01119	.00019	.11270	.20821	.00500	.00929	.01012	.01319
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500			.00100						
Range			-30.000%			-30.000%						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10663**	**3.2010**	**.02558**	**.20547**	**.01017**	**.01903**	**1.0646**	**.04183**	**2.8373**	**.01058**	**.08583**	**.01732**
Stddev	.00398	.0131	.00232	.00948	.00020	.00097	.0052	.00082	.0672	.00095	.01355	.00543
%RSD	3.7353	.40755	9.0639	4.6155	1.9634	5.0721	.49036	1.9692	2.3691	8.9595	15.788	31.333
#1	.10945	3.1917	.02394	.19876	.01003	.01971	1.0609	.04242	2.8848	.01125	.09541	.01349
#2	.10381	3.2102	.02722	.21217	.01031	.01835	1.0683	.04125	2.7897	.00991	.07625	.02116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01915**	**.47703**	**1.0209**	**.10028**	**.01066**	**.01559**	**.00966**	**.01390**	F **.00572**	**.01019**	**.01969**	**.01428**
Stddev	.00008	.03613	.0773	.00119	.00026	.00201	.00026	.00051	.06527	.00082	.00068	.00394
%RSD	.42725	7.5741	7.5741	1.1882	2.4009	12.899	2.7420	3.6959	1142.0	8.0818	3.4547	27.601
#1	.01921	.50258	1.0755	.10113	.01048	.01417	.00985	.01354	.05187	.01078	.02017	.01150
#2	.01909	.45148	.96618	.09944	.01084	.01701	.00948	.01427	-.04044	.00961	.01921	.01707
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3737.1**	**46208.**	**3210.1**
Stddev	2.8	11.	12.0
%RSD	.07395	.02402	.37442
#1	3739.0	46201.	3218.6
#2	3735.1	46216.	3201.6

Sample Name: 280-116482-C-4-A Acquired: 11/7/2018 15:37:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Line	328.068 {103}	167.079 {502}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00058**	W **2.5261**	W **2.5603**	**.00070**	**.02832**	**.05986**	**.00000**	**.00396**	**5.4658**
Stddev	.00099	.0652	.0170	.00306	.00163	.00001	.00000	.00032	.0178
%RSD	170.14	2.5791	.66369	436.65	5.7533	.00954	70.444	8.0287	.32639
#1	-.00012	2.5721	2.5483	-.00146	.02947	.05986	.00000	.00373	5.4784
#2	.00128	2.4800	2.5723	.00286	.02717	.05985	.00000	.00418	5.4532
Check ?	Chk Pass	Chk Warn	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		2.5000	500.00						
Low Limit		-.20000	3.2000						

Elem	Cd2288	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Line	228.802 {447}	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00104**	**.00283**	**.00055**	**1.8008**	**2.2272**	**-.00037**	**1.6345**	**.02634**
Stddev	.00007	.00063	.00034	.00147	.0027	.0463	.00564	.0083	.00016
%RSD	77.958	60.188	11.918	268.30	.15089	2.0784	1535.7	.50936	.62114
#1	.00004	.00060	.00259	.00159	1.7989	2.2600	.00362	1.6404	.02646
#2	.00014	.00148	.00307	-.00049	1.8027	2.1945	-.00436	1.6286	.02623
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Line	202.030 {467}	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**3.1683**	**.00495**	**.04895**	**-.00203**	**1.7590**	**.00004**	**.00209**	**6.9434**
Stddev	.00002	.0411	.00004	.00289	.00122	.0457	.00406	.00191	.0120
%RSD	50.885	1.2981	.82659	5.9077	60.202	2.5976	10729.	91.419	.17289
#1	-.00003	3.1974	.00492	.05099	-.00117	1.7913	-.00283	.00074	6.9519
#2	-.00006	3.1392	.00498	.04690	-.00290	1.7267	.00291	.00344	6.9349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062
Line	288.158 {117}2	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.859**	**-.00051**	**.06478**	**.00478**	**.03515**	**-.00446**	**-.06079**	**.00486**	**.00980**
Stddev	.026	.00012	.00040	.00112	.00050	.00281	.04085	.00037	.00014
%RSD	.17289	24.291	.62374	23.316	1.4089	63.092	67.192	7.5705	1.4165
#1	14.877	-.00042	.06506	.00557	.03550	-.00644	-.03191	.00460	.00990
#2	14.841	-.00060	.06449	.00399	.03480	-.00247	-.08968	.00512	.00970
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Zr3391
Line	339.198 { 99}
Units	ppm
Avg	**.00235**
Stddev	.00049
%RSD	21.018
#1	.00200
#2	.00269
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: 280-116482-C-4-A Acquired: 11/7/2018 15:37:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3801.2**	**46352.**	**3161.8**
Stddev	6.4	278.	12.6
%RSD	.16826	.60043	.40005
#1	3805.7	46155.	3152.9
#2	3796.7	46548.	3170.8

Sample Name: 280-116489-A-1-A Acquired: 11/7/2018 15:39:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00117**	**2.1238**	**.00562**	**.01558**	**.06374**	**-.00031**	**-.00363**	**5.0440**	**-.00016**
Stddev	.00028	.0447	.00377	.00042	.00081	.00001	.00007	.0116	.00011
%RSD	24.264	2.1049	67.044	2.6867	1.2676	4.6475	1.8316	.22947	64.322
#1	.00097	2.1554	.00829	.01587	.06317	-.00032	-.00358	5.0358	-.00024
#2	.00137	2.0922	.00296	.01528	.06431	-.00030	-.00368	5.0522	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00032**	**.00220**	**-.00019**	**1.3887**	**2.4696**	**.00333**	**1.2923**	**.02947**	**-.00020**
Stddev	.00019	.00036	.00031	.0146	.0004	.00468	.0056	.00011	.00083
%RSD	58.891	16.324	169.64	1.0489	.01535	140.35	.43052	.36385	426.87
#1	.00045	.00194	-.00041	1.3990	2.4699	.00003	1.2883	.02939	-.00079
#2	.00019	.00245	.00004	1.3784	2.4694	.00664	1.2962	.02955	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6935**	**.00377**	**.04933**	**-.00269**	**1.1868**	**-.00138**	**.00176**	**6.5333**	**13.981**
Stddev	.0099	.00052	.00528	.00150	.0117	.00183	.00527	.0083	.018
%RSD	.36615	13.749	10.696	55.788	.98838	132.70	300.27	.12652	.12652
#1	2.6866	.00413	.05306	-.00163	1.1951	-.00267	.00548	6.5274	13.969
#2	2.7005	.00340	.04560	-.00375	1.1785	-.00008	-.00197	6.5391	13.994
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00208**	**.06464**	**.00278**	**.03629**	**-.00198**	**-.07572**	**.00459**	**.00741**	**.00344**
Stddev	.00082	.00012	.00532	.00157	.00357	.03215	.00011	.00064	.00103
%RSD	39.432	.17851	191.57	4.3386	180.08	42.453	2.4613	8.6465	29.902
#1	-.00267	.06455	.00654	.03740	.00054	-.09845	.00451	.00695	.00416
#2	-.00150	.06472	-.00098	.03518	-.00451	-.05299	.00466	.00786	.00271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3823.0**	**46815.**	**3262.8**
Stddev	3.0	152.	10.1
%RSD	.07844	.32482	.30946
#1	3825.2	46708.	3269.9
#2	3820.9	46923.	3255.7

Sample Name: 280-116489-A-2-A Acquired: 11/7/2018 15:42:15 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00208**	**2.2029**	**.00149**	**.01502**	**.06310**	**-.00017**	**-.00362**	**4.9875**	**-.00008**
Stddev	.00023	.0326	.00273	.00039	.00037	.00012	.00205	.0032	.00016
%RSD	10.896	1.4813	183.43	2.6224	.58038	74.361	56.488	.06321	197.70
#1	.00192	2.2260	.00341	.01474	.06336	-.00008	-.00507	4.9852	.00003
#2	.00224	2.1798	-.00044	.01530	.06284	-.00025	-.00218	4.9897	-.00020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00057**	**.00241**	**.00134**	**1.5194**	**2.3399**	**.00040**	**1.2919**	**.02936**	**-.00047**
Stddev	.00015	.00001	.00081	.0012	.0889	.00328	.0108	.00004	.00014
%RSD	25.684	.54539	60.807	.07702	3.7998	819.78	.83907	.15236	29.031
#1	.00046	.00240	.00076	1.5186	2.4028	.00272	1.2843	.02940	-.00056
#2	.00067	.00242	.00191	1.5202	2.2770	-.00192	1.2996	.02933	-.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6304**	**.00404**	**.05238**	**-.00155**	**1.2017**	**-.00224**	**-.00321**	**6.6108**	**14.147**
Stddev	.0085	.00050	.00476	.00069	.0165	.00183	.00203	.0046	.010
%RSD	.32241	12.438	9.0836	44.451	1.3751	81.872	63.079	.06976	.06976
#1	2.6244	.00368	.05575	-.00106	1.2134	-.00354	-.00465	6.6140	14.154
#2	2.6364	.00439	.04902	-.00204	1.1900	-.00094	-.00178	6.6075	14.140
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00215**	**.06361**	**.00014**	**.02897**	**.00002**	**-.06044**	**.00462**	**.00964**	**.00396**
Stddev	.00022	.00003	.00001	.00087	.00031	.02358	.00016	.00003	.00236
%RSD	10.183	.04636	10.301	2.9968	1466.6	39.009	3.4624	.29481	59.513
#1	-.00199	.06359	.00015	.02958	-.00020	-.04377	.00451	.00966	.00230
#2	-.00230	.06363	.00013	.02836	.00024	-.07712	.00473	.00962	.00563
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3818.4**	**46891.**	**3271.8**
Stddev	4.1	230.	8.7
%RSD	.10804	.48979	.26607
#1	3815.5	47053.	3265.6
#2	3821.3	46729.	3277.9

Sample Name: 280-116489-A-3-A Acquired: 11/7/2018 15:44:48 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00112**	**2.3222**	**.00154**	**.01591**	**.06378**	**-.00039**	**.00412**	**4.7379**	**.00012**
Stddev	.00083	.0248	.00281	.00062	.00043	.00030	.00299	.0307	.00007
%RSD	73.866	1.0693	182.43	3.9124	.67628	76.243	72.527	.64797	61.594
#1	.00054	2.3397	.00353	.01547	.06408	-.00018	.00623	4.7596	.00017
#2	.00171	2.3046	-.00045	.01635	.06347	-.00060	.00201	4.7161	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**.00262**	**-.00003**	**1.5615**	**2.4656**	**-.00425**	**1.3058**	**.02880**	**-.00014**
Stddev	.00022	.00000	.00025	.0074	.0079	.00423	.0049	.00008	.00022
%RSD	80.881	.00474	864.10	.47223	.32129	99.470	.37820	.27460	161.87
#1	.00011	.00262	.00015	1.5667	2.4600	-.00126	1.3093	.02886	-.00029
#2	.00042	.00262	-.00021	1.5563	2.4712	-.00724	1.3023	.02874	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6545**	**.00362**	**.05474**	**-.00192**	**1.2218**	**-.00052**	**-.00489**	**6.8835**	**14.731**
Stddev	.0372	.00038	.00272	.00048	.0134	.00145	.00890	.0261	.056
%RSD	1.4019	10.496	4.9621	25.055	1.0935	276.24	182.17	.37871	.37871
#1	2.6808	.00335	.05666	-.00226	1.2312	-.00155	.00141	6.9020	14.770
#2	2.6282	.00389	.05282	-.00158	1.2123	.00050	-.01118	6.8651	14.691
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00081**	**.06373**	**.00165**	**.03704**	**-.00278**	**-.06867**	**.00479**	**.00925**	**.00291**
Stddev	.00207	.00025	.00002	.00006	.00078	.02628	.00035	.00080	.00157
%RSD	255.38	.39022	1.4710	.16737	27.862	38.277	7.3671	8.6709	54.140
#1	-.00227	.06355	.00163	.03699	-.00224	-.05008	.00503	.00868	.00402
#2	.00065	.06391	.00166	.03708	-.00333	-.08725	.00454	.00982	.00179
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3832.1**	**46914.**	**3292.2**
Stddev	5.9	138.	3.3
%RSD	.15482	.29336	.10067
#1	3836.3	46817.	3294.5
#2	3827.9	47011.	3289.8

Sample Name: 280-116469-F-2-A Acquired: 11/7/2018 15:47:22 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00060**	**.00145**	**.00646**	**.24123**	**.05948**	**-.00019**	**-.00040**	**197.91**	**.00031**
Stddev	.00013	.00059	.00294	.00615	.00008	.00019	.00057	1.11	.00032
%RSD	22.227	40.838	45.462	2.5500	.12704	101.07	141.97	.55881	103.76
#1	.00070	.00187	.00438	.24558	.05942	-.00005	-.00080	198.70	.00054
#2	.00051	.00103	.00853	.23688	.05953	-.00032	.00000	197.13	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00019**	**.00057**	**-.00254**	**7.9859**	**4.4633**	**.01934**	**23.245**	**.74050**	**.00017**
Stddev	.00014	.00037	.00021	.0423	.0113	.00365	.001	.00092	.00022
%RSD	71.270	65.732	8.1201	.52909	.25375	18.859	.00306	.12391	131.61
#1	-.00029	.00030	-.00269	8.0158	4.4553	.01676	23.245	.74115	.00001
#2	-.00010	.00083	-.00240	7.9560	4.4713	.02192	23.244	.73985	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.1957**	**.00158**	**.09589**	**-.00316**	**52.339**	**.00428**	**-.00399**	**10.049**	**21.505**
Stddev	.0173	.00040	.00400	.00075	1.117	.00190	.00374	.057	.121
%RSD	.21050	24.972	4.1752	23.754	2.1335	44.450	93.736	.56283	.56283
#1	8.2079	.00186	.09872	-.00263	53.129	.00293	-.00663	10.089	21.591
#2	8.1835	.00130	.09306	-.00369	51.550	.00562	-.00134	10.009	21.419
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00034**	**1.6598**	**.00418**	**.00097**	**-.00149**	**-.07020**	**.00035**	**.00023**	**.00478**
Stddev	.00075	.0068	.00204	.00033	.00205	.05194	.00014	.00069	.00272
%RSD	222.64	.41191	48.738	33.865	137.83	73.998	39.283	306.90	56.777
#1	.00019	1.6647	.00274	.00074	-.00294	-.03347	.00045	.00072	.00286
#2	-.00086	1.6550	.00562	.00121	-.00004	-.10693	.00026	-.00026	.00670
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3512.5**	**43031.**	**3079.8**
Stddev	7.7	23.	21.1
%RSD	.21893	.05346	.68672
#1	3507.1	43014.	3064.9
#2	3518.0	43047.	3094.8

Sample Name: 280-116538-J-1-A Acquired: 11/7/2018 15:49:54 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00173**	**.06161**	**.00643**	**.17010**	**.10754**	**-.00026**	**-.00226**	**171.22**	**.00076**
Stddev	.00023	.00239	.01148	.00151	.00013	.00053	.00354	.04	.00009
%RSD	13.152	3.8786	178.59	.88652	.12046	204.58	156.59	.02226	12.098
#1	.00157	.05992	.01455	.17117	.10764	-.00064	-.00476	171.19	.00070
#2	.00190	.06330	-.00169	.16904	.10745	.00012	.00024	171.25	.00083
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00204**	**.00038**	**.00058**	**.08988**	**4.6674**	**.02717**	**31.435**	**.19067**	**.00487**
Stddev	.00025	.00027	.00075	.00428	.0321	.00059	.135	.00108	.00039
%RSD	12.195	70.305	128.31	4.7654	.68810	2.1649	.42974	.56631	8.0058
#1	.00187	.00058	.00111	.09291	4.6901	.02759	31.531	.19144	.00515
#2	.00222	.00019	.00005	.08685	4.6447	.02676	31.340	.18991	.00460
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.170**	**.01106**	**.01324**	**-.00326**	**77.475**	**.01535**	**-.00834**	**9.3166**	**19.938**
Stddev	.738	.00053	.00104	.00099	1.274	.00309	.00667	.0007	.002
%RSD	2.9313	4.8100	7.8887	30.404	1.6438	20.112	79.937	.00783	.00783
#1	25.692	.01144	.01398	-.00395	78.376	.01753	-.00363	9.3161	19.936
#2	24.649	.01069	.01250	-.00256	76.575	.01317	-.01305	9.3171	19.939
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00052**	**.91538**	**.00316**	**.00154**	**.00048**	**-.04560**	**.00108**	**.00201**	**.00386**
Stddev	.00079	.00051	.00074	.00025	.00432	.00713	.00001	.00060	.00392
%RSD	150.07	.05552	23.508	16.477	896.52	15.627	1.0582	29.670	101.48
#1	-.00108	.91574	.00264	.00136	-.00257	-.04056	.00108	.00159	.00663
#2	.00003	.91502	.00369	.00172	.00353	-.05064	.00107	.00244	.00109
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3639.4**	**44183.**	**3129.5**
Stddev	10.1	118.	3.9
%RSD	.27841	.26601	.12606
#1	3646.6	44100.	3132.3
#2	3632.3	44266.	3126.7

Sample Name: 280-116538-J-2-A Acquired: 11/7/2018 15:52:27 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00172**	**.32898**	**.01302**	**.10821**	**.04388**	**-.00027**	**.00091**	**119.40**	**.00043**
Stddev	.00092	.01100	.00473	.00313	.00021	.00013	.00129	.39	.00013
%RSD	53.457	3.3444	36.306	2.8954	.47671	47.709	140.69	.32918	29.027
#1	.00107	.33676	.01637	.11043	.04403	-.00037	.00182	119.67	.00052
#2	.00237	.32120	.00968	.10600	.04373	-.00018	.00000	119.12	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00634**	**.00117**	**-.00022**	**.61188**	**5.5821**	**.05515**	**49.778**	**.23450**	**.00211**
Stddev	.00075	.00045	.00066	.00466	.0165	.00522	.135	.00040	.00000
%RSD	11.754	38.566	304.56	.76102	.29567	9.4669	.27093	.17250	.06127
#1	.00687	.00085	-.00068	.60859	5.5937	.05146	49.874	.23479	.00211
#2	.00582	.00149	.00025	.61518	5.5704	.05884	49.683	.23422	.00211
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.855**	**.01451**	**.00629**	**-.00292**	**63.930**	**.00209**	**-.00268**	**7.2839**	**15.587**
Stddev	.805	.00021	.00225	.00055	1.273	.00327	.00595	.0011	.002
%RSD	2.9977	1.4138	35.752	18.786	1.9911	156.40	222.13	.01543	.01543
#1	27.424	.01465	.00788	-.00331	64.831	.00440	-.00689	7.2831	15.586
#2	26.285	.01436	.00470	-.00253	63.030	-.00022	.00153	7.2847	15.589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00030**	**.42085**	**.00117**	**.00573**	**.00062**	**-.09748**	**.00096**	**.00344**	**.00114**
Stddev	.00132	.00055	.00116	.00036	.00155	.00585	.00102	.00004	.00221
%RSD	440.35	.13131	99.499	6.3602	249.99	6.0046	105.68	1.2207	193.61
#1	-.00123	.42124	.00199	.00598	-.00048	-.10162	.00168	.00341	-.00042
#2	.00063	.42046	.00035	.00547	.00172	-.09334	.00024	.00347	.00271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3685.7**	**44694.**	**3176.2**
Stddev	6.3	119.	3.4
%RSD	.17063	.26659	.10654
#1	3690.1	44610.	3173.8
#2	3681.2	44779.	3178.6

Sample Name: 280-116511-A-1-A Acquired: 11/7/2018 15:55:00 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00152**	**.00238**	**.00803**	**.00076**	**.00502**	**-.00032**	**-.00353**	**26.978**	**.00025**
Stddev	.00040	.00039	.00300	.00054	.00076	.00010	.00464	.216	.00008
%RSD	26.381	16.260	37.339	70.782	15.091	32.570	131.14	.80197	33.782
#1	.00181	.00211	.00591	.00115	.00555	-.00024	-.00681	26.825	.00030
#2	.00124	.00265	.01014	.00038	.00448	-.00039	-.00026	27.131	.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00051**	**.00072**	**.00076**	**.03177**	**3.4452**	**.00317**	**3.0906**	**.00065**	**-.00075**
Stddev	.00034	.00035	.00002	.00145	.0377	.00145	.0093	.00011	.00016
%RSD	66.418	49.041	2.2649	4.5612	1.0941	45.613	.30205	16.879	21.552
#1	-.00074	.00047	.00077	.03074	3.4719	.00215	3.0972	.00073	-.00087
#2	-.00027	.00097	.00074	.03279	3.4186	.00419	3.0840	.00058	-.00064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.1209**	**.00067**	**-.00218**	**-.00532**	**4.8271**	**-.00272**	**-.00207**	**6.2186**	**13.308**
Stddev	.0254	.00010	.00283	.00073	.1009	.00139	.00073	.0837	.179
%RSD	1.1952	14.298	129.85	13.686	2.0895	51.118	35.311	1.3461	1.3461
#1	2.1030	.00061	-.00418	-.00584	4.8985	-.00173	-.00155	6.2778	13.435
#2	2.1388	.00074	-.00018	-.00481	4.7558	-.00370	-.00259	6.1594	13.181
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00115**	**.09752**	**.00407**	**-.00012**	**-.00193**	**-.08642**	**.00058**	**-.00002**	**.00428**
Stddev	.00034	.00106	.00068	.00058	.00043	.07763	.00023	.00021	.00499
%RSD	29.913	1.0909	16.566	470.69	22.197	89.827	39.801	870.80	116.57
#1	-.00090	.09677	.00360	-.00053	-.00163	-.14132	.00074	.00012	.00781
#2	-.00139	.09828	.00455	.00029	-.00223	-.03153	.00041	-.00017	.00075
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3812.0**	**46880.**	**3271.8**
Stddev	10.5	164.	15.3
%RSD	.27491	.35009	.46803
#1	3804.6	46996.	3261.0
#2	3819.4	46764.	3282.7

Sample Name: 280-116511-A-2-A Acquired: 11/7/2018 15:57:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00138**	**.00480**	**.00183**	**.00077**	**.01078**	**-.00035**	**.00122**	**50.461**	**.00013**
Stddev	.00005	.00005	.00254	.00005	.00022	.00026	.00015	.426	.00016
%RSD	3.4841	1.1089	139.40	6.6693	2.0839	73.354	12.608	.84331	124.79
#1	.00141	.00476	.00362	.00081	.01062	-.00017	.00111	50.762	.00025
#2	.00134	.00483	.00003	.00073	.01094	-.00053	.00133	50.160	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00043**	**.00437**	**.02687**	**4.5926**	**.00457**	**6.0213**	**.11714**	**.00037**
Stddev	.00008	.00011	.00011	.00450	.0680	.00109	.0228	.00033	.00020
%RSD	96.556	26.328	2.6078	16.744	1.4805	23.795	.37808	.27998	53.566
#1	.00003	.00035	.00445	.03006	4.6407	.00380	6.0374	.11737	.00051
#2	.00015	.00051	.00429	.02369	4.5445	.00534	6.0052	.11691	.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.2893**	**.00110**	**.00804**	**-.00364**	**17.335**	**-.00159**	**-.00904**	**4.9990**	**10.698**
Stddev	.0290	.00002	.00057	.00104	.449	.00133	.00472	.0335	.072
%RSD	.67543	1.4607	7.1086	28.500	2.5903	83.594	52.238	.67058	.67058
#1	4.3098	.00109	.00763	-.00291	17.652	-.00254	-.00570	4.9753	10.647
#2	4.2688	.00111	.00844	-.00438	17.017	-.00065	-.01238	5.0227	10.749
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00173**	**.21776**	**.00364**	**.00030**	**-.00107**	**-.08157**	**.00081**	**.00940**	**.00205**
Stddev	.00141	.00197	.00136	.00076	.00316	.00536	.00075	.00072	.00128
%RSD	81.939	.90529	37.377	252.93	295.95	6.5684	92.063	7.6371	62.341
#1	-.00273	.21915	.00268	-.00024	-.00330	-.08536	.00134	.00890	.00296
#2	-.00073	.21637	.00460	.00084	.00117	-.07778	.00028	.00991	.00115
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3751.8**	**46117.**	**3271.2**
Stddev	8.7	105.	13.5
%RSD	.23056	.22783	.41209
#1	3757.9	46042.	3261.7
#2	3745.6	46191.	3280.8

Sample Name: 280-116511-A-3-A Acquired: 11/7/2018 16:00:07 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00077**	**.01060**	**.00052**	**.00084**	**.01002**	**-.00039**	**.00475**	**29.691**	**.00016**
Stddev	.00035	.00045	.00512	.00011	.00039	.00010	.00403	.293	.00011
%RSD	44.537	4.2553	979.15	13.027	3.8894	26.347	84.877	.98732	68.832
#1	.00102	.01028	-.00310	.00076	.00975	-.00047	.00760	29.898	.00024
#2	.00053	.01092	.00414	.00091	.01030	-.00032	.00190	29.483	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00053**	**.00568**	**.12713**	**3.4047**	**.00131**	**3.7774**	**.00143**	**-.00021**
Stddev	.00054	.00050	.00070	.00101	.1328	.00347	.0051	.00007	.00036
%RSD	4506.6	94.120	12.286	.79719	3.9014	265.68	.13394	5.1925	166.67
#1	.00039	.00018	.00618	.12641	3.4986	-.00115	3.7810	.00137	.00004
#2	-.00037	.00089	.00519	.12784	3.3108	.00376	3.7738	.00148	-.00047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.3495**	**.00098**	**-.00003**	**-.00138**	**6.4348**	**-.00006**	**-.00427**	**4.8135**	**10.301**
Stddev	.0290	.00057	.00251	.00164	.1522	.00038	.00856	.0753	.161
%RSD	.86581	58.293	8204.1	118.80	2.3652	658.87	200.55	1.5635	1.5635
#1	3.3700	.00058	.00175	-.00255	6.5425	.00021	.00178	4.8667	10.415
#2	3.3290	.00138	-.00181	-.00022	6.3272	-.00033	-.01032	4.7602	10.187
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00151**	**.46061**	**.00481**	**.00090**	**-.00146**	**-.06982**	**.00068**	**.00154**	**.00091**
Stddev	.00012	.00521	.00224	.00104	.00002	.02130	.00006	.00021	.00247
%RSD	8.1237	1.1322	46.509	115.73	1.0858	30.501	9.0808	13.686	270.87
#1	-.00143	.46429	.00639	.00016	-.00144	-.08488	.00064	.00139	-.00084
#2	-.00160	.45692	.00323	.00164	-.00147	-.05476	.00073	.00169	.00266
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3761.3**	**46393.**	**3285.6**
Stddev	9.6	205.	17.5
%RSD	.25493	.44141	.53337
#1	3754.5	46538.	3273.2
#2	3768.1	46249.	3298.0

Sample Name: CCVH-5408055 Acquired: 11/7/2018 16:02:41 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00324**	**51.495**	**-.00443**	**-.00047**	**.00058**	**-.00077**	**1.0402**	**.07263**	**-.00012**	**.00121**	**.00085**	**-.00173**	**50.040**
Stddev	.00039	.048	.00264	.00062	.00041	.00029	.0267	.00663	.00040	.00025	.00031	.00035	.142
%RSD	12.082	.09346	59.555	133.15	70.149	36.852	2.5657	9.1233	344.15	20.967	36.504	19.946	.28313
#1	-.00297	51.529	-.00629	-.00003	.00087	-.00098	1.0591	.07731	.00017	.00103	.00107	-.00198	49.939
#2	-.00352	51.461	-.00256	-.00091	.00029	-.00057	1.0214	.06794	-.00040	.00139	.00063	-.00149	50.140
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04799**	**.00196**	**-.07955**	**.00236**	**-.00130**	**254.60**	**.00383**	**.00129**	**-.00213**	**5.0624**	**.00650**	**.00774**	**.00596**
Stddev	.09007	.00006	.00582	.00008	.00035	1.19	.00055	.00046	.00014	.1049	.00107	.00028	.00850
%RSD	187.68	2.9565	7.3179	3.3622	26.979	.46749	14.457	36.017	6.3769	2.0720	16.512	3.6679	142.68
#1	-.01570	.00192	-.08366	.00230	-.00155	253.76	.00344	.00096	-.00223	5.1366	.00574	.00754	.01197
#2	.11167	.00200	-.07543	.00241	-.00105	255.44	.00422	.00161	-.00203	4.9883	.00726	.00794	-.00005
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01275**	**-.00073**	**.00042**	**4.7815**	**.01808**	**-.00089**	**10.321**	**-.01010**	**.00062**	**.07915**
Stddev	.01819	.00146	.00006	.0003	.00025	.00051	.082	.00001	.00028	.00286
%RSD	142.68	199.10	14.049	.00515	1.3815	57.524	.79809	.14049	44.891	3.6112
#1	.02561	.00030	.00038	4.7817	.01791	-.00053	10.379	-.01011	.00042	.07713
#2	-.00011	-.00176	.00046	4.7813	.01826	-.00126	10.263	-.01009	.00082	.08117
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3679.6**	**44444.**	**3173.3**
Stddev	10.9	145.	25.5
%RSD	.29511	.32728	.80500
#1	3671.9	44342.	3191.4
#2	3687.3	44547.	3155.2

Sample Name: CCV-5407546 Acquired: 11/7/2018 16:05:12 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49857**	**.53622**	**1.0224**	**.49379**	**.52026**	**.51849**	**.00040**	**5.0564**	**.49236**	**.50090**	**.50641**	**.50992**	**2.4093**
Stddev	.00220	.01882	.0150	.00653	.00275	.00302	.00601	.0125	.00629	.00665	.00729	.00143	.0069
%RSD	.44093	3.5100	1.4651	1.3216	.52817	.58335	1522.2	.24783	1.2766	1.3267	1.4387	.28001	.28515
#1	.50012	.54953	1.0330	.49841	.51832	.51635	-.00386	5.0475	.49680	.50560	.51156	.51093	2.4044
#2	.49701	.52291	1.0118	.48918	.52220	.52063	.00465	5.0652	.48792	.49620	.50126	.50891	2.4141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.265**	**1.0615**	**19.621**	**.48405**	**.49893**	**5.1811**	**.50147**	**.98266**	**1.0115**	**.01213**	**.98013**	**1.0390**	**4.8542**
Stddev	.182	.0010	.073	.00076	.00992	.0114	.00562	.01281	.0130	.00250	.01503	.0088	.0148
%RSD	.35568	.09178	.37240	.15631	1.9875	.21903	1.1208	1.3031	1.2867	20.635	1.5330	.84626	.30569
#1	51.136	1.0608	19.673	.48458	.50594	5.1731	.50544	.99172	1.0208	.01036	.99076	1.0452	4.8437
#2	51.394	1.0621	19.569	.48351	.49192	5.1891	.49750	.97361	1.0023	.01390	.96951	1.0328	4.8647
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.388**	**1.0068**	**.52101**	**.01101**	**.47682**	**1.0259**	**-.02172**	**.49042**	**.47482**	**.50034**
Stddev	.032	.0155	.00131	.00151	.00155	.0090	.07316	.00008	.00191	.00279
%RSD	.30569	1.5358	.25163	13.765	.32439	.88051	336.82	.01563	.40151	.55815
#1	10.366	1.0177	.52009	.00993	.47791	1.0323	-.07345	.49037	.47617	.50231
#2	10.410	.99586	.52194	.01208	.47573	1.0195	.03001	.49047	.47348	.49836
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3734.8**	**45531.**	**3198.8**
Stddev	6.7	96.	5.6
%RSD	.18031	.21020	.17659
#1	3739.6	45598.	3202.8
#2	3730.0	45463.	3194.8

Sample Name: CCB Acquired: 11/7/2018 16:07:35 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00190**	**.00920**	**-.00052**	**-.00040**	**.00047**	**-.00027**	**-.00251**	**.00784**	**.00027**	**-.00005**	**.00005**	**-.00255**	**.00218**
Stddev	.00024	.01004	.00053	.00007	.00022	.00003	.00168	.00264	.00001	.00059	.00014	.00033	.00125
%RSD	12.514	109.15	101.86	17.202	47.535	12.303	67.011	33.619	2.7133	1097.5	296.62	12.958	57.653
#1	.00173	.01629	-.00090	-.00035	.00031	-.00024	-.00369	.00598	.00028	-.00047	-.00005	-.00231	.00306
#2	.00207	.00210	-.00015	-.00045	.00063	-.00029	-.00132	.00970	.00027	.00036	.00015	-.00278	.00129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10705**	**-.00062**	**-.00593**	**-.00001**	**.00038**	**-.00541**	**.00063**	**.00051**	**-.00079**	**.00268**	**-.00359**	**.00212**	**-.05347**
Stddev	.03662	.00392	.00028	.00012	.00033	.00554	.00091	.00102	.00237	.00098	.00286	.00441	.04607
%RSD	34.213	637.55	4.7452	1010.4	84.764	102.51	144.31	199.23	300.56	36.538	79.692	208.08	86.160
#1	.13295	.00216	-.00613	.00007	.00015	-.00932	.00128	.00124	.00089	.00199	-.00561	.00524	-.02089
#2	.08115	-.00339	-.00573	-.00010	.00062	-.00149	-.00001	-.00021	-.00247	.00337	-.00157	-.00100	-.08605
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.11443**	**-.00070**	**-.00008**	**.00517**	**.00057**	**.00071**	**-.09549**	**.00016**	**-.00126**	**.00394**
Stddev	.09859	.00090	.00010	.00126	.00005	.00053	.03917	.00072	.00073	.00158
%RSD	86.160	127.18	126.76	24.389	8.3284	74.430	41.024	454.19	58.481	40.227
#1	-.04471	-.00007	-.00015	.00428	.00054	.00109	-.12319	-.00035	-.00074	.00282
#2	-.18414	-.00134	-.00001	.00606	.00060	.00034	-.06779	.00067	-.00177	.00506
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3703.5**	**45880.**	**3186.8**
Stddev	10.3	133.	6.6
%RSD	.27857	.29015	.20799
#1	3710.8	45974.	3191.5
#2	3696.2	45786.	3182.1

Sample Name: CCVL-5415520 Acquired: 11/7/2018 16:10:11 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01109**	**.10919**	**.01181**	**.09721**	**.01136**	F **.00049**	**.11745**	**.21432**	**.00531**	**.01017**	**.01047**	**.01263**
Stddev	.00074	.00225	.00671	.00189	.00003	.00009	.00195	.00017	.00008	.00010	.00021	.00075
%RSD	6.6820	2.0590	56.801	1.9424	.25700	18.221	1.6579	.07986	1.5195	1.0158	2.0129	5.9200
#1	.01056	.11078	.00707	.09854	.01138	.00055	.11607	.21420	.00536	.01024	.01062	.01210
#2	.01161	.10760	.01655	.09587	.01134	.00042	.11883	.21444	.00525	.01010	.01032	.01316
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						.00100						
Range						-30.000%						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10134**	**3.2261**	**.02327**	**.20355**	**.01003**	**.01938**	**1.0684**	**.04189**	**2.8490**	**.00907**	**.09581**	**.02080**
Stddev	.00911	.0822	.00108	.00170	.00001	.00061	.0266	.00035	.0538	.00078	.00403	.00083
%RSD	8.9871	2.5479	4.6231	.83684	.06044	3.1258	2.4865	.83165	1.8891	8.6089	4.2030	3.9980
#1	.09490	3.2842	.02403	.20234	.01004	.01980	1.0496	.04164	2.8870	.00963	.09866	.02139
#2	.10777	3.1679	.02251	.20475	.01003	.01895	1.0872	.04214	2.8109	.00852	.09296	.02021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.02749**	**.48537**	**1.0387**	**.10082**	**.01057**	**.01556**	**.00975**	**.01421**	**.04805**	**.01017**	**.01975**	F **.02076**
Stddev	.00166	.01608	.0344	.00147	.00024	.00112	.00010	.00250	.05482	.00044	.00079	.00011
%RSD	6.0430	3.3135	3.3135	1.4581	2.2303	7.2176	.99690	17.612	114.07	4.3511	3.9862	.51624
#1	.02867	.47400	1.0144	.10186	.01040	.01635	.00968	.01598	.08681	.01049	.01920	.02069
#2	.02632	.49675	1.0630	.09978	.01073	.01476	.00982	.01244	.00929	.00986	.02031	.02084
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value	.02000											.01500
Range	30.000%											30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3746.0**	**46327.**	**3208.2**
Stddev	1.2	121.	24.3
%RSD	.03231	.26053	.75755
#1	3746.9	46412.	3225.4
#2	3745.1	46241.	3191.0

Sample Name: 280-116489-A-4-A Acquired: 11/7/2018 16:12:45 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00129**	**2.2190**	**-.00238**	**.01461**	**.06357**	**-.00013**	**.00323**	**5.1207**	**-.00002**
Stddev	.00037	.0328	.00013	.00074	.00013	.00041	.00465	.0094	.00003
%RSD	28.753	1.4800	5.4253	5.0512	.20094	311.49	144.17	.18387	108.72
#1	.00103	2.2422	-.00229	.01513	.06366	.00016	-.00006	5.1273	-.00004
#2	.00156	2.1958	-.00247	.01408	.06348	-.00042	.00652	5.1140	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00025**	**.00296**	**.00024**	**1.4558**	**2.3847**	**-.00081**	**1.2980**	**.02887**	**-.00013**
Stddev	.00022	.00016	.00030	.0049	.1499	.00043	.0001	.00001	.00065
%RSD	87.666	5.5434	125.46	.33569	6.2872	52.777	.01019	.03070	508.06
#1	.00041	.00285	.00045	1.4593	2.2787	-.00111	1.2981	.02887	.00033
#2	.00010	.00308	.00003	1.4524	2.4908	-.00051	1.2979	.02886	-.00059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.6319**	**.00326**	**.05132**	**-.00148**	**1.1720**	**-.00151**	**-.00133**	**6.6257**	**14.179**
Stddev	.0079	.00063	.00315	.00224	.0061	.00148	.00039	.0528	.113
%RSD	.30039	19.216	6.1284	151.04	.52392	97.949	29.460	.79641	.79641
#1	2.6263	.00371	.05355	.00010	1.1764	-.00046	-.00161	6.6630	14.259
#2	2.6375	.00282	.04910	-.00306	1.1677	-.00256	-.00105	6.5884	14.099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00153**	**.06333**	**.00376**	**.04056**	**-.00011**	**-.06704**	**.00431**	**.00827**	**.00356**
Stddev	.00025	.00020	.00147	.00368	.00215	.02680	.00024	.00010	.00133
%RSD	16.057	.31434	39.130	9.0753	1898.5	39.969	5.5630	1.2200	37.421
#1	-.00135	.06347	.00480	.04316	.00141	-.08599	.00448	.00834	.00450
#2	-.00170	.06319	.00272	.03795	-.00163	-.04809	.00414	.00820	.00262
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3807.2**	**46703.**	**3230.4**
Stddev	8.1	97.	9.4
%RSD	.21306	.20813	.29239
#1	3801.5	46772.	3223.8
#2	3812.9	46635.	3237.1

Sample Name: 280-116489-A-4-B MS Acquired: 11/7/2018 16:15:18 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04407**	**5.9413**	**1.0253**	**1.0345**	**2.1710**	**.05275**	W **2.0683**	**55.975**	**.09483**
Stddev	.00061	.0110	.0170	.0148	.0002	.00027	.0382	.163	.00185
%RSD	1.3922	.18590	1.6546	1.4308	.00937	.51151	1.8477	.29203	1.9522
#1	.04450	5.9491	1.0373	1.0449	2.1708	.05294	2.0953	56.091	.09614
#2	.04363	5.9335	1.0133	1.0240	2.1711	.05256	2.0413	55.860	.09352
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50090**	**.20814**	**.25863**	**2.7427**	**54.618**	**1.0618**	**50.737**	**.52026**	**1.0368**
Stddev	.00802	.00389	.00163	.0131	.101	.0019	.168	.00124	.0192
%RSD	1.6004	1.8678	.62987	.47628	.18461	.18281	.33154	.23897	1.8494
#1	.50657	.21088	.25978	2.7335	54.547	1.0604	50.856	.52113	1.0504
#2	.49523	.20539	.25748	2.7520	54.690	1.0632	50.618	.51938	1.0233
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**55.483**	**.50042**	**10.267**	**.50009**	**3.2706**	**.49781**	**2.0958**	**18.662**	**39.936**
Stddev	.258	.00855	.158	.00808	.0465	.00245	.0262	.007	.016
%RSD	.46427	1.7090	1.5354	1.6157	1.4219	.49205	1.2512	.03986	.03986
#1	55.300	.50647	10.378	.50580	3.3035	.49954	2.1143	18.657	39.925
#2	55.665	.49437	10.155	.49438	3.2377	.49608	2.0772	18.667	39.948
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0423**	**1.1298**	**.99439**	**1.0278**	**2.0330**	**2.0537**	**.51851**	**.49949**	**.53446**
Stddev	.0316	.0025	.00037	.0032	.0285	.0595	.00025	.00099	.00238
%RSD	1.5456	.21952	.03690	.31498	1.3995	2.8947	.04801	.19778	.44451
#1	2.0646	1.1316	.99465	1.0301	2.0531	2.0957	.51869	.50019	.53614
#2	2.0200	1.1281	.99413	1.0255	2.0128	2.0116	.51833	.49879	.53278
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3667.2**	**44331.**	**3209.5**
Stddev	.6	234.	7.1
%RSD	.01656	.52702	.22045
#1	3667.6	44166.	3204.5
#2	3666.7	44496.	3214.5

Sample Name: 280-116489-A-4-C MSD Acquired: 11/7/2018 16:17:37 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04452**	**5.8311**	**1.0321**	**1.0399**	**2.1721**	**.05259**	W **2.0774**	**55.924**	**.09519**
Stddev	.00067	.0036	.0179	.0119	.0034	.00030	.0329	.083	.00150
%RSD	1.4998	.06095	1.7355	1.1478	.15781	.56125	1.5844	.14753	1.5799
#1	.04405	5.8286	1.0448	1.0483	2.1745	.05238	2.1006	55.982	.09625
#2	.04500	5.8336	1.0194	1.0314	2.1696	.05280	2.0541	55.866	.09413
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50101**	**.20891**	**.26005**	**2.7185**	**54.783**	**1.0574**	**50.979**	**.52226**	**1.0449**
Stddev	.00628	.00254	.00195	.0105	.038	.0034	.193	.00168	.0146
%RSD	1.2536	1.2156	.74992	.38609	.06951	.31901	.37884	.32207	1.3941
#1	.50545	.21070	.26143	2.7259	54.756	1.0597	51.116	.52345	1.0552
#2	.49657	.20711	.25867	2.7110	54.810	1.0550	50.843	.52107	1.0346
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.820**	**.49890**	**10.278**	**.50505**	**3.2762**	**.50400**	**2.0996**	**18.936**	**40.524**
Stddev	.136	.00779	.117	.00489	.0294	.00505	.0111	.046	.098
%RSD	.24771	1.5612	1.1342	.96791	.89837	1.0024	.53018	.24229	.24229
#1	54.916	.50441	10.360	.50850	3.2970	.50758	2.1075	18.969	40.593
#2	54.724	.49339	10.195	.50159	3.2554	.50043	2.0918	18.904	40.454
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0573**	**1.1293**	**.99957**	**1.0338**	**2.0334**	**2.0464**	**.52180**	**.50087**	**.53194**
Stddev	.0309	.0010	.00737	.0033	.0316	.0199	.00239	.00481	.00403
%RSD	1.5001	.08607	.73747	.32066	1.5541	.97124	.45739	.96009	.75850
#1	2.0791	1.1300	1.0048	1.0362	2.0557	2.0323	.52349	.50427	.53479
#2	2.0355	1.1286	.99436	1.0315	2.0110	2.0605	.52012	.49747	.52908
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3671.9**	**44346.**	**3201.6**
Stddev	10.5	81.	12.9
%RSD	.28640	.18166	.40244
#1	3664.5	44289.	3192.5
#2	3679.3	44403.	3210.7

Sample Name: 280-116469-F-3-A Acquired: 11/7/2018 16:19:56 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00151**	**.00448**	**.00306**	**.23833**	**.05843**	**-.00013**	**.00135**	**195.58**	**.00015**
Stddev	.00120	.00102	.00674	.00974	.00051	.00015	.00879	.80	.00005
%RSD	79.701	22.849	220.15	4.0854	.87961	121.78	651.95	.41143	30.989
#1	.00066	.00376	-.00170	.24521	.05807	-.00002	.00756	195.01	.00019
#2	.00236	.00520	.00783	.23144	.05880	-.00023	-.00487	196.15	.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00044**	**.00037**	**-.00116**	**7.7427**	**4.6187**	**.01596**	**22.757**	**.70765**	**.00231**
Stddev	.00075	.00011	.00055	.0451	.0268	.00048	.125	.00391	.00052
%RSD	167.78	28.406	47.719	.58219	.58015	3.0330	.55020	.55314	22.496
#1	-.00097	.00045	-.00155	7.7108	4.5997	.01562	22.845	.71042	.00194
#2	.00008	.00030	-.00077	7.7745	4.6376	.01631	22.668	.70488	.00268
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.8149**	**.00147**	**.09026**	**-.00400**	**51.230**	**.00313**	**-.00579**	**9.9193**	**21.227**
Stddev	.0528	.00006	.00120	.00135	1.922	.00179	.00273	.0859	.184
%RSD	.67524	3.9590	1.3286	33.813	3.7519	57.196	47.194	.86630	.86630
#1	7.7776	.00143	.09111	-.00495	52.589	.00186	-.00386	9.8585	21.097
#2	7.8522	.00151	.08942	-.00304	49.871	.00439	-.00772	9.9800	21.357
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00056**	**1.6439**	**.00354**	**.00110**	**-.00129**	**-.05037**	**.00039**	**-.00005**	**.00158**
Stddev	.00077	.0068	.00124	.00016	.00160	.03989	.00037	.00118	.00350
%RSD	136.08	.41210	35.131	14.483	123.58	79.193	95.524	2459.2	221.77
#1	.00110	1.6391	.00266	.00121	-.00016	-.02217	.00065	-.00088	-.00090
#2	.00002	1.6487	.00442	.00099	-.00243	-.07858	.00013	.00079	.00405
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3596.7**	**44251.**	**3194.1**
Stddev	3.8	31.	31.6
%RSD	.10430	.06958	.98977
#1	3594.0	44273.	3216.5
#2	3599.4	44230.	3171.8

Sample Name: 280-116469-F-3-B MS Acquired: 11/7/2018 16:22:28 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04328**	**2.0183**	**1.0403**	**1.2482**	**2.1599**	**.05214**	W **2.0543**	**240.50**	**.09428**
Stddev	.00024	.0431	.0189	.0229	.0047	.00024	.0410	.70	.00220
%RSD	.54308	2.1341	1.8169	1.8325	.21753	.46185	1.9956	.28967	2.3363
#1	.04312	2.0488	1.0536	1.2643	2.1566	.05197	2.0833	240.01	.09584
#2	.04345	1.9879	1.0269	1.2320	2.1633	.05231	2.0253	240.99	.09272
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48517**	**.20193**	**.25229**	**8.5927**	**57.279**	**1.0860**	**70.146**	**1.1680**	**1.0338**
Stddev	.00899	.00377	.00188	.0139	.125	.0046	.234	.0048	.0201
%RSD	1.8532	1.8685	.74366	.16170	.21868	.42660	.33302	.41403	1.9454
#1	.49153	.20460	.25362	8.5829	57.191	1.0827	70.311	1.1714	1.0480
#2	.47881	.19926	.25097	8.6025	57.368	1.0892	69.981	1.1646	1.0196
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**60.564**	**.48290**	**10.390**	**.48542**	**54.209**	**.50359**	**2.0815**	**19.361**	**41.432**
Stddev	.124	.00851	.190	.00924	.947	.01071	.0361	.018	.039
%RSD	.20458	1.7627	1.8255	1.9045	1.7466	2.1259	1.7349	.09402	.09402
#1	60.476	.48891	10.524	.49196	54.878	.51116	2.1070	19.348	41.404
#2	60.651	.47688	10.256	.47888	53.539	.49602	2.0560	19.373	41.459
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0214**	**2.6796**	**.98552**	**.98041**	**1.9580**	**2.0072**	**.50871**	**.47622**	**.53048**
Stddev	.0343	.0133	.00684	.00372	.0368	.0181	.00143	.00093	.00489
%RSD	1.6965	.49551	.69431	.37988	1.8791	.90355	.28171	.19587	.92209
#1	2.0457	2.6702	.99036	.98305	1.9841	2.0200	.50973	.47688	.52702
#2	1.9972	2.6890	.98068	.97778	1.9320	1.9944	.50770	.47556	.53394
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3587.1**	**43105.**	**3147.2**
Stddev	18.4	234.	3.5
%RSD	.51401	.54226	.11139
#1	3574.1	42939.	3144.7
#2	3600.2	43270.	3149.7

Sample Name: 280-116469-F-3-C MSD Acquired: 11/7/2018 16:24:48 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436445 6010C Q5 (Al Fe)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04343**	**2.0130**	**1.0295**	**1.2447**	**2.1000**	**.05084**	W **2.0408**	**232.98**	**.09414**
Stddev	.00052	.0127	.0046	.0083	.0030	.00014	.0190	.29	.00111
%RSD	1.1919	.62896	.44670	.66895	.14084	.27195	.93098	.12278	1.1799
#1	.04306	2.0220	1.0328	1.2506	2.1021	.05093	2.0542	233.18	.09492
#2	.04379	2.0041	1.0263	1.2388	2.0979	.05074	2.0274	232.78	.09335
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48394**	**.20095**	**.24879**	**8.2433**	**55.855**	**1.0512**	**68.964**	**1.1451**	**1.0377**
Stddev	.00352	.00165	.00079	.0157	.075	.0024	.074	.0025	.0095
%RSD	.72648	.82324	.31803	.19086	.13441	.23210	.10783	.21513	.91269
#1	.48643	.20212	.24935	8.2322	55.908	1.0529	69.017	1.1468	1.0444
#2	.48145	.19978	.24823	8.2544	55.802	1.0495	68.912	1.1434	1.0310
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**58.303**	**.48163**	**10.353**	**.48947**	**53.107**	**.50118**	**2.0745**	**18.850**	**40.339**
Stddev	.245	.00252	.086	.00510	.375	.00637	.0171	.012	.026
%RSD	.42070	.52244	.82873	1.0411	.70560	1.2713	.82529	.06411	.06411
#1	58.130	.48341	10.414	.49307	53.372	.50568	2.0866	18.858	40.357
#2	58.477	.47985	10.293	.48587	52.842	.49667	2.0624	18.841	40.320
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0284**	**2.5928**	**.97165**	**.97683**	**1.9487**	**1.9898**	**.50121**	**.47052**	**.52225**
Stddev	.0124	.0028	.00145	.00093	.0066	.0198	.00112	.00042	.00231
%RSD	.60885	.10756	.14911	.09504	.33960	.99558	.22262	.08875	.44228
#1	2.0371	2.5948	.97063	.97749	1.9534	2.0038	.50042	.47081	.52388
#2	2.0196	2.5908	.97267	.97617	1.9440	1.9758	.50200	.47022	.52061
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3572.0**	**43691.**	**3211.4**
Stddev	18.7	53.	4.2
%RSD	.52287	.12171	.12964
#1	3585.2	43729.	3208.5
#2	3558.8	43654.	3214.4

Sample Name: MB 280-436148/1-A Acquired: 11/7/2018 16:27:07 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/5 Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00178**	**.00102**	**-.00100**	**.00325**	**.00116**	**-.00024**	**.00057**	**.02757**	**-.00010**
Stddev	.00118	.00025	.00436	.00057	.00037	.00041	.00399	.00224	.00039
%RSD	66.343	24.703	434.67	17.681	32.137	174.31	701.49	8.1382	404.36
#1	.00262	.00120	-.00408	.00284	.00090	-.00053	.00339	.02916	.00018
#2	.00095	.00084	.00208	.00365	.00143	.00006	-.00225	.02598	-.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.00015**	**-.00222**	**.00312**	**.08880**	**-.00111**	W **.18308**	**.00246**	**.00207**
Stddev	.00011	.00016	.00071	.00107	.01964	.00132	.24719	.00339	.00078
%RSD	53.852	105.10	32.161	34.320	22.111	118.25	135.02	137.59	37.829
#1	-.00029	.00004	-.00172	.00387	.10269	-.00205	.35787	.00486	.00151
#2	-.00013	.00026	-.00273	.00236	.07492	-.00018	.00829	.00007	.00262
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							.10000		
Low Limit							-.10000		

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01088**	**.00033**	**.00006**	**-.00116**	**.01540**	**-.00005**	**-.00010**	**.00725**	**.01551**
Stddev	.00097	.00018	.00014	.00050	.00421	.00000	.00419	.04801	.10275
%RSD	8.8865	53.962	236.89	43.366	27.347	8.6385	4176.9	662.57	662.57
#1	.01156	.00046	-.00004	-.00080	.01838	-.00005	-.00306	.04120	.08816
#2	.01019	.00021	.00016	-.00151	.01242	-.00004	.00286	-.02670	-.05715
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00075**	**.00012**	W **.00994**	**.00332**	**-.00075**	**-.03316**	**.00181**	**.00169**	**-.00108**
Stddev	.00154	.00014	.00348	.00330	.00070	.00727	.00215	.00180	.00102
%RSD	204.09	123.74	35.047	99.311	93.061	21.935	119.09	106.14	93.994
#1	-.00184	.00022	.01241	.00566	-.00124	-.03831	.00333	.00296	-.00036
#2	.00033	.00001	.00748	.00099	-.00026	-.02802	.00029	.00042	-.00180
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			.00500						
Low Limit			-.00500						

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3750.6**	**47131.**	**3242.3**
Stddev	.0	396.	21.8
%RSD	.00132	.83970	.67327
#1	3750.6	47410.	3226.8
#2	3750.5	46851.	3257.7

Sample Name: LCS 280-436148/2-A Acquired: 11/7/2018 16:29:43 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04759**	**2.0076**	**.99632**	**.99510**	**2.0270**	**.05009**	**2.0163**	**48.788**	**.09212**
Stddev	.00013	.0269	.01011	.00852	.0024	.00004	.0173	.135	.00075
%RSD	.28029	1.3388	1.0147	.85638	.12111	.07984	.85997	.27727	.81777
#1	.04768	2.0267	1.0035	1.0011	2.0288	.05012	2.0286	48.884	.09265
#2	.04749	1.9886	.98917	.98907	2.0253	.05006	2.0041	48.693	.09159
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48181**	**.19748**	**.24309**	**.93985**	**50.477**	**1.0256**	**47.496**	**.47364**	**1.0012**
Stddev	.00523	.00238	.00048	.00675	.035	.0046	.182	.00242	.0129
%RSD	1.0846	1.2073	.19661	.71815	.06946	.44616	.38279	.51177	1.2880
#1	.48551	.19916	.24342	.94462	50.501	1.0223	47.625	.47536	1.0103
#2	.47811	.19579	.24275	.93508	50.452	1.0288	47.368	.47193	.99205
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.938**	**.47666**	**9.8985**	**.48848**	**2.0808**	**.48298**	**2.0361**	**9.6900**	**20.737**
Stddev	.799	.00458	.1256	.00388	.1469	.01067	.0158	.0553	.118
%RSD	1.5694	.96059	1.2689	.79452	7.0588	2.2086	.77613	.57115	.57115
#1	50.373	.47990	9.9874	.49122	2.1846	.49052	2.0473	9.6509	20.653
#2	51.504	.47342	9.8097	.48573	1.9769	.47544	2.0249	9.7291	20.820
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9816**	**1.0258**	**.95693**	**.94927**	**1.9775**	**1.9470**	**.49462**	**.47436**	**.51135**
Stddev	.0221	.0026	.00321	.00298	.0225	.0255	.00111	.00284	.00135
%RSD	1.1127	.25289	.33516	.31364	1.1386	1.3083	.22512	.59928	.26424
#1	1.9972	1.0276	.95920	.95138	1.9935	1.9650	.49541	.47637	.51230
#2	1.9660	1.0240	.95466	.94717	1.9616	1.9290	.49383	.47235	.51039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3659.9**	**44029.**	**3162.9**
Stddev	6.6	362.	.8
%RSD	.17944	.82211	.02617
#1	3664.5	43773.	3162.4
#2	3655.2	44285.	3163.5

Sample Name: CCVH-5408055 Acquired: 11/7/2018 16:32:03 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00238**	**51.497**	**-.00889**	**.00449**	**.00095**	**-.00039**	**1.0505**	**.02743**	**-.00014**	**.00126**	**.00048**	**-.00123**	**49.937**
Stddev	.00045	.029	.00034	.00201	.00054	.00013	.0128	.00951	.00024	.00006	.00024	.00034	.458
%RSD	18.856	.05548	3.8165	44.672	56.986	32.277	1.2193	34.684	168.28	4.5819	49.455	27.483	.91756
#1	-.00269	51.476	-.00913	.00591	.00133	-.00048	1.0596	.03416	.00003	.00122	.00065	-.00099	50.261
#2	-.00206	51.517	-.00865	.00307	.00057	-.00030	1.0415	.02070	-.00031	.00130	.00032	-.00147	49.613
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.14567**	**-.00209**	**-.07777**	**.00238**	**.00088**	**254.68**	**.00355**	**.00285**	**-.00117**	**5.0523**	**.00377**	**.00708**	**-.02251**
Stddev	.03389	.00334	.00240	.00003	.00052	.24	.00020	.00198	.00118	.0774	.00654	.00050	.01069
%RSD	23.268	159.60	3.0898	1.3320	58.899	.09314	5.5645	69.531	101.40	1.5315	173.51	7.1115	47.480
#1	.12170	.00027	-.07947	.00236	.00051	254.84	.00369	.00425	-.00033	5.1070	.00840	.00672	-.03007
#2	.16963	-.00445	-.07607	.00241	.00125	254.51	.00341	.00145	-.00200	4.9976	-.00086	.00743	-.01496
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04818**	**.00136**	**.00067**	**4.7961**	**.01801**	**-.00353**	**10.356**	**-.00962**	**-.00033**	**.08475**
Stddev	.02288	.00106	.00007	.0005	.00044	.00378	.055	.00028	.00126	.00138
%RSD	47.480	77.952	10.592	.01016	2.4563	107.16	.52939	2.8910	375.80	1.6273
#1	-.06435	.00212	.00062	4.7958	.01769	-.00085	10.317	-.00943	.00055	.08573
#2	-.03200	.00061	.00072	4.7965	.01832	-.00620	10.395	-.00982	-.00122	.08378
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3644.4**	**44338.**	**3187.2**
Stddev	4.1	1.	1.3
%RSD	.11218	.00309	.03946
#1	3647.3	44337.	3188.1
#2	3641.5	44339.	3186.3

Sample Name: CCV-5407546 Acquired: 11/7/2018 16:34:34 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49631**	**.52644**	**1.0098**	**.49032**	**.51982**	**.51490**	**.00184**	**5.0040**	**.48457**	**.49628**	**.50304**	**.50406**	**2.3833**
Stddev	.00021	.00943	.0113	.00904	.00108	.00144	.00854	.0135	.00875	.00774	.00983	.00006	.0144
%RSD	.04133	1.7917	1.1165	1.8436	.20707	.27949	462.94	.26998	1.8059	1.5588	1.9548	.01209	.60554
#1	.49616	.53311	1.0178	.49672	.52058	.51388	.00788	4.9944	.49075	.50175	.50999	.50402	2.3935
#2	.49645	.51977	1.0018	.48393	.51906	.51591	-.00419	5.0135	.47838	.49081	.49609	.50411	2.3731
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.287**	**1.0510**	**19.563**	**.48307**	**.49519**	**5.1571**	**.49617**	**.96775**	**.99862**	**.00749**	**.95798**	**1.0120**	**4.8239**
Stddev	.054	.0015	.064	.00029	.00935	.0388	.00875	.02100	.01191	.00233	.01227	.0227	.0136
%RSD	.10452	.13944	.32811	.05945	1.8888	.75268	1.7643	2.1698	1.1922	31.088	1.2804	2.2416	.28126
#1	51.249	1.0520	19.608	.48328	.50181	5.1845	.50236	.98260	1.0070	.00584	.96666	1.0280	4.8143
#2	51.325	1.0499	19.517	.48287	.48858	5.1296	.48998	.95291	.99020	.00914	.94931	.99591	4.8334
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.323**	**.99663**	**.51966**	**.01560**	**.47520**	**1.0119**	**-.07005**	**.48870**	**.47538**	**.49928**
Stddev	.029	.02024	.00021	.00283	.00081	.0168	.02835	.00053	.00327	.00206
%RSD	.28126	2.0309	.04032	18.148	.17081	1.6571	40.477	.10753	.68826	.41204
#1	10.303	1.0109	.51981	.01360	.47578	1.0238	-.09010	.48907	.47307	.49783
#2	10.344	.98231	.51951	.01760	.47463	1.0001	-.05000	.48833	.47769	.50074
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3705.9**	**44792.**	**3152.3**
Stddev	16.4	71.	8.6
%RSD	.44140	.15959	.27188
#1	3694.4	44843.	3146.3
#2	3717.5	44742.	3158.4

Sample Name: CCB Acquired: 11/7/2018 16:36:56 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00172**	**.00148**	**.00039**	**.00219**	**.00083**	**-.00030**	**.00729**	**.01468**	**.00024**	**.00031**	**.00014**	**-.00234**	**.00433**
Stddev	.00060	.00025	.00060	.00027	.00064	.00018	.00309	.00046	.00018	.00031	.00032	.00064	.00319
%RSD	34.815	16.828	152.52	12.498	77.438	61.078	42.316	3.1661	73.465	100.50	228.94	27.151	73.641
#1	.00215	.00130	.00082	.00200	.00037	-.00017	.00947	.01435	.00037	.00009	.00036	-.00189	.00658
#2	.00130	.00166	-.00003	.00239	.00128	-.00043	.00511	.01500	.00012	.00053	-.00009	-.00279	.00207
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19984**	**.00226**	**.01675**	**.00052**	**.00116**	**.01430**	**.00063**	**.00147**	**-.00138**	**.00505**	**.00142**	**.00006**	**.00964**
Stddev	.02584	.00390	.01263	.00016	.00071	.01330	.00011	.00106	.00059	.00579	.00343	.00350	.00737
%RSD	12.932	172.25	75.364	30.053	61.253	93.025	17.385	72.101	42.740	114.73	241.76	5726.7	76.447
#1	.21811	-.00049	.02568	.00063	.00166	.02370	.00055	.00222	-.00180	.00915	-.00101	-.00241	.01486
#2	.18157	.00502	.00783	.00041	.00066	.00489	.00071	.00072	-.00096	.00095	.00384	.00254	.00443
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit													
Low Limit													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02064**	**-.00133**	**.00007**	**.00605**	**.00087**	**-.00257**	**-.04070**	**.00078**	**-.00038**	**.00206**
Stddev	.01578	.00124	.00022	.00198	.00013	.00226	.04072	.00007	.00067	.00048
%RSD	76.447	93.428	325.70	32.704	14.612	87.988	100.05	8.9264	174.53	23.218
#1	.03179	-.00045	.00022	.00745	.00078	-.00097	-.06949	.00073	.00009	.00240
#2	.00948	-.00220	-.00009	.00465	.00096	-.00417	-.01190	.00082	-.00085	.00173
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit										
Low Limit										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3741.9**	**46331.**	**3186.6**
Stddev	.6	80.	2.9
%RSD	.01624	.17196	.09221
#1	3741.5	46275.	3188.7
#2	3742.3	46388.	3184.6

Sample Name: CCVL-5415520 Acquired: 11/7/2018 16:39:32 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01142**	**.11116**	**.01718**	**.09674**	**.01127**	**.00083**	**.11811**	**.20690**	**.00513**	**.00997**	**.01023**	**.01275**
Stddev	.00030	.00264	.00081	.00314	.00014	.00000	.00620	.00513	.00036	.00009	.00036	.00108
%RSD	2.6227	2.3725	4.7062	3.2445	1.2461	.32931	5.2504	2.4817	7.0534	.86712	3.5032	8.4845
#1	.01163	.11303	.01661	.09896	.01137	.00083	.12250	.21053	.00538	.01003	.01048	.01199
#2	.01120	.10930	.01775	.09452	.01117	.00083	.11373	.20327	.00487	.00990	.00998	.01352
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09772**	**3.1274**	**.02071**	**.20597**	**.01008**	**.01945**	**1.0325**	**.04183**	**2.8453**	**.00778**	**.09875**	**.01872**
Stddev	.00212	.0103	.00260	.00350	.00005	.00032	.0025	.00079	.0508	.00113	.00450	.00075
%RSD	2.1662	.33039	12.546	1.7009	.47971	1.6356	.24030	1.8916	1.7852	14.527	4.5557	4.0050
#1	.09922	3.1347	.02255	.20845	.01004	.01967	1.0343	.04239	2.8812	.00858	.10193	.01819
#2	.09623	3.1201	.01887	.20349	.01011	.01922	1.0308	.04127	2.8094	.00698	.09557	.01925
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01412**	**.47102**	**1.0080**	**.10069**	**.01065**	**.01801**	**.01015**	**.01577**	F **-.02250**	**.01043**	**.01915**	**.01936**
Stddev	.00876	.04253	.0910	.00126	.00031	.00105	.00056	.00083	.05120	.00046	.00093	.00862
%RSD	62.047	9.0296	9.0296	1.2522	2.8873	5.8448	5.5474	5.2920	227.52	4.3986	4.8422	44.508
#1	.02032	.50110	1.0723	.10158	.01087	.01727	.00975	.01518	-.05870	.01011	.01849	.02546
#2	.00793	.44095	.94363	.09980	.01043	.01875	.01055	.01636	.01370	.01075	.01980	.01327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3826.0**	**47139.**	**3267.0**
Stddev	7.3	226.	22.8
%RSD	.18958	.47910	.69691
#1	3820.9	47299.	3250.9
#2	3831.1	46979.	3283.1

Sample Name: 280-116342-A-3-A Acquired: 11/7/2018 16:42:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00195**	**.00071**	**-.00221**	**.00031**	**.00131**	**-.00035**	**.00299**	**.27526**	**.00000**
Stddev	.00082	.00014	.00471	.00106	.00040	.00000	.00053	.00379	.00030
%RSD	42.045	19.973	212.97	341.45	30.894	1.3981	17.544	1.3756	78300.
#1	.00253	.00061	-.00554	-.00044	.00159	-.00036	.00337	.27259	-.00021
#2	.00137	.00081	.00112	.00106	.00102	-.00035	.00262	.27794	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00001**	**.00029**	**-.00288**	**.00167**	**.20667**	**-.00227**	**-.00085**	**.00017**	**.00003**
Stddev	.00029	.00032	.00060	.00360	.11019	.00211	.00144	.00022	.00014
%RSD	3388.4	108.28	20.660	215.70	53.316	93.012	170.15	129.13	418.10
#1	.00020	.00007	-.00246	-.00088	.28458	-.00376	.00017	.00032	-.00007
#2	-.00022	.00052	-.00330	.00421	.12875	-.00078	-.00186	.00001	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05465**	**-.00001**	**.00126**	**.00023**	**.01537**	**-.00525**	**-.00747**	**-.03933**	**-.08416**
Stddev	.00916	.00068	.00243	.00101	.00121	.00219	.00596	.00498	.01065
%RSD	16.760	6668.5	192.08	432.60	7.8583	41.827	79.677	12.652	12.652
#1	.06112	.00047	-.00045	.00095	.01622	-.00680	-.00326	-.03581	-.07663
#2	.04817	-.00049	.00298	-.00048	.01451	-.00369	-.01168	-.04285	-.09169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00188**	**.00013**	**.00134**	**.00027**	**-.00333**	**.02270**	**.00135**	**.00035**	**.00437**
Stddev	.00150	.00013	.00073	.00037	.00190	.01838	.00042	.00033	.00507
%RSD	79.839	99.567	54.459	135.13	57.095	80.985	30.969	93.214	116.05
#1	-.00294	.00004	.00083	.00054	-.00468	.00970	.00106	.00059	.00078
#2	-.00082	.00022	.00186	.00001	-.00199	.03570	.00165	.00012	.00796
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3856.0**	**47477.**	**3294.8**
Stddev	4.6	305.	1.4
%RSD	.11992	.64298	.04191
#1	3852.7	47693.	3293.8
#2	3859.2	47261.	3295.8

Sample Name: 116342-A-3-A SD@5 Acquired: 11/7/2018 16:44:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00103**	**-.00040**	**.00246**	**-.00008**	**.00100**	**-.00034**	**.00357**	**.07066**	**-.00003**
Stddev	.00046	.00038	.00104	.00043	.00029	.00040	.00031	.00183	.00001
%RSD	44.572	95.400	42.277	556.04	28.612	118.67	8.6056	2.5871	19.516
#1	.00070	-.00067	.00172	.00023	.00120	-.00062	.00335	.06936	-.00004
#2	.00135	-.00013	.00320	-.00038	.00080	-.00005	.00379	.07195	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00027**	**-.00263**	**.00036**	**.07846**	**-.00193**	**-.00123**	**.00009**	**.00007**
Stddev	.00005	.00011	.00146	.00253	.06406	.00417	.00066	.00015	.00030
%RSD	150.84	40.065	55.353	697.19	81.642	215.45	53.337	162.63	452.70
#1	-.00000	.00020	-.00160	.00215	.03317	.00101	-.00169	-.00001	.00028
#2	.00007	.00035	-.00366	-.00143	.12376	-.00488	-.00077	.00020	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.02245**	**.00058**	**-.00165**	**-.00100**	**.00040**	**-.00094**	**.00066**	**-.00196**	**-.00419**
Stddev	.02730	.00023	.00179	.00105	.00144	.00316	.00394	.01261	.02698
%RSD	121.59	40.054	108.17	104.95	361.74	336.28	597.73	644.44	644.44
#1	-.00315	.00041	-.00039	-.00175	-.00062	.00130	-.00213	-.01087	-.02326
#2	-.04175	.00074	-.00292	-.00026	.00141	-.00318	.00345	.00696	.01489
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00161**	**.00015**	**.00383**	**.00001**	**-.00171**	**-.06564**	**.00036**	**.00072**	**-.00137**
Stddev	.00140	.00002	.00088	.00000	.00104	.05986	.00029	.00025	.00029
%RSD	86.552	15.186	23.028	17.615	61.058	91.182	81.941	35.247	21.398
#1	-.00260	.00013	.00321	.00001	-.00244	-.02332	.00015	.00054	-.00157
#2	-.00063	.00016	.00446	.00002	-.00097	-.10797	.00057	.00090	-.00116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3777.9**	**46583.**	**3259.1**
Stddev	3.6	421.	4.8
%RSD	.09570	.90418	.14677
#1	3775.4	46881.	3255.7
#2	3780.5	46285.	3262.5

Sample Name: 280-116342-A-3-B MS Acquired: 11/7/2018 16:47:18 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04790**	**2.0284**	**1.0101**	**1.0093**	**2.0599**	**.05161**	W **2.0468**	**49.859**	**.09326**
Stddev	.00033	.0380	.0057	.0136	.0044	.00024	.0279	.173	.00168
%RSD	.69516	1.8737	.56661	1.3492	.21367	.47080	1.3655	.34641	1.8016
#1	.04766	2.0552	1.0061	1.0190	2.0630	.05178	2.0666	49.982	.09445
#2	.04813	2.0015	1.0142	.99970	2.0568	.05144	2.0271	49.737	.09207
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48962**	**.20052**	**.24833**	**.93645**	**51.472**	**1.0414**	**47.971**	**.47776**	**1.0190**
Stddev	.00756	.00192	.00038	.01532	.233	.0074	.128	.00040	.0167
%RSD	1.5435	.95546	.15299	1.6364	.45319	.70720	.26771	.08390	1.6340
#1	.49496	.20187	.24860	.92561	51.636	1.0466	48.062	.47804	1.0307
#2	.48427	.19916	.24807	.94729	51.307	1.0362	47.880	.47747	1.0072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.444**	**.48588**	**10.065**	**.49472**	**2.0273**	**.49309**	**2.0682**	**9.7153**	**20.791**
Stddev	.119	.00628	.151	.00384	.0378	.00875	.0261	.0026	.006
%RSD	.22641	1.2930	1.5016	.77642	1.8665	1.7739	1.2596	.02653	.02653
#1	52.528	.49032	10.172	.49744	2.0540	.49927	2.0867	9.7171	20.795
#2	52.360	.48143	9.9585	.49201	2.0005	.48690	2.0498	9.7135	20.787
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0161**	**1.0432**	**.96227**	**.96086**	**2.0025**	**2.0833**	**.49876**	**.47657**	**.52459**
Stddev	.0237	.0034	.00082	.00014	.0316	.0577	.00136	.00030	.00326
%RSD	1.1743	.32825	.08514	.01447	1.5783	2.7717	.27206	.06202	.62208
#1	2.0328	1.0457	.96285	.96076	2.0249	2.0425	.49972	.47636	.52228
#2	1.9993	1.0408	.96169	.96096	1.9802	2.1242	.49780	.47678	.52690
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3683.9**	**45129.**	**3251.3**
Stddev	1.0	29.	17.4
%RSD	.02707	.06379	.53464
#1	3684.6	45109.	3239.0
#2	3683.2	45150.	3263.6

Sample Name: 280-116342-A-3-C MSD Acquired: 11/7/2018 16:49:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04769**	**2.0121**	**1.0078**	**1.0029**	**2.0232**	**.05010**	W **2.0303**	**48.881**	**.09253**
Stddev	.00021	.0232	.0003	.0073	.0018	.00050	.0222	.139	.00083
%RSD	.45010	1.1516	.02795	.73257	.08689	.99593	1.0927	.28532	.90012
#1	.04754	2.0285	1.0080	1.0080	2.0220	.04975	2.0460	48.782	.09312
#2	.04785	1.9957	1.0076	.99766	2.0245	.05046	2.0146	48.980	.09194
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48467**	**.19854**	**.24492**	**.93604**	**50.443**	**1.0281**	**47.340**	**.47262**	**1.0128**
Stddev	.00570	.00204	.00155	.00386	.156	.0020	.192	.00175	.0108
%RSD	1.1762	1.0283	.63122	.41261	.30985	.19518	.40553	.36934	1.0670
#1	.48871	.19998	.24601	.93331	50.332	1.0295	47.476	.47385	1.0204
#2	.48064	.19710	.24383	.93877	50.553	1.0267	47.205	.47138	1.0051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.355**	**.48083**	**9.9894**	**.49494**	**2.0076**	**.49183**	**2.0467**	**9.5807**	**20.503**
Stddev	.980	.00625	.0858	.00606	.0216	.00831	.0154	.1230	.263
%RSD	1.9082	1.2992	.85879	1.2236	1.0777	1.6901	.75409	1.2842	1.2842
#1	50.662	.48525	10.050	.49922	2.0229	.49771	2.0576	9.4937	20.316
#2	52.048	.47641	9.9287	.49065	1.9923	.48595	2.0358	9.6677	20.689
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.9988**	**1.0221**	**.95243**	**.95075**	**1.9906**	**2.0046**	**.49333**	**.47153**	**.50760**
Stddev	.0279	.0038	.00066	.00285	.0176	.0216	.00308	.00648	.00199
%RSD	1.3959	.37152	.06894	.30011	.88163	1.0769	.62378	1.3736	.39255
#1	2.0185	1.0194	.95197	.95277	2.0030	1.9893	.49551	.47611	.50901
#2	1.9791	1.0248	.95290	.94873	1.9782	2.0199	.49116	.46695	.50619
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3622.3**	**44718.**	**3226.4**
Stddev	10.3	294.	27.2
%RSD	.28410	.65811	.84329
#1	3629.6	44510.	3207.2
#2	3615.0	44926.	3245.7

Sample Name: 280-116342-A-3-A PDS Acquired: 11/7/2018 16:51:59 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.06121**	**1.3627**	**.27038**	**.13225**	**.13821**	**.06663**	**.00196**	**26.326**	**.06403**
Stddev	.00040	.0215	.00640	.00170	.00037	.00022	.00068	.138	.00077
%RSD	.65549	1.5764	2.3686	1.2832	.26716	.33028	34.673	.52268	1.2074
#1	.06092	1.3779	.27491	.13345	.13795	.06647	.00244	26.229	.06458
#2	.06149	1.3475	.26585	.13105	.13847	.06679	.00148	26.424	.06348
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.06371**	**.06587**	**.06487**	**1.2513**	**27.333**	**.13658**	**25.447**	**.06378**	**.06678**
Stddev	.00144	.00151	.00084	.0040	.162	.00750	.002	.00022	.00100
%RSD	2.2579	2.2938	1.2975	.32327	.59433	5.4886	.00937	.33805	1.5019
#1	.06472	.06694	.06546	1.2542	27.218	.14188	25.445	.06363	.06748
#2	.06269	.06480	.06427	1.2484	27.448	.13128	25.448	.06393	.06607
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.665**	**.06449**	**2.6140**	**.12946**	**.01549**	**.12528**	**.27117**	**6.3618**	**13.614**
Stddev	.384	.00225	.0476	.00050	.00593	.00477	.00263	.0309	.066
%RSD	1.3865	3.4964	1.8221	.38453	38.297	3.8075	.97144	.48598	.48598
#1	27.936	.06609	2.6477	.12981	.01129	.12865	.26931	6.3400	13.567
#2	27.394	.06290	2.5803	.12911	.01968	.12191	.27304	6.3837	13.661
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.12995**	**.06892**	**.25210**	**.06482**	**.27475**	**.59867**	**.06441**	**.25374**	**.07157**
Stddev	.00208	.00016	.00353	.00017	.00269	.01981	.00001	.00137	.00338
%RSD	1.5987	.23897	1.3988	.25667	.97810	3.3087	.00779	.53965	4.7206
#1	.13142	.06881	.25460	.06470	.27665	.58466	.06441	.25277	.06918
#2	.12848	.06904	.24961	.06493	.27285	.61267	.06441	.25471	.07396
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3646.6**	**44531.**	**3153.0**
Stddev	15.6	4.	28.2
%RSD	.42851	.00852	.89531
#1	3657.7	44529.	3172.9
#2	3635.6	44534.	3133.0

Sample Name: 280-116408-E-1-A Acquired: 11/7/2018 16:54:27 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00139**	**.03145**	**.00090**	**.43053**	**.01691**	**-.00011**	**.00121**	**251.78**	**.00138**
Stddev	.00053	.00134	.00128	.01234	.00035	.00017	.00552	.78	.00013
%RSD	38.316	4.2512	142.36	2.8663	2.0823	157.65	457.86	.30964	9.5417
#1	.00177	.03240	-.00001	.43925	.01666	.00001	-.00270	252.33	.00129
#2	.00102	.03050	.00180	.42180	.01716	-.00023	.00511	251.23	.00147
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00028**	**.00069**	**.00420**	**.05177**	**22.600**	**.33229**	**213.23**	**.01555**	**.00058**
Stddev	.00000	.00017	.00091	.00561	.024	.00105	.94	.00022	.00002
%RSD	.70744	24.603	21.759	10.827	.10422	.31484	.44297	1.4041	2.7832
#1	-.00027	.00082	.00484	.04781	22.583	.33303	213.90	.01571	.00059
#2	-.00028	.00057	.00355	.05574	22.616	.33155	212.56	.01540	.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **1019.0**	**.00534**	**.01888**	**-.00203**	F **1013.7**	**.00467**	**.11216**	**7.5428**	**16.142**
Stddev	5.8	.00013	.00030	.00111	27.9	.00269	.00389	.0201	.043
%RSD	.56580	2.4767	1.5675	54.701	2.7532	57.615	3.4695	.26634	.26634
#1	1023.1	.00543	.01909	-.00281	1033.5	.00277	.10941	7.5570	16.172
#2	1015.0	.00524	.01867	-.00124	994.00	.00657	.11491	7.5286	16.111
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00378**	**5.3790**	**-.00211**	**.00083**	**-.00384**	**-.06194**	**-.00037**	**.00196**	**.00128**
Stddev	.00120	.0189	.00575	.00003	.00164	.07980	.00049	.00002	.00028
%RSD	31.769	.35085	272.17	3.7638	42.667	128.84	132.63	1.2026	21.826
#1	-.00463	5.3924	-.00617	.00086	-.00268	-.00551	-.00002	.00197	.00109
#2	-.00293	5.3657	.00195	.00081	-.00500	-.11837	-.00072	.00194	.00148
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3389.2**	**40174.**	**3086.3**
Stddev	6.1	92.	37.8
%RSD	.18023	.22957	1.2257
#1	3384.9	40109.	3059.6
#2	3393.5	40239.	3113.1

Sample Name: 280-116408-E-2-A Acquired: 11/7/2018 16:57:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00145**	**3.7524**	**.00063**	**1.2108**	**.05463**	**.00016**	**-.00561**	**459.77**	**.00134**
Stddev	.00142	.0057	.00277	.0203	.00145	.00005	.00067	1.43	.00016
%RSD	98.180	.15179	443.10	1.6722	2.6548	33.577	11.998	.31071	11.993
#1	.00246	3.7565	.00259	1.2251	.05360	.00012	-.00513	460.78	.00145
#2	.00044	3.7484	-.00133	1.1964	.05565	.00020	-.00608	458.76	.00122
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00911**	**.00708**	**.00490**	**4.1848**	**17.860**	**.34986**	**295.40**	**1.3921**	**.00339**
Stddev	.00021	.00045	.00050	.0046	.048	.00411	1.15	.0005	.00027
%RSD	2.2512	6.4100	10.143	.11122	.27061	1.1749	.38774	.03614	7.9422
#1	.00926	.00740	.00455	4.1881	17.826	.34695	296.21	1.3924	.00320
#2	.00897	.00676	.00525	4.1815	17.895	.35276	294.59	1.3917	.00358
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**287.31**	**.02976**	**.16170**	**-.00348**	F **764.12**	**.00769**	**.01828**	**17.101**	**36.595**
Stddev	.62	.00154	.00454	.00014	12.76	.00378	.00254	.106	.226
%RSD	.21467	5.1919	2.8066	3.9966	1.6697	49.117	13.911	.61726	.61726
#1	287.75	.03085	.16491	-.00358	773.14	.01036	.01649	17.175	36.755
#2	286.88	.02866	.15849	-.00338	755.10	.00502	.02008	17.026	36.435
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00222**	**3.4630**	**.00214**	**.08436**	**-.00317**	**-.05182**	**.00712**	**.01560**	**.00657**
Stddev	.00090	.0053	.00071	.00611	.00119	.03590	.00144	.00028	.00384
%RSD	40.497	.15295	33.043	7.2432	37.491	69.284	20.276	1.7773	58.383
#1	-.00158	3.4668	.00164	.08003	-.00401	-.02643	.00814	.01579	.00929
#2	-.00286	3.4593	.00264	.08868	-.00233	-.07721	.00610	.01540	.00386
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3371.0**	**40789.**	**3055.3**
Stddev	23.6	289.	5.3
%RSD	.69893	.70947	.17447
#1	3354.3	40584.	3059.0
#2	3387.6	40993.	3051.5

Sample Name: 280-116408-E-3-A Acquired: 11/7/2018 16:59:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00138**	**.14110**	**.03566**	**2.3000**	**.60359**	**-.00003**	**.01707**	**112.01**	**.00073**
Stddev	.00117	.00467	.00851	.0421	.00108	.00037	.00038	.24	.00030
%RSD	85.202	3.3095	23.860	1.8292	.17877	1293.5	2.2095	.21782	41.535
#1	.00221	.14440	.02964	2.3297	.60283	-.00029	.01734	111.84	.00051
#2	.00055	.13780	.04167	2.2702	.60436	.00023	.01681	112.18	.00094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00239**	**.00090**	**-.00021**	**30.276**	**5.4878**	**.02801**	**81.128**	**.47254**	**.01436**
Stddev	.00050	.00007	.00055	.128	.0225	.00644	.077	.00108	.00047
%RSD	21.078	8.2538	265.28	.42128	.40965	22.999	.09521	.22865	3.2715
#1	.00275	.00084	-.00060	30.186	5.5037	.02345	81.183	.47330	.01469
#2	.00204	.00095	.00018	30.366	5.4719	.03256	81.073	.47177	.01403
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**168.14**	**.01128**	**.30049**	**-.00614**	**1.6510**	**.00047**	**-.00390**	**17.653**	**37.777**
Stddev	.14	.00015	.00467	.00183	.0078	.00398	.00125	.037	.079
%RSD	.08463	1.3306	1.5554	29.826	.47210	844.82	32.038	.20814	.20814
#1	168.24	.01138	.30380	-.00484	1.6565	-.00235	-.00479	17.627	37.721
#2	168.04	.01117	.29719	-.00743	1.6455	.00329	-.00302	17.679	37.833
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00086**	**.81774**	**.00089**	**.00355**	**-.00021**	**-.05860**	**.00156**	**.00266**	**.00195**
Stddev	.00064	.00248	.00115	.00017	.00332	.02964	.00028	.00082	.00301
%RSD	74.813	.30339	129.63	4.6709	1589.0	50.574	18.153	30.822	154.49
#1	-.00040	.81598	.00007	.00367	-.00256	-.03764	.00176	.00208	-.00018
#2	-.00131	.81949	.00171	.00344	.00214	-.07956	.00136	.00324	.00407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3623.9**	**44018.**	**3239.3**
Stddev	13.1	101.	17.8
%RSD	.36240	.22895	.54891
#1	3614.6	44090.	3251.9
#2	3633.2	43947.	3226.8

Sample Name: 280-116408-E-4-A Acquired: 11/7/2018 17:02:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00113**	**.30292**	**.00666**	**2.5662**	**.01636**	**-.00027**	**.00322**	**415.74**	**.00111**
Stddev	.00006	.00715	.00335	.0352	.00043	.00001	.00265	.64	.00007
%RSD	5.3653	2.3619	50.313	1.3737	2.6040	4.9487	82.347	.15398	6.2142
#1	.00109	.30798	.00429	2.5911	.01606	-.00028	.00134	415.28	.00116
#2	.00117	.29786	.00903	2.5413	.01666	-.00026	.00509	416.19	.00106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00443**	**.00155**	**.00128**	**.41963**	**20.903**	**.33934**	**325.26**	**.94050**	**.00846**
Stddev	.00007	.00000	.00028	.00126	.069	.00150	1.03	.00253	.00003
%RSD	1.5733	.16437	22.178	.29954	.32860	.44104	.31721	.26929	.37617
#1	.00438	.00155	.00149	.41874	20.951	.34040	324.53	.94229	.00844
#2	.00448	.00155	.00108	.42052	20.854	.33828	325.99	.93870	.00848
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**331.14**	**.02869**	**.02083**	**-.00363**	F **861.74**	**.00367**	**.20527**	**8.9483**	**19.149**
Stddev	1.66	.00056	.00122	.00195	14.23	.00163	.00402	.0290	.062
%RSD	.50243	1.9518	5.8710	53.792	1.6508	44.385	1.9586	.32353	.32353
#1	329.97	.02908	.02169	-.00225	871.80	.00483	.20811	8.9688	19.193
#2	332.32	.02829	.01996	-.00501	851.68	.00252	.20243	8.9279	19.106
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00215**	**5.0865**	**-.00514**	**.00919**	**.00261**	**.06575**	**-.00030**	**.00374**	**.00606**
Stddev	.00176	.0129	.00064	.00025	.00138	.04591	.00041	.00088	.00129
%RSD	81.558	.25292	12.496	2.7531	52.983	69.829	136.64	23.455	21.259
#1	-.00091	5.0774	-.00560	.00902	.00163	.03329	-.00001	.00436	.00515
#2	-.00340	5.0956	-.00469	.00937	.00358	.09822	-.00059	.00312	.00697
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3496.6**	**42560.**	**3210.7**
Stddev	10.8	152.	4.0
%RSD	.30887	.35598	.12577
#1	3504.3	42668.	3207.9
#2	3489.0	42453.	3213.6

Sample Name: 280-116408-E-5-A Acquired: 11/7/2018 17:04:51 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436148 6010C (Li)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00135**	**.04310**	**.00135**	**2.1458**	**.01591**	**-.00016**	**-.00088**	**326.47**	**.00131**
Stddev	.00046	.00166	.00308	.0381	.00014	.00010	.00141	1.62	.00061
%RSD	34.104	3.8593	227.46	1.7740	.90409	64.352	160.24	.49697	46.765
#1	.00102	.04428	-.00082	2.1728	.01601	-.00023	.00012	325.32	.00174
#2	.00168	.04193	.00353	2.1189	.01581	-.00008	-.00188	327.62	.00088
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00045**	**.00049**	**.00240**	**.32256**	**19.315**	**.34477**	**343.59**	**.02488**	**-.00005**
Stddev	.00028	.00017	.00063	.00131	.074	.00465	1.14	.00008	.00002
%RSD	63.616	35.353	26.427	.40687	.38286	1.3491	.33136	.30141	34.194
#1	.00025	.00061	.00285	.32349	19.262	.34148	342.79	.02494	-.00006
#2	.00065	.00037	.00195	.32163	19.367	.34806	344.40	.02483	-.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**362.23**	**.01472**	**.01128**	**-.00266**	F **840.41**	**-.00166**	**.05416**	**7.6710**	**16.416**
Stddev	.58	.00057	.00227	.00047	15.95	.00097	.01070	.0557	.119
%RSD	.15950	3.8763	20.137	17.602	1.8976	58.715	19.751	.72575	.72575
#1	362.64	.01512	.00967	-.00299	851.69	-.00235	.04660	7.6317	16.332
#2	361.82	.01432	.01288	-.00233	829.13	-.00097	.06173	7.7104	16.500
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00148**	**5.5383**	**-.00557**	**.00234**	**-.00101**	**.02039**	**-.00096**	**.00388**	**.00710**
Stddev	.00011	.0285	.00024	.00025	.00321	.05779	.00007	.00031	.00225
%RSD	7.3187	.51380	4.3717	10.732	318.32	283.47	6.9617	7.8769	31.680
#1	-.00156	5.5181	-.00574	.00216	-.00328	-.02048	-.00091	.00366	.00551
#2	-.00140	5.5584	-.00539	.00252	.00126	.06125	-.00100	.00409	.00870
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3518.9**	**42874.**	**3261.9**
Stddev	19.5	250.	17.8
%RSD	.55474	.58246	.54633
#1	3532.7	43051.	3274.5
#2	3505.1	42697.	3249.3

Sample Name: CCVH-5408055 Acquired: 11/7/2018 17:07:28 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00335**	**51.405**	**-.01100**	**.01007**	**.00027**	**-.00045**	**1.0580**	**.03844**	**.00001**	**.00170**	**.00094**	**-.00155**	**50.013**
Stddev	.00032	.169	.00453	.00126	.00067	.00006	.0113	.00293	.00011	.00032	.00013	.00034	.144
%RSD	9.5576	.32807	41.155	12.479	249.20	12.721	1.0668	7.6300	759.27	18.739	13.853	21.801	.28845
#1	-.00313	51.525	-.01420	.01096	-.00020	-.00049	1.0660	.04051	.00009	.00193	.00103	-.00179	50.115
#2	-.00358	51.286	-.00780	.00918	.00074	-.00041	1.0500	.03637	-.00006	.00147	.00085	-.00131	49.911
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.15774**	**.00078**	**-.06415**	**.00255**	**-.00136**	**257.62**	**.00417**	**.00408**	**-.00098**	**5.4944**	**.00228**	**.00307**	**-.04063**
Stddev	.08988	.00051	.00629	.00014	.00023	.80	.00010	.00038	.00190	.0627	.00277	.00339	.03208
%RSD	56.978	65.191	9.8024	5.3838	16.795	.30888	2.4517	9.2052	193.39	1.1407	121.47	110.21	78.969
#1	.22130	.00115	-.05970	.00245	-.00152	258.19	.00409	.00435	-.00233	5.5388	.00424	.00547	-.01794
#2	.09419	.00042	-.06859	.00265	-.00120	257.06	.00424	.00382	.00036	5.4501	.00032	.00068	-.06331
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.08694**	**-.00064**	**.00079**	**4.8907**	**.01732**	**-.00062**	**10.442**	**-.00921**	**.00057**	**.08361**
Stddev	.06866	.00127	.00004	.0123	.00028	.00019	.038	.00087	.00016	.00010
%RSD	78.969	198.44	4.7674	.25088	1.6171	31.322	.36548	9.4886	28.537	.11756
#1	-.03839	.00026	.00077	4.8993	.01752	-.00075	10.469	-.00983	.00045	.08368
#2	-.13549	-.00153	.00082	4.8820	.01713	-.00048	10.415	-.00859	.00068	.08354
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3716.4**	**44598.**	**3273.7**
Stddev	7.1	5.	9.4
%RSD	.19054	.01015	.28653
#1	3721.4	44601.	3267.1
#2	3711.4	44595.	3280.3

Sample Name: CCV-5407546 Acquired: 11/7/2018 17:09:59 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49619**	**.52990**	**1.0300**	**.50034**	**.51996**	**.51198**	**-.00080**	**5.1588**	**.49058**	**.50086**	**.50568**	**.50632**	**2.4216**
Stddev	.00149	.00915	.0078	.00634	.00145	.00121	.00525	.0562	.00524	.00739	.00812	.00074	.0190
%RSD	.30040	1.7275	.75464	1.2678	.27835	.23685	656.94	1.0892	1.0679	1.4764	1.6062	.14620	.78360
#1	.49724	.53637	1.0355	.50483	.52098	.51284	.00291	5.1985	.49428	.50608	.51142	.50580	2.4350
#2	.49514	.52343	1.0245	.49586	.51894	.51113	-.00451	5.1191	.48687	.49563	.49993	.50685	2.4082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**51.119**	**1.0559**	**19.605**	**.48492**	**.49868**	**5.4608**	**.50017**	**.98247**	**1.0088**	**.20742**	**.97382**	**1.0258**	**4.8022**
Stddev	.103	.0034	.019	.00170	.00727	.1232	.00674	.01275	.0126	.01031	.00715	.0261	.0194
%RSD	.20161	.32654	.09834	.34966	1.4576	2.2558	1.3485	1.2975	1.2457	4.9709	.73449	2.5467	.40422
#1	51.046	1.0584	19.619	.48612	.50382	5.5479	.50494	.99149	1.0177	.21471	.97887	1.0443	4.7885
#2	51.192	1.0535	19.592	.48372	.49354	5.3737	.49540	.97346	.99995	.20013	.96876	1.0074	4.8159
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.277**	**1.0041**	**.51977**	**.01670**	**.47705**	**1.0227**	**-.12141**	**.49181**	**.47818**	**.49625**
Stddev	.042	.0160	.00166	.00053	.00181	.0097	.05443	.00216	.00059	.00467
%RSD	.40422	1.5933	.31889	3.1688	.37986	.95116	44.830	.43896	.12316	.94163
#1	10.247	1.0155	.52094	.01707	.47833	1.0296	-.15990	.49334	.47776	.49295
#2	10.306	.99284	.51860	.01632	.47577	1.0159	-.08292	.49028	.47860	.49956
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3764.5**	**45944.**	**3278.1**
Stddev	.4	155.	11.9
%RSD	.01019	.33659	.36433
#1	3764.8	45835.	3286.6
#2	3764.3	46053.	3269.7

Sample Name: CCB Acquired: 11/7/2018 17:12:22 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00055**	**-.00081**	**.00179**	**.00533**	**.00057**	**-.00033**	**.00647**	**.01704**	**.00015**	**-.00018**	**.00002**	**-.00270**
Stddev	.00047	.00013	.01075	.00013	.00023	.00021	.00160	.01069	.00038	.00013	.00041	.00064
%RSD	85.633	16.534	601.83	2.4194	39.866	62.484	24.753	62.698	259.00	70.628	2687.1	23.694
#1	.00089	-.00090	.00939	.00543	.00073	-.00018	.00534	.02460	.00041	-.00009	-.00028	-.00316
#2	.00022	-.00071	-.00582	.00524	.00041	-.00048	.00761	.00949	-.00012	-.00027	.00031	-.00225
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00408**	**.03469**	**.00268**	**.00455**	**.00002**	**.00086**	**.08583**	**.00058**	**-.00047**	**-.00064**	F **.15671**	**.00379**
Stddev	.00249	.03996	.00025	.00215	.00004	.00055	.01620	.00018	.00234	.00164	.00478	.00281
%RSD	60.997	115.21	9.2451	47.292	181.61	64.169	18.872	31.729	503.56	256.06	3.0490	74.169
#1	.00232	.06295	.00250	.00303	-.00001	.00047	.09728	.00071	.00119	.00052	.16009	.00180
#2	.00584	.00643	.00285	.00607	.00005	.00125	.07437	.00045	-.00212	-.00180	.15333	.00577
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit											.10000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.00825**	**-.01218**	**-.02606**	**-.00018**	**.00020**	**.00255**	**.00080**	**.00011**	**-.07045**	**.00107**	**-.00176**	**-.00023**
Stddev	.01074	.01764	.03774	.00086	.00023	.00341	.00036	.00173	.03122	.00044	.00089	.00031
%RSD	130.28	144.83	144.83	473.91	113.51	133.42	44.646	1508.6	44.306	40.957	50.625	134.79
#1	.01584	.00029	.00063	.00042	.00036	.00496	.00055	-.00111	-.09253	.00139	-.00113	-.00001
#2	.00065	-.02465	-.05275	-.00079	.00004	.00014	.00105	.00134	-.04838	.00076	-.00239	-.00044
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	.00750											
Low Limit	-.01500											

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3763.6**	**46589.**	**3255.9**
Stddev	8.8	61.	.1
%RSD	.23390	.13154	.00170
#1	3769.8	46546.	3255.8
#2	3757.3	46632.	3255.9

Sample Name: CCVL-5415520 Acquired: 11/7/2018 17:14:58 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01131**	**.11226**	**.01747**	**.10025**	**.01093**	F **.00062**	**.11734**	**.23474**	**.00447**	**.01019**	**.00999**	**.01317**
Stddev	.00113	.00274	.00232	.00256	.00034	.00027	.00085	.00504	.00005	.00021	.00014	.00007
%RSD	10.038	2.4402	13.274	2.5534	3.1248	43.110	.72779	2.1462	1.0902	2.0229	1.3537	.55858
#1	.01050	.11420	.01911	.10206	.01069	.00043	.11794	.23118	.00450	.01034	.00990	.01312
#2	.01211	.11032	.01583	.09844	.01117	.00081	.11674	.23831	.00443	.01004	.01009	.01322
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						.00100						
Range						-30.000%						

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09494**	**3.2079**	**.02226**	**.20827**	**.00999**	**.01896**	**1.1202**	**.04127**	**2.8273**	**.00810**	F **.21413**	**.01729**
Stddev	.00414	.1598	.00597	.00664	.00011	.00056	.0245	.00089	.0458	.00055	.00327	.00095
%RSD	4.3623	4.9800	26.834	3.1874	1.1287	2.9596	2.1826	2.1640	1.6188	6.7831	1.5267	5.5197
#1	.09787	3.3209	.02648	.20358	.01007	.01935	1.1375	.04190	2.8596	.00848	.21644	.01662
#2	.09201	3.0949	.01804	.21297	.00991	.01856	1.1029	.04064	2.7949	.00771	.21182	.01797
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value											.10000	
Range											30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01601**	**.45909**	**.98245**	**.10028**	**.01025**	**.01654**	**.00982**	**.01542**	F **.01387**	**.01003**	**.02107**	**.01883**
Stddev	.00092	.00165	.00354	.00205	.00005	.00042	.00074	.00054	.05615	.00008	.00119	.00006
%RSD	5.7333	.36046	.36046	2.0465	.53336	2.5367	7.4973	3.4868	404.95	.82008	5.6234	.29801
#1	.01665	.45792	.97995	.10173	.01029	.01684	.01034	.01504	.05357	.01008	.02191	.01879
#2	.01536	.46026	.98495	.09883	.01021	.01625	.00930	.01580	-.02584	.00997	.02024	.01887
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3841.6**	**46786.**	**3253.6**
Stddev	1.3	39.	27.6
%RSD	.03478	.08327	.84884
#1	3840.6	46813.	3234.1
#2	3842.5	46758.	3273.1

Sample Name: Bottle 116251-C-2 Acquired: 11/7/2018 17:17:33 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: Bottle check Ba

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00142**	**.00208**	**.00738**	**.00112**	**.00093**	**-.00018**	**.00918**	**.10153**	**-.00024**
Stddev	.00058	.00041	.00397	.00164	.00009	.00008	.00250	.01432	.00015
%RSD	40.683	19.756	53.867	145.89	9.1566	46.799	27.280	14.108	63.081
#1	.00183	.00236	.00457	.00228	.00100	-.00012	.00741	.09140	-.00013
#2	.00102	.00179	.01019	-.00004	.00087	-.00023	.01095	.11165	-.00035
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**.00027**	**-.00203**	**-.00694**	**.05145**	**-.00536**	**.07912**	**.00021**	**-.00037**
Stddev	.00038	.00007	.00009	.00434	.05503	.00588	.00235	.00003	.00012
%RSD	207.35	25.336	4.2115	62.560	106.95	109.86	2.9668	12.034	31.822
#1	-.00009	.00022	-.00209	-.01002	.09036	-.00120	.08078	.00020	-.00029
#2	.00045	.00032	-.00197	-.00387	.01254	-.00952	.07746	.00023	-.00046
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.55976**	**.00043**	**-.00199**	**-.00263**	**.16931**	**-.00057**	**.00039**	**.09844**	**.21066**
Stddev	.01765	.00017	.00201	.00210	.00075	.00261	.00171	.00891	.01906
%RSD	3.1539	39.998	100.77	79.950	.44498	458.22	436.06	9.0465	9.0465
#1	.54728	.00031	-.00341	-.00114	.16984	.00127	-.00082	.10474	.22414
#2	.57225	.00055	-.00057	-.00412	.16878	-.00241	.00160	.09214	.19719
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00237**	**.00031**	**.00044**	**.00051**	**-.00176**	**-.03643**	**.00068**	**-.00004**	**.00126**
Stddev	.00055	.00030	.00336	.00056	.00065	.02854	.00074	.00054	.00433
%RSD	23.096	96.786	757.74	110.21	36.660	78.349	108.87	1251.2	343.17
#1	-.00276	.00010	-.00193	.00011	-.00222	-.05661	.00016	-.00042	.00432
#2	-.00198	.00052	.00282	.00090	-.00131	-.01625	.00121	.00034	-.00180
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3876.3**	**47794.**	**3342.6**
Stddev	9.1	99.	21.3
%RSD	.23376	.20643	.63753
#1	3882.7	47864.	3357.7
#2	3869.9	47725.	3327.5

Sample Name: Bottle 116330-B-2 Acquired: 11/7/2018 17:20:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: Bottle check Ba & V

Elem	Ag3280	Al1670	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Line	328.068 {103}	167.079 {502}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00101**	**2.4370**	W **3.1262**	**.00462**	**4.4969**	**.01746**	**.00029**	**.00630**	W **526.98**
Stddev	.00007	.1658	.0050	.00813	.2315	.00075	.00030	.00551	.40
%RSD	6.5909	6.8051	.16057	175.79	5.1484	4.3052	103.86	87.388	.07591
#1	.00096	2.5543	3.1297	.01037	4.6606	.01693	.00008	.01020	527.26
#2	.00106	2.3198	3.1226	-.00112	4.3332	.01799	.00051	.00241	526.70
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn
High Limit			500.00						500.00
Low Limit			3.2000						-.40000

Elem	Cd2288	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Line	228.802 {447}	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00082**	**.00084**	**.01311**	**.00245**	**2.3941**	**13.924**	**.64700**	**190.44**	**.13754**
Stddev	.00021	.00074	.00096	.00070	.0280	.273	.00197	.01	.00066
%RSD	25.216	87.577	7.3583	28.497	1.1708	1.9574	.30492	.00709	.47724
#1	.00068	.00136	.01379	.00196	2.4140	13.731	.64840	190.43	.13707
#2	.00097	.00032	.01243	.00295	2.3743	14.117	.64561	190.45	.13800
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Line	202.030 {467}	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00017**	W **1026.8**	**.01224**	**.16469**	**-.00493**	F **794.43**	**.00297**	**.00030**	**14.533**
Stddev	.00044	.6	.00107	.00164	.00083	38.75	.00109	.00425	.034
%RSD	262.54	.05948	8.7626	.99560	16.749	4.8781	36.795	1420.0	.23111
#1	.00014	1026.4	.01300	.16585	-.00434	821.83	.00219	.00331	14.557
#2	-.00048	1027.3	.01148	.16353	-.00551	767.03	.00374	-.00271	14.510
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit		500.00				200.00			
Low Limit		11.000				-.20000			

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062
Line	288.158 {117}2	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**31.101**	**-.00252**	W **16.147**	**-.00029**	**.09804**	**-.00233**	**-.06770**	**.00449**	**.00996**
Stddev	.072	.00130	.096	.00218	.01280	.00208	.01077	.00015	.00020
%RSD	.23111	51.556	.59585	746.46	13.058	89.516	15.907	3.3807	2.0110
#1	31.152	-.00160	16.215	-.00183	.08899	-.00085	-.07532	.00438	.00982
#2	31.051	-.00344	16.079	.00125	.10709	-.00380	-.06009	.00459	.01010
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			10.000						
Low Limit			-.02000						

Elem	Zr3391
Line	339.198 { 99}
Units	ppm
Avg	**.00760**
Stddev	.00359
%RSD	47.215
#1	.00506
#2	.01013
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: Bottle 116330-B-2 Acquired: 11/7/2018 17:20:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: Bottle check Ba & V

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3498.7**	**41680.**	**3259.3**
Stddev	.5	71.	21.0
%RSD	.01542	.16937	.64351
#1	3498.3	41730.	3244.5
#2	3499.1	41630.	3274.1

Sample Name: Bottle 116330-B-12 Acquired: 11/7/2018 17:22:56 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: Bottle check Ba & V

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00122**	**1.5495**	**.00802**	**2.3465**	**.03531**	**.00006**	**.01229**	W **604.09**	**.00049**
Stddev	.00033	.0533	.00113	.0544	.00414	.00006	.00519	5.83	.00014
%RSD	27.222	3.4397	14.033	2.3202	11.721	110.21	42.213	.96469	27.815
#1	.00099	1.5872	.00722	2.3850	.03824	.00010	.01596	599.97	.00039
#2	.00146	1.5118	.00882	2.3080	.03239	.00001	.00862	608.21	.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00300**	**.00251**	**.00356**	**2.5162**	**11.259**	**.59242**	**215.00**	**.69590**	**-.00136**
Stddev	.00014	.00005	.00074	.0412	.080	.00047	.61	.00220	.00056
%RSD	4.6203	1.8670	20.867	1.6374	.71105	.07926	.28355	.31578	41.600
#1	.00310	.00248	.00303	2.5453	11.315	.59208	214.57	.69434	-.00096
#2	.00290	.00254	.00408	2.4871	11.202	.59275	215.43	.69745	-.00175
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **532.96**	**.01674**	**.16290**	**-.00179**	F **779.71**	**-.00058**	**.00675**	**12.681**	**27.138**
Stddev	1.26	.00050	.00119	.00008	25.45	.00820	.00159	.113	.241
%RSD	.23605	3.0082	.72930	4.6914	3.2643	1413.4	23.573	.88850	.88850
#1	532.07	.01639	.16206	-.00174	797.71	-.00637	.00787	12.761	27.309
#2	533.85	.01710	.16374	-.00185	761.71	.00522	.00562	12.602	26.968
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00216**	W **18.433**	**-.00239**	**.04262**	**-.00287**	**-.03625**	**.00253**	**.01410**	**.01011**
Stddev	.00152	.068	.00214	.00127	.00187	.04143	.00053	.00066	.00397
%RSD	70.434	.36997	89.761	2.9768	65.176	114.28	21.050	4.6586	39.225
#1	-.00108	18.481	-.00087	.04172	-.00155	-.00696	.00290	.01364	.00731
#2	-.00323	18.385	-.00390	.04352	-.00419	-.06555	.00215	.01457	.01292
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000							
Low Limit		-.02000							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3615.4**	**42801.**	**3290.9**
Stddev	32.3	11.	8.2
%RSD	.89379	.02644	.24919
#1	3638.3	42793.	3296.7
#2	3592.6	42809.	3285.1

Sample Name: MB 280-436249/1-A Acquired: 11/7/2018 17:25:38 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/7 Custom ID2: Custom ID3:
Comment: 436249 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00086**	**.00061**	**-.00304**	**.01176**	**.00081**	**-.00023**	**.00161**	**.06135**	**-.00001**
Stddev	.00030	.00018	.00547	.00087	.00002	.00006	.00001	.00582	.00015
%RSD	35.153	29.633	180.12	7.3929	2.7270	23.799	.63787	9.4881	1675.8
#1	.00107	.00048	-.00691	.01237	.00079	-.00027	.00162	.06547	.00010
#2	.00064	.00074	.00083	.01114	.00082	-.00019	.00161	.05724	-.00012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00029**	**-.00322**	**.00671**	**.11929**	**-.00145**	**.01539**	**.00008**	**-.00014**
Stddev	.00031	.00032	.00014	.00098	.02852	.00119	.00096	.00011	.00076
%RSD	683.02	111.22	4.3473	14.654	23.908	81.952	6.2588	132.58	550.96
#1	.00026	.00051	-.00332	.00741	.13946	-.00229	.01607	.00000	-.00067
#2	-.00017	.00006	-.00312	.00602	.09913	-.00061	.01471	.00015	.00040
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.45159**	**.00003**	**.00020**	**-.00090**	F **.38444**	**-.00117**	**-.00006**	**-.02145**	**-.04591**
Stddev	.03091	.00036	.00090	.00172	.12259	.00095	.00150	.03107	.06648
%RSD	6.8456	1052.0	460.31	190.65	31.887	81.889	2601.0	144.80	144.80
#1	.47345	.00029	.00083	-.00212	.47112	-.00049	.00100	-.04342	-.09292
#2	.42973	-.00022	-.00044	.00031	.29776	-.00184	-.00112	.00051	.00110
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None
High Limit					.10000				
Low Limit					-.10000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00095**	**.00131**	**.00080**	**.00029**	**-.00014**	F **-.06548**	**.00030**	**.00047**	**.00045**
Stddev	.00009	.00019	.00174	.00005	.00052	.03419	.00034	.00046	.00002
%RSD	9.9045	14.830	217.42	18.120	373.23	52.224	112.66	98.871	5.2640
#1	-.00101	.00145	-.00043	.00025	.00023	-.08966	.00054	.00080	.00047
#2	-.00088	.00118	.00203	.00032	-.00051	-.04130	.00006	.00014	.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						.06000			
Low Limit						-.06000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3940.9**	**49082.**	**3405.8**
Stddev	1.4	139.	14.3
%RSD	.03567	.28341	.41940
#1	3941.9	49180.	3395.7
#2	3940.0	48983.	3415.9

Sample Name: LCS 280-436249/2-A Acquired: 11/7/2018 17:28:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436249 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.03367**	**2.0499**	**1.0327**	**1.0130**	**2.0894**	**.05133**	**2.0931**	**49.767**	**.09492**
Stddev	.00056	.0235	.0073	.0107	.0088	.00076	.0268	.117	.00136
%RSD	1.6673	1.1468	.71026	1.0609	.42173	1.4802	1.2812	.23575	1.4289
#1	.03406	2.0665	1.0379	1.0206	2.0956	.05187	2.1121	49.850	.09588
#2	.03327	2.0333	1.0275	1.0054	2.0832	.05079	2.0741	49.684	.09396
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750								
Low Limit	.04275								

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49535**	**.20308**	**.25105**	**.95657**	**51.986**	**1.0502**	**48.526**	**.48193**	**1.0226**
Stddev	.00574	.00239	.00075	.00219	.021	.0000	.123	.00033	.0155
%RSD	1.1588	1.1770	.30047	.22902	.04067	.00121	.25329	.06911	1.5153
#1	.49941	.20477	.25158	.95812	52.001	1.0502	48.612	.48216	1.0336
#2	.49129	.20139	.25051	.95502	51.971	1.0502	48.439	.48169	1.0117
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.241**	**.49015**	**10.268**	**.50170**	**2.2515**	**.49114**	**2.1044**	F **6.9368**	**14.845**
Stddev	.167	.00573	.137	.00714	.0390	.00682	.0171	.0018	.004
%RSD	.32041	1.1693	1.3304	1.4236	1.7332	1.3883	.81100	.02592	.02592
#1	52.359	.49420	10.365	.50675	2.2791	.49596	2.1165	6.9355	14.842
#2	52.122	.48610	10.172	.49665	2.2239	.48631	2.0924	6.9380	14.847
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit								11.000	
Low Limit								9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0324**	**1.0533**	**.97645**	**.96871**	**2.0389**	**1.9960**	**.50618**	**.48160**	**.51964**
Stddev	.0259	.0023	.00364	.00336	.0248	.0623	.00196	.00062	.00166
%RSD	1.2717	.21727	.37229	.34702	1.2180	3.1191	.38711	.12896	.31871
#1	2.0507	1.0549	.97388	.97108	2.0565	1.9519	.50756	.48203	.52081
#2	2.0141	1.0517	.97902	.96633	2.0214	2.0400	.50479	.48116	.51847
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3794.3**	**46517.**	**3345.5**
Stddev	9.8	147.	21.5
%RSD	.25716	.31703	.64176
#1	3787.4	46621.	3360.7
#2	3801.2	46413.	3330.4

Sample Name: 490-162244-A-1-C Acquired: 11/7/2018 17:30:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436249 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00235**	**2.1065**	**.11167**	**1.2964**	**.07209**	**-.00163**	**-.12694**	**85.955**	**.00629**
Stddev	.00065	.0821	.00613	.0476	.00311	.00018	.00542	1.330	.00079
%RSD	27.782	3.8969	5.4914	3.6716	4.3096	11.298	4.2714	1.5475	12.600
#1	.00282	2.1646	.11601	1.3300	.06989	-.00176	-.12310	85.014	.00685
#2	.00189	2.0485	.10734	1.2627	.07429	-.00150	-.13077	86.895	.00573
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00700**	F **225.55**	**.06440**	**.25873**	F **4193.2**	**1.3060**	**30.302**	**.32002**	**3.3692**
Stddev	.00011	4.71	.00009	.01395	133.0	.0082	.110	.00183	.1296
%RSD	1.5495	2.0873	.13829	5.3904	3.1708	.62999	.36173	.57269	3.8481
#1	-.00708	228.88	.06446	.24887	4287.2	1.3002	30.379	.32132	3.4609
#2	-.00692	222.23	.06434	.26859	4099.2	1.3119	30.224	.31873	3.2775
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000			500.00				
Low Limit		-.02000			-6.0000				

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **1977.3**	**.02780**	W **41.745**	F **-.02039**	F **3044.8**	F **-1.0142**	**1.6779**	**2.6643**	**5.7016**
Stddev	5.7	.00114	1.625	.00355	90.2	.0004	.0657	.0081	.0173
%RSD	.28799	4.1117	3.8929	17.419	2.9626	.04319	3.9162	.30357	.30357
#1	1973.3	.02861	42.894	-.02290	3108.6	-1.0139	1.7244	2.6700	5.7138
#2	1981.3	.02700	40.596	-.01787	2981.0	-1.0145	1.6314	2.6586	5.6893
Check ?	Chk Warn	Chk Pass	Chk Warn	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00		20.000	200.00	200.00	50.000			
Low Limit	11.000		-6.0000	-.01800	-.20000	-.04000			

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00939**	**.38196**	**-.00396**	**-.01843**	**-.01991**	F **-.44966**	**.56971**	**.14490**	**.00082**
Stddev	.00108	.04259	.00086	.00132	.00140	.10299	.00576	.00161	.00135
%RSD	11.470	11.151	21.795	7.1634	7.0471	22.904	1.0114	1.1128	164.11
#1	-.00863	.35184	-.00335	-.01937	-.02091	-.52248	.57378	.14604	.00177
#2	-.01016	.41207	-.00457	-.01750	-.01892	-.37683	.56563	.14376	-.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						20.000			
Low Limit						-.12000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2789.1**	**39227.**	**3302.1**
Stddev	3.8	59.	8.5
%RSD	.13598	.14956	.25625
#1	2786.4	39269.	3296.1
#2	2791.7	39186.	3308.1

Sample Name: 490-162244-A-1-C SD Acquired: 11/7/2018 17:33:17 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436249 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00174**	**.40059**	**.02379**	**.25831**	**.01393**	**-.00040**	**-.02395**	**16.596**	**.00096**
Stddev	.00017	.00232	.00392	.00150	.00007	.00015	.00088	.108	.00009
%RSD	10.033	.57803	16.472	.57947	.52287	38.665	3.6776	.64880	9.0325
#1	.00162	.40223	.02656	.25725	.01398	-.00050	-.02457	16.520	.00090
#2	.00186	.39895	.02102	.25937	.01388	-.00029	-.02333	16.672	.00102
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00089**	F **45.602**	**.01381**	**.04781**	F **943.44**	**.24843**	**6.1696**	**.06393**	**.63924**
Stddev	.00006	.134	.00006	.00123	5.57	.00103	.0755	.00088	.00138
%RSD	6.7527	.29447	.46349	2.5728	.59039	.41497	1.2237	1.3762	.21555
#1	-.00085	45.697	.01385	.04694	939.50	.24916	6.1162	.06331	.64021
#2	-.00094	45.507	.01376	.04868	947.38	.24770	6.2229	.06455	.63826
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000			500.00				
Low Limit		-.02000			-6.0000				

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**379.12**	**.00521**	**7.3803**	**-.00460**	F **616.40**	F **-.22780**	**.28337**	**.49628**	**1.0620**
Stddev	2.11	.00068	.0240	.00119	.51	.00022	.00890	.01031	.0221
%RSD	.55562	12.973	.32485	25.840	.08195	.09574	3.1396	2.0773	2.0773
#1	377.63	.00473	7.3972	-.00544	616.04	-.22796	.27708	.50357	1.0776
#2	380.61	.00568	7.3633	-.00376	616.75	-.22765	.28966	.48899	1.0464
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00	50.000			
Low Limit					-.20000	-.04000			

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00362**	**.06777**	**.00465**	**-.00443**	**-.00509**	F **-.15342**	**.10979**	**.02778**	**-.00112**
Stddev	.00229	.00035	.00145	.00035	.00111	.05275	.00123	.00105	.00419
%RSD	63.203	.51303	31.185	7.9464	21.811	34.382	1.1188	3.7948	373.96
#1	-.00200	.06753	.00363	-.00468	-.00430	-.11612	.10892	.02852	.00184
#2	-.00524	.06802	.00568	-.00418	-.00587	-.19072	.11066	.02703	-.00408
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit						20.000			
Low Limit						-.12000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3440.3**	**42430.**	**3257.8**
Stddev	3.5	142.	6.7
%RSD	.10127	.33483	.20595
#1	3437.9	42329.	3253.0
#2	3442.8	42530.	3262.5

Sample Name: 490-162244-A-1-D MS Acquired: 11/7/2018 17:35:47 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436249 6010B

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03838**	**4.1039**	**1.3007**	**2.2447**	**2.0577**	**.04557**	W **2.0164**	**130.60**	**.11355**
Stddev	.00038	.0042	.0539	.0725	.0056	.00013	.0783	.53	.00409
%RSD	.98577	.10328	4.1466	3.2296	.26979	.27668	3.8834	.40373	3.6034
#1	.03811	4.1009	1.3388	2.2959	2.0616	.04566	2.0717	130.98	.11644
#2	.03865	4.1069	1.2626	2.1934	2.0538	.04548	1.9610	130.23	.11065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51559**	F **215.38**	**.29517**	**.99904**	F **4045.4**	W **2.2763**	**73.750**	**.77206**	**4.3428**
Stddev	.01687	7.88	.00146	.01243	147.6	.0038	.103	.00192	.1644
%RSD	3.2725	3.6583	.49344	1.2444	3.6491	.16837	.13905	.24916	3.7860
#1	.52752	220.95	.29620	1.0078	4149.8	2.2790	73.822	.77342	4.4591
#2	.50366	209.81	.29414	.99025	3941.0	2.2736	73.677	.77070	4.2266
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Warn	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000			500.00	2.0000			
Low Limit		-.02000			-6.0000	-.02000			

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **1990.1**	**.54832**	F **52.763**	**.48381**	F **2959.8**	F **-.41539**	**4.1073**	**10.941**	**23.413**
Stddev	4.7	.01976	1.919	.01693	86.1	.01968	.1560	.155	.331
%RSD	.23467	3.6043	3.6370	3.4990	2.9075	4.7370	3.7989	1.4144	1.4144
#1	1993.4	.56230	54.120	.49578	3020.7	-.42930	4.2176	11.050	23.647
#2	1986.8	.53435	51.406	.47184	2899.0	-.40147	3.9969	10.831	23.179
Check ?	Chk Warn	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00		50.000		200.00	50.000			
Low Limit	11.000		-6.0000		-.20000	-.04000			

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0020**	**1.3487**	**.55460**	**.73893**	**1.7626**	**1.4402**	**1.0496**	**.64293**	**.06183**
Stddev	.0682	.0021	.01000	.00226	.0707	.0109	.0079	.00585	.00020
%RSD	3.4065	.15456	1.8037	.30634	4.0091	.75861	.74865	.90999	.31781
#1	2.0502	1.3501	.56167	.74053	1.8126	1.4479	1.0551	.64706	.06169
#2	1.9538	1.3472	.54752	.73733	1.7126	1.4324	1.0440	.63879	.06196
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2825.8**	**38926.**	**3244.8**
Stddev	7.9	6.	28.0
%RSD	.27974	.01506	.86238
#1	2820.2	38922.	3225.0
#2	2831.4	38931.	3264.6

Sample Name: 490-162244-A-1-E MSD Acquired: 11/7/2018 17:38:24 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436249 6010B

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.04127**	**4.3041**	**1.4406**	**2.4414**	**2.1766**	**.04883**	W **2.2577**	**136.68**	**.12555**
Stddev	.00015	.0223	.0004	.0242	.0025	.00035	.0233	.22	.00168
%RSD	.36603	.51807	.03067	.99032	.11283	.70956	1.0328	.15909	1.3364
#1	.04116	4.2883	1.4403	2.4585	2.1783	.04859	2.2742	136.83	.12673
#2	.04137	4.3198	1.4410	2.4244	2.1748	.04908	2.2412	136.53	.12436
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.56892**	F **229.98**	**.31386**	**1.0552**	F **4077.8**	W **2.4005**	**78.012**	**.81713**	**4.7603**
Stddev	.00659	1.44	.00068	.0055	27.8	.0096	.111	.00123	.0667
%RSD	1.1589	.62784	.21741	.51976	.68135	.40059	.14213	.15018	1.4014
#1	.57358	231.00	.31435	1.0591	4097.5	2.4073	78.091	.81800	4.8075
#2	.56426	228.96	.31338	1.0513	4058.2	2.3937	77.934	.81626	4.7131
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Warn	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000			500.00	2.0000			
Low Limit		-.02000			-6.0000	-.02000			

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2080.0**	**.60413**	F **58.046**	**.53793**	F **3178.2**	F **-.37689**	**4.5523**	**11.657**	**24.945**
Stddev	.4	.00571	.692	.00070	28.2	.01092	.0659	.030	.064
%RSD	.01895	.94577	1.1921	.13014	.88783	2.8966	1.4488	.25643	.25643
#1	2080.2	.60817	58.535	.53843	3198.1	-.36917	4.5990	11.678	24.990
#2	2079.7	.60009	57.557	.53744	3158.2	-.38461	4.5057	11.636	24.900
Check ?	Chk Warn	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00		50.000		200.00	50.000			
Low Limit	11.000		-6.0000		-.20000	-.04000			

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.1724**	**1.4221**	**.61243**	**.79270**	**1.9566**	**1.5623**	**1.1175**	**.67978**	**.06250**
Stddev	.0193	.0008	.00554	.00006	.0234	.0389	.0022	.00330	.00249
%RSD	.88978	.05856	.90486	.00765	1.1940	2.4917	.19253	.48544	3.9882
#1	2.1860	1.4227	.61635	.79274	1.9731	1.5348	1.1190	.68211	.06426
#2	2.1587	1.4215	.60851	.79265	1.9401	1.5898	1.1160	.67744	.06074
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**2738.4**	**38006.**	**3157.9**
Stddev	11.7	99.	17.1
%RSD	.42901	.26129	.54051
#1	2730.1	37935.	3170.0
#2	2746.7	38076.	3145.8

Sample Name: CCVH-5408055 Acquired: 11/7/2018 17:41:01 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00297**	**50.908**	**-.00372**	**.01163**	**.00150**	**-.00047**	**1.0437**	**.06424**	**.00001**	**.00131**	**.01858**	**-.00137**
Stddev	.00016	.146	.00121	.00068	.00033	.00000	.0104	.00190	.00027	.00010	.01733	.00038
%RSD	5.4594	.28695	32.508	5.8843	22.154	.90241	1.0006	2.9561	2346.9	7.4918	93.256	27.539
#1	-.00286	51.012	-.00457	.01212	.00173	-.00047	1.0511	.06290	.00021	.00124	.03083	-.00164
#2	-.00309	50.805	-.00286	.01115	.00126	-.00048	1.0363	.06558	-.00018	.00137	.00633	-.00111
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None
Value												
Range												

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.715**	**10.209**	**-.00203**	**-.05998**	**.00272**	**.00981**	**258.54**	**.00407**	**.01658**	**-.00454**	F **5.8192**	**.00754**
Stddev	.339	.933	.00049	.00313	.00004	.00078	.20	.00014	.00003	.00142	.3052	.00703
%RSD	.68263	9.1412	24.218	5.2106	1.2875	7.9825	.07716	3.4306	.15109	31.215	5.2452	93.186
#1	49.475	10.869	-.00168	-.06219	.00270	.00926	258.68	.00397	.01656	-.00354	6.0350	.00257
#2	49.955	9.5494	-.00237	-.05777	.00274	.01037	258.40	.00417	.01660	-.00554	5.6034	.01251
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None	None	None	Chk Fail	None
Value											5.0000	
Range											10.490%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00731**	**-.02870**	**-.06142**	**-.00019**	**.00107**	**4.8252**	**.01811**	**-.00166**	**10.353**	**-.00879**	**.00065**	**.08118**
Stddev	.00892	.00758	.01622	.00192	.00015	.0059	.00034	.00192	.072	.00116	.00102	.00099
%RSD	122.06	26.411	26.411	1029.7	14.388	.12224	1.8570	115.94	.69368	13.220	156.12	1.2165
#1	.00100	-.03406	-.07289	.00117	.00096	4.8293	.01787	-.00030	10.302	-.00797	-.00007	.08187
#2	.01361	-.02334	-.04995	-.00154	.00118	4.8210	.01835	-.00302	10.404	-.00962	.00137	.08048
Check ?	None	None	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3738.1**	**44846.**	**3215.4**
Stddev	30.7	155.	16.9
%RSD	.82190	.34512	.52434
#1	3716.4	44956.	3203.5
#2	3759.8	44737.	3227.3

Sample Name: CCV-5407546 Acquired: 11/7/2018 17:43:33 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49288**	**.51687**	**.99805**	**.49175**	**.51710**	**.50869**	**.00394**	**4.9755**	**.48134**	**.48979**	**.49712**	**.50157**
Stddev	.00002	.01227	.02087	.01100	.00234	.00007	.00238	.0128	.01106	.01007	.01153	.00277
%RSD	.00322	2.3731	2.0908	2.2368	.45312	.01410	60.377	.25669	2.2972	2.0569	2.3197	.55263
#1	.49287	.52554	1.0128	.49953	.51876	.50864	.00562	4.9845	.48916	.49691	.50527	.50353
#2	.49289	.50819	.98330	.48397	.51545	.50874	.00226	4.9665	.47352	.48266	.48896	.49961
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3355**	**54.561**	**1.0541**	**19.322**	**.47784**	**.48953**	F **5.7296**	**.48877**	**.96389**	**.98806**	**.41123**	**.94967**
Stddev	.0040	.105	.0016	.033	.00063	.01264	.0546	.01165	.01776	.02094	.01294	.01872
%RSD	.17010	.19327	.15000	.17098	.13199	2.5828	.95317	2.3828	1.8424	2.1188	3.1475	1.9709
#1	2.3383	54.636	1.0552	19.345	.47829	.49847	5.7682	.49701	.97645	1.0029	.42038	.96290
#2	2.3327	54.487	1.0530	19.298	.47740	.48059	5.6910	.48054	.95133	.97326	.40207	.93643
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.99515**	**4.7603**	**10.187**	**.98369**	**.51775**	**.01152**	**.46991**	**1.0087**	**-.01959**	**.48673**	**.47166**	**.49902**
Stddev	.01489	.0575	.123	.02280	.00170	.00090	.00137	.0173	.01478	.00113	.00064	.00481
%RSD	1.4965	1.2076	1.2076	2.3180	.32802	7.8193	.29093	1.7156	75.458	.23237	.13548	.96325
#1	1.0057	4.7197	10.100	.99982	.51895	.01088	.47087	1.0210	-.00914	.48753	.47211	.50242
#2	.98462	4.8010	10.274	.96757	.51655	.01216	.46894	.99649	-.03004	.48593	.47120	.49562
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3749.6**	**46081.**	**3300.3**
Stddev	17.1	15.	13.8
%RSD	.45589	.03155	.41680
#1	3737.5	46070.	3310.0
#2	3761.7	46091.	3290.6

Sample Name: CCB Acquired: 11/7/2018 17:45:56 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00160**	**-.00075**	**-.00024**	**.00590**	**.00036**	**-.00042**	**.00824**	**.00971**	**-.00005**	**-.00021**	W **.00288**	**-.00308**
Stddev	.00016	.00020	.00762	.00062	.00020	.00018	.00922	.00077	.00027	.00022	.00017	.00001
%RSD	10.070	26.279	3240.5	10.509	56.581	42.503	111.87	7.8894	567.66	103.79	5.9396	.20785
#1	.00172	-.00061	.00515	.00634	.00050	-.00029	.01476	.01025	.00014	-.00006	.00300	-.00309
#2	.00149	-.00088	-.00562	.00546	.00021	-.00054	.00172	.00917	-.00024	-.00037	.00276	-.00308
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit											.00260	
Low Limit											-.00260	

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00528**	F **3.3778**	**-.00276**	**.00522**	**.00018**	**.00115**	F **.50725**	**.00076**	**.00012**	**-.00080**	F **.34213**	**-.00006**
Stddev	.00008	.0379	.00150	.01792	.00007	.00020	.00095	.00007	.00383	.00001	.01246	.00161
%RSD	1.4244	1.1230	54.226	343.57	37.880	17.717	.18747	8.5663	3080.2	.72583	3.6422	2606.5
#1	.00523	3.4046	-.00382	.01789	.00023	.00100	.50792	.00081	.00283	-.00080	.35094	.00108
#2	.00533	3.3509	-.00170	-.00746	.00013	.00129	.50657	.00071	-.00258	-.00079	.33332	-.00120
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit		1.5000					.50000				.10000	
Low Limit		-1.5000					-.50000				-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00672**	**-.01817**	**-.03889**	**.00011**	**.00028**	**.00259**	**.00034**	**-.00112**	**-.09448**	**.00028**	**-.00093**	**.00010**
Stddev	.00724	.03633	.07774	.00054	.00010	.00094	.00054	.00053	.00046	.00059	.00059	.00251
%RSD	107.76	199.89	199.89	475.44	35.716	36.135	159.53	47.109	.48260	211.83	63.904	2456.4
#1	.00160	.00751	.01608	-.00027	.00036	.00193	.00072	-.00074	-.09416	-.00014	-.00051	.00188
#2	.01185	-.04386	-.09386	.00049	.00021	.00325	-.00004	-.00149	-.09480	.00069	-.00135	-.00167
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3775.6**	**46408.**	**3185.0**
Stddev	11.7	93.	3.6
%RSD	.30858	.20027	.11377
#1	3783.9	46474.	3187.6
#2	3767.4	46343.	3182.5

Sample Name: CCVL-5415520 Acquired: 11/7/2018 17:48:32 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01134**	**.10892**	**.01729**	**.10184**	**.01151**	**.00089**	**.12235**	**.22886**	**.00499**	**.01021**	F **.01304**	**.01307**
Stddev	.00030	.00299	.00440	.00191	.00064	.00006	.00175	.00415	.00032	.00011	.00049	.00005
%RSD	2.6395	2.7458	25.451	1.8773	5.5376	6.3529	1.4268	1.8152	6.3516	1.1075	3.7334	.38281
#1	.01113	.11103	.01418	.10319	.01106	.00093	.12111	.23180	.00522	.01029	.01339	.01311
#2	.01155	.10680	.02040	.10049	.01196	.00085	.12358	.22592	.00477	.01013	.01270	.01304
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value											.01000	
Range											30.000%	

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10442**	F **6.0958**	**.01981**	**.20571**	**.01017**	**.01967**	F **1.4699**	**.04132**	**2.8298**	**.00797**	F **.39119**	**.01629**
Stddev	.00509	.0410	.00252	.00680	.00004	.00079	.0074	.00076	.0588	.00021	.00745	.00187
%RSD	4.8725	.67222	12.730	3.3052	.43904	4.0377	.50081	1.8377	2.0764	2.6735	1.9053	11.452
#1	.10802	6.1248	.02159	.21051	.01020	.02023	1.4647	.04186	2.8714	.00781	.39647	.01761
#2	.10082	6.0668	.01802	.20090	.01014	.01911	1.4751	.04078	2.7883	.00812	.38592	.01497
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value		3.0000					1.0000				.10000	
Range		30.000%					30.000%				30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.02745**	**.46293**	**.99066**	**.09956**	**.01083**	**.01522**	**.00976**	**.01645**	F **.02213**	**.00970**	**.02200**	**.01613**
Stddev	.00612	.02739	.05861	.00151	.00019	.00257	.00004	.00242	.04182	.00042	.00038	.00436
%RSD	22.288	5.9167	5.9167	1.5201	1.7190	16.902	.40462	14.699	188.98	4.2878	1.7341	27.017
#1	.02312	.44356	.94922	.10063	.01097	.01340	.00973	.01816	.05170	.01000	.02227	.01305
#2	.03177	.48229	1.0321	.09849	.01070	.01704	.00978	.01474	-.00744	.00941	.02173	.01921
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value	.02000								.06000			
Range	30.000%								-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3877.9**	**47484.**	**3238.8**
Stddev	11.9	91.	11.1
%RSD	.30753	.19106	.34143
#1	3886.3	47548.	3246.6
#2	3869.4	47420.	3231.0

Sample Name: MB 280-436581/1-A Acquired: 11/7/2018 17:51:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/7 Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00055**	**.00639**	**-.00073**	**.00362**	**.00176**	**-.00039**	**.00502**	**.02558**	**-.00002**
Stddev	.00014	.00029	.00075	.00127	.00058	.00026	.00377	.00461	.00026
%RSD	24.595	4.5955	101.68	35.118	32.814	65.394	75.124	18.015	1231.8
#1	.00045	.00618	-.00021	.00451	.00135	-.00021	.00768	.02884	-.00020
#2	.00065	.00660	-.00126	.00272	.00216	-.00058	.00235	.02232	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**.00304**	**-.00260**	**.02472**	W **2.6842**	**-.00235**	**.00758**	**.00019**	**.00032**
Stddev	.00013	.00045	.00037	.00238	.0906	.00151	.00742	.00006	.00002
%RSD	48.599	14.806	14.376	9.6411	3.3744	64.101	97.850	29.364	6.8653
#1	.00037	.00272	-.00287	.02303	2.7482	-.00342	.01283	.00015	.00033
#2	.00018	.00336	-.00234	.02640	2.6202	-.00129	.00234	.00023	.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					1.5000				
Low Limit					-1.5000				

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.34718**	**.00024**	**.00127**	**-.00073**	F **.25700**	**.00145**	**.00407**	**-.00508**	**-.01087**
Stddev	.00066	.00058	.00039	.00027	.00317	.00038	.00345	.01297	.02777
%RSD	.19068	246.36	31.029	37.913	1.2315	26.536	84.709	255.34	255.34
#1	.34765	-.00018	.00099	-.00092	.25476	.00118	.00651	.00409	.00876
#2	.34671	.00065	.00155	-.00053	.25924	.00172	.00163	-.01426	-.03051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None
High Limit					.10000				
Low Limit					-.10000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00133**	**.00017**	**.00247**	**.00099**	**-.00110**	W **-.05040**	**.00071**	**.00037**	**.00365**
Stddev	.00039	.00002	.00304	.00043	.00010	.05635	.00039	.00179	.00120
%RSD	29.367	11.910	123.21	43.738	8.9568	111.82	54.255	487.33	32.963
#1	-.00160	.00016	.00032	.00068	-.00117	-.09024	.00044	.00164	.00280
#2	-.00105	.00019	.00462	.00130	-.00103	-.01055	.00099	-.00090	.00450
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass
High Limit						.05000			
Low Limit						-.05000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3917.3**	**48547.**	**3327.8**
Stddev	12.5	156.	21.8
%RSD	.31850	.32080	.65364
#1	3926.1	48437.	3312.4
#2	3908.4	48657.	3343.2

Sample Name: LCS 280-436581/2-A Acquired: 11/7/2018 17:53:41 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.03365**	**2.0447**	**1.0286**	**.99782**	**2.0685**	**.05061**	**2.0790**	**49.252**	**.09514**
Stddev	.00014	.0293	.0039	.00731	.0077	.00060	.0295	.213	.00085
%RSD	.42657	1.4351	.37965	.73240	.37470	1.1852	1.4202	.43242	.88870
#1	.03375	2.0654	1.0314	1.0030	2.0740	.05104	2.0999	49.402	.09574
#2	.03355	2.0239	1.0258	.99265	2.0631	.05019	2.0581	49.101	.09454
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750								
Low Limit	.04275								

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49355**	**.20408**	**.25045**	**.93690**	**53.852**	**1.0416**	**48.566**	**.48153**	**1.0121**
Stddev	.00698	.00332	.00000	.00670	.146	.0080	.148	.00155	.0153
%RSD	1.4133	1.6247	.00156	.71503	.27026	.77226	.30399	.32283	1.5068
#1	.49848	.20642	.25044	.94164	53.955	1.0473	48.671	.48263	1.0228
#2	.48861	.20173	.25045	.93217	53.749	1.0360	48.462	.48043	1.0013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.846**	**.48969**	**10.253**	**.50314**	**2.2715**	**.48693**	**2.0869**	F **6.7187**	**14.378**
Stddev	.413	.00649	.111	.00972	.0088	.00560	.0252	.0028	.006
%RSD	.78169	1.3245	1.0854	1.9318	.38703	1.1496	1.2086	.04146	.04146
#1	52.554	.49427	10.331	.51001	2.2777	.49089	2.1048	6.7207	14.382
#2	53.138	.48510	10.174	.49627	2.2652	.48297	2.0691	6.7168	14.374
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit								11.000	
Low Limit								9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0173**	**1.0399**	**.97955**	**.96505**	**2.0285**	**2.0059**	**.50173**	**.48476**	**.50818**
Stddev	.0308	.0052	.00531	.00424	.0317	.0171	.00164	.00456	.00004
%RSD	1.5294	.49971	.54236	.43918	1.5606	.85327	.32773	.94110	.00855
#1	2.0391	1.0436	.98331	.96805	2.0509	1.9938	.50289	.48798	.50815
#2	1.9955	1.0362	.97580	.96205	2.0061	2.0180	.50056	.48153	.50821
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3743.1**	**45605.**	**3274.4**
Stddev	3.0	266.	.6
%RSD	.07999	.58272	.01874
#1	3741.0	45417.	3274.0
#2	3745.2	45793.	3274.8

Sample Name: 280-116619-A-1-A Acquired: 11/7/2018 17:56:02 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00061**	**.79289**	**-.00385**	**2.2928**	**.02799**	**-.00022**	**-.00116**	**329.52**	**.00194**
Stddev	.00001	.01971	.00344	.0521	.00001	.00005	.01206	.41	.00001
%RSD	2.3176	2.4858	89.382	2.2723	.02252	23.432	1040.1	.12484	.34956
#1	.00062	.80683	-.00629	2.3297	.02800	-.00019	-.00968	329.81	.00194
#2	.00060	.77895	-.00142	2.2560	.02799	-.00026	.00737	329.23	.00193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00457**	**.00297**	**.00194**	**1.0114**	**23.972**	**1.3804**	W **948.51**	**.29042**	**.04409**
Stddev	.00047	.00053	.00041	.0048	1.857	.0015	5.99	.00168	.00053
%RSD	10.379	17.805	20.966	.47509	7.7447	.10910	.63125	.57894	1.1985
#1	.00490	.00335	.00165	1.0148	22.660	1.3793	952.74	.29161	.04447
#2	.00423	.00260	.00222	1.0080	25.285	1.3815	944.28	.28923	.04372
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							500.00		
Low Limit							-.40000		

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2048.4**	**.03444**	**.05713**	**-.00238**	F **2365.5**	**.00942**	**.00421**	**9.3318**	**19.970**
Stddev	1.7	.00006	.00052	.00114	56.9	.00962	.00758	.3187	.682
%RSD	.08481	.17319	.91820	47.913	2.4057	102.08	180.02	3.4149	3.4149
#1	2049.6	.03448	.05750	-.00158	2405.7	.01622	.00957	9.5571	20.452
#2	2047.2	.03440	.05675	-.00319	2325.2	.00262	-.00115	9.1064	19.488
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00152**	W **10.234**	**-.00514**	**.02072**	**.00028**	**.26586**	**.00458**	**.00914**	**.00825**
Stddev	.00155	.072	.00187	.00056	.00141	.00496	.00018	.00037	.00296
%RSD	102.31	.70635	36.465	2.7260	495.71	1.8650	4.0200	4.0800	35.915
#1	-.00042	10.183	-.00381	.02112	-.00071	.26235	.00445	.00940	.00615
#2	-.00262	10.285	-.00646	.02032	.00128	.26936	.00471	.00888	.01034
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000							
Low Limit		-.02000							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3289.9**	**38653.**	**3110.5**
Stddev	32.2	261.	2.4
%RSD	.97859	.67554	.07563
#1	3267.2	38469.	3108.8
#2	3312.7	38838.	3112.1

Sample Name: 116619-A-1-A SD@5 Acquired: 11/7/2018 17:58:49 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00065**	**.17963**	**.00382**	**.50632**	**.00708**	**-.00009**	**.00885**	**69.180**	**.00143**
Stddev	.00011	.00231	.00355	.00655	.00012	.00007	.00321	.215	.00036
%RSD	17.269	1.2837	92.912	1.2927	1.7641	78.106	36.268	.31086	25.370
#1	.00057	.18126	.00634	.51095	.00717	-.00014	.01112	69.028	.00169
#2	.00073	.17800	.00131	.50169	.00699	-.00004	.00658	69.332	.00117
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00060**	**.00129**	**.00037**	**.21377**	**7.7483**	**.27460**	**190.79**	**.05880**	**.00909**
Stddev	.00047	.00013	.00140	.00392	.7139	.00105	.22	.00016	.00021
%RSD	79.030	10.035	377.51	1.8321	9.2135	.38391	.11555	.26887	2.3231
#1	.00093	.00120	-.00062	.21654	8.2531	.27534	190.95	.05891	.00924
#2	.00026	.00138	.00137	.21100	7.2435	.27385	190.64	.05869	.00894
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**412.98**	**.00670**	**.00941**	**-.00221**	F **538.59**	**.00376**	**-.00085**	**1.9811**	**4.2395**
Stddev	.19	.00027	.00077	.00245	7.58	.00247	.00874	.0522	.1118
%RSD	.04556	4.0133	8.2021	110.78	1.4071	65.704	1029.5	2.6359	2.6359
#1	412.85	.00689	.00996	-.00394	543.95	.00201	-.00703	2.0180	4.3185
#2	413.11	.00651	.00887	-.00048	533.23	.00551	.00533	1.9441	4.1605
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00117**	**2.0817**	**-.00598**	**.00571**	**-.00233**	**.06146**	**.00072**	**.00175**	**.00333**
Stddev	.00000	.0081	.00252	.00013	.00365	.07619	.00003	.00056	.00369
%RSD	.32215	.38858	42.140	2.3261	156.43	123.96	3.4858	31.768	110.76
#1	-.00117	2.0760	-.00420	.00581	.00025	.00759	.00070	.00214	.00072
#2	-.00117	2.0874	-.00776	.00562	-.00491	.11533	.00074	.00136	.00594
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3663.5**	**43879.**	**3260.8**
Stddev	20.0	8.	27.0
%RSD	.54691	.01892	.82828
#1	3649.4	43873.	3241.7
#2	3677.7	43885.	3279.9

Sample Name: 280-116619-A-1-B MS Acquired: 11/7/2018 18:01:22 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03619**	**5.1269**	**1.0470**	**3.1581**	**2.0651**	**.04949**	**1.9355**	**437.58**	**.09513**
Stddev	.00033	.0009	.0232	.0523	.0212	.00003	.0418	.57	.00172
%RSD	.92021	.01807	2.2148	1.6553	1.0267	.05128	2.1594	.12986	1.8086
#1	.03595	5.1275	1.0634	3.1951	2.0501	.04947	1.9650	437.17	.09635
#2	.03642	5.1262	1.0306	3.1211	2.0801	.04951	1.9059	437.98	.09391
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.46341**	**.19388**	**.24863**	**2.3198**	**78.417**	W **2.4168**	W **979.53**	**.76157**	**1.0137**
Stddev	.00859	.00449	.00007	.0098	1.630	.0140	6.59	.00345	.0222
%RSD	1.8526	2.3166	.02920	.42351	2.0783	.57933	.67289	.45346	2.1933
#1	.46948	.19706	.24868	2.3128	77.264	2.4069	984.19	.76401	1.0294
#2	.45734	.19071	.24858	2.3267	79.569	2.4267	974.87	.75913	.99797
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Warn	Chk Pass	Chk Pass
High Limit						2.0000	500.00		
Low Limit						-.02000	-.40000		

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2073.5**	**.48729**	**10.962**	**.43762**	F **2374.4**	**.48281**	**2.1743**	**14.371**	**30.754**
Stddev	5.4	.00774	.213	.00978	37.4	.01260	.0350	.041	.087
%RSD	.26283	1.5891	1.9475	2.2338	1.5736	2.6088	1.6103	.28405	.28405
#1	2069.7	.49277	11.113	.44453	2400.8	.49171	2.1991	14.400	30.816
#2	2077.4	.48182	10.811	.43071	2348.0	.47390	2.1495	14.342	30.692
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8380**	W **11.890**	**.93507**	**.99411**	**1.5955**	**2.2048**	**.52456**	**.48876**	**.51057**
Stddev	.0329	.140	.00509	.00366	.0262	.0223	.00118	.00401	.00030
%RSD	1.7886	1.1754	.54445	.36770	1.6421	1.0134	.22432	.81988	.05783
#1	1.8612	11.791	.93867	.99669	1.6140	2.2206	.52540	.49160	.51036
#2	1.8147	11.989	.93147	.99153	1.5770	2.1890	.52373	.48593	.51078
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000							
Low Limit		-.02000							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3386.2**	**40409.**	**3248.1**
Stddev	7.3	207.	8.7
%RSD	.21573	.51154	.26692
#1	3391.4	40263.	3242.0
#2	3381.1	40555.	3254.3

Sample Name: 280-116619-A-1-C MSD Acquired: 11/7/2018 18:03:58 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03759**	**4.9605**	**1.0741**	**3.2500**	**2.0657**	**.04968**	**1.9972**	**451.80**	**.09746**
Stddev	.00077	.0756	.0082	.0527	.0292	.00015	.0334	2.72	.00165
%RSD	2.0476	1.5246	.76620	1.6205	1.4125	.29334	1.6726	.60284	1.6956
#1	.03814	4.9070	1.0799	3.2873	2.0451	.04958	2.0208	449.88	.09863
#2	.03705	5.0140	1.0682	3.2128	2.0864	.04979	1.9736	453.73	.09629
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.47291**	**.19824**	**.25288**	**2.2756**	**75.746**	W **2.4342**	W **987.16**	**.77482**	**1.0464**
Stddev	.00829	.00333	.00310	.0007	.911	.0132	.67	.00417	.0215
%RSD	1.7520	1.6822	1.2244	.03130	1.2033	.54255	.06810	.53822	2.0511
#1	.47877	.20060	.25507	2.2761	75.102	2.4249	986.68	.77777	1.0616
#2	.46705	.19589	.25069	2.2751	76.391	2.4436	987.63	.77187	1.0312
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Warn	Chk Pass	Chk Pass
High Limit						2.0000	500.00		
Low Limit						-.02000	-.40000		

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2078.8**	**.49598**	**11.238**	**.44467**	F **2423.7**	**.49860**	**2.2335**	**14.580**	**31.201**
Stddev	13.2	.00817	.182	.00823	33.9	.01248	.0480	.097	.207
%RSD	.63516	1.6468	1.6185	1.8518	1.3972	2.5034	2.1476	.66277	.66277
#1	2069.4	.50176	11.367	.45050	2447.7	.50743	2.2674	14.511	31.055
#2	2088.1	.49020	11.110	.43885	2399.8	.48978	2.1996	14.648	31.347
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.8839**	W **12.235**	**.99589**	**1.0207**	**1.6322**	**2.3242**	**.53390**	**.49425**	**.51963**
Stddev	.0342	.148	.00587	.0010	.0264	.0436	.00431	.00088	.00475
%RSD	1.8174	1.2063	.58903	.10095	1.6155	1.8762	.80783	.17803	.91462
#1	1.9082	12.339	1.0000	1.0214	1.6509	2.3550	.53694	.49487	.51627
#2	1.8597	12.130	.99174	1.0200	1.6136	2.2933	.53085	.49363	.52299
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000							
Low Limit		-.02000							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3445.4**	**40900.**	**3288.8**
Stddev	19.0	67.	35.7
%RSD	.55116	.16274	1.0858
#1	3431.9	40853.	3314.0
#2	3458.8	40948.	3263.5

Sample Name: 280-116619-A-2-A Acquired: 11/7/2018 18:06:35 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00091**	**.27613**	**-.00283**	**2.3294**	**.01830**	**-.00010**	**.01096**	**387.90**	**.00167**
Stddev	.00127	.00829	.01010	.0392	.00025	.00001	.00419	.91	.00041
%RSD	139.96	3.0015	356.53	1.6846	1.3519	11.282	38.252	.23443	24.769
#1	.00001	.28199	.00431	2.3572	.01813	-.00009	.01392	388.55	.00138
#2	.00181	.27027	-.00997	2.3017	.01848	-.00011	.00799	387.26	.00196
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00281**	**.00247**	**.01018**	**.21464**	**18.728**	**1.0855**	W **788.40**	**.47781**	**.14238**
Stddev	.00019	.00015	.00032	.00309	.161	.0016	.20	.00027	.00329
%RSD	6.7581	6.0975	3.1108	1.4378	.85852	.14898	.02600	.05690	2.3104
#1	.00295	.00257	.00996	.21246	18.614	1.0866	788.55	.47762	.14470
#2	.00268	.00236	.01041	.21683	18.842	1.0843	788.26	.47800	.14005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							500.00		
Low Limit							-.40000		

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **3403.4**	**.02810**	**.04917**	**-.00340**	F **2695.6**	**.00141**	W **5.9429**	**8.0629**	**17.255**
Stddev	9.4	.00095	.00038	.00012	38.9	.00342	.1274	.2035	.435
%RSD	.27628	3.3885	.78154	3.3960	1.4441	242.48	2.1440	2.5238	2.5238
#1	3410.0	.02877	.04945	-.00332	2723.1	.00383	6.0330	8.2068	17.562
#2	3396.7	.02743	.04890	-.00348	2668.1	-.00101	5.8528	7.9190	16.947
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit	500.00				200.00		5.0000		
Low Limit	11.000				-.20000		-.03000		

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00422**	**7.3513**	**-.00569**	**.00677**	**-.00319**	**.24520**	**.00437**	**.00731**	**.00807**
Stddev	.00142	.0172	.00376	.00025	.00316	.03735	.00025	.00076	.00394
%RSD	33.545	.23451	66.103	3.7284	98.982	15.232	5.6554	10.419	48.851
#1	-.00522	7.3635	-.00834	.00695	-.00543	.21879	.00454	.00677	.01085
#2	-.00322	7.3391	-.00303	.00659	-.00096	.27161	.00419	.00784	.00528
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3412.8**	**40115.**	**3367.0**
Stddev	15.7	35.	5.9
%RSD	.46023	.08724	.17536
#1	3423.9	40139.	3371.1
#2	3401.7	40090.	3362.8

Sample Name: 280-116619-A-3-A Acquired: 11/7/2018 18:09:16 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al1670	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179
Line	328.068 {103}	167.079 {502}	309.271 {109}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**1.7195**	W **2.9562**	**.00032**	**2.0160**	**.03333**	**.00027**	**-.00004**	**402.37**
Stddev	.00149	.0493	.0013	.00037	.0585	.00151	.00010	.00538	.73
%RSD	1614.1	2.8669	.04385	113.67	2.9034	4.5217	35.654	12310.	.18120
#1	.00115	1.7544	2.9571	.00006	2.0573	.03439	.00020	-.00384	402.89
#2	-.00096	1.6847	2.9553	.00058	1.9746	.03226	.00034	.00376	401.85
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			500.00						
Low Limit			3.2000						

Elem	Cd2288	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576
Line	228.802 {447}	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00225**	**.00425**	**.00383**	**.01244**	**1.6130**	**30.513**	**1.2317**	W **1179.1**	**.69363**
Stddev	.00018	.00006	.00041	.00036	.0118	.217	.0054	1.0	.00324
%RSD	7.9639	1.4605	10.810	2.9195	.73001	.71040	.44060	.08534	.46645
#1	.00238	.00421	.00413	.01219	1.6213	30.360	1.2355	1179.8	.69591
#2	.00213	.00430	.00354	.01270	1.6047	30.666	1.2278	1178.4	.69134
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Line	202.030 {467}	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.19590**	W **4365.9**	**.05812**	**.14675**	**-.00353**	F **3260.1**	**.00144**	W **7.8413**	**11.707**
Stddev	.00748	4.8	.00278	.00741	.00069	67.1	.00918	.2436	.415
%RSD	3.8194	.10894	4.7845	5.0509	19.548	2.0589	635.65	3.1062	3.5482
#1	.20119	4362.5	.06009	.15199	-.00402	3307.6	-.00504	8.0135	12.001
#2	.19061	4369.2	.05615	.14151	-.00304	3212.7	.00793	7.6691	11.414
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Warn	Chk Pass
High Limit		500.00				200.00		5.0000	
Low Limit		11.000				-.20000		-.03000	

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062
Line	288.158 {117}2	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.053**	**-.00464**	W **10.523**	**-.00625**	**.03959**	**-.00334**	**.20876**	**.01782**	**.01813**
Stddev	.889	.00185	.058	.00444	.00441	.00264	.05818	.00085	.00036
%RSD	3.5482	39.904	.54938	71.006	11.147	78.981	27.869	4.7817	1.9663
#1	25.682	-.00594	10.563	-.00311	.04271	-.00521	.16762	.01842	.01788
#2	24.425	-.00333	10.482	-.00938	.03647	-.00147	.24989	.01721	.01839
Check ?	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit			10.000						
Low Limit			-.02000						

Elem	Zr3391
Line	339.198 { 99}
Units	ppm
Avg	**.01023**
Stddev	.00041
%RSD	4.0058
#1	.00994
#2	.01052
Check ?	Chk Pass
High Limit	
Low Limit	

Sample Name: 280-116619-A-3-A Acquired: 11/7/2018 18:09:16 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3332.0**	**39126.**	**3327.1**
Stddev	1.2	57.	2.1
%RSD	.03615	.14585	.06317
#1	3331.2	39166.	3325.6
#2	3332.9	39086.	3328.6

Sample Name: 280-116619-A-4-A Acquired: 11/7/2018 18:12:00 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00030**	**.34759**	**.00160**	**1.1429**	**.01378**	**.00018**	**-.00335**	**356.07**	**.00167**
Stddev	.00090	.01671	.00107	.0473	.00020	.00019	.00110	.36	.00001
%RSD	301.22	4.8066	66.879	4.1407	1.4821	108.76	32.827	.10161	.71881
#1	-.00094	.35940	.00236	1.1764	.01392	.00004	-.00413	356.33	.00166
#2	.00034	.33578	.00084	1.1095	.01363	.00032	-.00257	355.81	.00168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00391**	**.00250**	**.00921**	**.32239**	**28.009**	**1.4886**	F **1775.2**	**.73073**	**.15718**
Stddev	.00015	.00034	.00028	.00804	.559	.0055	11.6	.00055	.00776
%RSD	3.8329	13.464	3.0061	2.4934	1.9950	.36922	.65194	.07584	4.9362
#1	.00381	.00274	.00901	.31670	27.614	1.4925	1767.0	.73113	.16267
#2	.00402	.00226	.00940	.32807	28.404	1.4847	1783.4	.73034	.15169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit							1500.0		
Low Limit							-.40000		

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **4464.0**	**.06803**	**.05693**	**-.00186**	F **3541.8**	**.00028**	W **8.3019**	**11.184**	**23.934**
Stddev	2.7	.00249	.00163	.00054	111.4	.00268	.3488	.410	.877
%RSD	.05961	3.6633	2.8702	28.837	3.1441	941.49	4.2009	3.6641	3.6641
#1	4462.1	.06979	.05577	-.00224	3620.5	.00218	8.5486	11.474	24.554
#2	4465.9	.06627	.05809	-.00148	3463.0	-.00161	8.0553	10.894	23.314
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit	500.00				200.00		5.0000		
Low Limit	11.000				-.20000		-.03000		

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00473**	W **11.876**	**-.01008**	**.01088**	**-.00101**	**.39945**	**.00415**	**.01063**	**.00572**
Stddev	.00016	.003	.00129	.00159	.00387	.01599	.00057	.00081	.00276
%RSD	3.3226	.02555	12.825	14.606	384.36	4.0018	13.634	7.6391	48.252
#1	-.00485	11.873	-.00916	.01200	-.00375	.38815	.00455	.01006	.00377
#2	-.00462	11.878	-.01099	.00976	.00173	.41076	.00375	.01120	.00767
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000							
Low Limit		-.02000							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3312.1**	**38605.**	**3318.5**
Stddev	50.1	123.	5.2
%RSD	1.5141	.31839	.15740
#1	3276.6	38692.	3322.2
#2	3347.6	38519.	3314.8

Sample Name: 280-116619-A-5-A Acquired: 11/7/2018 18:14:52 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00136**	**.19439**	**.00282**	**.58077**	**.01753**	**-.00005**	**.00535**	**368.93**	**.00181**
Stddev	.00009	.00726	.00241	.01607	.00009	.00011	.00310	.76	.00046
%RSD	6.3447	3.7322	85.414	2.7673	.51053	216.34	58.034	.20560	25.264
#1	.00130	.19952	.00453	.59214	.01747	-.00013	.00754	369.46	.00149
#2	.00142	.18926	.00112	.56941	.01760	.00003	.00315	368.39	.00214
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00463**	**.00199**	**.01039**	**.17748**	**15.550**	**.39131**	**390.78**	**.89361**	**.08228**
Stddev	.00005	.00035	.00007	.00239	.008	.00705	4.64	.00733	.00226
%RSD	1.0641	17.328	.69189	1.3445	.05369	1.8028	1.1870	.82079	2.7410
#1	.00459	.00224	.01034	.17579	15.544	.39630	394.06	.89880	.08387
#2	.00466	.00175	.01044	.17917	15.556	.38632	387.50	.88843	.08068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **1026.2**	**.03365**	**.02732**	**-.00160**	F **1191.7**	**.00046**	**1.6199**	**6.5513**	**14.020**
Stddev	.2	.00158	.00026	.00170	37.5	.00119	.0520	.1432	.307
%RSD	.01605	4.6981	.94183	106.18	3.1504	261.16	3.2131	2.1864	2.1864
#1	1026.3	.03477	.02750	-.00279	1218.3	-.00039	1.6567	6.6526	14.236
#2	1026.1	.03253	.02714	-.00040	1165.2	.00130	1.5830	6.4500	13.803
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00380**	**7.5683**	**-.00229**	**.00685**	**.00007**	**.01409**	**.00181**	**.00447**	**.00549**
Stddev	.00230	.0106	.00242	.00064	.00100	.01817	.00022	.00047	.00056
%RSD	60.504	.14056	105.55	9.3530	1340.7	128.96	12.256	10.519	10.187
#1	-.00542	7.5759	-.00400	.00640	-.00063	.02694	.00197	.00414	.00510
#2	-.00217	7.5608	-.00058	.00730	.00078	.00124	.00165	.00480	.00589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3682.2**	**44209.**	**3469.2**
Stddev	17.2	48.	9.4
%RSD	.46624	.10963	.27142
#1	3694.3	44244.	3475.9
#2	3670.0	44175.	3462.5

Sample Name: CCVH-5408055 Acquired: 11/7/2018 18:17:37 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00348**	**50.936**	**-.00322**	**.01042**	**.00106**	**-.00022**	**1.0782**	**.07354**	**.00008**	**.00128**	**.00138**	**-.00179**
Stddev	.00087	.425	.00323	.00079	.00049	.00046	.0004	.04950	.00022	.00032	.00001	.00063
%RSD	25.083	.83389	100.30	7.6198	46.237	214.04	.03611	67.316	265.54	24.759	.69883	35.002
#1	-.00286	51.237	-.00550	.00986	.00141	.00011	1.0785	.03853	-.00007	.00106	.00138	-.00224
#2	-.00409	50.636	-.00094	.01099	.00071	-.00054	1.0779	.10854	.00024	.00150	.00139	-.00135
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None
Value												
Range												

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**49.322**	**1.3547**	**-.00402**	**.20409**	**.00273**	**-.00045**	**262.81**	**.00461**	**.00040**	**-.00082**	F **6.8620**	**.00255**
Stddev	.302	.0103	.00014	.01161	.00004	.00037	2.45	.00035	.00265	.00332	.0913	.00086
%RSD	.61285	.76130	3.5638	5.6909	1.4975	83.741	.93184	7.5442	665.64	403.94	1.3300	33.804
#1	49.536	1.3620	-.00392	.19588	.00270	-.00071	264.54	.00486	-.00148	.00153	6.9265	.00194
#2	49.108	1.3474	-.00412	.21231	.00276	-.00018	261.08	.00437	.00228	-.00317	6.7974	.00316
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None	None	None	Chk Fail	None
Value											5.0000	
Range											10.490%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00691**	**-.01416**	**-.03029**	**-.00061**	**.00164**	**4.9012**	**.01842**	**-.00195**	**10.529**	**-.00983**	**.00054**	**.07961**
Stddev	.00566	.04028	.08621	.00081	.00045	.0042	.00006	.00451	.020	.00054	.00013	.00104
%RSD	81.995	284.57	284.57	134.25	27.575	.08611	.32610	231.33	.19103	5.5271	23.493	1.3107
#1	.01091	.01433	.03066	-.00003	.00132	4.9042	.01847	-.00514	10.515	-.00945	.00063	.07888
#2	.00290	-.04264	-.09125	-.00118	.00196	4.8982	.01838	.00124	10.543	-.01022	.00045	.08035
Check ?	None	None	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3891.4**	**46913.**	**3402.0**
Stddev	19.6	76.	5.1
%RSD	.50283	.16107	.15002
#1	3877.5	46966.	3405.6
#2	3905.2	46859.	3398.4

Sample Name: CCV-5407546 Acquired: 11/7/2018 18:20:10 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49668**	**.53018**	**1.0415**	**.50922**	**.52459**	**.50779**	**.00802**	**5.0711**	**.49765**	**.50570**	**.51212**	**.50881**
Stddev	.00217	.00460	.0141	.00131	.00195	.00038	.00263	.1212	.00298	.00327	.00412	.00146
%RSD	.43706	.86799	1.3496	.25761	.37217	.07471	32.799	2.3907	.59824	.64585	.80394	.28627
#1	.49821	.53344	1.0515	.51015	.52321	.50752	.00616	4.9854	.49976	.50801	.51503	.50984
#2	.49514	.52693	1.0316	.50829	.52597	.50806	.00988	5.1569	.49555	.50339	.50921	.50778
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3178**	**52.463**	**1.0666**	**19.518**	**.48450**	**.50467**	F **6.7871**	**.50475**	**.99993**	**1.0171**	**.81954**	**.99451**
Stddev	.0164	.029	.0060	.007	.00003	.00363	.7230	.00361	.00457	.0042	.01592	.00523
%RSD	.70544	.05522	.56124	.03418	.00558	.71979	10.652	.71515	.45661	.40837	1.9427	.52630
#1	2.3062	52.483	1.0624	19.523	.48448	.50723	6.2759	.50730	1.0032	1.0200	.83080	.99821
#2	2.3293	52.442	1.0708	19.513	.48452	.50210	7.2984	.50219	.99670	1.0142	.80829	.99081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0395**	**4.7040**	**10.066**	**1.0194**	**.52274**	**.01270**	**.47904**	**1.0373**	**-.01096**	**.49313**	**.47736**	**.50081**
Stddev	.0065	.0323	.069	.0065	.00342	.00072	.00023	.0097	.00711	.00124	.00119	.00157
%RSD	.62163	.68613	.68613	.63250	.65439	5.6418	.04814	.93629	64.833	.25205	.25000	.31330
#1	1.0441	4.6811	10.018	1.0239	.52032	.01219	.47888	1.0442	-.01599	.49401	.47652	.50192
#2	1.0349	4.7268	10.115	1.0148	.52516	.01321	.47921	1.0305	-.00594	.49225	.47821	.49970
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**4065.3**	**49900.**	**3518.9**
Stddev	4.7	21.	30.7
%RSD	.11612	.04220	.87295
#1	4068.6	49885.	3497.2
#2	4062.0	49915.	3540.6

Sample Name: CCB Acquired: 11/7/2018 18:22:34 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00085**	**.00308**	**.00137**	**.00516**	**.00122**	**-.00015**	**.00456**	F **.67824**	**.00016**	**-.00004**	**.00089**	**-.00298**
Stddev	.00016	.00041	.00527	.00019	.00034	.00019	.00384	.00511	.00024	.00013	.00000	.00054
%RSD	19.034	13.362	384.78	3.6147	27.803	122.50	84.259	.75324	155.92	303.37	.49202	18.196
#1	.00097	.00279	.00510	.00503	.00146	-.00029	.00184	.68185	-.00002	.00005	.00089	-.00337
#2	.00074	.00337	-.00236	.00529	.00098	-.00002	.00727	.67463	.00033	-.00014	.00089	-.00260
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit								.13500				
Low Limit								-.13500				

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00722**	**.75521**	**-.00627**	**.03003**	F **.00585**	**.00060**	F **.99914**	**.00004**	**-.00035**	**.00093**	F **.77670**	**.00099**
Stddev	.00161	.02044	.00334	.00344	.00001	.00023	.01969	.00029	.00338	.00051	.01154	.00040
%RSD	22.255	2.7065	53.228	11.448	.13907	37.918	1.9711	706.11	962.36	54.660	1.4856	40.068
#1	.00609	.76966	-.00391	.02760	.00584	.00044	1.0131	.00025	-.00274	.00057	.78486	.00127
#2	.00836	.74076	-.00864	.03246	.00585	.00076	.98521	-.00016	.00204	.00129	.76854	.00071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit					.00500		.50000				.10000	
Low Limit					-.01000		-.50000				-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00415**	**.01815**	**.03883**	**-.00084**	W **.00358**	**.00107**	**.00070**	**.00054**	**-.02844**	**.00084**	**-.00019**	**.00559**
Stddev	.00335	.01237	.02647	.00112	.00020	.00150	.00028	.00148	.07661	.00006	.00066	.00034
%RSD	80.754	68.159	68.159	133.36	5.6701	140.29	40.321	272.35	269.38	6.8588	341.64	6.1098
#1	.00651	.02689	.05755	-.00163	.00344	.00214	.00050	.00159	-.08261	.00088	-.00066	.00535
#2	.00178	.00940	.02012	-.00005	.00372	.00001	.00090	-.00050	.02573	.00080	.00027	.00583
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					.00120							
Low Limit					-.00120							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**4054.9**	**50166.**	**3494.6**
Stddev	8.7	173.	5.9
%RSD	.21370	.34548	.16754
#1	4061.0	50288.	3498.7
#2	4048.7	50043.	3490.5

Sample Name: CCVL-5415520 Acquired: 11/7/2018 18:25:11 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01174**	**.11179**	F **.02025**	**.10549**	**.01149**	**.00086**	**.12291**	**.22800**	**.00507**	**.01055**	**.01104**	**.01366**
Stddev	.00010	.00160	.00195	.00077	.00003	.00003	.00075	.00596	.00030	.00016	.00024	.00076
%RSD	.84158	1.4319	9.6386	.72558	.23679	3.3087	.61004	2.6155	5.9603	1.4869	2.1457	5.6009
#1	.01181	.11293	.02163	.10495	.01147	.00088	.12344	.23222	.00528	.01044	.01087	.01420
#2	.01167	.11066	.01887	.10603	.01151	.00084	.12238	.22379	.00486	.01066	.01121	.01312
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09915**	F **3.9584**	**.01985**	F **.29798**	**.01057**	**.01939**	F **1.9194**	**.04255**	**2.9244**	**.00962**	F **.66795**	**.01596**
Stddev	.00401	.0214	.00045	.11085	.00047	.00025	.0013	.00005	.0001	.00053	.00803	.00317
%RSD	4.0398	.53996	2.2524	37.198	4.4584	1.2744	.06761	.10829	.00254	5.5080	1.2026	19.882
#1	.10198	3.9735	.02016	.37636	.01090	.01956	1.9203	.04258	2.9243	.00999	.67363	.01821
#2	.09631	3.9433	.01953	.21960	.01024	.01921	1.9185	.04252	2.9244	.00925	.66227	.01372
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value		3.0000		.20000			1.0000				.10000	
Range		30.000%		30.000%			30.000%				30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01910**	**.43955**	**.94064**	**.09994**	**.01065**	**.01687**	**.01032**	**.01640**	F **.04117**	**.01096**	**.02033**	F **.02302**
Stddev	.00455	.00032	.00068	.00010	.00012	.00128	.00050	.00232	.01180	.00013	.00013	.00339
%RSD	23.826	.07251	.07251	.09645	1.1383	7.6106	4.8507	14.124	28.667	1.2268	.65768	14.749
#1	.01588	.43932	.94015	.10000	.01073	.01777	.01068	.01477	.03282	.01087	.02043	.02062
#2	.02232	.43977	.94112	.09987	.01056	.01596	.00997	.01804	.04952	.01106	.02024	.02542
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									-30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**4126.6**	**50511.**	**3562.9**
Stddev	7.7	108.	10.0
%RSD	.18618	.21386	.28184
#1	4132.0	50434.	3570.0
#2	4121.2	50587.	3555.8

Sample Name: 280-116619-A-6-A Acquired: 11/7/2018 18:27:45 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00120**	**.34272**	**-.00318**	**.96861**	**.02835**	**.00001**	**.00232**	**470.05**	**.00150**
Stddev	.00008	.01121	.00255	.02789	.00001	.00009	.00127	.11	.00002
%RSD	6.7665	3.2696	80.066	2.8793	.03847	628.80	54.960	.02348	1.4569
#1	.00114	.35064	-.00138	.98833	.02834	-.00005	.00322	469.97	.00149
#2	.00126	.33480	-.00498	.94889	.02835	.00008	.00142	470.13	.00152
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00221**	**.00042**	**.00506**	**.23497**	**14.340**	**.47366**	W **582.25**	**.32539**	**.08543**
Stddev	.00024	.00017	.00002	.00505	.195	.00222	3.83	.00105	.00312
%RSD	10.760	41.033	.44395	2.1479	1.3609	.46873	.65733	.32244	3.6568
#1	.00204	.00030	.00508	.23854	14.202	.47209	579.54	.32613	.08764
#2	.00237	.00054	.00505	.23140	14.478	.47523	584.95	.32465	.08322
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							500.00		
Low Limit							-.40000		

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **1568.7**	**.04282**	**.02636**	**-.00359**	F **1688.9**	**.00513**	**2.1664**	**8.7778**	**18.784**
Stddev	5.5	.00190	.00002	.00050	51.6	.00371	.0602	.2650	.567
%RSD	.35104	4.4392	.07781	14.068	3.0569	72.246	2.7777	3.0184	3.0184
#1	1564.8	.04416	.02637	-.00323	1725.4	.00776	2.2089	8.9651	19.185
#2	1572.6	.04147	.02634	-.00394	1652.4	.00251	2.1238	8.5905	18.384
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00367**	**9.3337**	**-.00456**	**.00539**	**-.00090**	**.12831**	**.00271**	**.00869**	**.00560**
Stddev	.00049	.0989	.00729	.00039	.00032	.10067	.00035	.00061	.00093
%RSD	13.332	1.0596	159.81	7.2993	35.802	78.459	13.119	6.9987	16.571
#1	-.00401	9.4037	.00059	.00567	-.00113	.05712	.00245	.00912	.00626
#2	-.00332	9.2638	-.00972	.00512	-.00067	.19949	.00296	.00826	.00495
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3560.3**	**42662.**	**3433.0**
Stddev	14.5	184.	19.5
%RSD	.40828	.43161	.56776
#1	3550.1	42792.	3446.8
#2	3570.6	42532.	3419.2

Sample Name: 280-116619-A-7-A Acquired: 11/7/2018 18:30:32 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00090**	**.00977**	**-.00406**	**.49964**	**.04466**	**-.00011**	**.00054**	**421.26**	**.00140**
Stddev	.00106	.00023	.00032	.00975	.00123	.00009	.00382	1.17	.00005
%RSD	117.64	2.3817	7.9436	1.9513	2.7578	84.470	710.87	.27891	3.6740
#1	.00015	.00960	-.00383	.50654	.04553	-.00018	.00324	422.09	.00137
#2	.00165	.00993	-.00428	.49275	.04379	-.00005	-.00216	420.43	.00144
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00375**	**.00037**	**.00802**	**.09931**	**11.239**	**.30594**	**244.63**	**.87884**	**.08223**
Stddev	.00024	.00023	.00033	.00065	.058	.00488	.45	.00156	.00189
%RSD	6.4943	63.210	4.1123	.65716	.51413	1.5935	.18531	.17803	2.3015
#1	.00392	.00020	.00779	.09885	11.199	.30939	244.95	.87995	.08357
#2	.00358	.00054	.00825	.09977	11.280	.30249	244.31	.87774	.08090
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**494.06**	**.04544**	**.01673**	**-.00174**	F **816.23**	**-.00164**	**.80840**	**6.9834**	**14.944**
Stddev	1.79	.00085	.00349	.00058	12.52	.00437	.01771	.2279	.488
%RSD	.36308	1.8798	20.889	33.328	1.5337	266.65	2.1908	3.2639	3.2639
#1	495.33	.04604	.01920	-.00216	825.08	-.00473	.82092	7.1445	15.289
#2	492.79	.04484	.01426	-.00133	807.38	.00145	.79588	6.8222	14.600
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00217**	**7.4178**	**-.00596**	**.00111**	**-.00105**	**.07602**	**.00318**	**.00417**	**.00578**
Stddev	.00094	.0297	.00185	.00014	.00186	.00147	.00044	.00098	.00088
%RSD	43.494	.40030	31.034	12.544	177.72	1.9310	13.820	23.545	15.289
#1	-.00284	7.4388	-.00727	.00120	.00027	.07499	.00349	.00487	.00516
#2	-.00150	7.3968	-.00465	.00101	-.00237	.07706	.00287	.00348	.00641
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3681.1**	**44762.**	**3383.8**
Stddev	9.2	87.	8.6
%RSD	.24863	.19516	.25300
#1	3674.6	44823.	3389.8
#2	3687.5	44700.	3377.7

Sample Name: 280-116619-A-8-A Acquired: 11/7/2018 18:33:04 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436581 200.7 (Ca Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.31574**	**.00426**	**1.6699**	**.01466**	**-.00014**	**.00544**	**340.46**	**.00156**
Stddev	.00031	.01019	.00242	.0520	.00027	.00037	.00176	.12	.00021
%RSD	866.81	3.2267	56.923	3.1134	1.8547	263.30	32.367	.03470	13.619
#1	-.00018	.32295	.00254	1.7066	.01485	.00012	.00420	340.55	.00171
#2	.00026	.30854	.00597	1.6331	.01447	-.00040	.00669	340.38	.00141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00394**	**.00085**	**.01088**	**.32193**	**12.194**	**1.5632**	F **1599.3**	**.21564**	**.10059**
Stddev	.00054	.00037	.00143	.00216	.220	.0082	6.4	.00103	.00359
%RSD	13.598	43.585	13.160	.66990	1.8053	.52262	.40085	.47578	3.5672
#1	.00432	.00059	.01189	.32041	12.038	1.5574	1603.9	.21636	.10313
#2	.00356	.00111	.00987	.32346	12.349	1.5690	1594.8	.21491	.09806
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
High Limit							1500.0		
Low Limit							-.40000		

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2789.3**	**.04806**	**.04567**	**-.00569**	F **2905.9**	**.00231**	W **8.4291**	**14.469**	**30.963**
Stddev	2.7	.00141	.00046	.00222	81.4	.00287	.3333	.396	.848
%RSD	.09557	2.9413	.99682	39.078	2.8007	124.11	3.9538	2.7389	2.7389
#1	2791.2	.04906	.04599	-.00727	2963.5	.00434	8.6647	14.749	31.563
#2	2787.4	.04706	.04535	-.00412	2848.4	.00028	8.1934	14.188	30.363
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit	500.00				200.00		5.0000		
Low Limit	11.000				-.20000		-.03000		

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00582**	**9.4521**	**-.00693**	**.00950**	**-.00126**	**.40508**	**.00388**	**.00522**	**.00694**
Stddev	.00287	.0329	.00298	.00001	.00351	.03101	.00066	.00092	.00222
%RSD	49.365	.34818	43.055	.10242	278.83	7.6561	17.081	17.584	32.021
#1	-.00785	9.4288	-.00482	.00950	-.00374	.38315	.00435	.00457	.00537
#2	-.00379	9.4754	-.00904	.00951	.00122	.42701	.00341	.00587	.00851
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3383.5**	**39684.**	**3324.9**
Stddev	6.9	29.	7.9
%RSD	.20304	.07379	.23835
#1	3378.7	39704.	3330.5
#2	3388.4	39663.	3319.3

Sample Name: MB 280-436565/1-A Acquired: 11/7/2018 18:35:51 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/7 Custom ID2: Custom ID3:
Comment: 436565 200.7 (Ca K Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00074**	**.00073**	**.00748**	**.00583**	**.00168**	**.00015**	**.00849**	F **.35155**	**-.00021**
Stddev	.00046	.00057	.00446	.00028	.00053	.00009	.00192	.10153	.00010
%RSD	62.407	78.191	59.659	4.8791	31.316	57.838	22.573	28.880	48.582
#1	.00106	.00032	.01064	.00603	.00205	.00009	.00714	.27976	-.00014
#2	.00041	.00113	.00433	.00562	.00131	.00021	.00985	.42334	-.00028
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit								.20000	
Low Limit								-.20000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00032**	**-.00258**	**.00072**	**.95566**	**-.00134**	W **.12435**	**.00021**	**-.00014**
Stddev	.00006	.00003	.00093	.00381	.03932	.00093	.01754	.00003	.00003
%RSD	275.50	10.613	36.033	530.17	4.1144	69.538	14.105	15.975	22.180
#1	.00006	.00030	-.00192	-.00197	.92785	-.00200	.13675	.00023	-.00011
#2	-.00002	.00034	-.00323	.00341	.98346	-.00068	.11194	.00018	-.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							.10000		
Low Limit							-.10000		

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.9177**	**-.00007**	**-.00167**	**-.00103**	F **.89116**	**-.00154**	**-.00210**	**.04976**	**.10649**
Stddev	.3924	.00020	.00253	.00060	.05792	.00300	.00193	.03790	.08111
%RSD	13.451	271.76	151.36	58.362	6.4989	194.13	91.972	76.167	76.167
#1	2.6402	.00007	.00012	-.00060	.93211	-.00366	-.00073	.02296	.04914
#2	3.1952	-.00021	-.00346	-.00145	.85021	.00058	-.00346	.07657	.16385
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None
High Limit	1.0000				.10000				
Low Limit	-1.0000				-.10000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00140**	W **.00765**	**.00314**	**.00065**	**-.00009**	**-.03628**	**-.00001**	**-.00040**	**.00357**
Stddev	.00011	.00237	.00130	.00066	.00447	.05266	.00078	.00027	.00020
%RSD	7.5901	30.970	41.429	102.31	5216.2	145.15	13460.	68.338	5.5842
#1	-.00148	.00598	.00407	.00018	.00308	-.07352	-.00056	-.00059	.00371
#2	-.00132	.00933	.00222	.00112	-.00325	.00096	.00055	-.00020	.00343
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		.00500							
Low Limit		-.00500							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**4136.0**	**51084.**	**3537.4**
Stddev	9.9	44.	26.2
%RSD	.24046	.08659	.74076
#1	4143.0	51052.	3518.9
#2	4129.0	51115.	3556.0

Sample Name: LCS 280-436565/2-A Acquired: 11/7/2018 18:38:26 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436565 200.7 (Ca K Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.03511**	**2.0527**	**1.0453**	**1.0288**	**2.1290**	**.05108**	**2.1175**	**49.777**	**.09653**
Stddev	.00114	.0206	.0036	.0115	.0008	.00025	.0262	.123	.00177
%RSD	3.2540	1.0028	.34509	1.1129	.03668	.49018	1.2348	.24770	1.8319
#1	.03431	2.0673	1.0479	1.0369	2.1296	.05090	2.1360	49.864	.09778
#2	.03592	2.0382	1.0428	1.0207	2.1285	.05126	2.0990	49.690	.09528
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750								
Low Limit	.04275								

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50018**	**.20393**	**.25463**	**.93655**	**53.797**	**1.0756**	**48.924**	**.48714**	**1.0382**
Stddev	.00593	.00235	.00013	.00845	.020	.0029	.063	.00067	.0150
%RSD	1.1863	1.1547	.05107	.90202	.03772	.27253	.12914	.13808	1.4474
#1	.50437	.20560	.25454	.94252	53.782	1.0777	48.879	.48666	1.0488
#2	.49598	.20227	.25473	.93058	53.811	1.0735	48.968	.48761	1.0276
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.367**	**.49507**	**10.418**	**.50857**	**2.8864**	**.50725**	**2.1254**	F **7.2133**	**15.436**
Stddev	.201	.00477	.115	.00239	.0374	.00848	.0273	.0220	.047
%RSD	.36901	.96273	1.1080	.46921	1.2968	1.6717	1.2838	.30434	.30434
#1	54.508	.49844	10.500	.51026	2.9129	.51325	2.1447	7.1977	15.403
#2	54.225	.49170	10.336	.50689	2.8600	.50126	2.1061	7.2288	15.470
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit								11.000	
Low Limit								9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0599**	**1.0647**	**.99015**	**.98535**	**2.0485**	**2.1206**	**.50998**	**.48714**	**.52415**
Stddev	.0261	.0005	.00035	.00112	.0237	.0080	.00161	.00132	.00236
%RSD	1.2652	.05046	.03541	.11335	1.1557	.37529	.31539	.27153	.45103
#1	2.0783	1.0651	.99040	.98456	2.0652	2.1263	.51112	.48621	.52582
#2	2.0414	1.0643	.98990	.98614	2.0318	2.1150	.50884	.48808	.52248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3990.0**	**48782.**	**3489.8**
Stddev	2.2	103.	25.0
%RSD	.05440	.21096	.71559
#1	3991.5	48710.	3472.1
#2	3988.4	48855.	3507.4

Sample Name: 280-116606-A-1-A Acquired: 11/7/2018 18:40:46 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436565 200.7 (Ca K Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00104**	**.02245**	**.00216**	**.26598**	**.03017**	**-.00030**	**.00527**	**72.878**	**.00039**
Stddev	.00039	.00038	.00131	.00360	.00014	.00005	.00025	.127	.00025
%RSD	37.828	1.6744	60.543	1.3550	.44863	16.984	4.6550	.17374	64.851
#1	.00076	.02272	.00309	.26853	.03027	-.00027	.00510	72.968	.00056
#2	.00132	.02219	.00124	.26344	.03008	-.00034	.00544	72.789	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00025**	**.00089**	**.00055**	**.02448**	**20.561**	**.01165**	**21.382**	**.01518**	**.00395**
Stddev	.00022	.00027	.00112	.00370	.113	.00228	.042	.00011	.00052
%RSD	88.966	30.461	204.76	15.132	.54758	19.536	.19518	.74519	13.240
#1	-.00040	.00108	-.00024	.02186	20.641	.01004	21.412	.01526	.00358
#2	-.00009	.00070	.00134	.02710	20.482	.01326	21.353	.01510	.00432
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**126.73**	**.00150**	**3.4718**	**-.00889**	**24.123**	**-.00029**	**.00204**	**20.115**	**43.047**
Stddev	.67	.00007	.0449	.00050	.267	.00046	.00221	.259	.553
%RSD	.53229	4.9139	1.2944	5.5907	1.1061	155.14	108.39	1.2852	1.2852
#1	127.21	.00144	3.5036	-.00854	24.312	-.00062	.00360	20.298	43.438
#2	126.26	.00155	3.4400	-.00924	23.934	.00003	.00048	19.933	42.656
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00005**	**.33068**	**.00296**	**.00168**	**-.00060**	**-.04516**	**.00837**	**.04452**	**.00469**
Stddev	.00032	.00102	.00246	.00061	.00029	.01367	.00033	.00071	.00220
%RSD	668.32	.30757	83.129	36.528	47.743	30.268	3.8951	1.5991	46.896
#1	-.00018	.33140	.00470	.00211	-.00040	-.03549	.00814	.04502	.00625
#2	.00027	.32996	.00122	.00124	-.00080	-.05482	.00860	.04402	.00314
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3987.9**	**48009.**	**3486.2**
Stddev	16.7	152.	2.2
%RSD	.41796	.31650	.06173
#1	3976.2	47901.	3487.7
#2	3999.7	48116.	3484.7

Sample Name: 116606-A-1-A SD@5 Acquired: 11/7/2018 18:43:18 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436565 200.7 (Ca K Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00059**	**.00535**	**.00413**	**.05721**	**.00740**	**-.00006**	**.00514**	**15.050**	**-.00012**
Stddev	.00057	.00026	.00266	.00089	.00023	.00021	.00167	.052	.00014
%RSD	96.775	4.9383	64.448	1.5545	3.1525	386.38	32.564	.34797	113.32
#1	.00099	.00554	.00225	.05784	.00724	-.00021	.00632	15.013	-.00002
#2	.00019	.00516	.00602	.05658	.00757	.00010	.00396	15.087	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**.00130**	**.00086**	**.03844**	**4.7061**	**.00399**	**4.5201**	**.00349**	**.00046**
Stddev	.00024	.00005	.00084	.00165	.0774	.00184	.0491	.00022	.00029
%RSD	95.549	4.1972	97.575	4.2802	1.6446	46.101	1.0861	6.4145	63.778
#1	-.00008	.00134	.00145	.03960	4.7608	.00529	4.5548	.00365	.00025
#2	-.00043	.00126	.00027	.03727	4.6514	.00269	4.4854	.00334	.00066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.532**	**.00076**	**.69088**	**-.00282**	**5.2225**	**.00020**	**-.00164**	**4.1010**	**8.7761**
Stddev	.411	.00058	.00855	.00070	.0779	.00005	.00141	.0223	.0477
%RSD	1.4945	77.021	1.2381	24.611	1.4925	27.680	86.259	.54404	.54404
#1	27.241	.00117	.69693	-.00233	5.2776	.00016	-.00264	4.1167	8.8098
#2	27.823	.00035	.68483	-.00332	5.1674	.00023	-.00064	4.0852	8.7423
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00092**	**.06917**	**.00310**	**.00077**	**-.00064**	**-.04087**	**.00222**	**.01351**	**.00504**
Stddev	.00061	.00093	.00163	.00014	.00103	.03378	.00083	.00026	.00440
%RSD	66.597	1.3511	52.634	17.952	162.07	82.649	37.332	1.9150	87.344
#1	-.00049	.06850	.00425	.00067	-.00137	-.06476	.00163	.01369	.00815
#2	-.00135	.06983	.00195	.00087	.00009	-.01699	.00280	.01333	.00193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**4019.0**	**49372.**	**3475.0**
Stddev	.2	57.	19.7
%RSD	.00520	.11594	.56753
#1	4019.2	49331.	3461.1
#2	4018.9	49412.	3488.9

Sample Name: 280-116606-A-1-B MS Acquired: 11/7/2018 18:45:51 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436565 200.7 (Ca K Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03507**	**2.0201**	**1.0631**	**1.2771**	**2.1540**	**.05194**	W **2.0661**	**124.00**	**.09574**
Stddev	.00060	.0274	.0185	.0179	.0085	.00071	.0215	.32	.00167
%RSD	1.7218	1.3543	1.7377	1.4027	.39459	1.3626	1.0397	.25770	1.7466
#1	.03550	2.0395	1.0762	1.2898	2.1480	.05144	2.0813	123.78	.09692
#2	.03464	2.0008	1.0501	1.2644	2.1600	.05244	2.0509	124.23	.09456
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49214**	**.20230**	**.25678**	**.95094**	**74.191**	**1.0858**	**70.102**	**.50083**	**1.0391**
Stddev	.00725	.00368	.00098	.00637	.237	.0044	.088	.00093	.0170
%RSD	1.4730	1.8198	.38133	.67035	.31969	.40523	.12574	.18665	1.6339
#1	.49726	.20490	.25748	.94643	74.024	1.0889	70.165	.50149	1.0511
#2	.48701	.19970	.25609	.95545	74.359	1.0827	70.040	.50017	1.0271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**183.26**	**.48805**	**14.115**	**.48837**	**26.667**	**.49614**	**2.1171**	**21.372**	**45.736**
Stddev	.73	.00787	.206	.00609	.302	.01474	.0385	.022	.047
%RSD	.40060	1.6117	1.4582	1.2471	1.1324	2.9713	1.8200	.10247	.10247
#1	182.74	.49361	14.261	.49268	26.881	.50656	2.1443	21.357	45.703
#2	183.78	.48249	13.970	.48407	26.453	.48571	2.0898	21.388	45.769
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0253**	**1.4068**	**.99818**	**.99260**	**1.9532**	**2.1060**	**.52168**	**.53256**	**.52695**
Stddev	.0294	.0057	.00221	.00298	.0328	.0453	.00173	.00280	.00010
%RSD	1.4508	.40720	.22147	.29995	1.6780	2.1493	.33157	.52558	.01961
#1	2.0461	1.4027	.99974	.99470	1.9764	2.1380	.52290	.53454	.52702
#2	2.0045	1.4108	.99662	.99049	1.9301	2.0740	.52045	.53058	.52688
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3848.4**	**46285.**	**3395.2**
Stddev	7.5	185.	3.5
%RSD	.19494	.39901	.10293
#1	3843.1	46415.	3397.7
#2	3853.7	46154.	3392.8

Sample Name: 280-116606-A-1-C MSD Acquired: 11/7/2018 18:48:10 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436565 200.7 (Ca K Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03474**	**2.0081**	**1.0450**	**1.2692**	**2.1207**	**.05116**	W **2.0459**	**121.71**	**.09544**
Stddev	.00032	.0291	.0117	.0147	.0099	.00042	.0228	.70	.00089
%RSD	.92267	1.4481	1.1148	1.1570	.46596	.82084	1.1157	.57705	.92841
#1	.03452	2.0287	1.0532	1.2796	2.1277	.05146	2.0620	122.20	.09607
#2	.03497	1.9876	1.0367	1.2588	2.1137	.05087	2.0297	121.21	.09482
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48902**	**.20089**	**.25311**	**1.0265**	**72.976**	**1.0670**	**69.021**	**.49568**	**1.0340**
Stddev	.00636	.00285	.00012	.0034	.409	.0030	.029	.00012	.0145
%RSD	1.3011	1.4182	.04655	.32680	.56079	.28392	.04167	.02336	1.4011
#1	.49352	.20291	.25302	1.0288	73.265	1.0691	69.001	.49560	1.0443
#2	.48452	.19888	.25319	1.0241	72.686	1.0648	69.041	.49576	1.0238
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**178.95**	**.48456**	**14.005**	**.48751**	**26.280**	**.49300**	**2.1073**	**20.578**	**44.037**
Stddev	.07	.00520	.164	.00500	.244	.00594	.0220	.128	.275
%RSD	.03882	1.0723	1.1698	1.0254	.92868	1.2039	1.0452	.62339	.62339
#1	178.90	.48823	14.121	.49105	26.453	.49720	2.1229	20.669	44.231
#2	179.00	.48088	13.889	.48398	26.108	.48881	2.0917	20.487	43.843
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0231**	**1.3835**	**.98608**	**.98182**	**1.9308**	**2.0813**	**.51492**	**.52312**	**.52426**
Stddev	.0222	.0069	.00094	.00007	.0196	.0719	.00236	.00252	.00445
%RSD	1.0966	.50083	.09576	.00702	1.0132	3.4553	.45796	.48217	.84931
#1	2.0388	1.3884	.98541	.98177	1.9446	2.0304	.51659	.52490	.52741
#2	2.0074	1.3786	.98674	.98187	1.9170	2.1321	.51325	.52133	.52111
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3854.6**	**46934.**	**3433.6**
Stddev	14.7	118.	4.5
%RSD	.38223	.25213	.13154
#1	3865.0	46850.	3430.4
#2	3844.1	47018.	3436.8

Sample Name: 280-116606-A-2-A Acquired: 11/7/2018 18:50:29 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436565 200.7 (Ca K Mg Na)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00056**	**.10001**	**-.00020**	**.06901**	**.03787**	**.00023**	**.00475**	**22.274**	**.00019**
Stddev	.00011	.00071	.00638	.00209	.00008	.00027	.00484	.086	.00026
%RSD	19.035	.70657	3220.8	3.0281	.20898	116.10	101.92	.38481	137.39
#1	.00064	.10051	-.00471	.07049	.03793	.00004	.00133	22.335	.00001
#2	.00049	.09951	.00431	.06753	.03781	.00042	.00817	22.214	.00037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00015**	**.00065**	**-.00152**	**.21030**	**4.1766**	**.00442**	**7.3271**	**.01256**	**.00269**
Stddev	.00007	.00007	.00035	.00394	.0244	.00065	.0643	.00019	.00062
%RSD	46.930	10.423	22.896	1.8747	.58520	14.607	.87689	1.4929	23.012
#1	-.00010	.00061	-.00176	.21309	4.1939	.00487	7.3725	.01269	.00225
#2	-.00020	.00070	-.00127	.20751	4.1593	.00396	7.2817	.01243	.00313
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.346**	**.00031**	**.09962**	**-.00539**	**3.5633**	**-.00085**	**-.00489**	**12.091**	**25.876**
Stddev	.565	.00003	.00369	.00176	.0498	.00515	.00396	.202	.431
%RSD	2.7773	9.7023	3.6994	32.630	1.3965	608.41	81.027	1.6666	1.6666
#1	19.947	.00029	.10223	-.00415	3.5985	-.00449	-.00769	12.234	26.181
#2	20.746	.00033	.09702	-.00664	3.5281	.00279	-.00209	11.949	25.571
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00018**	**.12350**	**-.00117**	**.00813**	**-.00028**	**.00691**	**.00853**	**.00184**	**.00656**
Stddev	.00044	.00093	.00164	.00006	.00337	.05460	.00043	.00087	.00017
%RSD	241.85	.74951	140.06	.77355	1206.2	790.15	5.0762	46.994	2.5350
#1	-.00049	.12284	-.00233	.00809	-.00266	-.03170	.00883	.00123	.00644
#2	.00013	.12415	-.00001	.00818	.00210	.04552	.00822	.00246	.00667
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**4051.7**	**49850.**	**3516.4**
Stddev	9.6	2.	47.9
%RSD	.23575	.00479	1.3616
#1	4058.5	49848.	3482.5
#2	4045.0	49851.	3550.2

Sample Name: CCVH-5408055 Acquired: 11/7/2018 18:53:02 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00242**	**50.831**	**-.00804**	**.00436**	**.00111**	**-.00030**	**1.0649**	**.02846**	**.00003**	**.00162**	**.00093**	**-.00248**
Stddev	.00090	.010	.00264	.00016	.00005	.00014	.0190	.00449	.00022	.00045	.00008	.00055
%RSD	37.197	.01908	32.847	3.7678	4.3498	46.351	1.7849	15.770	792.42	27.894	8.4498	22.028
#1	-.00305	50.838	-.00990	.00424	.00115	-.00020	1.0783	.02529	.00018	.00130	.00088	-.00210
#2	-.00178	50.824	-.00617	.00448	.00108	-.00040	1.0514	.03163	-.00013	.00194	.00099	-.00287
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None
Value												
Range												

Elem	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**48.709**	**.58013**	**-.00041**	**-.07638**	**.00246**	**-.00033**	**266.00**	**.00358**	**.00359**	**-.00110**	F **5.7729**	**.00235**
Stddev	.130	.03737	.00129	.00835	.00013	.00041	.48	.00005	.00229	.00126	.0788	.00152
%RSD	.26731	6.4422	316.55	10.934	5.2745	123.53	.18073	1.5111	63.782	114.38	1.3656	64.672
#1	48.617	.60655	.00051	-.07048	.00236	-.00062	266.34	.00362	.00197	-.00199	5.8286	.00127
#2	48.801	.55370	-.00132	-.08229	.00255	-.00004	265.66	.00354	.00521	-.00021	5.7171	.00342
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None	None	None	Chk Fail	None
Value											5.0000	
Range											10.490%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00665**	**.03713**	**.07947**	**.00043**	**.00044**	**4.9141**	**.01829**	**-.00019**	**10.479**	**-.00912**	**.00020**	**.08265**
Stddev	.00028	.03379	.07230	.00125	.00011	.0050	.00038	.00002	.035	.00003	.00007	.00069
%RSD	4.1922	90.988	90.988	289.01	25.841	.10271	2.0620	11.792	.33688	.28457	36.202	.84005
#1	.00685	.01324	.02834	-.00045	.00052	4.9105	.01802	-.00018	10.504	-.00914	.00025	.08314
#2	.00646	.06103	.13059	.00132	.00036	4.9176	.01856	-.00021	10.454	-.00911	.00015	.08216
Check ?	None	None	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3891.8**	**47255.**	**3369.9**
Stddev	6.1	33.	11.0
%RSD	.15599	.07076	.32515
#1	3896.1	47279.	3362.2
#2	3887.5	47232.	3377.7

Sample Name: CCV-5407546 Acquired: 11/7/2018 18:55:35 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50422**	F **.62027**	**1.0477**	**.50834**	**.52388**	**.50770**	**.00501**	**4.9986**	**.50194**	**.50890**	**.51265**	**.51687**
Stddev	.00065	.00791	.0073	.00327	.00212	.00253	.00072	.0113	.00343	.00445	.00441	.00196
%RSD	.12940	1.2748	.69619	.64363	.40419	.49901	14.469	.22651	.68394	.87404	.86084	.37944
#1	.50468	.62586	1.0529	.51065	.52538	.50949	.00450	5.0066	.50437	.51204	.51577	.51826
#2	.50376	.61468	1.0426	.50602	.52238	.50591	.00552	4.9906	.49951	.50575	.50953	.51548
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value		.50000										
Range		10.000%										

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.3992**	**52.590**	**1.0728**	**19.812**	**.49168**	**.50649**	F **6.3358**	**.50787**	**1.0040**	**1.0234**	**.53323**	**.99396**
Stddev	.0064	.046	.0063	.037	.00089	.00563	.1399	.00478	.0019	.0098	.00780	.01480
%RSD	.26581	.08701	.58304	.18657	.18083	1.1123	2.2078	.94169	.19113	.95410	1.4622	1.4892
#1	2.3947	52.622	1.0773	19.838	.49231	.51047	6.2369	.51125	1.0054	1.0303	.53874	1.0044
#2	2.4037	52.557	1.0684	19.786	.49106	.50250	6.4347	.50449	1.0027	1.0165	.52772	.98350
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0406**	**4.7648**	**10.197**	**1.0238**	**.52124**	**.02320**	**.48656**	**1.0433**	**.00045**	**.49863**	**.48178**	**.50268**
Stddev	.0056	.0241	.052	.0060	.00037	.00150	.00222	.0079	.04873	.00067	.00114	.00465
%RSD	.54312	.50539	.50539	.58924	.07037	6.4446	.45718	.75579	10729.	.13361	.23712	.92494
#1	1.0446	4.7478	10.160	1.0281	.52098	.02215	.48814	1.0488	.03491	.49816	.48258	.50597
#2	1.0366	4.7818	10.233	1.0196	.52150	.02426	.48499	1.0377	-.03400	.49910	.48097	.49939
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3987.5**	**48740.**	**3449.7**
Stddev	25.1	152.	31.3
%RSD	.63015	.31096	.90654
#1	4005.3	48633.	3427.5
#2	3969.8	48847.	3471.8

Sample Name: CCB Acquired: 11/7/2018 18:57:59 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00115**	**.00063**	**.00413**	**.00281**	W **.00351**	**.00000**	**.00544**	F **.36777**	**.00033**	**-.00035**	**.00026**	**-.00363**
Stddev	.00045	.00008	.00114	.00036	.00307	.00048	.00113	.49953	.00031	.00009	.00005	.00026
%RSD	38.912	13.088	27.626	12.639	87.660	54482.	20.780	135.83	94.254	25.297	18.082	7.0535
#1	.00146	.00057	.00332	.00307	.00133	-.00034	.00464	.01454	.00055	-.00029	.00029	-.00345
#2	.00083	.00069	.00493	.00256	.00568	.00034	.00623	.72099	.00011	-.00041	.00023	-.00381
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					.00200			.13500				
Low Limit					-.00200			-.13500				

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.07015**	**.50525**	**.00278**	W **.06081**	**.00024**	**.00106**	F **1.5622**	**.00018**	**-.00304**	**-.00195**	F **.43646**	**.00277**
Stddev	.03792	.14598	.00300	.06583	.00008	.00025	1.6050	.00045	.00135	.00204	.00526	.00326
%RSD	54.056	28.893	107.99	108.25	33.802	23.551	102.74	248.22	44.458	104.66	1.2055	117.40
#1	.04334	.40203	.00066	.10736	.00030	.00088	.42730	.00050	-.00209	-.00340	.44019	.00508
#2	.09696	.60848	.00490	.01427	.00019	.00123	2.6970	-.00014	-.00400	-.00051	.43274	.00047
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit	.05000			.04000			.50000				.10000	
Low Limit	-.05000			-.04000			-.50000				-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00024**	**.06071**	**.12991**	**-.00122**	W **.00567**	**.00014**	**.00063**	**-.00038**	**-.03011**	**.00048**	**-.00054**	**.00357**
Stddev	.00505	.05246	.11227	.00084	.00802	.00190	.00069	.00043	.01125	.00041	.00068	.00346
%RSD	2074.7	86.422	86.422	68.774	141.50	1334.5	109.36	112.31	37.354	85.080	124.72	96.959
#1	.00382	.02361	.05052	-.00063	-.00000	-.00120	.00014	-.00069	-.03806	.00019	-.00006	.00112
#2	-.00333	.09780	.20930	-.00181	.01133	.00149	.00111	-.00008	-.02215	.00077	-.00102	.00602
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					.00120							
Low Limit					-.00120							

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**4005.4**	**49518.**	**3433.8**
Stddev	5.3	204.	39.3
%RSD	.13161	.41155	1.1447
#1	4009.1	49374.	3406.0
#2	4001.6	49662.	3461.6

Sample Name: CCVL-5415520 Acquired: 11/7/2018 19:00:37 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01061**	**.11288**	**.01897**	**.10121**	**.01168**	**.00084**	**.12451**	**.22273**	**.00449**	**.01068**	**.01051**	**.01293**
Stddev	.00068	.00284	.00099	.00034	.00033	.00010	.00498	.00594	.00034	.00032	.00030	.00051
%RSD	6.4374	2.5198	5.2333	.33988	2.8108	11.996	3.9983	2.6688	7.5146	3.0181	2.8431	3.9125
#1	.01013	.11489	.01968	.10145	.01192	.00076	.12803	.21853	.00472	.01091	.01030	.01328
#2	.01109	.11087	.01827	.10096	.01145	.00091	.12099	.22694	.00425	.01046	.01072	.01257
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09065**	**3.6701**	**.02555**	F **.26380**	**.01023**	**.01927**	F **1.5623**	**.04198**	**2.9097**	**.00877**	F **.45686**	**.01875**
Stddev	.00068	.0766	.00315	.00139	.00010	.00016	.0693	.00008	.0406	.00104	.02597	.00184
%RSD	.75562	2.0880	12.345	.52642	.97248	.84197	4.4325	.18678	1.3944	11.807	5.6840	9.7919
#1	.09016	3.6159	.02332	.26282	.01016	.01938	1.5134	.04204	2.9384	.00804	.47522	.01745
#2	.09113	3.7243	.02778	.26478	.01030	.01915	1.6113	.04193	2.8810	.00950	.43850	.02005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value				.20000			1.0000				.10000	
Range				30.000%			30.000%				30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.02889**	**.47042**	**1.0067**	**.10133**	**.01098**	**.01670**	**.01024**	**.01666**	F **-.00809**	**.01037**	**.01957**	F **.02153**
Stddev	.00001	.04601	.0985	.00117	.00015	.00082	.00055	.00108	.03471	.00025	.00032	.00375
%RSD	.04780	9.7816	9.7816	1.1497	1.4103	4.9109	5.3369	6.4947	429.25	2.4104	1.6499	17.395
#1	.02888	.43788	.93706	.10216	.01087	.01612	.00986	.01742	-.03263	.01019	.01980	.02418
#2	.02890	.50295	1.0763	.10051	.01109	.01728	.01063	.01589	.01646	.01054	.01934	.01888
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value	.02000								.06000			.01500
Range	30.000%								-30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**4066.1**	**50048.**	**3425.3**
Stddev	.7	297.	1.3
%RSD	.01656	.59434	.03806
#1	4065.6	50258.	3424.4
#2	4066.6	49838.	3426.2

Sample Name: MB 280-436579/1-A Acquired: 11/7/2018 19:03:13 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/7 Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00061**	**.00499**	**-.00029**	**.00179**	**.00340**	**.00039**	**.00302**	F **.20251**	**-.00004**
Stddev	.00020	.00029	.00054	.00004	.00235	.00092	.00358	.21024	.00014
%RSD	32.875	5.8536	185.01	2.2457	69.306	238.04	118.22	103.82	341.85
#1	.00047	.00520	.00009	.00176	.00506	.00103	.00050	.35117	-.00014
#2	.00076	.00478	-.00068	.00182	.00173	-.00026	.00555	.05385	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit								.20000	
Low Limit								-.20000	

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**.00008**	**-.00236**	W **.05699**	**.51857**	**-.00126**	**.00611**	**.00017**	**-.00029**
Stddev	.00015	.00021	.00005	.05674	.13734	.00110	.00583	.00007	.00002
%RSD	234.16	254.94	2.0258	99.554	26.485	86.883	95.397	40.311	8.3114
#1	-.00017	.00023	-.00232	.09711	.61568	-.00049	.01023	.00012	-.00027
#2	.00004	-.00007	-.00239	.01687	.42145	-.00204	.00199	.00022	-.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit				.05000					
Low Limit				-.05000					

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **1.1832**	**.00038**	**-.00114**	**-.00284**	F **.28245**	**-.00064**	**.00138**	**.00424**	**.00907**
Stddev	.8703	.00015	.00034	.00134	.00190	.00238	.00129	.03623	.07753
%RSD	73.556	38.328	29.982	47.407	.67279	370.30	93.224	854.41	854.41
#1	1.7986	.00028	-.00138	-.00379	.28380	-.00232	.00230	.02986	.06390
#2	.56779	.00048	-.00090	-.00189	.28111	.00104	.00047	-.02138	-.04575
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None
High Limit	1.0000				.10000				
Low Limit	-1.0000				-.10000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00159**	**.00335**	**.00253**	**.00057**	**-.00299**	**-.02327**	**.00031**	**.00062**	**.00296**
Stddev	.00104	.00346	.00023	.00003	.00048	.04104	.00108	.00077	.00338
%RSD	65.702	103.32	9.2198	6.0031	16.228	176.34	346.83	123.19	114.27
#1	-.00233	.00580	.00236	.00059	-.00264	-.05230	-.00045	.00116	.00534
#2	-.00085	.00090	.00269	.00054	-.00333	.00575	.00107	.00008	.00057
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**4097.0**	**51062.**	**3512.4**
Stddev	14.4	58.	26.5
%RSD	.35240	.11274	.75328
#1	4086.8	51022.	3531.1
#2	4107.2	51103.	3493.6

Sample Name: LCS 280-436579/2-A Acquired: 11/7/2018 19:05:49 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.03443**	**2.0342**	**1.0288**	**1.0200**	**2.0800**	**.05009**	**2.0845**	**48.756**	**.09528**
Stddev	.00028	.0252	.0115	.0064	.0003	.00030	.0139	.142	.00036
%RSD	.82471	1.2398	1.1211	.63041	.01423	.60862	.66677	.29221	.37983
#1	.03422	2.0520	1.0370	1.0246	2.0802	.05031	2.0944	48.857	.09553
#2	.03463	2.0163	1.0207	1.0155	2.0798	.04988	2.0747	48.655	.09502
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750								
Low Limit	.04275								

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49362**	**.20172**	**.25190**	**.91147**	**52.733**	**1.0535**	**48.149**	**.48056**	**1.0241**
Stddev	.00456	.00217	.00021	.00409	.073	.0043	.103	.00064	.0113
%RSD	.92376	1.0741	.08312	.44922	.13828	.40934	.21383	.13241	1.1065
#1	.49684	.20325	.25176	.90857	52.784	1.0565	48.222	.48101	1.0321
#2	.49040	.20018	.25205	.91436	52.681	1.0504	48.076	.48011	1.0161
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**53.280**	**.48902**	**10.278**	**.50129**	**2.4159**	**.49680**	**2.0979**	F **8.8288**	**18.894**
Stddev	.322	.00345	.100	.00706	.0151	.00177	.0213	.0607	.130
%RSD	.60448	.70510	.97020	1.4075	.62548	.35662	1.0142	.68722	.68722
#1	53.052	.49145	10.348	.50628	2.4266	.49805	2.1129	8.8717	18.985
#2	53.507	.48658	10.207	.49630	2.4052	.49555	2.0829	8.7859	18.802
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit								11.000	
Low Limit								9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0283**	**1.0427**	**.97888**	**.96900**	**2.0281**	**2.0979**	**.50371**	**.47941**	**.51308**
Stddev	.0149	.0023	.00101	.00281	.0192	.0168	.00160	.00074	.00206
%RSD	.73671	.21929	.10306	.29011	.94682	.79956	.31812	.15403	.40162
#1	2.0389	1.0443	.97959	.97099	2.0417	2.1098	.50484	.47993	.51454
#2	2.0178	1.0411	.97816	.96702	2.0145	2.0860	.50257	.47889	.51163
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3927.7**	**48001.**	**3429.9**
Stddev	5.0	77.	16.3
%RSD	.12624	.16003	.47599
#1	3924.2	48055.	3418.4
#2	3931.2	47947.	3441.5

Sample Name: 116515-A-1-A Acquired: 11/7/2018 19:08:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00077**	**.01920**	**.00293**	**2.0322**	**.05106**	**-.00006**	**.00508**	**20.156**	**-.00012**
Stddev	.00038	.00025	.00142	.0268	.00046	.00012	.00145	.052	.00021
%RSD	49.385	1.3015	48.545	1.3183	.89196	194.34	28.571	.25920	177.13
#1	.00050	.01938	.00192	2.0511	.05139	-.00014	.00611	20.193	-.00026
#2	.00103	.01903	.00393	2.0132	.05074	.00002	.00406	20.119	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00029**	**.00096**	**.00097**	**.57117**	**6.6623**	**.03213**	**7.7806**	**.01350**	**.00448**
Stddev	.00006	.00001	.00084	.00282	.0368	.00482	.0144	.00015	.00037
%RSD	21.572	1.4194	85.879	.49421	.55208	15.011	.18478	1.0887	8.2556
#1	.00034	.00095	.00038	.57317	6.6883	.02872	7.7908	.01340	.00474
#2	.00025	.00097	.00156	.56917	6.6363	.03554	7.7704	.01360	.00421
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**322.35**	**.00114**	**.03410**	**-.00324**	**33.480**	**.00005**	**.00183**	**6.0000**	**12.840**
Stddev	1.87	.00019	.00522	.00088	.445	.00093	.00015	.0057	.012
%RSD	.58115	16.432	15.310	27.240	1.3277	1869.5	8.3464	.09470	.09470
#1	323.68	.00127	.03779	-.00386	33.794	.00071	.00172	5.9959	12.831
#2	321.03	.00101	.03040	-.00262	33.166	-.00061	.00194	6.0040	12.848
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00121**	**1.6368**	**.00109**	**.00072**	**-.00340**	**-.06674**	**.00035**	**.00277**	**.00634**
Stddev	.00008	.0038	.00091	.00022	.00005	.00107	.00088	.00060	.00019
%RSD	6.8715	.23420	83.559	30.994	1.4928	1.6006	252.64	21.826	3.0039
#1	-.00127	1.6395	.00174	.00088	-.00344	-.06750	.00097	.00319	.00648
#2	-.00115	1.6341	.00045	.00056	-.00336	-.06599	-.00027	.00234	.00621
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3922.8**	**47177.**	**3453.4**
Stddev	8.7	256.	20.1
%RSD	.22133	.54340	.58263
#1	3928.9	46995.	3439.2
#2	3916.6	47358.	3467.7

Sample Name: 116515-A-1-A SD@5 Acquired: 11/7/2018 19:10:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00137**	**.00425**	**.00173**	**.41839**	**.01142**	**-.00001**	**.00365**	**4.1206**	**-.00021**
Stddev	.00108	.00061	.00155	.00739	.00107	.00002	.00141	.0004	.00019
%RSD	78.743	14.286	89.574	1.7659	9.3525	190.97	38.631	.00891	91.486
#1	.00061	.00468	.00063	.42362	.01066	-.00002	.00465	4.1203	-.00007
#2	.00213	.00382	.00282	.41317	.01217	.00000	.00266	4.1208	-.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00070**	**-.00170**	**.12198**	**1.6757**	**.00682**	**1.6179**	**.00296**	**.00035**
Stddev	.00004	.00015	.00061	.00360	.0091	.00334	.0001	.00005	.00069
%RSD	132.99	20.706	35.889	2.9484	.54175	48.988	.00798	1.5964	198.72
#1	.00000	.00080	-.00213	.11944	1.6693	.00918	1.6178	.00299	.00084
#2	.00006	.00060	-.00127	.12452	1.6821	.00446	1.6180	.00293	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**67.098**	**.00049**	**.00368**	**-.00046**	**6.7560**	**.00326**	**.00124**	**1.2132**	**2.5962**
Stddev	.525	.00008	.00293	.00055	.1237	.00391	.00034	.0038	.0081
%RSD	.78244	17.016	79.558	119.28	1.8306	119.94	27.861	.31232	.31232
#1	67.469	.00043	.00161	-.00007	6.8434	.00602	.00099	1.2105	2.5905
#2	66.726	.00055	.00575	-.00085	6.6685	.00049	.00148	1.2159	2.6020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00114**	**.33142**	**.00261**	**.00045**	**-.00088**	**-.03772**	**.00086**	**.00068**	**.00720**
Stddev	.00069	.00010	.00136	.00011	.00503	.01886	.00035	.00061	.00152
%RSD	60.186	.03016	51.984	23.312	572.36	50.002	40.556	90.005	21.188
#1	-.00162	.33135	.00357	.00053	-.00444	-.05106	.00062	.00111	.00828
#2	-.00065	.33149	.00165	.00038	.00268	-.02438	.00111	.00025	.00612
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3918.8**	**48215.**	**3410.4**
Stddev	4.4	290.	19.2
%RSD	.11208	.60201	.56323
#1	3915.7	48009.	3423.9
#2	3921.9	48420.	3396.8

Sample Name: 116515-A-1-B MS Acquired: 11/7/2018 19:13:15 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03524**	**1.9984**	**1.0563**	**2.9617**	**2.1628**	**.05122**	W **2.0321**	**69.320**	**.09505**
Stddev	.00021	.0261	.0240	.0280	.0140	.00044	.0224	.460	.00083
%RSD	.60881	1.3053	2.2773	.94391	.64630	.86137	1.1010	.66343	.86831
#1	.03539	2.0168	1.0733	2.9814	2.1727	.05153	2.0480	69.645	.09563
#2	.03509	1.9799	1.0393	2.9419	2.1529	.05091	2.0163	68.994	.09447
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49116**	**.20031**	**.25470**	**1.4635**	**59.752**	**1.0879**	**55.590**	**.49925**	**1.0281**
Stddev	.00582	.00235	.00079	.0022	.432	.0066	.046	.00057	.0158
%RSD	1.1840	1.1735	.30882	.14994	.72252	.60672	.08360	.11333	1.5356
#1	.49527	.20197	.25525	1.4619	60.058	1.0926	55.622	.49965	1.0392
#2	.48705	.19865	.25414	1.4650	59.447	1.0832	55.557	.49885	1.0169
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**367.71**	**.48711**	**10.564**	**.48790**	**34.650**	**.49231**	**2.1111**	**12.706**	**27.190**
Stddev	2.56	.00589	.139	.00659	.365	.01003	.0279	.009	.019
%RSD	.69599	1.2098	1.3139	1.3515	1.0528	2.0382	1.3197	.06950	.06950
#1	369.52	.49128	10.662	.49257	34.908	.49941	2.1308	12.699	27.177
#2	365.91	.48295	10.465	.48324	34.392	.48522	2.0914	12.712	27.203
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0191**	**2.6763**	**.99505**	**.98951**	**1.9014**	**2.0834**	**.51474**	**.49911**	**.52596**
Stddev	.0297	.0155	.00053	.00141	.0273	.0124	.00029	.00211	.00818
%RSD	1.4704	.57856	.05352	.14224	1.4373	.59634	.05662	.42319	1.5552
#1	2.0401	2.6872	.99468	.99051	1.9207	2.0746	.51454	.49762	.53175
#2	1.9981	2.6653	.99543	.98851	1.8821	2.0922	.51495	.50061	.52018
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3805.9**	**45605.**	**3340.1**
Stddev	19.4	25.	19.2
%RSD	.51007	.05518	.57421
#1	3792.2	45623.	3326.6
#2	3819.6	45587.	3353.7

Sample Name: 116515-A-1-C MSD Acquired: 11/7/2018 19:15:35 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03463**	**2.0247**	**1.0769**	**3.0243**	**2.1664**	**.05105**	W **2.0657**	**69.553**	**.09625**
Stddev	.00009	.0181	.0080	.0160	.0017	.00001	.0196	.164	.00098
%RSD	.25475	.89549	.73941	.52978	.07755	.01678	.95010	.23582	1.0220
#1	.03457	2.0376	1.0825	3.0357	2.1676	.05104	2.0796	69.669	.09695
#2	.03470	2.0119	1.0712	3.0130	2.1652	.05105	2.0518	69.437	.09556
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49895**	**.20448**	**.25708**	**1.4775**	**59.782**	**1.0900**	**55.969**	**.50305**	**1.0450**
Stddev	.00328	.00162	.00111	.0039	.076	.0032	.120	.00085	.0113
%RSD	.65748	.79130	.43166	.26088	.12686	.29608	.21359	.16957	1.0789
#1	.50127	.20563	.25786	1.4748	59.836	1.0878	56.054	.50366	1.0530
#2	.49663	.20334	.25630	1.4802	59.729	1.0923	55.885	.50245	1.0371
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**368.74**	**.49408**	**10.743**	**.49051**	**35.249**	**.50209**	**2.1479**	**13.644**	**29.199**
Stddev	.83	.00494	.078	.00290	.271	.00717	.0080	.009	.018
%RSD	.22541	.99996	.72311	.59113	.76936	1.4282	.37257	.06331	.06331
#1	369.33	.49757	10.798	.49256	35.441	.50716	2.1535	13.650	29.212
#2	368.16	.49058	10.688	.48846	35.058	.49702	2.1422	13.638	29.186
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0458**	**2.6917**	**1.0025**	**.99730**	**1.9314**	**2.0689**	**.51860**	**.49872**	**.52877**
Stddev	.0205	.0085	.0028	.00042	.0200	.0298	.00166	.00034	.00280
%RSD	1.0034	.31462	.28006	.04179	1.0374	1.4423	.32075	.06762	.53024
#1	2.0603	2.6977	1.0045	.99759	1.9456	2.0900	.51978	.49848	.53075
#2	2.0313	2.6857	1.0005	.99700	1.9173	2.0478	.51743	.49896	.52679
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3813.5**	**45896.**	**3409.4**
Stddev	18.1	83.	2.5
%RSD	.47590	.18169	.07411
#1	3800.6	45837.	3407.6
#2	3826.3	45955.	3411.2

Sample Name: 280-116515-A-2-A Acquired: 11/7/2018 19:17:53 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00114**	**.00587**	**.00317**	**2.0033**	**.04431**	**-.00021**	**-.00063**	**10.524**	**.00020**
Stddev	.00034	.00096	.00443	.0449	.00019	.00010	.00636	.032	.00029
%RSD	29.924	16.380	140.11	2.2402	.43170	45.782	1009.8	.30545	146.23
#1	.00090	.00655	.00003	2.0350	.04444	-.00028	-.00513	10.501	.00040
#2	.00139	.00519	.00630	1.9716	.04417	-.00015	.00387	10.547	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00014**	**.00066**	**-.00003**	**.06374**	**15.941**	**.12748**	**5.6061**	**.00082**	**.00437**
Stddev	.00033	.00027	.00100	.00385	.024	.00208	.0073	.00015	.00027
%RSD	239.92	40.295	2916.3	6.0425	.15212	1.6287	.12937	17.967	6.2068
#1	.00037	.00085	-.00074	.06102	15.924	.12601	5.6113	.00092	.00418
#2	-.00010	.00047	.00067	.06646	15.958	.12895	5.6010	.00071	.00456
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**333.17**	**.00033**	**.03200**	**-.00300**	**22.226**	**-.00171**	**-.00139**	**5.4947**	**11.759**
Stddev	.67	.00001	.00179	.00041	.563	.00202	.00443	.0184	.039
%RSD	.20236	3.2322	5.6056	13.670	2.5322	118.43	319.13	.33526	.33526
#1	332.69	.00034	.03074	-.00329	22.624	-.00028	.00175	5.4816	11.731
#2	333.64	.00033	.03327	-.00271	21.828	-.00313	-.00452	5.5077	11.786
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00068**	**1.1982**	**.00051**	**.00146**	**.00177**	**-.04427**	**.00045**	**.00261**	**.00659**
Stddev	.00009	.0037	.00020	.00032	.00077	.03603	.00054	.00012	.00215
%RSD	13.377	.31177	39.869	21.774	43.529	81.398	119.78	4.5277	32.674
#1	-.00062	1.1955	.00065	.00168	.00231	-.01879	.00007	.00269	.00507
#2	-.00075	1.2008	.00036	.00123	.00122	-.06975	.00084	.00252	.00812
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3837.7**	**46488.**	**3389.1**
Stddev	.2	176.	.1
%RSD	.00424	.37851	.00344
#1	3837.8	46364.	3389.0
#2	3837.6	46613.	3389.2

Sample Name: 280-116515-A-3-A Acquired: 11/7/2018 19:20:27 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00094**	**.00950**	**.00247**	**1.5847**	**.03963**	**-.00039**	**.00505**	**5.2228**	**.00006**
Stddev	.00090	.00066	.00187	.0234	.00007	.00014	.00324	.0114	.00029
%RSD	96.013	6.8922	75.557	1.4793	.17260	34.829	64.300	.21824	463.10
#1	.00158	.00997	.00115	1.6013	.03958	-.00030	.00275	5.2148	.00027
#2	.00030	.00904	.00379	1.5682	.03968	-.00049	.00734	5.2309	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00051**	**.00083**	**-.00004**	**.00975**	**41.267**	**.23404**	**5.7149**	**.00021**	**.01312**
Stddev	.00014	.00018	.00014	.00438	.081	.00453	.0237	.00004	.00019
%RSD	27.033	22.026	389.37	44.968	.19730	1.9341	.41432	19.480	1.4827
#1	.00042	.00070	-.00013	.00665	41.209	.23724	5.7316	.00018	.01326
#2	.00061	.00096	.00006	.01285	41.325	.23084	5.6981	.00024	.01298
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**177.51**	**.00110**	**.00920**	**-.00116**	**58.375**	**.00215**	**-.00383**	**3.5034**	**7.4972**
Stddev	1.34	.00012	.00214	.00044	1.026	.00258	.00057	.0219	.0469
%RSD	.75398	10.456	23.237	38.042	1.7572	119.83	14.786	.62588	.62588
#1	176.56	.00119	.01071	-.00147	59.101	.00033	-.00423	3.5189	7.5304
#2	178.45	.00102	.00769	-.00085	57.650	.00398	-.00343	3.4879	7.4640
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00096**	**1.2670**	**.00083**	**.00074**	**-.00171**	**-.02583**	**.00041**	**.00240**	**.00430**
Stddev	.00072	.0035	.00073	.00022	.00556	.01661	.00062	.00017	.00108
%RSD	75.021	.27294	87.972	30.302	325.03	64.322	152.01	7.0265	25.018
#1	-.00147	1.2645	.00031	.00090	.00222	-.01408	.00085	.00228	.00354
#2	-.00045	1.2694	.00134	.00058	-.00565	-.03757	-.00003	.00252	.00506
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3895.0**	**47670.**	**3390.8**
Stddev	1.2	222.	7.0
%RSD	.03095	.46485	.20610
#1	3895.9	47513.	3395.8
#2	3894.2	47827.	3385.9

Sample Name: 280-116515-A-4-A Acquired: 11/7/2018 19:22:59 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00150**	**.00096**	**.00229**	**1.1681**	**.02405**	**-.00008**	**.00357**	**91.328**	**.00022**
Stddev	.00002	.00062	.00533	.0191	.00106	.00005	.00117	.269	.00025
%RSD	1.4797	64.844	232.51	1.6384	4.4243	59.562	32.650	.29481	115.36
#1	.00151	.00052	.00606	1.1816	.02480	-.00012	.00275	91.518	.00040
#2	.00148	.00140	-.00148	1.1545	.02329	-.00005	.00440	91.137	.00004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00032**	**.00032**	**-.00076**	**.53564**	**9.2293**	**.05290**	**30.302**	**.02562**	**.00349**
Stddev	.00052	.00017	.00071	.00328	.1209	.00336	.003	.00009	.00015
%RSD	163.57	55.342	94.090	.61319	1.3101	6.3467	.00867	.35863	4.3287
#1	-.00005	.00044	-.00025	.53796	9.3148	.05052	30.304	.02555	.00338
#2	.00068	.00019	-.00126	.53332	9.1438	.05527	30.300	.02568	.00360
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**172.07**	**.00044**	**.01860**	**-.00306**	**83.980**	**.00208**	**-.00007**	**8.2621**	**17.681**
Stddev	1.64	.00027	.00148	.00081	1.589	.00518	.00246	.0851	.182
%RSD	.95545	61.896	7.9777	26.594	1.8918	248.94	3734.0	1.0305	1.0305
#1	173.23	.00063	.01755	-.00364	85.103	-.00158	.00167	8.2019	17.552
#2	170.91	.00025	.01965	-.00249	82.857	.00574	-.00181	8.3223	17.810
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00156**	**5.1144**	**.00058**	**.00102**	**-.00100**	**-.05125**	**.00017**	**.00128**	**.00717**
Stddev	.00113	.0150	.00087	.00018	.00258	.01553	.00015	.00070	.00054
%RSD	72.376	.29276	150.51	17.205	257.01	30.293	84.103	54.435	7.5478
#1	-.00235	5.1250	-.00004	.00090	.00082	-.04028	.00028	.00177	.00756
#2	-.00076	5.1038	.00120	.00115	-.00283	-.06223	.00007	.00079	.00679
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3856.7**	**46763.**	**3371.0**
Stddev	7.5	47.	4.2
%RSD	.19398	.10053	.12434
#1	3862.0	46730.	3368.0
#2	3851.4	46796.	3374.0

Sample Name: 280-116515-A-5-A Acquired: 11/7/2018 19:25:31 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00082**	**.02465**	**.00169**	**1.8484**	**.04099**	**-.00008**	**.00289**	**57.220**	**.00005**
Stddev	.00065	.00049	.00162	.0486	.00003	.00008	.00019	.220	.00027
%RSD	78.520	2.0004	95.789	2.6277	.06184	105.68	6.4695	.38413	587.92
#1	.00128	.02500	.00054	1.8827	.04101	-.00002	.00276	57.375	.00024
#2	.00037	.02430	.00283	1.8141	.04097	-.00014	.00303	57.064	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.00059**	**-.00005**	**.05272**	**7.8049**	**.03407**	**21.170**	**.01404**	**.00181**
Stddev	.00002	.00029	.00050	.00469	.0411	.00202	.108	.00013	.00046
%RSD	6.2209	48.982	963.00	8.8906	.52649	5.9384	.50785	.89552	25.513
#1	-.00034	.00038	-.00040	.05603	7.7759	.03264	21.246	.01396	.00148
#2	-.00037	.00079	.00030	.04940	7.8340	.03550	21.094	.01413	.00213
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**163.70**	**.00103**	**.01336**	**-.00320**	**35.370**	**-.00109**	**-.00378**	**5.5685**	**11.917**
Stddev	.33	.00033	.00012	.00113	.914	.00232	.00450	.0191	.041
%RSD	.20197	32.550	.91674	35.232	2.5846	213.02	118.98	.34286	.34286
#1	163.93	.00126	.01328	-.00240	36.016	.00055	-.00060	5.5820	11.945
#2	163.46	.00079	.01345	-.00400	34.724	-.00273	-.00696	5.5550	11.888
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00151**	**4.1303**	**.00227**	**.00083**	**-.00072**	**-.06630**	**.00023**	**.00119**	**.00381**
Stddev	.00076	.0125	.00368	.00006	.00474	.02647	.00046	.00039	.00123
%RSD	50.042	.30241	162.08	7.3287	659.30	39.923	203.79	33.248	32.235
#1	-.00098	4.1391	-.00033	.00078	.00264	-.04758	.00056	.00147	.00468
#2	-.00205	4.1215	.00487	.00087	-.00407	-.08501	-.00010	.00091	.00294
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3885.1**	**47126.**	**3407.5**
Stddev	5.5	118.	6.4
%RSD	.14180	.25142	.18860
#1	3889.0	47210.	3403.0
#2	3881.2	47043.	3412.1

Sample Name: CCVH-5408055 Acquired: 11/7/2018 19:28:03 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00238**	**50.387**	**-.00184**	**.01105**	**.00081**	**-.00036**	**1.0457**	**.03910**	**-.00018**	**.00152**	**.00122**	**-.00108**	**48.753**
Stddev	.00022	.256	.01046	.00020	.00022	.00000	.0268	.01590	.00014	.00048	.00013	.00031	.114
%RSD	9.4055	.50838	567.78	1.8459	26.876	1.0090	2.5609	40.664	77.890	31.322	10.456	28.466	.23374
#1	-.00254	50.206	.00556	.01119	.00065	-.00036	1.0646	.05035	-.00008	.00186	.00132	-.00086	48.672
#2	-.00222	50.568	-.00924	.01090	.00096	-.00036	1.0267	.02786	-.00029	.00119	.00113	-.00130	48.834
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51104**	**-.00205**	**-.08182**	**.00291**	**-.00104**	**267.79**	**.00407**	**.00120**	**-.00255**	**5.3892**	**.00248**	**.00874**	**-.02188**
Stddev	.00393	.00222	.00188	.00001	.00079	.41	.00071	.00253	.00351	.1317	.00140	.00592	.00082
%RSD	.76905	108.33	2.2996	.28975	75.766	.15268	17.312	211.27	137.54	2.4432	56.367	67.748	3.7362
#1	.50826	-.00361	-.08049	.00290	-.00048	268.08	.00357	-.00059	-.00007	5.4823	.00149	.01292	-.02246
#2	.51382	-.00048	-.08315	.00291	-.00159	267.50	.00457	.00299	-.00503	5.2961	.00347	.00455	-.02131
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04683**	**-.00209**	**.00143**	**4.8929**	**.01750**	**-.00048**	**10.441**	**-.00945**	**.00056**	**.08045**
Stddev	.00175	.00041	.00124	.0134	.00049	.00168	.078	.00032	.00072	.00192
%RSD	3.7362	19.633	86.604	.27364	2.8079	348.53	.74288	3.3392	129.25	2.3885
#1	-.04807	-.00180	.00231	4.9024	.01784	-.00167	10.496	-.00968	.00005	.08181
#2	-.04559	-.00238	.00055	4.8834	.01715	.00070	10.386	-.00923	.00107	.07909
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3871.9**	**46867.**	**3321.1**
Stddev	40.9	149.	14.8
%RSD	1.0564	.31785	.44478
#1	3843.0	46972.	3331.6
#2	3900.8	46762.	3310.7

Sample Name: CCV-5407546 Acquired: 11/7/2018 19:30:34 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49239**	**.50878**	**.99007**	**.49099**	**.51917**	**.49820**	**.00787**	**4.8919**	**.48049**	**.48521**	**.48797**	**.50283**
Stddev	.00056	.01315	.03197	.01227	.00031	.00028	.00201	.0053	.01343	.01269	.01279	.00054
%RSD	.11405	2.5841	3.2289	2.4989	.06051	.05605	25.494	.10842	2.7945	2.6151	2.6213	.10796
#1	.49278	.51807	1.0127	.49967	.51895	.49840	.00645	4.8882	.48999	.49419	.49701	.50321
#2	.49199	.49948	.96746	.48232	.51940	.49800	.00929	4.8957	.47100	.47624	.47892	.50244
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.2663**	**52.232**	**1.0611**	**19.370**	**.48012**	**.48123**	F **5.5614**	**.48491**	**.95310**	**.97890**	**.26646**	**.95444**
Stddev	.0076	.096	.0010	.063	.00162	.01351	.0007	.01434	.02679	.02867	.00666	.03274
%RSD	.33361	.18293	.09589	.32346	.33740	2.8066	.01282	2.9574	2.8105	2.9291	2.5008	3.4306
#1	2.2610	52.165	1.0618	19.414	.48127	.49078	5.5619	.49505	.97204	.99918	.26175	.97759
#2	2.2717	52.300	1.0604	19.326	.47898	.47168	5.5609	.47477	.93416	.95863	.27117	.93129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value							5.0000					
Range							10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.99793**	**4.6493**	**9.9495**	**.97038**	**.51531**	**.00893**	**.47307**	**.99826**	**.01493**	**.48434**	**.47240**	**.49261**
Stddev	.03836	.0341	.0730	.02244	.00082	.00057	.00072	.02285	.06188	.00378	.00025	.00170
%RSD	3.8437	.73391	.73391	2.3123	.15844	6.3760	.15170	2.2891	414.51	.78116	.05194	.34500
#1	1.0251	4.6252	9.8979	.98625	.51589	.00853	.47358	1.0144	-.02883	.48701	.47257	.49382
#2	.97080	4.6734	10.001	.95451	.51473	.00934	.47256	.98210	.05868	.48166	.47223	.49141
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3933.3**	**48080.**	**3370.9**
Stddev	2.9	30.	4.4
%RSD	.07275	.06156	.13044
#1	3931.3	48101.	3374.0
#2	3935.3	48059.	3367.8

Sample Name: CCB Acquired: 11/7/2018 19:32:59 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00077**	**-.00007**	**.00516**	**.00579**	**.00187**	**-.00014**	**.00304**	**.00968**	**.00013**	**.00006**	**.00040**	**-.00186**
Stddev	.00012	.00045	.00195	.00152	.00066	.00013	.00363	.00075	.00015	.00021	.00016	.00100
%RSD	16.130	684.56	37.771	26.217	35.111	92.748	119.34	7.7102	113.08	338.74	39.724	53.816
#1	.00086	.00025	.00654	.00686	.00141	-.00005	.00047	.00915	.00024	.00022	.00029	-.00257
#2	.00069	-.00038	.00378	.00471	.00234	-.00024	.00560	.01021	.00003	-.00009	.00052	-.00115
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.08483**	**.29724**	**-.00228**	**-.00225**	**.00065**	**.00065**	**.32598**	**-.00005**	**-.00200**	**-.00160**	F **.23547**	**.00224**
Stddev	.00044	.02238	.00073	.00114	.00009	.00052	.01639	.00076	.00127	.00099	.00270	.00348
%RSD	.51342	7.5279	32.034	50.833	14.298	79.825	5.0281	1605.2	63.390	61.941	1.1456	155.34
#1	.08452	.28142	-.00176	-.00144	.00059	.00028	.31439	.00049	-.00290	-.00090	.23357	-.00022
#2	.08514	.31306	-.00279	-.00305	.00072	.00102	.33757	-.00058	-.00110	-.00229	.23738	.00471
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit	.05000										.10000	
Low Limit	-.05000										-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00522**	**-.01613**	**-.03451**	**-.00018**	**-.00012**	**.00196**	**.00088**	**-.00366**	**-.09806**	**.00083**	**-.00026**	**.00312**
Stddev	.00217	.04416	.09450	.00181	.00008	.00151	.00032	.00059	.06392	.00008	.00003	.00713
%RSD	41.556	273.82	273.82	997.99	62.161	76.800	36.486	16.209	65.188	9.7083	10.700	228.36
#1	-.00369	-.04735	-.10133	.00110	-.00007	.00303	.00111	-.00408	-.14326	.00089	-.00028	.00817
#2	-.00676	.01510	.03231	-.00146	-.00017	.00090	.00065	-.00324	-.05286	.00078	-.00024	-.00192
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3923.4**	**48195.**	**3319.3**
Stddev	21.5	47.	5.0
%RSD	.54884	.09798	.15110
#1	3908.1	48229.	3322.9
#2	3938.6	48162.	3315.8

Sample Name: CCVL-5415520 Acquired: 11/7/2018 19:35:38 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01153**	**.11478**	**.01419**	**.10402**	**.01132**	**.00085**	**.12292**	**.22170**	**.00490**	**.01080**	**.01061**	**.01321**
Stddev	.00052	.00294	.00048	.00246	.00009	.00013	.00711	.00102	.00009	.00030	.00051	.00004
%RSD	4.5533	2.5572	3.4044	2.3651	.76403	15.728	5.7832	.46038	1.8436	2.7389	4.7773	.32975
#1	.01190	.11271	.01385	.10576	.01138	.00095	.12794	.22098	.00497	.01101	.01097	.01324
#2	.01116	.11686	.01454	.10228	.01125	.00076	.11789	.22242	.00484	.01059	.01025	.01318
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10622**	**3.5020**	**.02196**	**.21102**	**.01036**	**.01905**	F **1.3762**	**.04207**	**2.9131**	**.00987**	F **.29098**	**.01790**
Stddev	.00356	.1076	.00039	.00049	.00002	.00093	.0008	.00057	.0470	.00084	.00308	.00088
%RSD	3.3507	3.0738	1.7788	.23202	.21235	4.8637	.05695	1.3503	1.6148	8.4648	1.0581	4.9054
#1	.10873	3.4259	.02168	.21137	.01038	.01971	1.3768	.04248	2.9464	.01046	.29316	.01728
#2	.10370	3.5781	.02223	.21067	.01035	.01840	1.3757	.04167	2.8798	.00928	.28881	.01852
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							1.0000				.10000	
Range							30.000%				30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.01346**	**.48145**	**1.0303**	**.10032**	**.01054**	**.01730**	**.00974**	**.01621**	F **.01483**	**.01017**	**.02127**	**.01866**
Stddev	.00101	.00086	.0018	.00234	.00013	.00037	.00001	.00100	.01437	.00019	.00031	.00032
%RSD	7.5323	.17899	.17899	2.3345	1.2780	2.1636	.12862	6.1814	96.892	1.8931	1.4341	1.7007
#1	.01417	.48206	1.0316	.10198	.01064	.01757	.00975	.01550	.00467	.01031	.02149	.01888
#2	.01274	.48084	1.0290	.09867	.01045	.01704	.00973	.01692	.02499	.01004	.02106	.01843
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value	.02000								.06000			
Range	-30.000%								-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**4040.9**	**49719.**	**3412.9**
Stddev	5.6	160.	9.8
%RSD	.13872	.32246	.28808
#1	4044.8	49833.	3419.9
#2	4036.9	49606.	3405.9

Sample Name: 280-116515-A-6-A Acquired: 11/7/2018 19:38:13 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00140**	**1.7492**	**.00768**	**.02219**	**.07217**	**-.00010**	**-.00182**	**357.88**	**-.00003**
Stddev	.00016	.0298	.00508	.00051	.00037	.00018	.00434	.81	.00027
%RSD	11.155	1.7042	66.148	2.2958	.51641	171.21	238.41	.22550	856.13
#1	.00151	1.7703	.01127	.02255	.07243	-.00023	-.00489	358.46	-.00022
#2	.00129	1.7282	.00409	.02183	.07190	.00002	.00125	357.31	.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00440**	**.00417**	**.00047**	**1.7612**	**1.6567**	**.00539**	**5.6112**	**3.0212**	**-.00098**
Stddev	.00054	.00020	.00019	.0050	.0479	.00038	.0101	.0029	.00009
%RSD	12.284	4.7028	40.744	.28600	2.8898	7.0316	.18038	.09708	9.3803
#1	.00478	.00403	.00034	1.7648	1.6229	.00566	5.6183	3.0233	-.00104
#2	.00402	.00431	.00061	1.7577	1.6906	.00512	5.6040	3.0191	-.00091
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**36.915**	**.01108**	**.36834**	**-.00151**	**51.645**	**.00603**	**-.00089**	**8.1467**	**17.434**
Stddev	1.101	.00007	.00250	.00249	.658	.00038	.00046	.0224	.048
%RSD	2.9812	.67553	.67954	165.22	1.2738	6.3013	52.095	.27520	.27520
#1	36.136	.01103	.36657	.00025	52.110	.00576	-.00056	8.1308	17.400
#2	37.693	.01114	.37011	-.00327	51.180	.00630	-.00122	8.1625	17.468
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00021**	**1.7929**	**.00389**	**.03021**	**-.00121**	**-.05872**	**.00373**	**.00620**	**.00198**
Stddev	.00010	.0037	.00089	.00141	.00269	.01120	.00063	.00028	.00255
%RSD	48.789	.20686	22.986	4.6664	221.66	19.074	16.866	4.5658	128.76
#1	.00014	1.7955	.00326	.03121	-.00311	-.06664	.00329	.00640	.00378
#2	.00028	1.7903	.00452	.02922	.00069	-.05080	.00418	.00600	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3766.5**	**46320.**	**3313.5**
Stddev	16.7	437.	5.5
%RSD	.44249	.94375	.16635
#1	3778.3	46010.	3309.6
#2	3754.7	46629.	3317.4

Sample Name: 280-116515-A-7-A Acquired: 11/7/2018 19:40:47 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00164**	**.00706**	**.00782**	**1.8803**	**.05543**	**-.00029**	**.00437**	**38.983**	**.00023**
Stddev	.00155	.00054	.00460	.0134	.00012	.00016	.00331	.108	.00010
%RSD	94.751	7.6201	58.790	.71364	.22056	55.058	75.801	.27720	43.385
#1	.00274	.00745	.01107	1.8898	.05534	-.00018	.00671	39.059	.00016
#2	.00054	.00668	.00457	1.8708	.05551	-.00040	.00203	38.907	.00030
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00001**	**.00015**	**-.00069**	**.06927**	**7.0953**	**.02796**	**15.582**	**.01156**	**.00022**
Stddev	.00053	.00007	.00053	.00703	.0290	.00036	.026	.00013	.00069
%RSD	5148.2	43.688	76.625	10.153	.40942	1.2787	.16824	1.0955	317.34
#1	-.00039	.00020	-.00106	.06430	7.0747	.02770	15.601	.01165	-.00027
#2	.00036	.00010	-.00032	.07425	7.1158	.02821	15.564	.01147	.00071
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**189.83**	**.00121**	**.04395**	**-.00321**	**22.655**	**-.00282**	**-.00787**	**5.4673**	**11.700**
Stddev	.60	.00012	.00502	.00247	.210	.00250	.00359	.0319	.068
%RSD	.31809	9.9954	11.410	76.780	.92896	88.714	45.696	.58251	.58251
#1	190.26	.00112	.04750	-.00495	22.803	-.00105	-.01041	5.4898	11.748
#2	189.41	.00129	.04041	-.00147	22.506	-.00458	-.00532	5.4448	11.652
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00117**	**3.0548**	**-.00087**	**.00085**	**.00235**	**.01764**	**-.00039**	**.00396**	**.00498**
Stddev	.00090	.0038	.00045	.00054	.00186	.02201	.00019	.00120	.00129
%RSD	76.626	.12557	52.029	63.314	79.105	124.79	47.646	30.450	25.822
#1	-.00054	3.0576	-.00118	.00047	.00104	.00207	-.00026	.00481	.00407
#2	-.00180	3.0521	-.00055	.00122	.00367	.03320	-.00053	.00310	.00589
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3886.2**	**46525.**	**3343.0**
Stddev	29.4	100.	8.2
%RSD	.75698	.21506	.24432
#1	3865.4	46596.	3337.3
#2	3907.0	46454.	3348.8

Sample Name: 280-116515-A-8-A Acquired: 11/7/2018 19:43:20 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00053**	**.03181**	**.00511**	**1.9237**	**.05121**	**-.00016**	**-.00116**	**36.772**	**.00052**
Stddev	.00010	.00742	.00209	.0273	.00018	.00031	.00134	.089	.00009
%RSD	18.533	23.333	40.870	1.4174	.35216	189.57	115.31	.24164	16.727
#1	.00046	.03706	.00659	1.9430	.05134	-.00038	-.00211	36.709	.00046
#2	.00060	.02656	.00364	1.9044	.05108	.00005	-.00021	36.834	.00058
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00028**	**.00089**	**-.00021**	**.18873**	**7.0272**	**.02899**	**14.286**	**.02765**	**.00101**
Stddev	.00034	.00002	.00032	.00110	.1959	.00007	.024	.00009	.00094
%RSD	122.02	2.5661	147.12	.58530	2.7879	.24504	.16872	.33525	93.513
#1	.00053	.00091	-.00044	.18951	6.8886	.02894	14.303	.02771	.00167
#2	.00004	.00087	.00001	.18795	7.1657	.02904	14.269	.02758	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**192.33**	**.00132**	**.04737**	**-.00111**	**19.717**	**-.00060**	**-.00617**	**5.8137**	**12.441**
Stddev	1.09	.00051	.00469	.00191	.417	.00159	.00909	.0270	.058
%RSD	.56641	38.625	9.9027	171.34	2.1169	264.41	147.45	.46474	.46474
#1	191.56	.00168	.05069	.00024	20.012	-.00173	.00026	5.7946	12.400
#2	193.10	.00096	.04406	-.00246	19.422	.00052	-.01259	5.8328	12.482
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00099**	**2.8324**	**.00343**	**.00151**	**.00038**	**-.07117**	**.00041**	**.00251**	**.00482**
Stddev	.00004	.0056	.00032	.00053	.00212	.07069	.00030	.00083	.00231
%RSD	4.1876	.19827	9.1897	35.444	558.59	99.323	72.976	33.179	47.867
#1	-.00102	2.8285	.00365	.00189	.00188	-.12116	.00062	.00310	.00319
#2	-.00096	2.8364	.00321	.00113	-.00112	-.02119	.00020	.00192	.00646
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3874.8**	**46755.**	**3357.3**
Stddev	3.8	52.	15.0
%RSD	.09893	.11143	.44660
#1	3877.5	46792.	3367.9
#2	3872.1	46718.	3346.7

Sample Name: 280-116515-A-9-A Acquired: 11/7/2018 19:45:54 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00113**	**.21601**	**.00946**	**.03360**	**.16551**	**-.00034**	**.00483**	**348.42**	**-.00003**
Stddev	.00073	.00340	.00227	.00069	.00052	.00004	.00934	.18	.00019
%RSD	64.351	1.5753	24.028	2.0581	.31671	12.458	193.33	.05180	645.70
#1	.00164	.21842	.00785	.03409	.16588	-.00037	-.00177	348.55	.00010
#2	.00061	.21361	.01107	.03312	.16514	-.00031	.01143	348.30	-.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00349**	**.00083**	**.00034**	**.34066**	**.94388**	**.01320**	**6.8465**	**.18531**	**-.00040**
Stddev	.00033	.00012	.00082	.00609	.05168	.00208	.0053	.00033	.00021
%RSD	9.4869	15.091	237.65	1.7875	5.4754	15.790	.07712	.17709	53.065
#1	.00325	.00074	-.00023	.33635	.90734	.01173	6.8427	.18554	-.00025
#2	.00372	.00092	.00092	.34496	.98043	.01468	6.8502	.18508	-.00055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**184.99**	**.00376**	**.08037**	**-.00446**	**36.206**	**.00003**	**-.00544**	**7.9621**	**17.039**
Stddev	.16	.00000	.00708	.00138	.287	.00228	.00378	.0132	.028
%RSD	.08595	.07969	8.8090	30.842	.79224	9071.5	69.471	.16577	.16577
#1	184.88	.00377	.07536	-.00543	36.409	.00163	-.00277	7.9528	17.019
#2	185.11	.00376	.08537	-.00349	36.003	-.00158	-.00812	7.9714	17.059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00180**	**3.1997**	**.00322**	**.00453**	**-.00151**	**-.06056**	**.00091**	**.00168**	**.00291**
Stddev	.00013	.0056	.00145	.00062	.00263	.01163	.00069	.00039	.00060
%RSD	7.1578	.17476	44.962	13.764	173.61	19.204	75.465	22.978	20.548
#1	-.00171	3.2037	.00424	.00409	-.00337	-.05233	.00043	.00141	.00333
#2	-.00189	3.1958	.00219	.00497	.00034	-.06878	.00140	.00195	.00248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3756.5**	**45859.**	**3355.1**
Stddev	3.9	158.	29.9
%RSD	.10355	.34526	.89054
#1	3753.8	45971.	3376.3
#2	3759.3	45747.	3334.0

Sample Name: 280-116515-A-10-A Acquired: 11/7/2018 19:48:26 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00079**	**.00682**	**.00476**	**1.8813**	**.04861**	**-.00011**	**.00740**	**37.629**	**-.00007**
Stddev	.00104	.00032	.00616	.0452	.00069	.00020	.00562	.177	.00003
%RSD	131.32	4.7371	129.38	2.4025	1.4190	176.32	75.977	.47151	41.187
#1	.00006	.00705	.00041	1.9133	.04910	-.00025	.00343	37.754	-.00008
#2	.00153	.00660	.00912	1.8494	.04813	.00003	.01138	37.503	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**.00049**	**-.00026**	**.36434**	**7.1713**	**.03490**	**14.838**	**.01070**	**.00185**
Stddev	.00017	.00053	.00008	.00810	.0541	.00366	.003	.00000	.00007
%RSD	302.10	108.37	32.557	2.2222	.75454	10.492	.02183	.01675	3.8853
#1	-.00018	.00012	-.00020	.37007	7.2096	.03231	14.840	.01070	.00180
#2	.00007	.00087	-.00032	.35862	7.1331	.03749	14.836	.01070	.00190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**190.97**	**.00136**	**.03259**	**-.00390**	**28.249**	**.00121**	**-.00581**	**6.2768**	**13.432**
Stddev	.19	.00029	.00064	.00164	.718	.00384	.00308	.0445	.095
%RSD	.09995	21.194	1.9501	41.953	2.5413	317.74	52.952	.70900	.70900
#1	191.10	.00115	.03214	-.00506	28.756	-.00151	-.00364	6.3083	13.500
#2	190.83	.00156	.03304	-.00275	27.741	.00393	-.00799	6.2453	13.365
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00102**	**2.8942**	**.00079**	**.00045**	**-.00055**	**-.03477**	**.00017**	**.00141**	**.00510**
Stddev	.00179	.0057	.00173	.00008	.00015	.06160	.00145	.00011	.00218
%RSD	176.08	.19878	217.54	17.499	26.418	177.19	850.38	7.4924	42.784
#1	.00025	2.8983	-.00043	.00040	-.00065	.00879	.00120	.00134	.00665
#2	-.00229	2.8901	.00202	.00051	-.00045	-.07832	-.00085	.00149	.00356
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3839.5**	**46564.**	**3346.3**
Stddev	4.1	172.	2.9
%RSD	.10596	.37017	.08661
#1	3842.4	46685.	3344.3
#2	3836.6	46442.	3348.4

Sample Name: 280-116515-A-11-A Acquired: 11/7/2018 19:50:59 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00121**	**.00987**	**.00442**	**1.5067**	**.07462**	**-.00028**	**.00125**	**44.456**	**-.00006**
Stddev	.00006	.00020	.00091	.0340	.00087	.00018	.00316	.524	.00011
%RSD	5.3219	1.9997	20.645	2.2542	1.1721	62.383	253.06	1.1791	184.34
#1	.00126	.01001	.00378	1.5307	.07400	-.00016	-.00099	44.086	.00002
#2	.00116	.00973	.00507	1.4827	.07524	-.00041	.00348	44.827	-.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00030**	**.00043**	**-.00057**	**.00813**	**7.3440**	**.03056**	**15.576**	**.00099**	**.00137**
Stddev	.00032	.00034	.00049	.00789	.0523	.00132	.008	.00005	.00056
%RSD	106.56	79.262	86.417	97.087	.71213	4.3081	.05284	5.5127	41.201
#1	-.00053	.00067	-.00092	.01371	7.3071	.02962	15.581	.00103	.00177
#2	-.00007	.00019	-.00022	.00255	7.3810	.03149	15.570	.00095	.00097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**151.23**	**.00117**	**.03415**	**-.00346**	**17.042**	**-.00440**	**-.00362**	**6.2450**	**13.364**
Stddev	1.47	.00014	.00248	.00078	.368	.00024	.00730	.0533	.114
%RSD	.97483	11.892	7.2726	22.639	2.1579	5.5536	201.53	.85412	.85412
#1	150.18	.00127	.03240	-.00401	17.302	-.00423	.00154	6.2073	13.284
#2	152.27	.00107	.03591	-.00290	16.782	-.00457	-.00879	6.2827	13.445
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00236**	**3.0355**	**.00269**	**.00044**	**.00048**	**-.06968**	**.00089**	**.00066**	**.00184**
Stddev	.00078	.0312	.00382	.00068	.00149	.00560	.00016	.00058	.00189
%RSD	32.882	1.0292	142.36	152.65	308.56	8.0346	18.444	88.639	102.72
#1	-.00291	3.0134	.00539	.00092	.00153	-.07364	.00101	.00107	.00050
#2	-.00181	3.0576	-.00002	-.00004	-.00057	-.06572	.00077	.00025	.00317
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3879.3**	**46948.**	**3387.9**
Stddev	1.4	157.	9.0
%RSD	.03592	.33387	.26596
#1	3878.3	47059.	3381.6
#2	3880.3	46837.	3394.3

Sample Name: 280-116515-A-12-A Acquired: 11/7/2018 19:53:32 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00104**	**.01843**	**.00733**	**2.3235**	**.03556**	**.00003**	**.00291**	**34.977**	**-.00021**
Stddev	.00050	.00062	.00632	.0390	.00013	.00007	.00168	.153	.00041
%RSD	48.492	3.3591	86.299	1.6789	.36319	206.65	57.576	.43708	197.31
#1	.00068	.01887	.01180	2.3510	.03565	.00009	.00410	35.085	-.00050
#2	.00139	.01799	.00286	2.2959	.03547	-.00002	.00173	34.869	.00008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**.00055**	**.00107**	**.31227**	**8.4378**	**.03895**	**15.225**	**.00284**	**.00123**
Stddev	.00023	.00010	.00058	.00331	.1005	.00583	.053	.00000	.00058
%RSD	86.664	17.589	54.004	1.0606	1.1905	14.972	.34841	.12627	47.065
#1	.00010	.00048	.00066	.31461	8.3667	.04307	15.262	.00284	.00164
#2	.00043	.00062	.00148	.30992	8.5088	.03483	15.187	.00285	.00082
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**282.56**	**.00075**	**.01678**	**-.00325**	**55.478**	**-.00442**	**-.00758**	**6.9094**	**14.786**
Stddev	1.08	.00069	.00105	.00173	1.123	.00111	.00462	.0964	.206
%RSD	.38065	92.129	6.2494	53.079	2.0248	25.041	60.888	1.3956	1.3956
#1	283.32	.00124	.01603	-.00203	56.272	-.00364	-.00432	6.9776	14.932
#2	281.80	.00026	.01752	-.00448	54.683	-.00520	-.01084	6.8412	14.640
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00193**	**2.8926**	**.00323**	**.00081**	**-.00333**	**-.03734**	**.00034**	**.00341**	**.00194**
Stddev	.00026	.0136	.00448	.00005	.00081	.02479	.00033	.00042	.00095
%RSD	13.473	.47026	138.76	5.6157	24.269	66.395	97.026	12.438	48.857
#1	-.00175	2.9022	.00640	.00084	-.00275	-.01981	.00058	.00311	.00261
#2	-.00212	2.8830	.00006	.00078	-.00390	-.05487	.00011	.00370	.00127
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3813.6**	**45993.**	**3308.8**
Stddev	7.6	89.	10.5
%RSD	.19954	.19294	.31704
#1	3819.0	46056.	3316.2
#2	3808.3	45930.	3301.4

Sample Name: 280-116515-A-13-A Acquired: 11/7/2018 19:56:05 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00153**	**.03342**	**.00538**	**1.8753**	**.02025**	**-.00001**	**.00449**	**89.268**	**.00024**
Stddev	.00004	.00030	.00442	.0355	.00011	.00038	.00366	.075	.00003
%RSD	2.8884	.90806	82.135	1.8906	.51902	2710.2	81.594	.08424	12.572
#1	.00150	.03321	.00226	1.9003	.02032	.00025	.00708	89.215	.00026
#2	.00157	.03364	.00850	1.8502	.02017	-.00028	.00190	89.321	.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00038**	**.00026**	**.00000**	**.02701**	**8.7271**	**.05186**	**27.724**	**.00119**	**.00434**
Stddev	.00006	.00012	.00050	.00024	.0009	.00266	.007	.00001	.00026
%RSD	15.724	47.849	72298.	.89958	.01005	5.1320	.02364	1.1774	6.1011
#1	-.00034	.00017	.00035	.02684	8.7265	.04998	27.719	.00120	.00415
#2	-.00042	.00035	-.00035	.02719	8.7277	.05374	27.729	.00118	.00452
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**231.16**	**.00185**	**.00286**	**-.00289**	**121.02**	**-.00021**	**-.00710**	**6.8196**	**14.594**
Stddev	.22	.00003	.00094	.00049	2.61	.00090	.00402	.0244	.052
%RSD	.09609	1.6481	32.993	16.795	2.1572	435.41	56.537	.35821	.35821
#1	231.00	.00187	.00219	-.00255	122.87	-.00084	-.00994	6.8369	14.631
#2	231.32	.00182	.00353	-.00323	119.18	.00043	-.00426	6.8023	14.557
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00074**	**4.9504**	**-.00117**	**.00089**	**-.00299**	**-.00354**	**.00072**	**.00276**	**.00527**
Stddev	.00149	.0066	.00155	.00051	.00060	.02890	.00016	.00024	.00190
%RSD	202.76	.13407	131.67	56.780	20.036	815.88	21.754	8.6618	35.974
#1	.00032	4.9551	-.00008	.00125	-.00341	-.02397	.00061	.00292	.00393
#2	-.00179	4.9457	-.00227	.00053	-.00256	.01689	.00083	.00259	.00661
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3722.9**	**44808.**	**3207.7**
Stddev	.1	136.	3.4
%RSD	.00252	.30358	.10447
#1	3723.0	44904.	3210.1
#2	3722.9	44712.	3205.3

Sample Name: 280-116515-A-14-A Acquired: 11/7/2018 19:58:38 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00077**	**.18417**	**.00666**	**1.5519**	**.01829**	**-.00016**	**.00249**	**87.447**	**.00036**
Stddev	.00101	.00404	.00747	.0278	.00045	.00007	.00318	.113	.00014
%RSD	132.07	2.1927	112.03	1.7914	2.4874	45.031	127.68	.12928	37.801
#1	.00149	.18703	.00138	1.5715	.01861	-.00021	.00474	87.367	.00046
#2	.00005	.18131	.01194	1.5322	.01796	-.00011	.00024	87.527	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00009**	**.00069**	**.00311**	**.10240**	**9.1367**	**.06685**	**29.974**	**.00437**	**.00817**
Stddev	.00021	.00033	.00037	.00369	.0598	.00078	.078	.00000	.00037
%RSD	247.85	48.239	11.909	3.5986	.65464	1.1714	.26078	.09293	4.5063
#1	-.00023	.00093	.00337	.09980	9.0944	.06740	30.029	.00437	.00791
#2	.00006	.00046	.00285	.10501	9.1790	.06629	29.919	.00437	.00843
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**269.01**	**.00215**	**.01449**	**-.00354**	**145.65**	**.00061**	**-.00765**	**8.5828**	**18.367**
Stddev	1.32	.00051	.00084	.00165	2.75	.00487	.00144	.0829	.177
%RSD	.49096	23.807	5.7879	46.799	1.8907	793.88	18.806	.96614	.96614
#1	268.08	.00251	.01508	-.00237	147.59	.00406	-.00867	8.5241	18.242
#2	269.94	.00179	.01390	-.00471	143.70	-.00283	-.00663	8.6414	18.493
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00435**	**4.8746**	**.00153**	**.00579**	**-.00143**	**-.03076**	**.00016**	**.00398**	**.00537**
Stddev	.00210	.0051	.00032	.00215	.00231	.02582	.00042	.00074	.00114
%RSD	48.363	.10494	20.828	37.239	161.48	83.940	268.96	18.546	21.216
#1	-.00286	4.8710	.00131	.00731	.00020	-.01250	-.00014	.00346	.00457
#2	-.00584	4.8782	.00176	.00426	-.00307	-.04902	.00045	.00450	.00618
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3719.6**	**45207.**	**3262.5**
Stddev	17.8	172.	15.9
%RSD	.47836	.38052	.48707
#1	3732.2	45085.	3273.7
#2	3707.0	45329.	3251.3

Sample Name: 280-116515-A-15-A Acquired: 11/7/2018 20:01:10 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00091**	**.00308**	**-.00325**	**2.0897**	**.01888**	**-.00019**	**.00180**	**134.76**	**.00057**
Stddev	.00055	.00061	.01403	.0457	.00034	.00012	.00489	.21	.00015
%RSD	59.828	19.669	431.28	2.1896	1.7777	60.880	271.75	.15244	26.432
#1	.00130	.00351	-.01317	2.1220	.01864	-.00027	-.00166	134.62	.00068
#2	.00053	.00265	.00667	2.0573	.01912	-.00011	.00526	134.91	.00047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**.00087**	**.00062**	**.01132**	**12.075**	**.06787**	**51.488**	**.00884**	**.00066**
Stddev	.00012	.00041	.00044	.00273	.149	.00071	.087	.00001	.00004
%RSD	44.734	46.689	71.251	24.121	1.2371	1.0438	.16883	.16086	6.3076
#1	-.00034	.00116	.00031	.01325	11.970	.06837	51.550	.00883	.00063
#2	-.00018	.00059	.00093	.00939	12.181	.06737	51.427	.00885	.00069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**317.31**	**.00193**	**.02076**	**-.00164**	F **253.74**	**-.00103**	**-.00900**	**8.4955**	**18.180**
Stddev	.18	.00026	.00102	.00286	5.73	.00427	.00680	.0427	.091
%RSD	.05673	13.481	4.8915	174.38	2.2591	415.00	75.587	.50248	.50248
#1	317.43	.00175	.02004	-.00367	257.80	-.00405	-.01381	8.4653	18.116
#2	317.18	.00212	.02147	.00038	249.69	.00199	-.00419	8.5257	18.245
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00273**	**9.0456**	**.00152**	**.00079**	**-.00059**	**-.04017**	**-.00008**	**.00198**	**.00872**
Stddev	.00320	.0804	.00172	.00055	.00031	.05153	.00025	.00127	.00148
%RSD	117.21	.88864	113.42	69.983	52.740	128.28	299.96	64.122	17.005
#1	-.00500	8.9887	.00273	.00040	-.00037	-.07661	.00009	.00287	.00767
#2	-.00047	9.1024	.00030	.00118	-.00081	-.00373	-.00026	.00108	.00977
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3761.6**	**45054.**	**3288.6**
Stddev	24.8	109.	6.0
%RSD	.66003	.24152	.18151
#1	3744.0	44977.	3292.8
#2	3779.1	45131.	3284.3

Sample Name: CCVH-5408055 Acquired: 11/7/2018 20:03:48 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00353**	**50.136**	**-.00839**	**.01176**	**.00118**	**-.00024**	**1.0570**	**.04841**	**-.00013**	**.00124**	**.00069**	**-.00106**	**47.921**
Stddev	.00037	.181	.01179	.00113	.00044	.00021	.0229	.03074	.00007	.00044	.00006	.00001	.048
%RSD	10.410	.36146	140.52	9.6436	37.560	84.817	2.1668	63.500	56.977	35.134	8.6178	1.1574	.09924
#1	-.00379	50.264	-.01672	.01257	.00149	-.00039	1.0732	.07015	-.00018	.00155	.00065	-.00105	47.955
#2	-.00327	50.008	-.00005	.01096	.00087	-.00010	1.0408	.02667	-.00007	.00093	.00073	-.00106	47.888
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.54716**	**.00147**	**-.08077**	**.00254**	**-.00145**	**266.54**	**.00434**	**.00275**	**-.00126**	**5.4078**	**.00445**	**.00765**	**-.02200**
Stddev	.02863	.00316	.00220	.00006	.00000	.39	.00031	.00151	.00078	.1039	.00275	.00381	.02010
%RSD	5.2325	215.54	2.7254	2.3702	.32040	.14810	7.0639	54.765	62.260	1.9211	61.907	49.779	91.385
#1	.56740	.00370	-.08232	.00258	-.00145	266.82	.00455	.00381	-.00181	5.4812	.00639	.01034	-.03621
#2	.52691	-.00077	-.07921	.00250	-.00145	266.26	.00412	.00168	-.00070	5.3343	.00250	.00496	-.00778
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.04708**	**-.00103**	**.00283**	**4.9137**	**.01751**	**-.00157**	**10.461**	**-.01030**	**.00381**	**.08181**
Stddev	.04302	.00058	.00256	.0121	.00053	.00364	.040	.00017	.00046	.00092
%RSD	91.385	56.651	90.392	.24634	3.0382	231.76	.38120	1.6122	12.050	1.1297
#1	-.07749	-.00062	.00464	4.9223	.01789	-.00414	10.489	-.01042	.00349	.08116
#2	-.01666	-.00144	.00102	4.9052	.01714	.00100	10.433	-.01018	.00414	.08247
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3849.8**	**46740.**	**3352.3**
Stddev	17.9	333.	21.7
%RSD	.46382	.71163	.64780
#1	3837.2	46505.	3337.0
#2	3862.5	46975.	3367.7

Sample Name: CCV-5407546 Acquired: 11/7/2018 20:06:20 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49304**	**.51776**	**1.0005**	**.49678**	**.51331**	**.49233**	**.00228**	**4.8494**	**.48596**	**.49215**	**.49467**	**.50066**
Stddev	.00059	.00650	.0050	.00771	.00221	.00089	.00111	.0484	.00610	.00587	.00689	.00242
%RSD	.11921	1.2562	.49796	1.5522	.42994	.18059	48.529	.99827	1.2549	1.1923	1.3925	.48379
#1	.49346	.52236	1.0040	.50223	.51487	.49296	.00150	4.8836	.49028	.49630	.49954	.50237
#2	.49263	.51316	.99697	.49133	.51175	.49170	.00307	4.8152	.48165	.48800	.48980	.49895
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.2162**	**51.752**	**1.0593**	**19.366**	**.48072**	**.48768**	**5.4645**	**.49195**	**.96886**	**.99176**	**.19914**	**.96530**
Stddev	.0078	.199	.0020	.058	.00235	.00851	.0888	.00723	.01325	.01557	.00072	.02498
%RSD	.35234	.38379	.18523	.29703	.48960	1.7454	1.6253	1.4692	1.3678	1.5700	.36065	2.5875
#1	2.2217	51.892	1.0607	19.407	.48238	.49370	5.5273	.49706	.97823	1.0028	.19864	.98296
#2	2.2107	51.611	1.0579	19.326	.47905	.48166	5.4017	.48684	.95949	.98075	.19965	.94764
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value	2.5000											
Range	-10.000%											

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0048**	**4.6021**	**9.8486**	**.98739**	**.50983**	**.01213**	**.47514**	**1.0091**	**-.07317**	**.48470**	**.47265**	**.48899**
Stddev	.0219	.0348	.0745	.00920	.00237	.00231	.00156	.0081	.01368	.00161	.00157	.00269
%RSD	2.1778	.75592	.75592	.93141	.46583	19.044	.32914	.80750	18.693	.33212	.33125	.55022
#1	1.0202	4.5775	9.7959	.99389	.51151	.01049	.47625	1.0149	-.08284	.48583	.47376	.49090
#2	.98930	4.6267	9.9012	.98088	.50815	.01376	.47404	1.0033	-.06350	.48356	.47154	.48709
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3892.9**	**47419.**	**3371.6**
Stddev	9.1	161.	17.1
%RSD	.23477	.33931	.50861
#1	3899.3	47305.	3359.5
#2	3886.4	47532.	3383.7

Sample Name: CCB Acquired: 11/7/2018 20:08:42 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00063**	**.01606**	**.00127**	**.00912**	**.00103**	**-.00033**	**.00074**	**.03558**	**.00019**	**-.00006**	**.00029**	**-.00197**
Stddev	.00076	.01435	.00618	.00263	.00015	.00002	.00015	.00646	.00024	.00055	.00008	.00006
%RSD	120.07	89.361	486.33	28.823	14.275	5.4287	20.906	18.164	125.45	996.81	26.060	3.2443
#1	.00010	.00591	-.00310	.00726	.00093	-.00034	.00084	.03101	.00036	-.00045	.00035	-.00202
#2	.00117	.02621	.00564	.01098	.00114	-.00032	.00063	.04015	.00002	.00034	.00024	-.00193
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.06842**	**.37412**	**-.00067**	**.01146**	**.00075**	**.00084**	**.27839**	**.00055**	**-.00174**	**-.00204**	F **.32160**	**.00239**
Stddev	.00481	.06457	.00053	.01034	.00032	.00027	.01807	.00021	.00031	.00078	.19496	.00155
%RSD	7.0248	17.259	78.900	90.273	42.969	32.350	6.4900	37.269	17.978	38.274	60.623	65.178
#1	.06502	.32846	-.00030	.00414	.00053	.00065	.29116	.00041	-.00197	-.00259	.18374	.00129
#2	.07182	.41978	-.00104	.01877	.00098	.00104	.26561	.00070	-.00152	-.00148	.45946	.00348
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit	.05000										.10000	
Low Limit	-.05000										-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00472**	**-.01276**	**-.02731**	**-.00052**	**.00020**	**.00026**	**.00035**	**-.00152**	**.00599**	**.00107**	**.00622**	**.00440**
Stddev	.00006	.00056	.00119	.00033	.00054	.00422	.00018	.00238	.00142	.00063	.00042	.00162
%RSD	1.2328	4.3594	4.3594	63.743	268.72	1652.9	50.806	156.00	23.707	59.141	6.8245	36.695
#1	.00476	-.01316	-.02815	-.00029	.00058	-.00273	.00023	-.00320	.00700	.00062	.00652	.00554
#2	.00468	-.01237	-.02647	-.00076	-.00018	.00324	.00048	.00016	.00499	.00151	.00592	.00326
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3890.0**	**47744.**	**3220.1**
Stddev	13.1	491.	20.5
%RSD	.33629	1.0278	.63776
#1	3880.8	47397.	3205.6
#2	3899.3	48091.	3234.6

Sample Name: CCVL-5415520 Acquired: 11/7/2018 20:11:20 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01101**	**.11354**	**.01841**	**.10737**	**.01114**	**.00100**	**.12244**	**.21829**	**.00514**	**.01073**	**.01078**	**.01363**
Stddev	.00084	.00086	.00586	.00064	.00022	.00015	.00113	.00350	.00043	.00031	.00003	.00001
%RSD	7.6541	.75789	31.797	.59190	1.9809	15.186	.92537	1.6022	8.3640	2.8512	.24791	.10752
#1	.01161	.11414	.02255	.10692	.01098	.00090	.12164	.22076	.00484	.01051	.01077	.01364
#2	.01042	.11293	.01427	.10782	.01130	.00111	.12325	.21582	.00545	.01095	.01080	.01362
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.10164**	**3.6962**	**.01860**	**.20875**	**.01040**	**.01964**	F **1.3455**	**.04336**	**2.9836**	**.00862**	F **.24559**	**.01665**
Stddev	.00383	.0234	.00534	.00724	.00003	.00022	.0010	.00036	.0250	.00038	.00001	.00455
%RSD	3.7674	.63300	28.726	3.4662	.29729	1.1107	.07399	.83456	.83763	4.3952	.00526	27.356
#1	.09894	3.7127	.01482	.20364	.01038	.01979	1.3462	.04362	3.0013	.00835	.24560	.01343
#2	.10435	3.6796	.02238	.21387	.01043	.01949	1.3447	.04310	2.9660	.00889	.24558	.01987
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							1.0000				.10000	
Range							30.000%				30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01985**	**.44509**	**.95250**	**.10334**	**.01094**	**.01609**	**.00956**	**.01472**	F **.08898**	**.01004**	**.01972**	F **.02074**
Stddev	.00068	.00304	.00651	.00012	.00003	.00014	.00074	.00068	.03619	.00042	.00102	.00009
%RSD	3.4017	.68383	.68383	.11888	.29660	.84195	7.6879	4.6521	40.667	4.1638	5.1735	.43440
#1	.01937	.44294	.94789	.10342	.01092	.01619	.01008	.01520	.06339	.01034	.02044	.02067
#2	.02033	.44724	.95710	.10325	.01096	.01600	.00904	.01424	.11457	.00974	.01900	.02080
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3992.6**	**49317.**	**3363.2**
Stddev	9.0	25.	42.9
%RSD	.22476	.05166	1.2751
#1	3986.3	49335.	3332.9
#2	3999.0	49299.	3393.5

Sample Name: 280-116515-A-16-A Acquired: 11/7/2018 20:13:56 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00091**	**.01897**	**.00469**	**1.8564**	**.05223**	**-.00014**	**.00371**	**27.311**	**.00018**
Stddev	.00015	.00013	.00479	.0062	.00017	.00051	.00638	.070	.00029
%RSD	15.960	.68279	102.03	.33574	.31591	372.92	171.91	.25791	160.55
#1	.00081	.01888	.00131	1.8608	.05235	-.00050	.00822	27.361	-.00002
#2	.00102	.01906	.00807	1.8520	.05212	.00022	-.00080	27.261	.00039
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00017**	**.00004**	**.00040**	**.02080**	**6.9999**	**.02952**	**10.628**	**.00099**	**.00383**
Stddev	.00061	.00001	.00002	.00102	.0142	.00012	.017	.00004	.00008
%RSD	361.58	20.151	6.1156	4.9146	.20245	.40223	.15524	3.9040	2.0076
#1	-.00026	.00004	.00042	.02008	6.9899	.02944	10.617	.00097	.00377
#2	.00060	.00003	.00039	.02153	7.0099	.02960	10.640	.00102	.00388
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**272.40**	**.00065**	**.02351**	**-.00438**	**36.266**	**-.00420**	**.00066**	**6.0539**	**12.955**
Stddev	.47	.00020	.00434	.00077	.190	.00328	.00356	.0086	.018
%RSD	.17385	31.520	18.447	17.550	.52375	78.123	543.48	.14213	.14213
#1	272.07	.00079	.02045	-.00384	36.401	-.00188	.00317	6.0478	12.942
#2	272.74	.00050	.02658	-.00492	36.132	-.00653	-.00186	6.0600	12.968
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00324**	**2.1139**	**.00019**	**.00061**	**-.00114**	**-.04131**	**.00084**	**.00348**	**.00538**
Stddev	.00168	.0033	.00204	.00046	.00224	.06228	.00038	.00029	.00037
%RSD	51.728	.15705	1085.1	74.318	195.59	150.77	45.620	8.4635	6.9236
#1	-.00205	2.1162	.00163	.00029	-.00273	.00273	.00057	.00327	.00511
#2	-.00443	2.1115	-.00126	.00094	.00044	-.08534	.00111	.00369	.00564
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3843.9**	**46224.**	**3337.7**
Stddev	4.3	52.	8.2
%RSD	.11315	.11198	.24440
#1	3847.0	46260.	3331.9
#2	3840.9	46187.	3343.4

Sample Name: 280-116515-A-17-A Acquired: 11/7/2018 20:16:32 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00079**	**.00575**	**.00991**	**1.7637**	**.07256**	**-.00006**	**.00153**	**51.471**	**-.00008**
Stddev	.00011	.00034	.00104	.0107	.00031	.00017	.00468	.145	.00019
%RSD	14.050	5.8958	10.536	.60680	.43137	284.69	305.03	.28136	241.20
#1	.00087	.00599	.00917	1.7712	.07278	-.00018	.00484	51.369	-.00021
#2	.00071	.00551	.01065	1.7561	.07234	.00006	-.00177	51.573	.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00034**	**.00011**	**.00172**	**.10216**	**7.1149**	**.04709**	**15.398**	**.00709**	**.00087**
Stddev	.00009	.00017	.00044	.00006	.1597	.00193	.001	.00003	.00009
%RSD	25.272	150.71	25.670	.06354	2.2444	4.0916	.00705	.39318	10.308
#1	.00028	.00023	.00140	.10221	7.0020	.04846	15.397	.00711	.00094
#2	.00040	-.00001	.00203	.10212	7.2278	.04573	15.398	.00707	.00081
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**196.94**	**.00093**	**.03735**	**-.00393**	**13.651**	**.00103**	**.00113**	**7.1172**	**15.231**
Stddev	.42	.00003	.00007	.00013	.077	.00352	.00097	.0416	.089
%RSD	.21478	3.7143	.18217	3.3414	.56569	340.74	86.227	.58509	.58509
#1	196.64	.00090	.03730	-.00384	13.705	-.00145	.00181	7.1466	15.294
#2	197.24	.00095	.03740	-.00402	13.596	.00352	.00044	7.0877	15.168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00164**	**3.0855**	**-.00042**	**.00013**	**.00114**	**-.07553**	**.00030**	**.00256**	**.00600**
Stddev	.00005	.0063	.00293	.00040	.00009	.03419	.00028	.00018	.00413
%RSD	3.2237	.20313	702.03	307.51	7.9478	45.269	91.926	6.9383	68.882
#1	-.00168	3.0811	-.00249	-.00015	.00121	-.09971	.00011	.00268	.00308
#2	-.00161	3.0900	.00165	.00041	.00108	-.05136	.00050	.00243	.00892
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3835.4**	**46149.**	**3326.9**
Stddev	12.1	131.	3.0
%RSD	.31605	.28427	.09107
#1	3826.8	46056.	3329.0
#2	3844.0	46241.	3324.7

Sample Name: 280-116515-A-18-A Acquired: 11/7/2018 20:19:07 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**.00307**	**.00487**	**2.2424**	**.03555**	**-.00031**	**.01136**	**37.032**	**.00031**
Stddev	.00075	.00038	.00529	.0159	.00031	.00019	.00125	.064	.00005
%RSD	274.44	12.299	108.51	.70828	.86274	60.627	10.973	.17365	16.731
#1	-.00026	.00334	.00113	2.2537	.03533	-.00018	.01047	37.078	.00034
#2	.00080	.00280	.00861	2.2312	.03577	-.00045	.01224	36.987	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00033**	**.00030**	**.00031**	**.61672**	**8.8935**	**.04299**	**15.911**	**.00644**	**.00019**
Stddev	.00026	.00012	.00119	.00855	.0707	.00074	.034	.00001	.00000
%RSD	78.792	40.385	384.56	1.3862	.79454	1.7286	.21534	.20517	.86940
#1	.00015	.00021	-.00053	.62277	8.9434	.04351	15.887	.00644	.00019
#2	.00051	.00039	.00115	.61068	8.8435	.04246	15.935	.00645	.00019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**356.72**	**.00021**	**.05388**	**-.00372**	**65.308**	**-.00307**	**-.00687**	**6.1930**	**13.253**
Stddev	.43	.00036	.00144	.00163	.749	.00130	.00362	.0654	.140
%RSD	.12145	173.42	2.6692	43.690	1.1470	42.431	52.749	1.0558	1.0558
#1	356.41	-.00005	.05490	-.00257	65.837	-.00215	-.00944	6.2393	13.352
#2	357.02	.00046	.05286	-.00487	64.778	-.00399	-.00431	6.1468	13.154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00131**	**3.1204**	**.00372**	**.00072**	**-.00110**	**-.03630**	**.00066**	**.00315**	**.00307**
Stddev	.00067	.0005	.00121	.00005	.00126	.00187	.00025	.00024	.00106
%RSD	50.980	.01638	32.609	7.0800	113.85	5.1564	37.098	7.6621	34.387
#1	-.00179	3.1208	.00458	.00068	-.00199	-.03498	.00049	.00333	.00232
#2	-.00084	3.1201	.00286	.00075	-.00022	-.03762	.00084	.00298	.00382
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3828.2**	**46000.**	**3327.9**
Stddev	1.5	103.	22.9
%RSD	.03844	.22392	.68738
#1	3829.2	46072.	3311.7
#2	3827.1	45927.	3344.0

Sample Name: 280-116515-A-19-A Acquired: 11/7/2018 20:21:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00076**	**.01108**	**-.00023**	**.84845**	**.02355**	**.00006**	**.00976**	**3.6231**	**-.00026**
Stddev	.00057	.00019	.00620	.00838	.00017	.00009	.00093	.0171	.00028
%RSD	74.433	1.6726	2652.2	.98738	.70754	150.61	9.5222	.47221	107.22
#1	.00116	.01121	-.00462	.85437	.02366	-.00000	.01041	3.6352	-.00046
#2	.00036	.01095	.00415	.84252	.02343	.00013	.00910	3.6110	-.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00031**	**.00055**	**-.00002**	**.37653**	**3.7710**	**.01557**	**1.0565**	**.00679**	**.00218**
Stddev	.00005	.00011	.00071	.00632	.0407	.00190	.0164	.00016	.00024
%RSD	15.139	19.672	3300.3	1.6779	1.0802	12.221	1.5505	2.4076	10.842
#1	-.00028	.00063	-.00053	.38100	3.7998	.01691	1.0681	.00667	.00202
#2	-.00035	.00048	.00048	.37207	3.7422	.01422	1.0449	.00690	.00235
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**461.04**	**.00064**	**.06781**	**-.00267**	**.13197**	**-.00307**	**.00268**	**4.9269**	**10.544**
Stddev	.70	.00034	.00135	.00143	.00397	.00384	.00275	.0162	.035
%RSD	.15162	53.154	1.9872	53.628	3.0058	125.05	102.51	.32781	.32781
#1	461.54	.00040	.06876	-.00369	.13477	-.00578	.00074	4.9383	10.568
#2	460.55	.00087	.06685	-.00166	.12916	-.00036	.00462	4.9155	10.519
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00141**	**.36153**	**-.00200**	**.00052**	**.00008**	**.04694**	**.00105**	**.00128**	**.00254**
Stddev	.00159	.00060	.00045	.00021	.00327	.01722	.00024	.00047	.00062
%RSD	113.26	.16547	22.255	39.776	4240.3	36.692	23.228	36.669	24.398
#1	-.00028	.36196	-.00169	.00037	-.00224	.03476	.00088	.00161	.00298
#2	-.00253	.36111	-.00232	.00066	.00239	.05912	.00122	.00095	.00210
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3795.3**	**45859.**	**3326.5**
Stddev	31.1	78.	3.4
%RSD	.82006	.17001	.10283
#1	3817.3	45914.	3324.0
#2	3773.3	45804.	3328.9

Sample Name: 280-116515-A-20-A Acquired: 11/7/2018 20:24:16 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436579 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00070**	**.00979**	**-.00366**	**.84360**	**.03208**	**-.00028**	**-.00176**	**4.6195**	**-.00008**
Stddev	.00061	.00012	.00043	.01277	.00097	.00015	.00365	.0033	.00025
%RSD	86.850	1.2474	11.741	1.5140	3.0139	52.298	207.82	.07172	318.82
#1	.00027	.00987	-.00396	.85263	.03140	-.00039	-.00434	4.6172	-.00026
#2	.00113	.00970	-.00335	.83456	.03276	-.00018	.00082	4.6219	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00009**	**.00019**	**-.00013**	**.33286**	**4.5543**	**.01972**	**1.4168**	**.00626**	**.00101**
Stddev	.00005	.00039	.00052	.00820	.1073	.00250	.0118	.00022	.00015
%RSD	53.346	209.78	410.44	2.4645	2.3553	12.683	.83597	3.5321	14.481
#1	.00012	-.00009	.00024	.33866	4.4784	.02149	1.4252	.00642	.00090
#2	.00006	.00047	-.00049	.32706	4.6301	.01795	1.4085	.00611	.00111
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **544.79**	**.00083**	**.03151**	**-.00278**	**.14518**	**-.00011**	**-.00414**	**5.2799**	**11.299**
Stddev	5.41	.00086	.00031	.00034	.00802	.00114	.00274	.0214	.046
%RSD	.99280	103.21	.97176	12.124	5.5232	1022.7	66.191	.40458	.40458
#1	540.96	.00023	.03130	-.00254	.15085	-.00092	-.00607	5.2648	11.267
#2	548.61	.00144	.03173	-.00302	.13951	.00070	-.00220	5.2950	11.331
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00210**	**.49538**	**.00251**	**.00043**	**.00207**	**-.05779**	**-.00013**	**.00659**	**.00325**
Stddev	.00093	.00227	.00110	.00013	.00223	.09569	.00075	.00009	.00235
%RSD	44.084	.45824	43.930	29.426	107.80	165.59	576.12	1.3487	72.233
#1	-.00276	.49377	.00328	.00052	.00364	.00988	-.00066	.00665	.00491
#2	-.00145	.49698	.00173	.00034	.00049	-.12545	.00040	.00653	.00159
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3732.2**	**44880.**	**3267.5**
Stddev	10.3	462.	27.8
%RSD	.27676	1.0305	.85150
#1	3724.9	44553.	3287.1
#2	3739.5	45207.	3247.8

Sample Name: MB 280-436578/1-A Acquired: 11/7/2018 20:26:53 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/7 Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00124**	**.00188**	**.00557**	**.00714**	**.00107**	**-.00021**	**.00796**	**.01472**	**-.00005**
Stddev	.00079	.00003	.00303	.00012	.00014	.00004	.00011	.00463	.00001
%RSD	64.211	1.4704	54.505	1.6493	13.524	18.309	1.3310	31.487	12.029
#1	.00180	.00186	.00771	.00706	.00097	-.00023	.00804	.01799	-.00006
#2	.00068	.00190	.00342	.00722	.00117	-.00018	.00789	.01144	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00012**	**-.00268**	**.00554**	**.45439**	**-.00178**	**-.00317**	**.00021**	**-.00064**
Stddev	.00034	.00023	.00022	.00486	.04175	.00224	.00028	.00017	.00062
%RSD	3471.8	192.26	8.0588	87.846	9.1887	125.65	8.8675	81.702	96.557
#1	-.00023	-.00004	-.00283	.00898	.42486	-.00020	-.00337	.00009	-.00020
#2	.00025	.00028	-.00252	.00210	.48391	-.00337	-.00297	.00033	-.00108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.67070**	**.00037**	**-.00010**	**-.00143**	W **.09281**	**-.00296**	**-.00090**	**-.03574**	**-.07648**
Stddev	.03789	.00027	.00132	.00145	.00646	.00087	.00055	.01225	.02622
%RSD	5.6492	73.525	1328.7	101.51	6.9553	29.537	60.702	34.290	34.290
#1	.64391	.00057	.00083	-.00040	.08824	-.00234	-.00129	-.04440	-.09502
#2	.69749	.00018	-.00103	-.00246	.09737	-.00358	-.00052	-.02707	-.05794
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	None
High Limit	.50000				.05000				
Low Limit	-.50000				-.05000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00025**	**-.00017**	**.00146**	**.00085**	**-.00299**	**-.01759**	**.00049**	**.00060**	**.00323**
Stddev	.00168	.00015	.00032	.00006	.00241	.01537	.00002	.00068	.00213
%RSD	679.98	88.424	21.530	6.5266	80.677	87.408	4.4485	114.20	65.968
#1	-.00143	-.00027	.00169	.00081	-.00470	-.02846	.00051	.00108	.00173
#2	.00094	-.00006	.00124	.00089	-.00128	-.00672	.00048	.00012	.00474
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**4040.2**	**49830.**	**3411.9**
Stddev	9.9	318.	1.6
%RSD	.24391	.63790	.04695
#1	4047.2	49605.	3413.1
#2	4033.2	50055.	3410.8

Sample Name: LCS 280-436578/2-A Acquired: 11/7/2018 20:29:30 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.03547**	**2.0637**	**1.0318**	**1.0331**	**2.1192**	**.05021**	**2.0944**	**49.485**	**.09683**
Stddev	.00034	.0215	.0010	.0091	.0161	.00029	.0112	.239	.00141
%RSD	.95106	1.0398	.09242	.88079	.76111	.57245	.53275	.48284	1.4511
#1	.03523	2.0788	1.0312	1.0396	2.1306	.05042	2.1023	49.654	.09783
#2	.03571	2.0485	1.0325	1.0267	2.1078	.05001	2.0865	49.316	.09584
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750								
Low Limit	.04275								

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50245**	**.20438**	**.25368**	**.91692**	**54.134**	**1.0886**	**49.357**	**.49260**	**1.0351**
Stddev	.00604	.00249	.00143	.00266	.389	.0068	.114	.00095	.0146
%RSD	1.2026	1.2169	.56370	.29021	.71778	.62227	.23149	.19198	1.4059
#1	.50672	.20614	.25469	.91880	54.409	1.0934	49.438	.49327	1.0454
#2	.49818	.20262	.25267	.91504	53.860	1.0838	49.276	.49193	1.0248
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**55.187**	**.49799**	**10.420**	**.51297**	**2.1921**	**.49222**	**2.1078**	F **7.9532**	**17.020**
Stddev	.225	.00572	.111	.00588	.0257	.00971	.0161	.0156	.033
%RSD	.40696	1.1483	1.0634	1.1461	1.1743	1.9733	.76454	.19650	.19650
#1	55.028	.50203	10.499	.51713	2.2103	.49908	2.1192	7.9643	17.044
#2	55.346	.49394	10.342	.50881	2.1739	.48535	2.0964	7.9422	16.996
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit								11.000	
Low Limit								9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0559**	**1.0594**	**.99339**	**.99165**	**2.0423**	**2.0546**	**.51058**	**.49265**	**.51807**
Stddev	.0248	.0059	.00694	.00069	.0186	.0334	.00173	.00145	.00033
%RSD	1.2061	.55249	.69910	.06992	.91118	1.6266	.33856	.29484	.06341
#1	2.0735	1.0636	.98848	.99116	2.0554	2.0782	.51180	.49162	.51784
#2	2.0384	1.0553	.99830	.99214	2.0291	2.0310	.50935	.49368	.51831
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3848.3**	**46679.**	**3300.1**
Stddev	6.4	261.	4.9
%RSD	.16706	.55985	.14874
#1	3852.8	46494.	3296.6
#2	3843.7	46863.	3303.5

Sample Name: 116515-A-21-A Acquired: 11/7/2018 20:31:50 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.09004**	**-.00394**	**.75975**	**.03031**	**-.00021**	**.01150**	**4.1594**	**.00042**
Stddev	.00083	.00064	.00199	.00802	.00034	.00010	.00138	.0006	.00008
%RSD	208.36	.70882	50.573	1.0554	1.1170	45.363	12.040	.01553	19.803
#1	-.00019	.09049	-.00534	.76542	.03007	-.00015	.01248	4.1589	.00036
#2	.00099	.08959	-.00253	.75408	.03055	-.00028	.01052	4.1598	.00048
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00115**	**.00291**	**2.6042**	**4.0206**	**.02026**	**1.0062**	**.02048**	**.00379**
Stddev	.00026	.00008	.00036	.0121	.0423	.00180	.0068	.00000	.00029
%RSD	587.84	6.8307	12.386	.46256	1.0531	8.8973	.67705	.01430	7.7324
#1	.00023	.00120	.00317	2.5957	4.0505	.01898	1.0110	.02048	.00358
#2	-.00014	.00109	.00266	2.6128	3.9907	.02153	1.0014	.02048	.00400
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**475.47**	**.00076**	**.08713**	**-.00247**	**.13147**	**.00120**	**.00426**	**5.1067**	**10.928**
Stddev	.93	.00012	.00072	.00123	.00016	.00267	.00442	.0412	.088
%RSD	.19548	15.660	.82822	49.988	.12497	222.53	103.81	.80617	.80617
#1	476.13	.00084	.08764	-.00159	.13159	.00309	.00113	5.1358	10.991
#2	474.81	.00067	.08662	-.00334	.13136	-.00069	.00739	5.0775	10.866
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00165**	**.38021**	**-.00010**	**.00321**	**.00047**	**.00735**	**.00044**	**.02605**	**.00544**
Stddev	.00118	.00014	.00187	.00014	.00009	.00533	.00051	.00053	.00391
%RSD	71.294	.03622	1820.7	4.3249	19.623	72.609	114.68	2.0423	71.767
#1	-.00248	.38031	-.00142	.00330	.00040	.00357	.00008	.02643	.00268
#2	-.00082	.38011	.00122	.00311	.00053	.01112	.00080	.02567	.00820
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3772.6**	**45599.**	**3298.0**
Stddev	14.6	396.	17.4
%RSD	.38830	.86904	.52680
#1	3782.9	45319.	3285.7
#2	3762.2	45880.	3310.3

Sample Name: 116515-A-21-A SD@5 Acquired: 11/7/2018 20:34:24 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00071**	**.01931**	**-.00208**	**.15981**	**.00625**	**-.00065**	**.00281**	**.85879**	**.00022**
Stddev	.00041	.00022	.00523	.00235	.00067	.00030	.00286	.00442	.00016
%RSD	56.905	1.1472	250.93	1.4723	10.681	46.075	101.73	.51489	72.115
#1	.00100	.01916	-.00578	.16148	.00577	-.00044	.00079	.85566	.00032
#2	.00043	.01947	.00161	.15815	.00672	-.00086	.00484	.86191	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**.00064**	**-.00085**	**.53097**	**1.1402**	**-.00195**	**.20577**	**.00407**	**.00013**
Stddev	.00021	.00016	.00004	.00364	.0183	.00134	.00525	.00008	.00019
%RSD	267.99	24.176	4.2647	.68533	1.6011	68.862	2.5510	1.9136	153.12
#1	.00023	.00075	-.00082	.53355	1.1532	-.00290	.20206	.00401	.00026
#2	-.00007	.00053	-.00087	.52840	1.1273	-.00100	.20948	.00412	-.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**98.350**	**.00027**	**.01487**	**-.00234**	**.12372**	**-.00123**	**.00216**	**1.0026**	**2.1455**
Stddev	.147	.00051	.00095	.00031	.00657	.00155	.00027	.0059	.0127
%RSD	.14938	190.90	6.3866	13.094	5.3131	126.59	12.696	.58968	.58968
#1	98.454	-.00009	.01420	-.00212	.12837	-.00232	.00197	1.0067	2.1544
#2	98.246	.00063	.01554	-.00255	.11907	-.00013	.00236	.99839	2.1365
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00022**	**.07685**	**.00151**	**.00099**	**-.00024**	**-.04166**	**.00010**	**.00436**	**.00321**
Stddev	.00011	.00031	.00149	.00043	.00064	.02684	.00004	.00063	.00223
%RSD	51.393	.40523	98.647	43.158	271.39	64.432	40.696	14.403	69.369
#1	-.00014	.07663	.00046	.00069	-.00069	-.06064	.00007	.00391	.00164
#2	-.00030	.07707	.00257	.00129	.00022	-.02268	.00013	.00480	.00479
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3788.5**	**46352.**	**3210.4**
Stddev	11.5	144.	5.9
%RSD	.30366	.30985	.18421
#1	3796.6	46454.	3214.6
#2	3780.3	46251.	3206.2

Sample Name: 116515-A-21-B MS Acquired: 11/7/2018 20:37:02 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03490**	**2.1485**	**1.0452**	**1.7682**	**2.1631**	**.05124**	W **2.0255**	**53.699**	**.09621**
Stddev	.00059	.0215	.0094	.0116	.0010	.00004	.0188	.115	.00090
%RSD	1.6935	.99841	.89607	.65546	.04787	.07559	.93044	.21324	.93391
#1	.03532	2.1637	1.0519	1.7764	2.1624	.05127	2.0389	53.618	.09684
#2	.03449	2.1334	1.0386	1.7600	2.1638	.05121	2.0122	53.780	.09557
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49736**	**.20568**	**.25542**	**3.7716**	**58.096**	**1.0840**	**48.912**	**.51122**	**1.0447**
Stddev	.00509	.00163	.00217	.0132	.322	.0011	.164	.00249	.0138
%RSD	1.0229	.79304	.84822	.35069	.55483	.10298	.33518	.48797	1.3197
#1	.50095	.20683	.25695	3.7622	57.868	1.0832	49.028	.51299	1.0544
#2	.49376	.20453	.25389	3.7809	58.324	1.0848	48.796	.50946	1.0349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **533.56**	**.49387**	**10.752**	**.49117**	**2.2941**	**.49588**	**2.1109**	**14.219**	**30.429**
Stddev	.95	.00378	.090	.00245	.0128	.00620	.0157	.125	.268
%RSD	.17845	.76617	.83728	.49940	.55709	1.2502	.74459	.88193	.88193
#1	532.88	.49655	10.816	.49290	2.3032	.50026	2.1220	14.131	30.240
#2	534.23	.49120	10.688	.48943	2.2851	.49149	2.0998	14.308	30.619
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0341**	**1.4467**	**1.0090**	**1.0039**	**1.8990**	**2.0821**	**.52091**	**.53294**	**.52850**
Stddev	.0196	.0027	.0032	.0089	.0238	.0006	.00229	.00356	.00329
%RSD	.96568	.18513	.31470	.88870	1.2541	.02950	.44028	.66812	.62240
#1	2.0480	1.4448	1.0067	1.0103	1.9158	2.0825	.52253	.53545	.52617
#2	2.0202	1.4486	1.0112	.99764	1.8821	2.0816	.51929	.53042	.53082
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3648.0**	**43577.**	**3183.0**
Stddev	13.9	9.	17.4
%RSD	.37997	.02109	.54584
#1	3638.2	43583.	3195.3
#2	3657.8	43570.	3170.7

Sample Name: CCVH-5408055 Acquired: 11/7/2018 20:39:25 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00343**	**50.571**	**-.00706**	**.00932**	**.00110**	**-.00024**	**1.0683**	**.02213**	**-.00012**	**.00141**	**.00071**	**-.00088**	**48.836**
Stddev	.00044	.128	.00213	.00015	.00021	.00019	.0058	.00406	.00015	.00008	.00045	.00007	.050
%RSD	12.785	.25391	30.152	1.6406	19.300	80.913	.53941	18.345	124.08	5.7068	63.117	7.7087	.10199
#1	-.00312	50.661	-.00556	.00943	.00095	-.00010	1.0724	.02500	-.00001	.00135	.00039	-.00093	48.871
#2	-.00374	50.480	-.00857	.00921	.00125	-.00038	1.0642	.01926	-.00022	.00147	.00103	-.00084	48.800
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48844**	**-.00404**	**-.08735**	**.00269**	**.00103**	**270.66**	**.00396**	**.00483**	**-.00109**	**5.3888**	**.00657**	**.00979**	**-.00199**
Stddev	.01059	.00070	.00363	.00014	.00020	.75	.00016	.00072	.00108	.0282	.00069	.01433	.00931
%RSD	2.1671	17.337	4.1610	5.2313	19.415	.27733	4.0939	14.895	99.372	.52301	10.571	146.27	467.94
#1	.49593	-.00454	-.08992	.00259	.00089	270.13	.00385	.00534	-.00185	5.4087	.00608	-.00034	-.00857
#2	.48096	-.00355	-.08478	.00279	.00117	271.19	.00408	.00432	-.00032	5.3689	.00706	.01992	.00459
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00426**	**-.00121**	**.00056**	**5.0069**	**.01833**	**-.00215**	**10.540**	**-.00995**	**-.00065**	**.08438**
Stddev	.01992	.00095	.00003	.0376	.00037	.00296	.022	.00004	.00023	.00007
%RSD	467.94	78.964	6.0197	.75171	2.0317	137.82	.20804	.41647	35.725	.08480
#1	-.01834	-.00188	.00054	5.0336	.01807	-.00005	10.555	-.00992	-.00081	.08433
#2	.00983	-.00053	.00058	4.9803	.01859	-.00424	10.524	-.00998	-.00048	.08443
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3794.0**	**45724.**	**3213.6**
Stddev	13.3	93.	7.1
%RSD	.35032	.20390	.22139
#1	3784.6	45790.	3208.5
#2	3803.4	45658.	3218.6

Sample Name: CCV-5407546 Acquired: 11/7/2018 20:41:56 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.48359**	**.50629**	**.97443**	**.48053**	**.51663**	**.48783**	**.00704**	**4.8136**	**.47545**	**.48203**	**.48327**	**.49210**
Stddev	.00182	.01467	.02493	.00880	.00077	.00020	.00010	.0034	.00979	.01033	.01253	.00108
%RSD	.37578	2.8977	2.5586	1.8322	.14947	.04053	1.4411	.07030	2.0594	2.1420	2.5935	.22034
#1	.48230	.51666	.99206	.48675	.51609	.48769	.00697	4.8112	.48237	.48933	.49213	.49134
#2	.48487	.49591	.95680	.47430	.51718	.48797	.00711	4.8160	.46853	.47472	.47441	.49287
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.1899**	**52.095**	**1.0591**	**19.128**	**.47477**	**.47719**	**5.4845**	**.48090**	**.95154**	**.96838**	**.13894**	**.94468**
Stddev	.0085	.038	.0004	.055	.00135	.01111	.0106	.01072	.02280	.02009	.00027	.02038
%RSD	.38877	.07241	.04063	.28784	.28454	2.3278	.19232	2.2297	2.3966	2.0747	.19535	2.1568
#1	2.1839	52.068	1.0588	19.167	.47572	.48504	5.4919	.48848	.96767	.98259	.13913	.95909
#2	2.1959	52.122	1.0594	19.089	.47381	.46933	5.4770	.47332	.93542	.95417	.13875	.93028
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value	2.5000											
Range	-10.000%											

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.98364**	**4.5843**	**9.8103**	**.96681**	**.50763**	**.01283**	**.47162**	**.98800**	**-.01504**	**.48175**	**.46846**	**.48749**
Stddev	.01341	.0432	.0924	.01911	.00093	.00260	.00251	.01510	.05065	.00144	.00011	.00035
%RSD	1.3631	.94156	.94156	1.9762	.18383	20.286	.53266	1.5282	336.79	.29802	.02402	.07201
#1	.99312	4.5537	9.7450	.98032	.50697	.01099	.47340	.99868	.02077	.48277	.46838	.48724
#2	.97415	4.6148	9.8756	.95330	.50829	.01467	.46984	.97732	-.05085	.48073	.46854	.48774
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3892.4**	**47238.**	**3228.2**
Stddev	.0	417.	8.7
%RSD	.00095	.88225	.26883
#1	3892.4	46944.	3222.0
#2	3892.4	47533.	3234.3

Sample Name: CCB Acquired: 11/7/2018 20:44:20 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00064**	**.00061**	**-.00420**	**.00372**	**.00038**	**-.00017**	**.00551**	**.03250**	**.00007**	**-.00025**	**-.00002**	**-.00263**
Stddev	.00021	.00001	.00124	.00058	.00013	.00013	.00005	.00086	.00001	.00040	.00035	.00060
%RSD	32.479	1.9206	29.592	15.494	34.052	76.348	.94911	2.6565	11.925	156.64	1951.5	22.741
#1	.00049	.00060	-.00508	.00332	.00047	-.00027	.00555	.03311	.00007	-.00053	.00023	-.00221
#2	.00078	.00062	-.00332	.00413	.00028	-.00008	.00548	.03189	.00006	.00003	-.00027	-.00306
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00226**	**.30358**	**-.00264**	**-.00233**	**.00006**	**.00090**	**.27852**	**.00065**	**-.00084**	**-.00022**	F **.12404**	**.00413**
Stddev	.00580	.05736	.00064	.00225	.00003	.00060	.02461	.00089	.00256	.00091	.00300	.00250
%RSD	256.66	18.894	24.357	96.616	56.587	66.019	8.8356	135.92	305.23	422.46	2.4164	60.461
#1	-.00184	.34414	-.00309	-.00074	.00008	.00048	.26112	.00128	.00097	-.00086	.12192	.00237
#2	.00636	.26302	-.00219	-.00392	.00004	.00132	.29592	.00003	-.00265	.00043	.12616	.00590
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit											.10000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00329**	**.00867**	**.01856**	**-.00137**	**-.00019**	**.00300**	**.00085**	**-.00210**	**-.05056**	**.00089**	**.00071**	**.00238**
Stddev	.00039	.00622	.01332	.00141	.00002	.00070	.00016	.00230	.02219	.00094	.00018	.00039
%RSD	11.794	71.760	71.760	102.79	8.5875	23.198	18.660	109.33	43.885	105.73	24.757	16.442
#1	.00301	.00427	.00914	-.00037	-.00018	.00349	.00097	-.00373	-.03487	.00022	.00059	.00210
#2	.00356	.01307	.02798	-.00236	-.00021	.00251	.00074	-.00048	-.06625	.00155	.00083	.00265
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3891.4**	**47772.**	**3243.3**
Stddev	11.8	172.	14.4
%RSD	.30343	.35935	.44451
#1	3883.1	47893.	3253.5
#2	3899.8	47651.	3233.1

Sample Name: CCVL-5415520 Acquired: 11/7/2018 20:46:57 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01144**	**.11327**	F **.01982**	**.10347**	**.01184**	**.00097**	**.12107**	**.21169**	**.00502**	**.01034**	**.01026**	**.01378**
Stddev	.00002	.00189	.00044	.00223	.00084	.00023	.00037	.00296	.00009	.00007	.00011	.00010
%RSD	.14110	1.6670	2.1998	2.1546	7.1224	24.294	.30170	1.3977	1.8065	.68767	1.0346	.72427
#1	.01145	.11461	.01951	.10505	.01244	.00113	.12133	.21378	.00508	.01040	.01033	.01371
#2	.01143	.11194	.02013	.10190	.01124	.00080	.12081	.20960	.00496	.01029	.01018	.01386
Check ?	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value			.01500									
Range			30.000%									

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08884**	**3.6473**	**.02043**	**.21299**	**.01040**	**.01930**	F **1.3432**	**.04231**	**2.9336**	**.00996**	F **.19631**	**.02185**
Stddev	.00226	.0183	.00284	.00623	.00017	.00023	.0111	.00083	.0607	.00202	.00333	.00058
%RSD	2.5403	.50058	13.922	2.9228	1.6542	1.1954	.82788	1.9690	2.0675	20.237	1.6965	2.6631
#1	.08725	3.6602	.02244	.21739	.01052	.01946	1.3510	.04290	2.9765	.01139	.19395	.02144
#2	.09044	3.6344	.01842	.20859	.01028	.01913	1.3353	.04173	2.8907	.00853	.19866	.02226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							1.0000				.10000	
Range							30.000%				30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02244**	**.49933**	**1.0686**	**.10063**	**.01071**	**.01649**	**.00984**	**.01517**	F **.03913**	**.01082**	**.01933**	F **.02239**
Stddev	.00079	.00926	.0198	.00332	.00027	.00053	.00006	.00513	.03717	.00057	.00017	.00076
%RSD	3.5296	1.8537	1.8537	3.3002	2.5623	3.2113	.62643	33.817	95.003	5.2289	.87347	3.4068
#1	.02300	.50587	1.0826	.10298	.01051	.01686	.00989	.01879	.01284	.01122	.01921	.02293
#2	.02188	.49278	1.0546	.09828	.01090	.01611	.00980	.01154	.06541	.01042	.01945	.02185
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									-30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**4001.2**	**49270.**	**3344.0**
Stddev	8.0	174.	10.7
%RSD	.19899	.35247	.32078
#1	4006.8	49393.	3351.6
#2	3995.6	49147.	3336.4

Sample Name: 116515-A-21-C MSD Acquired: 11/7/2018 20:49:33 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03543**	**2.1675**	**1.0749**	**1.8128**	**2.1955**	**.05181**	W **2.0797**	**54.601**	**.09867**
Stddev	.00016	.0208	.0124	.0068	.0085	.00026	.0216	.085	.00057
%RSD	.43826	.95975	1.1559	.37624	.38716	.50254	1.0389	.15577	.57803
#1	.03532	2.1822	1.0837	1.8176	2.1895	.05199	2.0950	54.541	.09908
#2	.03554	2.1528	1.0661	1.8079	2.2015	.05162	2.0644	54.661	.09827
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50897**	**.20950**	**.26147**	**3.4563**	**59.046**	**1.1051**	**49.869**	**.51985**	**1.0675**
Stddev	.00258	.00089	.00092	.0223	.030	.0020	.084	.00098	.0072
%RSD	.50771	.42569	.34996	.64607	.05006	.17833	.16752	.18881	.67257
#1	.51079	.21013	.26212	3.4405	59.026	1.1037	49.928	.52054	1.0726
#2	.50714	.20887	.26082	3.4721	59.067	1.1065	49.810	.51915	1.0624
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **541.31**	**.50491**	**11.053**	**.50202**	**2.3462**	**.51218**	**2.1617**	**14.428**	**30.875**
Stddev	2.05	.00192	.064	.00368	.0306	.00284	.0098	.070	.150
%RSD	.37949	.38023	.58095	.73368	1.3053	.55464	.45578	.48440	.48440
#1	539.86	.50626	11.098	.50463	2.3679	.51419	2.1686	14.378	30.770
#2	542.77	.50355	11.007	.49942	2.3246	.51017	2.1547	14.477	30.981
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0767**	**1.4706**	**1.0303**	**1.0197**	**1.9405**	**2.0663**	**.52947**	**.53949**	**.53398**
Stddev	.0123	.0004	.0044	.0002	.0080	.0193	.00162	.00062	.00391
%RSD	.59291	.03008	.42822	.01809	.41219	.93190	.30547	.11524	.73159
#1	2.0854	1.4703	1.0334	1.0196	1.9462	2.0799	.53062	.53993	.53121
#2	2.0680	1.4710	1.0272	1.0198	1.9349	2.0527	.52833	.53905	.53674
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3702.4**	**44421.**	**3239.7**
Stddev	6.2	.	7.8
%RSD	.16636	.00081	.23967
#1	3698.0	44421.	3234.2
#2	3706.7	44422.	3245.2

Sample Name: 280-116515-A-22-A Acquired: 11/7/2018 20:51:56 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00078**	**.00992**	**-.00546**	**.87884**	**.03575**	**-.00008**	**.00656**	**4.2423**	**-.00005**
Stddev	.00028	.00024	.00710	.00777	.00047	.00023	.00351	.0131	.00047
%RSD	36.368	2.4580	129.99	.88380	1.3266	282.01	53.461	.30780	946.33
#1	.00058	.00974	-.00044	.88434	.03608	.00008	.00903	4.2331	.00028
#2	.00098	.01009	-.01048	.87335	.03541	-.00024	.00408	4.2516	-.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.00014**	**.00058**	**.05899**	**4.6005**	**.02444**	**1.4879**	**.00481**	**.00314**
Stddev	.00031	.00033	.00060	.00227	.1776	.00505	.0042	.00003	.00049
%RSD	147.04	230.92	104.01	3.8514	3.8614	20.655	.28409	.52666	15.573
#1	.00001	.00037	.00101	.05739	4.7261	.02801	1.4908	.00479	.00280
#2	-.00043	-.00009	.00015	.06060	4.4748	.02087	1.4849	.00483	.00349
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **553.63**	**.00063**	**.03671**	**-.00208**	**.18148**	**.00060**	**-.00471**	**5.2163**	**11.163**
Stddev	.54	.00024	.00233	.00163	.00206	.00046	.00199	.0395	.084
%RSD	.09775	38.109	6.3355	78.022	1.1341	76.208	42.298	.75652	.75652
#1	554.01	.00079	.03836	-.00323	.18294	.00093	-.00330	5.2442	11.223
#2	553.25	.00046	.03507	-.00093	.18002	.00028	-.00611	5.1884	11.103
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00099**	**.51929**	**.00217**	**.00180**	**.00109**	**-.05928**	**.00021**	**.00190**	**.00649**
Stddev	.00025	.00059	.00078	.00017	.00057	.00734	.00016	.00006	.00014
%RSD	25.210	.11347	35.693	9.4544	52.229	12.376	74.380	3.0405	2.2282
#1	-.00117	.51971	.00163	.00192	.00149	-.05409	.00032	.00186	.00639
#2	-.00082	.51888	.00272	.00168	.00069	-.06447	.00010	.00194	.00659
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3738.8**	**45105.**	**3297.7**
Stddev	1.2	311.	6.0
%RSD	.03230	.68945	.18085
#1	3738.0	45325.	3293.5
#2	3739.7	44886.	3301.9

Sample Name: 280-116515-A-23-A Acquired: 11/7/2018 20:54:35 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00096**	**.02478**	**.00730**	**.60680**	**.73833**	**.00015**	**.00777**	**37.047**	**-.00010**
Stddev	.00037	.00185	.00639	.00616	.00287	.00000	.00002	.175	.00016
%RSD	38.596	7.4465	87.531	1.0147	.38812	.23727	.27569	.47354	169.89
#1	.00070	.02348	.01182	.61115	.74036	.00015	.00779	37.171	-.00021
#2	.00122	.02609	.00278	.60245	.73631	.00015	.00776	36.923	.00002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00054**	**.00076**	**.00447**	**.28402**	**7.2264**	**.20760**	**.00251**	**.00549**	**.00527**
Stddev	.00066	.00010	.00046	.00515	.1728	.00276	.00537	.00003	.00076
%RSD	121.88	12.688	10.393	1.8131	2.3912	1.3289	213.87	.50878	14.485
#1	.00008	.00069	.00414	.28766	7.3486	.20565	.00630	.00551	.00473
#2	.00101	.00083	.00480	.28038	7.1042	.20956	-.00129	.00547	.00581
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**374.77**	**.01618**	**.01850**	**-.00211**	**.57357**	**-.00143**	**-.00770**	**1.4021**	**3.0004**
Stddev	.07	.00076	.01403	.00086	.00070	.00481	.00285	.0366	.0784
%RSD	.01993	4.6827	75.830	40.945	.12215	336.48	37.015	2.6136	2.6136
#1	374.82	.01564	.00858	-.00272	.57407	-.00483	-.00569	1.4280	3.0559
#2	374.71	.01672	.02843	-.00150	.57308	.00197	-.00972	1.3762	2.9450
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	W **14.799**	**.00346**	**.00048**	**-.00003**	**-.03267**	**.00060**	**.00091**	**.00479**
Stddev	.00105	.015	.00018	.00046	.00104	.00337	.00007	.00039	.00364
%RSD	9625.9	.09800	5.1530	95.915	3182.9	10.324	11.908	42.923	76.030
#1	-.00073	14.809	.00358	.00015	-.00077	-.03506	.00055	.00119	.00737
#2	.00075	14.789	.00333	.00081	.00070	-.03029	.00066	.00063	.00222
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000							
Low Limit		-.02000							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3805.6**	**45846.**	**3296.7**
Stddev	13.3	116.	8.0
%RSD	.35043	.25208	.24344
#1	3796.2	45927.	3302.4
#2	3815.0	45764.	3291.0

Sample Name: 280-116515-A-24-A Acquired: 11/7/2018 20:57:18 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00003**	**.00123**	**-.00103**	**.00886**	**.00109**	**-.00017**	**.00506**	**.02276**	**-.00006**
Stddev	.00008	.00025	.00187	.00047	.00002	.00018	.00089	.00073	.00022
%RSD	245.22	20.680	181.83	5.3563	1.9552	111.45	17.551	3.1971	354.70
#1	-.00002	.00105	-.00235	.00920	.00110	-.00030	.00443	.02328	.00009
#2	.00009	.00141	.00029	.00853	.00107	-.00003	.00568	.02225	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00001**	**.00027**	**-.00274**	**.01064**	**.45168**	**.00033**	**-.00212**	**.00021**	**.00030**
Stddev	.00019	.00025	.00064	.00436	.04973	.00213	.00082	.00003	.00024
%RSD	3699.8	93.487	23.543	40.988	11.010	651.19	38.782	15.374	78.385
#1	.00014	.00044	-.00319	.01373	.41651	-.00118	-.00270	.00019	.00047
#2	-.00013	.00009	-.00228	.00756	.48684	.00183	-.00154	.00024	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.60856**	**-.00006**	**.00252**	**-.00310**	**.08745**	**-.00123**	**.00018**	**.00925**	**.01979**
Stddev	.01030	.00064	.00278	.00125	.00445	.00076	.00286	.00719	.01539
%RSD	1.6927	1119.5	110.33	40.479	5.0924	61.883	1580.2	77.749	77.749
#1	.61584	-.00051	.00055	-.00399	.09060	-.00176	.00220	.00416	.00891
#2	.60127	.00039	.00449	-.00221	.08430	-.00069	-.00184	.01433	.03067
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00187**	**.00050**	**-.00055**	**.00003**	**-.00276**	**.04507**	**.00029**	**.00029**	**.00192**
Stddev	.00000	.00021	.00137	.00079	.00083	.03026	.00032	.00069	.00117
%RSD	.05496	42.261	250.50	2349.1	30.019	67.143	111.27	234.57	61.095
#1	-.00187	.00065	.00042	.00059	-.00217	.02367	.00052	-.00019	.00109
#2	-.00187	.00035	-.00151	-.00052	-.00335	.06647	.00006	.00078	.00275
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**4018.6**	**48963.**	**3312.7**
Stddev	8.0	286.	6.7
%RSD	.20031	.58458	.20309
#1	4024.3	49166.	3307.9
#2	4012.9	48761.	3317.5

Sample Name: 280-116515-A-25-A Acquired: 11/7/2018 20:59:56 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.00373**	**.00577**	**.00326**	**.00069**	**-.00023**	**.00163**	**.03550**	**-.00001**
Stddev	.00007	.00008	.00058	.00050	.00004	.00013	.00064	.00254	.00007
%RSD	18.726	2.1402	10.067	15.240	5.8759	56.619	39.137	7.1561	509.74
#1	.00035	.00379	.00535	.00361	.00066	-.00032	.00118	.03730	-.00006
#2	.00045	.00368	.00618	.00291	.00072	-.00014	.00208	.03371	.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00007**	**.00075**	**-.00169**	**.00601**	**.28851**	**.00020**	**.00507**	**.00033**	**-.00048**
Stddev	.00027	.00072	.00108	.00401	.05783	.00241	.00270	.00003	.00030
%RSD	362.86	95.892	63.528	66.749	20.044	1220.0	53.206	9.4776	62.871
#1	.00026	.00024	-.00093	.00317	.32940	.00190	.00698	.00031	-.00070
#2	-.00012	.00126	-.00246	.00885	.24762	-.00151	.00317	.00036	-.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.36931**	**.00211**	**.00235**	**-.00133**	**.06392**	**-.00114**	**-.00534**	**.01316**	**.02816**
Stddev	.00763	.00038	.00115	.00120	.00417	.00196	.00211	.00781	.01671
%RSD	2.0648	18.193	48.840	90.340	6.5204	172.22	39.503	59.348	59.348
#1	.37470	.00184	.00154	-.00048	.06687	.00025	-.00683	.01868	.03998
#2	.36392	.00238	.00316	-.00217	.06097	-.00253	-.00385	.00764	.01634
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00234**	**.00050**	**.00417**	**.00045**	**-.00084**	**-.05023**	**.00051**	**.00118**	**.00621**
Stddev	.00126	.00011	.00001	.00020	.00026	.00240	.00023	.00013	.00172
%RSD	53.658	22.691	.29681	44.636	30.705	4.7855	44.988	11.157	27.669
#1	-.00323	.00042	.00416	.00031	-.00066	-.05193	.00067	.00127	.00499
#2	-.00145	.00058	.00418	.00059	-.00102	-.04853	.00035	.00108	.00742
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**4003.3**	**49570.**	**3386.5**
Stddev	29.2	77.	13.0
%RSD	.72918	.15447	.38265
#1	4023.9	49516.	3377.3
#2	3982.6	49624.	3395.7

Sample Name: 280-116515-A-26-A Acquired: 11/7/2018 21:02:35 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00075**	**.06065**	**-.00547**	**.74937**	**.02690**	**-.00024**	**.00250**	**3.9355**	**-.00004**
Stddev	.00026	.00022	.00662	.00410	.00030	.00014	.00111	.0053	.00022
%RSD	34.407	.36895	120.90	.54692	1.1023	59.040	44.437	.13362	520.26
#1	.00057	.06049	-.00079	.75227	.02711	-.00034	.00329	3.9392	-.00020
#2	.00093	.06081	-.01015	.74647	.02669	-.00014	.00172	3.9318	.00011
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00007**	**.00097**	**.00795**	**2.7464**	**4.8717**	**.02682**	**.87071**	**.02049**	**.00249**
Stddev	.00114	.00031	.00047	.0038	.1982	.00485	.00036	.00022	.00063
%RSD	1718.2	31.778	5.9126	.13707	4.0685	18.070	.04191	1.0767	25.171
#1	.00074	.00075	.00828	2.7490	4.7315	.02339	.87046	.02034	.00204
#2	-.00087	.00119	.00762	2.7437	5.0118	.03024	.87097	.02065	.00293
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**485.27**	**.00116**	**.07615**	**-.00280**	**.09713**	**-.00167**	**.00007**	**3.1081**	**6.6513**
Stddev	.44	.00044	.00108	.00079	.00483	.00538	.00013	.0009	.0020
%RSD	.09042	37.468	1.4183	28.344	4.9712	322.70	177.08	.02941	.02941
#1	485.58	.00147	.07539	-.00224	.10055	.00214	-.00002	3.1087	6.6527
#2	484.96	.00086	.07692	-.00336	.09372	-.00547	.00016	3.1074	6.6499
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00122**	**.37135**	**.00394**	**.00227**	**-.00002**	**-.10159**	**.00012**	**.03509**	**.00114**
Stddev	.00275	.00112	.00187	.00034	.00225	.03620	.00019	.00058	.00268
%RSD	226.62	.30142	47.437	15.178	12222.	35.631	162.50	1.6490	235.34
#1	.00073	.37056	.00526	.00251	-.00161	-.07599	.00026	.03468	-.00075
#2	-.00316	.37214	.00262	.00203	.00157	-.12718	-.00002	.03550	.00303
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3789.8**	**45382.**	**3292.4**
Stddev	4.9	46.	6.1
%RSD	.12979	.10174	.18459
#1	3793.3	45349.	3296.7
#2	3786.4	45414.	3288.1

Sample Name: 280-116515-A-27-A Acquired: 11/7/2018 21:05:09 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00137**	**.00442**	**-.00319**	**.00344**	**.00090**	**.00011**	**.00906**	**.05621**	**-.00004**
Stddev	.00048	.00091	.00143	.00081	.00033	.00009	.00401	.00391	.00016
%RSD	35.011	20.521	44.853	23.548	36.371	80.231	44.247	6.9499	382.40
#1	.00103	.00506	-.00420	.00287	.00067	.00017	.00622	.05345	-.00015
#2	.00170	.00378	-.00218	.00401	.00114	.00005	.01189	.05897	.00007
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**.00011**	**-.00098**	**.02140**	**.45289**	**-.00583**	**.00309**	**.00040**	**-.00020**
Stddev	.00017	.00046	.00030	.00079	.00631	.00048	.00904	.00009	.00042
%RSD	87.528	405.29	30.349	3.6975	1.3939	8.1799	292.55	22.480	209.04
#1	-.00007	.00044	-.00077	.02084	.45735	-.00549	-.00330	.00034	-.00049
#2	-.00032	-.00021	-.00119	.02196	.44842	-.00617	.00948	.00047	.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.59142**	**.00061**	**.00450**	**-.00095**	**.06816**	**-.00302**	**-.00196**	**-.00778**	**-.01666**
Stddev	.02887	.00037	.00059	.00106	.00052	.00148	.00060	.03393	.07260
%RSD	4.8818	61.012	13.167	111.96	.76040	49.046	30.379	435.79	435.79
#1	.61183	.00035	.00492	-.00170	.06780	-.00197	-.00154	-.03177	-.06800
#2	.57100	.00088	.00408	-.00020	.06853	-.00407	-.00238	.01620	.03468
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00051**	**.00078**	**.00176**	**.00086**	**.00180**	**-.01058**	**.00047**	**.00177**	**.00194**
Stddev	.00051	.00010	.00255	.00004	.00210	.04172	.00095	.00077	.00178
%RSD	99.042	12.340	144.86	4.7573	116.75	394.20	201.07	43.559	91.989
#1	-.00087	.00071	.00356	.00089	.00031	.01892	.00115	.00123	.00320
#2	-.00015	.00084	-.00004	.00083	.00328	-.04008	-.00020	.00232	.00068
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3940.4**	**49221.**	**3282.5**
Stddev	8.8	206.	2.6
%RSD	.22404	.41898	.07976
#1	3946.6	49076.	3280.7
#2	3934.1	49367.	3284.4

Sample Name: 280-116537-D-1-A Acquired: 11/7/2018 21:07:47 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00099**	**.00256**	**.00228**	**.29584**	**.19136**	**-.00008**	**.00313**	**85.845**	**-.00010**
Stddev	.00013	.00083	.00088	.00197	.00015	.00015	.00284	.052	.00008
%RSD	12.872	32.355	38.684	.66706	.07794	185.08	90.825	.06049	79.873
#1	.00108	.00315	.00291	.29444	.19147	-.00018	.00514	85.808	-.00004
#2	.00090	.00197	.00166	.29724	.19126	.00002	.00112	85.881	-.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00026**	**.00075**	**-.00085**	**.69306**	**4.5987**	**.07049**	**26.028**	**.34665**	**.00691**
Stddev	.00051	.00017	.00012	.01209	.1358	.00091	.020	.00102	.00043
%RSD	193.21	23.196	14.399	1.7445	2.9523	1.2872	.07656	.29549	6.1629
#1	-.00062	.00087	-.00094	.70161	4.5027	.06985	26.042	.34738	.00661
#2	.00010	.00063	-.00076	.68451	4.6947	.07113	26.014	.34593	.00721
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**38.053**	**.00093**	**.01576**	**-.00539**	**15.457**	**.00346**	**-.00431**	**13.116**	**28.068**
Stddev	.139	.00047	.00065	.00085	.044	.00175	.00472	.014	.029
%RSD	.36444	49.849	4.1127	15.825	.28327	50.588	109.50	.10469	.10469
#1	37.955	.00126	.01530	-.00479	15.488	.00470	-.00765	13.126	28.089
#2	38.151	.00061	.01622	-.00600	15.426	.00222	-.00097	13.106	28.047
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00098**	**.75378**	**.00346**	**.00060**	**.00005**	**-.06489**	**-.00086**	**.00115**	**.00096**
Stddev	.00130	.00100	.00346	.00058	.00045	.02226	.00034	.00041	.00083
%RSD	133.11	.13227	100.05	95.846	882.04	34.304	39.999	35.474	86.030
#1	-.00006	.75307	.00590	.00101	.00037	-.08063	-.00061	.00144	.00155
#2	-.00190	.75448	.00101	.00019	-.00027	-.04915	-.00110	.00086	.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3752.4**	**44970.**	**3153.0**
Stddev	63.6	100.	16.7
%RSD	1.6943	.22247	.52858
#1	3707.4	45041.	3164.8
#2	3797.3	44899.	3141.2

Sample Name: 280-116537-D-2-A Acquired: 11/7/2018 21:10:22 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00002**	**.00304**	**.00423**	**.11131**	**.07484**	**-.00024**	**.00935**	**80.371**	**.00023**
Stddev	.00052	.00034	.00020	.00154	.00005	.00001	.00184	.353	.00018
%RSD	2136.9	11.074	4.6862	1.3859	.07252	3.9415	19.700	.43891	79.335
#1	.00039	.00281	.00437	.11240	.07488	-.00023	.01065	80.621	.00036
#2	-.00034	.00328	.00409	.11022	.07480	-.00024	.00805	80.122	.00010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00006**	**.00060**	**-.00145**	**.04032**	**4.5515**	**.05113**	**24.218**	**.12353**	**.00125**
Stddev	.00001	.00016	.00039	.00645	.1629	.00211	.090	.00071	.00043
%RSD	13.073	27.182	26.574	16.005	3.5792	4.1210	.37328	.57290	34.650
#1	-.00006	.00049	-.00173	.03576	4.6667	.05262	24.282	.12403	.00155
#2	-.00005	.00072	-.00118	.04488	4.4363	.04964	24.154	.12303	.00094
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.517**	**.00006**	**.01852**	**-.00693**	**12.865**	**.00340**	**-.00497**	**9.5327**	**20.400**
Stddev	.432	.00022	.00209	.00149	.080	.00066	.00621	.1516	.324
%RSD	1.8385	384.83	11.257	21.413	.62049	19.456	124.75	1.5903	1.5903
#1	23.211	-.00010	.01705	-.00799	12.921	.00293	-.00059	9.6399	20.629
#2	23.822	.00021	.02000	-.00588	12.809	.00387	-.00936	9.4255	20.171
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00049**	**.81883**	**-.00159**	**.00038**	**-.00058**	**.02097**	**.00064**	**.00069**	**.00328**
Stddev	.00118	.00449	.00065	.00032	.00187	.03195	.00005	.00108	.00055
%RSD	243.20	.54855	41.197	83.857	321.72	152.35	8.1272	157.11	16.648
#1	.00035	.82201	-.00113	.00061	.00074	.04356	.00061	-.00008	.00366
#2	-.00132	.81566	-.00205	.00016	-.00191	-.00162	.00068	.00145	.00289
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3868.2**	**47096.**	**3263.4**
Stddev	13.1	131.	2.7
%RSD	.33943	.27906	.08201
#1	3877.5	47003.	3265.3
#2	3859.0	47189.	3261.5

Sample Name: 280-116537-D-3-A Acquired: 11/7/2018 21:12:57 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00059**	**.00711**	**-.00111**	**.11856**	**.12645**	**-.00001**	**.00223**	**70.551**	**.00027**
Stddev	.00102	.00010	.00309	.00054	.00005	.00025	.00214	.013	.00009
%RSD	174.46	1.3726	279.06	.45926	.03600	2152.8	96.002	.01808	31.949
#1	.00131	.00718	-.00329	.11818	.12648	-.00019	.00071	70.542	.00021
#2	-.00014	.00704	.00108	.11895	.12642	.00016	.00374	70.560	.00033
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00054**	**.00193**	**-.00179**	**.03587**	**3.8096**	**.04171**	**19.336**	**.01497**	**.00162**
Stddev	.00029	.00062	.00139	.00469	.0158	.00459	.036	.00001	.00008
%RSD	53.884	32.089	77.263	13.065	.41331	11.005	.18413	.09380	4.9317
#1	-.00034	.00149	-.00277	.03918	3.7984	.04496	19.362	.01496	.00156
#2	-.00075	.00237	-.00081	.03256	3.8207	.03847	19.311	.01498	.00168
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.295**	**.00058**	**.02062**	**-.00670**	**5.5821**	**.00190**	**-.00094**	**10.483**	**22.434**
Stddev	.669	.00014	.00607	.00127	.0730	.00049	.00173	.015	.033
%RSD	3.0019	24.488	29.466	19.027	1.3083	25.600	184.15	.14639	.14639
#1	21.821	.00048	.01632	-.00580	5.6338	.00224	.00028	10.494	22.457
#2	22.768	.00068	.02491	-.00760	5.5305	.00156	-.00217	10.472	22.411
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00040**	**.55584**	**.00215**	**.00074**	**-.00140**	**-.05008**	**.00008**	**.00115**	**.00273**
Stddev	.00220	.00025	.00111	.00018	.00162	.02150	.00043	.00005	.00469
%RSD	551.97	.04528	51.705	24.887	115.38	42.938	561.28	3.9687	171.75
#1	-.00116	.55567	.00293	.00061	-.00255	-.06528	.00038	.00112	.00605
#2	.00195	.55602	.00136	.00087	-.00026	-.03487	-.00023	.00118	-.00059
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3854.0**	**46701.**	**3255.0**
Stddev	4.7	84.	19.6
%RSD	.12237	.18047	.60088
#1	3850.7	46760.	3268.9
#2	3857.4	46641.	3241.2

Sample Name: CCVH-5408055 Acquired: 11/7/2018 21:15:30 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00402**	**50.341**	**-.00524**	**.00211**	**.00085**	**-.00025**	**1.0576**	**.01979**	**-.00001**	**.00134**	**.00056**	**-.00027**	**48.165**
Stddev	.00032	.027	.00116	.00030	.00015	.00002	.0124	.00133	.00010	.00044	.00019	.00100	.223
%RSD	7.8850	.05329	22.166	14.146	17.282	8.7154	1.1740	6.7159	1097.7	33.007	34.294	367.89	.46233
#1	-.00425	50.360	-.00606	.00232	.00075	-.00023	1.0663	.02073	.00006	.00102	.00042	-.00098	48.323
#2	-.00380	50.322	-.00442	.00190	.00096	-.00026	1.0488	.01885	-.00008	.00165	.00069	.00044	48.008
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.38597**	**.00068**	**-.09178**	**.00260**	**-.00118**	**270.84**	**.00397**	**-.00044**	**-.00166**	**5.2612**	**.00441**	**.00859**	**.01156**
Stddev	.01555	.00020	.00166	.00016	.00019	1.12	.00002	.00014	.00105	.0766	.00075	.00031	.01609
%RSD	4.0287	29.934	1.8093	5.9821	16.486	.41515	.39150	30.818	63.418	1.4549	16.900	3.6650	139.20
#1	.39696	.00082	-.09295	.00271	-.00104	271.63	.00398	-.00054	-.00091	5.3154	.00494	.00837	.00018
#2	.37497	.00054	-.09061	.00249	-.00132	270.04	.00396	-.00034	-.00240	5.2071	.00388	.00882	.02294
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02474**	**-.00040**	**.00045**	**4.9721**	**.01817**	**-.00156**	**10.553**	**-.01087**	**-.00008**	**.08129**
Stddev	.03444	.00104	.00011	.0102	.00045	.00328	.042	.00034	.00047	.00124
%RSD	139.20	263.23	23.862	.20434	2.4600	209.91	.39678	3.1175	585.30	1.5237
#1	.00039	-.00114	.00037	4.9792	.01849	-.00388	10.523	-.01063	-.00041	.08042
#2	.04909	.00034	.00053	4.9649	.01785	.00076	10.583	-.01111	.00025	.08217
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3799.4**	**45097.**	**3193.6**
Stddev	18.6	220.	17.2
%RSD	.49075	.48778	.53948
#1	3786.2	44942.	3181.4
#2	3812.6	45253.	3205.8

Sample Name: CCV-5407546 Acquired: 11/7/2018 21:18:03 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49950**	**.52673**	**1.0166**	**.49877**	**.52484**	**.49712**	**.00542**	**4.9174**	**.49795**	**.50479**	**.50633**	**.50844**
Stddev	.00097	.00497	.0117	.00342	.00368	.00287	.00340	.0060	.00402	.00460	.00590	.00008
%RSD	.19362	.94294	1.1524	.68491	.70176	.57752	62.751	.12125	.80751	.91120	1.1655	.01541
#1	.49881	.53025	1.0249	.50119	.52744	.49915	.00302	4.9216	.50080	.50804	.51051	.50850
#2	.50018	.52322	1.0083	.49636	.52223	.49509	.00783	4.9132	.49511	.50154	.50216	.50839
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.2326**	**53.189**	**1.0860**	**19.723**	**.49131**	**.50160**	**5.4948**	**.50445**	**.99599**	**1.0145**	**.11375**	**.98446**
Stddev	.0021	.205	.0025	.023	.00045	.00660	.0169	.00449	.00752	.0095	.00167	.00270
%RSD	.09526	.38517	.23345	.11573	.09141	1.3166	.30729	.89030	.75506	.93300	1.4689	.27455
#1	2.2341	53.334	1.0878	19.707	.49163	.50627	5.5067	.50763	1.0013	1.0212	.11493	.98637
#2	2.2311	53.044	1.0843	19.739	.49099	.49693	5.4828	.50127	.99067	1.0078	.11257	.98255
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value	2.5000											
Range	-10.000%											

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0138**	**4.7273**	**10.116**	**1.0101**	**.51829**	**.01142**	**.48732**	**1.0297**	**-.02522**	**.49589**	**.48263**	**.49664**
Stddev	.0019	.0428	.092	.0076	.00201	.00176	.00112	.0062	.05282	.00014	.00086	.00212
%RSD	.18883	.90497	.90497	.75211	.38865	15.407	.22923	.60364	209.45	.02788	.17889	.42768
#1	1.0124	4.6970	10.052	1.0155	.51972	.01017	.48653	1.0341	-.06256	.49580	.48202	.49814
#2	1.0151	4.7575	10.181	1.0047	.51687	.01266	.48811	1.0253	.01213	.49599	.48324	.49514
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3856.8**	**47441.**	**3274.4**
Stddev	14.8	9.	5.5
%RSD	.38252	.01990	.16853
#1	3846.4	47434.	3278.3
#2	3867.3	47448.	3270.5

Sample Name: CCB Acquired: 11/7/2018 21:20:26 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00065**	**-.00098**	**.00218**	**.00098**	**.00041**	**-.00012**	**.00143**	**.00876**	**.00028**	**.00005**	**.00012**	**-.00196**
Stddev	.00072	.00003	.00464	.00018	.00009	.00031	.00533	.00682	.00002	.00041	.00007	.00071
%RSD	111.01	3.0723	213.41	17.860	22.297	252.45	374.00	77.889	7.0834	854.07	58.971	36.175
#1	.00014	-.00100	.00546	.00111	.00034	.00010	.00520	.01358	.00027	-.00024	.00017	-.00247
#2	.00115	-.00096	-.00111	.00086	.00047	-.00035	-.00235	.00393	.00029	.00034	.00007	-.00146
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00710**	**.23640**	**-.00493**	**-.00425**	**-.00002**	**.00075**	**.20687**	**-.00026**	**-.00218**	**-.00090**	F **.10279**	**-.00200**
Stddev	.00103	.05389	.00274	.00203	.00000	.00038	.02194	.00037	.00424	.00078	.00742	.00363
%RSD	14.447	22.796	55.667	47.910	.11677	50.302	10.606	141.64	194.68	86.633	7.2173	180.94
#1	.00637	.27451	-.00299	-.00281	-.00002	.00049	.19136	.00000	.00082	-.00035	.10804	-.00457
#2	.00782	.19829	-.00687	-.00568	-.00002	.00102	.22239	-.00052	-.00518	-.00145	.09755	.00056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit											.10000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00662**	**-.03855**	**-.08250**	**-.00116**	**-.00003**	**.00215**	**.00063**	**-.00004**	**-.02626**	**.00029**	**-.00042**	**.00473**
Stddev	.00073	.02233	.04780	.00136	.00003	.00215	.00078	.00305	.04647	.00074	.00053	.00136
%RSD	11.084	57.938	57.938	117.45	104.96	100.01	123.98	7846.3	176.98	255.96	127.60	28.646
#1	.00714	-.05434	-.11629	-.00020	-.00004	.00366	.00118	-.00220	-.05912	-.00024	-.00079	.00377
#2	.00610	-.02276	-.04870	-.00212	-.00001	.00063	.00008	.00212	.00660	.00082	-.00004	.00569
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3847.7**	**47257.**	**3227.8**
Stddev	17.1	180.	11.4
%RSD	.44405	.38189	.35458
#1	3835.6	47130.	3219.7
#2	3859.8	47385.	3235.8

Sample Name: CCVL-5415520 Acquired: 11/7/2018 21:23:02 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01138**	**.11303**	**.01355**	**.10047**	**.01190**	**.00080**	**.11724**	**.20876**	**.00517**	**.01055**	**.01040**	**.01359**
Stddev	.00074	.00250	.00266	.00251	.00039	.00008	.00520	.00778	.00019	.00029	.00017	.00004
%RSD	6.4902	2.2128	19.592	2.5005	3.2773	10.257	4.4372	3.7256	3.6866	2.7769	1.6243	.26248
#1	.01190	.11480	.01543	.10224	.01218	.00074	.12092	.21426	.00504	.01076	.01052	.01356
#2	.01085	.11126	.01168	.09869	.01163	.00086	.11356	.20326	.00531	.01034	.01028	.01362
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08651**	**3.5865**	**.02233**	**.21374**	**.01038**	**.01984**	**1.2958**	**.04212**	**2.9381**	**.00802**	F **.17824**	**.01872**
Stddev	.00233	.1187	.00528	.00085	.00003	.00082	.0010	.00178	.0539	.00112	.00883	.00233
%RSD	2.6938	3.3099	23.650	.39926	.25971	4.1198	.07994	4.2194	1.8358	14.000	4.9527	12.440
#1	.08816	3.6705	.01859	.21435	.01036	.02041	1.2965	.04337	2.9763	.00722	.17200	.01707
#2	.08486	3.5026	.02606	.21314	.01040	.01926	1.2951	.04086	2.9000	.00881	.18449	.02037
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value											.10000	
Range											30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01759**	**.47174**	**1.0095**	**.10248**	**.01056**	**.01560**	**.01078**	**.01518**	F **.08816**	**.01081**	**.02016**	F **.02292**
Stddev	.00060	.03890	.0832	.00371	.00035	.00109	.00005	.00095	.00937	.00010	.00100	.00367
%RSD	3.4070	8.2459	8.2459	3.6201	3.2882	6.9880	.42102	6.2569	10.629	.93090	4.9537	15.995
#1	.01717	.44423	.95066	.10511	.01080	.01483	.01075	.01585	.08153	.01073	.01945	.02033
#2	.01801	.49925	1.0684	.09986	.01031	.01637	.01081	.01451	.09478	.01088	.02086	.02551
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Fail
Value									.06000			.01500
Range									30.000%			30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3902.2**	**47936.**	**3237.1**
Stddev	8.1	59.	13.6
%RSD	.20795	.12267	.41908
#1	3896.4	47977.	3246.7
#2	3907.9	47894.	3227.5

Sample Name: 280-116537-D-4-A Acquired: 11/7/2018 21:25:37 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00101**	**.00456**	**.00161**	**.11932**	**.07105**	**-.00021**	**.00068**	**78.443**	**.00006**
Stddev	.00069	.00096	.00119	.00007	.00077	.00024	.00353	.411	.00015
%RSD	67.865	21.113	74.076	.05754	1.0851	115.17	519.10	.52405	271.37
#1	.00053	.00524	.00245	.11928	.07160	-.00004	-.00181	78.734	.00016
#2	.00150	.00388	.00077	.11937	.07051	-.00038	.00317	78.152	-.00005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00018**	**.00024**	**-.00032**	**.06800**	**4.5143**	**.04965**	**23.540**	**.06883**	**.00238**
Stddev	.00013	.00032	.00040	.00511	.0767	.00264	.043	.00028	.00015
%RSD	71.435	136.36	126.80	7.5217	1.7000	5.3233	.18284	.40716	6.3684
#1	.00027	.00046	-.00003	.07161	4.4600	.05152	23.570	.06863	.00227
#2	.00009	.00001	-.00061	.06438	4.5686	.04778	23.509	.06903	.00249
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.403**	**.00088**	**.01783**	**-.00640**	**12.822**	**-.00240**	**-.00547**	**9.5214**	**20.376**
Stddev	.176	.00025	.00547	.00044	.184	.00062	.00160	.1434	.307
%RSD	.71922	28.684	30.659	6.9460	1.4389	25.899	29.253	1.5059	1.5059
#1	24.278	.00106	.02169	-.00672	12.952	-.00196	-.00660	9.6227	20.593
#2	24.527	.00070	.01396	-.00609	12.691	-.00284	-.00433	9.4200	20.159
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00192**	**.72691**	**.00765**	**.00139**	**-.00133**	**.01600**	**.00148**	**.00228**	**.00150**
Stddev	.00205	.00342	.00085	.00067	.00057	.03356	.00025	.00025	.00263
%RSD	106.52	.47023	11.096	48.281	43.099	209.79	16.759	11.013	175.50
#1	-.00337	.72933	.00705	.00187	-.00174	.03973	.00165	.00245	.00336
#2	-.00047	.72450	.00825	.00092	-.00093	-.00773	.00130	.00210	-.00036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3848.4**	**47047.**	**3290.2**
Stddev	4.5	21.	16.0
%RSD	.11661	.04417	.48606
#1	3851.6	47032.	3278.9
#2	3845.2	47061.	3301.5

Sample Name: 280-116537-D-5-A Acquired: 11/7/2018 21:28:12 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00139**	**.00429**	**.00286**	**.12151**	**.07338**	**-.00003**	**.00071**	**78.870**	**-.00017**
Stddev	.00077	.00030	.00060	.00085	.00025	.00029	.00368	.105	.00011
%RSD	55.532	6.8729	21.181	.70090	.33583	842.37	515.49	.13363	65.864
#1	.00193	.00409	.00243	.12211	.07356	.00017	.00332	78.945	-.00025
#2	.00084	.00450	.00328	.12091	.07321	-.00024	-.00189	78.796	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00025**	**.00071**	**-.00046**	**.04365**	**4.4645**	**.04845**	**24.087**	**.00142**	**.00154**
Stddev	.00022	.00006	.00082	.00286	.0539	.00001	.008	.00012	.00048
%RSD	87.241	8.0106	178.59	6.5492	1.2080	.02047	.03437	8.1734	30.896
#1	-.00040	.00067	-.00104	.04163	4.5027	.04845	24.093	.00134	.00188
#2	-.00010	.00075	.00012	.04567	4.4264	.04844	24.082	.00150	.00121
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.579**	**.00097**	**.01629**	**-.00441**	**12.619**	**-.00030**	**.00567**	**9.7558**	**20.877**
Stddev	.508	.00056	.00127	.00059	.065	.00578	.00084	.1056	.226
%RSD	2.1563	57.849	7.8111	13.363	.51365	1941.3	14.765	1.0826	1.0826
#1	23.220	.00137	.01719	-.00399	12.665	-.00439	.00507	9.8305	21.037
#2	23.939	.00057	.01539	-.00482	12.573	.00379	.00626	9.6811	20.718
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00141**	**.73251**	**-.00029**	**.00033**	**-.00060**	**-.02678**	**.00161**	**.00089**	**.00305**
Stddev	.00033	.00121	.00143	.00001	.00221	.01518	.00056	.00005	.00625
%RSD	23.268	.16531	487.02	2.5621	366.56	56.697	34.945	5.2035	204.77
#1	-.00117	.73337	-.00130	.00032	-.00217	-.01604	.00201	.00085	-.00137
#2	-.00164	.73166	.00072	.00033	.00096	-.03752	.00121	.00092	.00747
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3845.1**	**46427.**	**3228.9**
Stddev	.8	52.	16.7
%RSD	.02048	.11245	.51656
#1	3845.6	46464.	3240.7
#2	3844.5	46390.	3217.1

Sample Name: 280-116537-D-6-A Acquired: 11/7/2018 21:30:47 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00072**	**.00412**	**.00118**	**.11712**	**.07426**	**-.00007**	**.00228**	**78.448**	**.00035**
Stddev	.00078	.00024	.00222	.00125	.00006	.00018	.00288	.092	.00011
%RSD	109.21	5.8708	188.60	1.0708	.07689	253.54	126.57	.11757	30.774
#1	.00016	.00395	-.00039	.11801	.07422	-.00020	.00431	78.383	.00042
#2	.00127	.00429	.00274	.11624	.07430	.00006	.00024	78.514	.00027
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00051**	**.00089**	**-.00154**	**.01592**	**4.4434**	**.04721**	**23.856**	**.00132**	**.00145**
Stddev	.00012	.00004	.00080	.00051	.0202	.00040	.037	.00001	.00024
%RSD	24.337	4.3328	51.887	3.2323	.45373	.83961	.15530	.65764	16.348
#1	-.00060	.00086	-.00210	.01556	4.4291	.04749	23.830	.00133	.00128
#2	-.00042	.00092	-.00097	.01629	4.4576	.04693	23.882	.00132	.00162
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.091**	**.00037**	**.01754**	**-.00426**	**12.478**	**-.00110**	**.00527**	**9.6276**	**20.603**
Stddev	.072	.00039	.00031	.00179	.069	.00268	.00617	.0911	.195
%RSD	.29781	105.47	1.7589	42.086	.55348	244.81	117.12	.94659	.94659
#1	24.040	.00009	.01732	-.00553	12.527	-.00299	.00091	9.6920	20.741
#2	24.142	.00064	.01776	-.00300	12.429	.00080	.00964	9.5631	20.465
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00075**	**.72814**	**.00071**	**.00092**	**-.00158**	**-.00747**	**.00113**	**.00198**	**.00248**
Stddev	.00030	.00195	.00286	.00004	.00146	.08206	.00040	.00044	.00213
%RSD	40.261	.26746	399.87	4.5192	92.513	1098.9	35.302	22.385	85.961
#1	-.00096	.72676	-.00131	.00095	-.00054	.05056	.00085	.00167	.00399
#2	-.00053	.72952	.00273	.00089	-.00261	-.06549	.00141	.00230	.00097
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3826.7**	**46508.**	**3264.1**
Stddev	21.5	320.	7.2
%RSD	.56092	.68824	.21954
#1	3841.9	46735.	3259.0
#2	3811.6	46282.	3269.2

Sample Name: 280-116539-C-1-A Acquired: 11/7/2018 21:33:22 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00030**	**.04028**	**-.00052**	**.99772**	**.11804**	**-.00013**	**.00100**	**72.985**	**.00035**
Stddev	.00077	.00010	.00074	.01076	.00031	.00013	.00432	.266	.00001
%RSD	256.42	.25886	141.93	1.0785	.26575	98.453	432.18	.36378	3.5888
#1	.00025	.04035	-.00105	1.0053	.11827	-.00004	-.00205	73.172	.00036
#2	-.00085	.04020	.00000	.99011	.11782	-.00023	.00405	72.797	.00034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00017**	**.00070**	**.00241**	**.16147**	**14.359**	**.33407**	**49.990**	**.02811**	**.00065**
Stddev	.00016	.00015	.00048	.00032	.273	.00680	.205	.00009	.00013
%RSD	98.481	20.965	19.969	.19851	1.9031	2.0345	.41046	.31147	20.202
#1	-.00028	.00081	.00207	.16124	14.165	.33888	50.135	.02805	.00074
#2	-.00005	.00060	.00275	.16169	14.552	.32927	49.845	.02817	.00055
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2735.3**	**.00190**	**.03829**	**-.00228**	**58.884**	**.00057**	**-.00222**	**3.8302**	**8.1966**
Stddev	9.4	.00004	.00284	.00177	.708	.00279	.00143	.0085	.0182
%RSD	.34359	2.1611	7.4043	77.843	1.2027	492.25	64.385	.22182	.22182
#1	2742.0	.00187	.03628	-.00102	59.385	-.00141	-.00322	3.8362	8.2095
#2	2728.7	.00192	.04029	-.00353	58.383	.00254	-.00121	3.8242	8.1838
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00350**	W **11.353**	**-.00443**	**.00113**	**-.00358**	**-.03226**	**.00005**	**.01084**	**.00227**
Stddev	.00307	.057	.00186	.00000	.00470	.02074	.00019	.00117	.00146
%RSD	87.671	.50184	41.971	.42524	131.28	64.307	410.02	10.814	64.527
#1	-.00133	11.393	-.00575	.00114	-.00690	-.01759	.00018	.01001	.00123
#2	-.00567	11.313	-.00312	.00113	-.00026	-.04692	-.00009	.01167	.00330
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000							
Low Limit		-.02000							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3385.7**	**39556.**	**3073.8**
Stddev	1.2	232.	23.2
%RSD	.03582	.58582	.75488
#1	3384.9	39392.	3057.4
#2	3386.6	39720.	3090.2

Sample Name: 280-116539-C-2-A Acquired: 11/7/2018 21:36:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00019**	**.04301**	**-.00427**	**1.3372**	**.26988**	**.00006**	**.00297**	**189.83**	**.00134**
Stddev	.00041	.00128	.00368	.0565	.00164	.00043	.00340	.97	.00026
%RSD	218.89	2.9808	86.254	4.2253	.60657	782.74	114.50	.50920	19.220
#1	-.00010	.04392	-.00688	1.3772	.27104	-.00025	.00057	190.51	.00152
#2	.00047	.04211	-.00167	1.2973	.26872	.00036	.00538	189.14	.00115
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00027**	**.00086**	**.00149**	**.06975**	**28.866**	**.74623**	**149.75**	**.17368**	**.00039**
Stddev	.00036	.00050	.00093	.00062	.465	.00378	.52	.00070	.00020
%RSD	130.62	58.871	62.644	.88580	1.6101	.50606	.34394	.40102	49.630
#1	-.00002	.00050	.00083	.06931	28.538	.74890	150.12	.17418	.00053
#2	-.00053	.00121	.00215	.07019	29.195	.74356	149.39	.17319	.00026
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **4938.9**	**.00309**	**.03685**	**-.00299**	**76.601**	**.00334**	**-.00595**	**4.3685**	**9.3487**
Stddev	20.3	.00055	.00085	.00014	3.236	.00143	.00243	.0049	.0104
%RSD	.41154	17.713	2.3059	4.6131	4.2251	42.735	40.939	.11126	.11126
#1	4953.3	.00348	.03745	-.00289	78.890	.00434	-.00767	4.3720	9.3560
#2	4924.6	.00270	.03625	-.00309	74.313	.00233	-.00422	4.3651	9.3413
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00367**	F **34.300**	**-.00517**	**.00140**	**-.00249**	**-.07278**	**-.00019**	**.00892**	**.00205**
Stddev	.00499	.297	.00067	.00020	.00101	.04266	.00065	.00046	.00069
%RSD	136.05	.86462	12.963	13.954	40.485	58.607	351.76	5.2109	33.871
#1	-.00014	34.510	-.00565	.00154	-.00178	-.10295	.00028	.00859	.00254
#2	-.00719	34.091	-.00470	.00126	-.00320	-.04262	-.00065	.00925	.00156
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		20.000							
Low Limit		-.02000							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3249.8**	**37511.**	**3107.6**
Stddev	22.5	190.	11.0
%RSD	.69210	.50735	.35256
#1	3233.9	37645.	3115.3
#2	3265.7	37376.	3099.8

Sample Name: 280-116539-C-3-A Acquired: 11/7/2018 21:38:50 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00091**	**.02550**	**-.00189**	**1.2531**	**1.7370**	**-.00027**	**.00132**	**159.20**	**.00074**
Stddev	.00038	.00032	.00263	.0206	.0024	.00023	.00237	.16	.00005
%RSD	42.037	1.2547	139.29	1.6431	.13904	85.475	179.22	.10286	6.7505
#1	.00118	.02573	-.00003	1.2677	1.7387	-.00043	.00300	159.31	.00071
#2	.00064	.02527	-.00375	1.2385	1.7353	-.00011	-.00035	159.08	.00078
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00001**	**.00006**	**.00253**	**1.2606**	**23.512**	W **2.3491**	**78.406**	**.23691**	**-.00056**
Stddev	.00028	.00025	.00061	.0031	.159	.0004	.152	.00037	.00056
%RSD	5439.2	416.58	24.190	.24408	.67438	.01876	.19362	.15734	100.24
#1	.00019	-.00012	.00210	1.2627	23.400	2.3495	78.514	.23718	-.00016
#2	-.00020	.00024	.00297	1.2584	23.624	2.3488	78.299	.23665	-.00095
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass
High Limit						2.0000			
Low Limit						-.02000			

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **3149.7**	**.00325**	**.16701**	**-.00423**	**12.535**	**-.00203**	**-.01214**	**6.2482**	**13.371**
Stddev	4.3	.00021	.00128	.00106	.263	.00811	.00644	.1137	.243
%RSD	.13773	6.4999	.76762	25.162	2.0956	398.81	53.038	1.8195	1.8195
#1	3152.8	.00310	.16792	-.00348	12.721	-.00777	-.00759	6.3286	13.543
#2	3146.6	.00340	.16610	-.00499	12.349	.00370	-.01669	6.1678	13.199
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00308**	W **18.746**	**-.00174**	**.00207**	**-.00090**	F **-.13116**	**-.00032**	**.01406**	**.00199**
Stddev	.00022	.435	.00269	.00027	.00203	.02918	.00072	.00082	.00255
%RSD	7.2534	2.3204	154.07	12.923	225.87	22.247	226.24	5.8378	128.28
#1	-.00324	18.438	-.00365	.00188	.00054	-.11053	.00019	.01465	.00379
#2	-.00292	19.053	.00016	.00226	-.00234	-.15179	-.00083	.01348	.00018
Check ?	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
High Limit		10.000				20.000			
Low Limit		-.02000				-.12000			

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3441.0**	**40157.**	**3177.3**
Stddev	15.7	90.	7.5
%RSD	.45593	.22293	.23511
#1	3452.1	40094.	3182.6
#2	3429.9	40220.	3172.0

Sample Name: 280-116539-C-4-A Acquired: 11/7/2018 21:41:33 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00114**	**.00195**	**.00437**	**.00467**	**.00173**	**-.00048**	**.01065**	**.10304**	**-.00008**
Stddev	.00073	.00021	.00252	.00173	.00043	.00002	.00447	.00688	.00004
%RSD	63.901	10.568	57.779	37.150	24.954	3.6084	41.999	6.6756	43.253
#1	.00166	.00181	.00615	.00590	.00143	-.00049	.01381	.09817	-.00011
#2	.00063	.00210	.00258	.00344	.00204	-.00047	.00749	.10790	-.00006
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00001**	**.00024**	**-.00185**	**.00475**	**1.0228**	**-.00079**	**.01769**	**.00028**	**-.00043**
Stddev	.00035	.00014	.00098	.00082	.0319	.00161	.00455	.00008	.00018
%RSD	4011.6	58.056	52.724	17.172	3.1163	202.04	25.708	27.602	41.001
#1	-.00025	.00034	-.00116	.00417	1.0453	.00034	.02090	.00023	-.00031
#2	.00024	.00014	-.00254	.00533	1.0003	-.00193	.01447	.00034	-.00056
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.8718**	**.00025**	**.00469**	**-.00255**	**.08549**	**-.00174**	**.00121**	**.09333**	**.19973**
Stddev	.0442	.00028	.00013	.00061	.00213	.00194	.00930	.01554	.03325
%RSD	1.5374	110.52	2.8709	24.118	2.4906	111.07	765.92	16.645	16.645
#1	2.8406	.00005	.00479	-.00211	.08398	-.00312	-.00536	.08235	.17622
#2	2.9030	.00044	.00460	-.00298	.08699	-.00037	.00779	.10432	.22324
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00234**	**.00282**	**.00112**	**.00092**	**.00003**	**.00724**	**.00018**	**-.00077**	**.00312**
Stddev	.00126	.00101	.00160	.00035	.00135	.01957	.00040	.00006	.00225
%RSD	54.084	35.872	142.97	37.904	5319.6	270.20	218.61	7.6599	72.252
#1	-.00323	.00210	-.00001	.00117	.00098	-.00660	.00047	-.00073	.00471
#2	-.00144	.00353	.00224	.00068	-.00093	.02109	-.00010	-.00081	.00153
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**4039.2**	**49074.**	**3333.2**
Stddev	23.5	331.	22.4
%RSD	.58155	.67378	.67181
#1	4055.8	48840.	3349.0
#2	4022.6	49308.	3317.4

Sample Name: 280-116539-C-5-A Acquired: 11/7/2018 21:44:10 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00135**	**.01284**	**.00836**	**.33027**	**.50754**	**.00034**	**.00881**	**169.78**	**.00037**
Stddev	.00040	.00005	.00635	.00541	.00368	.00004	.00161	1.24	.00033
%RSD	29.826	.42407	75.861	1.6380	.72565	10.448	18.219	.73036	90.089
#1	.00107	.01280	.00388	.33410	.51015	.00036	.00995	170.66	.00060
#2	.00164	.01288	.01285	.32645	.50494	.00031	.00768	168.91	.00013
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00160**	**.00088**	**-.00029**	**4.6796**	**10.700**	**.26812**	**24.262**	**.40046**	**.00473**
Stddev	.00009	.00030	.00055	.0633	.160	.00315	.101	.00088	.00001
%RSD	5.3114	33.947	190.02	1.3525	1.4950	1.1762	.41833	.22053	.16335
#1	.00154	.00067	.00010	4.7244	10.813	.26589	24.334	.40109	.00474
#2	.00166	.00109	-.00068	4.6348	10.587	.27035	24.190	.39984	.00472
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**129.83**	**.00408**	**.05402**	**-.00165**	**16.005**	**-.00112**	**-.00594**	**7.0643**	**15.118**
Stddev	12.29	.00057	.00267	.00041	.304	.00295	.00068	.0646	.138
%RSD	9.4644	13.964	4.9404	25.026	1.8993	262.56	11.468	.91394	.91394
#1	121.14	.00368	.05213	-.00194	16.220	.00096	-.00642	7.1100	15.215
#2	138.52	.00448	.05590	-.00136	15.790	-.00321	-.00546	7.0187	15.020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00431**	**2.5804**	**.00304**	**.00295**	**.00327**	**-.05269**	**.00238**	**.00259**	**.00348**
Stddev	.00030	.0476	.00296	.00069	.00186	.06762	.00002	.00021	.00221
%RSD	6.9011	1.8454	97.444	23.283	56.693	128.32	.79351	8.0264	63.434
#1	.00453	2.5467	.00095	.00343	.00196	-.00488	.00236	.00244	.00192
#2	.00410	2.6141	.00513	.00246	.00459	-.10050	.00239	.00273	.00504
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3768.4**	**45716.**	**3250.4**
Stddev	9.7	121.	21.6
%RSD	.25853	.26496	.66423
#1	3775.3	45630.	3235.2
#2	3761.6	45802.	3265.7

Sample Name: 280-116539-C-6-A Acquired: 11/7/2018 21:46:42 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00105**	**.03119**	**.00093**	**1.0545**	**.05867**	**-.00006**	**-.00263**	**194.28**	**.00082**
Stddev	.00048	.00201	.00638	.0196	.00044	.00004	.00614	.88	.00005
%RSD	45.250	6.4503	686.10	1.8587	.74241	71.669	233.05	.45224	5.9772
#1	.00072	.03262	-.00358	1.0683	.05836	-.00009	.00171	194.91	.00086
#2	.00139	.02977	.00544	1.0406	.05897	-.00003	-.00697	193.66	.00079
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00004**	**.00044**	**.00076**	**1.0016**	**29.372**	**.57622**	**146.91**	**.16567**	**-.00059**
Stddev	.00020	.00012	.00002	.0022	.574	.00111	.58	.00077	.00010
%RSD	542.55	28.106	3.1178	.21422	1.9535	.19188	.39426	.46516	17.437
#1	-.00011	.00035	.00075	1.0001	28.966	.57700	147.32	.16622	-.00066
#2	.00018	.00053	.00078	1.0031	29.777	.57543	146.50	.16513	-.00051
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **4487.9**	**.00396**	**.06238**	**-.00413**	F **305.24**	**.00036**	**-.00434**	**5.8359**	**12.489**
Stddev	19.7	.00066	.00074	.00110	5.85	.00197	.00202	.0137	.029
%RSD	.44003	16.723	1.1802	26.701	1.9168	545.67	46.673	.23479	.23479
#1	4501.9	.00443	.06290	-.00335	309.38	-.00103	-.00291	5.8456	12.510
#2	4474.0	.00349	.06186	-.00491	301.10	.00175	-.00577	5.8263	12.468
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00				200.00				
Low Limit	11.000				-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00604**	F **31.545**	**-.00319**	**.00047**	**-.00170**	**-.06386**	**-.00117**	**.00114**	**.00714**
Stddev	.00270	.791	.00086	.00039	.00194	.02630	.00100	.00145	.00020
%RSD	44.638	2.5065	26.884	84.346	113.86	41.184	85.684	127.31	2.8202
#1	-.00414	32.104	-.00258	.00019	-.00033	-.08246	-.00187	.00217	.00728
#2	-.00795	30.986	-.00379	.00075	-.00307	-.04527	-.00046	.00011	.00700
Check ?	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit		20.000							
Low Limit		-.02000							

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3314.5**	**38371.**	**3110.8**
Stddev	16.3	23.	30.8
%RSD	.49249	.05964	.99073
#1	3303.0	38354.	3089.0
#2	3326.1	38387.	3132.6

Sample Name: 280-116539-C-7-A Acquired: 11/7/2018 21:49:26 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436578 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00048**	**.01903**	**.00294**	**.55084**	**.30742**	**.00009**	**.00489**	**196.27**	**.00040**
Stddev	.00034	.00146	.00020	.01141	.00058	.00002	.00002	.09	.00047
%RSD	71.232	7.6486	6.9447	2.0716	.18909	24.060	.40916	.04366	116.78
#1	.00024	.02006	.00308	.55890	.30783	.00010	.00491	196.33	.00007
#2	.00072	.01800	.00279	.54277	.30701	.00007	.00488	196.21	.00074
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**.00041**	**.00043**	**6.8396**	**15.816**	**.30425**	**47.351**	**.54190**	**.00139**
Stddev	.00014	.00029	.00016	.0075	.124	.00147	.032	.00025	.00033
%RSD	171.20	71.946	36.639	.10994	.78179	.48210	.06841	.04658	23.500
#1	-.00002	.00020	.00032	6.8342	15.903	.30528	47.374	.54173	.00162
#2	.00018	.00061	.00054	6.8449	15.728	.30321	47.328	.54208	.00116
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **661.18**	**.00489**	**.03106**	**-.00344**	**46.414**	**.00483**	**-.00602**	**7.6520**	**16.375**
Stddev	.66	.00018	.00509	.00136	1.042	.00186	.00487	.0309	.066
%RSD	.09937	3.6720	16.377	39.408	2.2451	38.519	80.860	.40448	.40448
#1	661.65	.00476	.03465	-.00440	47.151	.00351	-.00947	7.6739	16.422
#2	660.72	.00502	.02746	-.00248	45.677	.00614	-.00258	7.6301	16.328
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	500.00								
Low Limit	11.000								

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00220**	**5.6299**	**.00166**	**.00019**	**-.00083**	**-.02007**	**-.00120**	**.00341**	**.00180**
Stddev	.00173	.0136	.00317	.00025	.00054	.08523	.00055	.00011	.00166
%RSD	78.369	.24120	190.47	126.09	64.794	424.56	45.520	3.0901	92.325
#1	-.00098	5.6395	.00391	.00002	-.00121	-.08034	-.00159	.00349	.00298
#2	-.00343	5.6203	-.00058	.00037	-.00045	.04019	-.00081	.00334	.00063
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3625.2**	**43445.**	**3203.1**
Stddev	8.0	77.	1.9
%RSD	.21960	.17750	.05852
#1	3630.9	43390.	3201.7
#2	3619.6	43500.	3204.4

Sample Name: CCVH-5408055 Acquired: 11/7/2018 21:52:03 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00288**	**50.295**	**-.00407**	**.00644**	**.00082**	**-.00008**	**1.0518**	**.03554**	**-.00003**	**.00167**	**.00004**	**-.00157**	**47.456**
Stddev	.00073	.022	.00137	.00146	.00050	.00020	.0139	.00810	.00019	.00084	.00051	.00052	.077
%RSD	25.281	.04289	33.580	22.709	60.796	265.21	1.3253	22.783	691.57	50.089	1469.7	33.425	.16238
#1	-.00339	50.279	-.00310	.00747	.00047	-.00022	1.0616	.04126	-.00016	.00108	.00040	-.00120	47.510
#2	-.00236	50.310	-.00504	.00540	.00118	.00007	1.0419	.02981	.00010	.00226	-.00033	-.00194	47.401
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.80361**	**-.00269**	**-.08253**	**.00276**	**-.00092**	**274.28**	**.00358**	**.00094**	**-.00171**	**5.2871**	**.00403**	**.00705**	**-.00215**
Stddev	.03511	.00387	.00244	.00007	.00038	1.60	.00046	.00056	.00013	.0723	.00075	.00617	.01703
%RSD	4.3686	144.10	2.9618	2.6893	41.405	.58461	12.921	58.976	7.4267	1.3673	18.628	87.561	793.18
#1	.77878	.00005	-.08425	.00271	-.00119	275.41	.00391	.00133	-.00162	5.3382	.00456	.01141	.00990
#2	.82843	-.00543	-.08080	.00281	-.00065	273.15	.00325	.00055	-.00180	5.2360	.00350	.00268	-.01419
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00459**	**-.00064**	**.00115**	**5.0189**	**.01705**	**-.00076**	**10.500**	**-.01060**	**.00007**	**.07821**
Stddev	.03645	.00063	.00022	.0022	.00089	.00096	.046	.00086	.00012	.00418
%RSD	793.18	97.355	19.167	.04330	5.1974	126.01	.43507	8.0967	177.88	5.3404
#1	.02118	-.00108	.00099	5.0204	.01768	-.00144	10.532	-.01120	-.00002	.07525
#2	-.03037	-.00020	.00130	5.0173	.01642	-.00008	10.467	-.00999	.00015	.08116
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3655.3**	**43981.**	**3072.4**
Stddev	1.2	2.	8.4
%RSD	.03248	.00393	.27310
#1	3654.5	43980.	3066.4
#2	3656.2	43982.	3078.3

Sample Name: CCV-5407546 Acquired: 11/7/2018 21:54:34 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50647**	**.53818**	**1.0185**	**.50460**	**.53864**	**.50452**	**.00231**	**5.0274**	**.50013**	**.50814**	**.50924**	**.51256**
Stddev	.00184	.02334	.0159	.00705	.00383	.00354	.00121	.0204	.00684	.00816	.00908	.00027
%RSD	.36246	4.3372	1.5646	1.3981	.71017	.70250	52.531	.40679	1.3677	1.6066	1.7838	.05240
#1	.50517	.55469	1.0298	.50959	.54134	.50703	.00317	5.0419	.50496	.51391	.51566	.51275
#2	.50777	.52168	1.0073	.49962	.53594	.50202	.00145	5.0130	.49529	.50236	.50281	.51237
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.2350**	F **55.083**	F **1.1226**	**20.045**	**.49910**	**.50498**	F **6.3605**	**.50760**	**1.0006**	**1.0202**	**.14310**	**.98988**
Stddev	.0126	.218	.0083	.018	.00044	.00952	.0259	.00767	.0152	.0146	.00938	.01338
%RSD	.56155	.39527	.73915	.08898	.08776	1.8853	.40714	1.5112	1.5219	1.4278	6.5538	1.3515
#1	2.2439	55.237	1.1284	20.057	.49941	.51171	6.3788	.51302	1.0114	1.0305	.14973	.99934
#2	2.2261	54.929	1.1167	20.032	.49879	.49825	6.3422	.50217	.98986	1.0099	.13647	.98042
Check ?	Chk Fail	Chk Fail	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value	2.5000	50.000	1.0000				5.0000					
Range	-10.000%	10.000%	10.000%				10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0204**	**4.7499**	**10.165**	**1.0143**	**.53121**	**.01078**	**.49552**	**1.0338**	**-.03935**	**.50516**	**.48973**	**.50055**
Stddev	.0127	.0038	.008	.0153	.00379	.00251	.00120	.0149	.01038	.00171	.00002	.00208
%RSD	1.2414	.07932	.07932	1.5128	.71363	23.273	.24186	1.4423	26.375	.33918	.00396	.41585
#1	1.0293	4.7472	10.159	1.0252	.53389	.01256	.49637	1.0443	-.03201	.50637	.48974	.50202
#2	1.0114	4.7525	10.170	1.0035	.52853	.00901	.49467	1.0232	-.04669	.50395	.48971	.49908
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3778.4**	**45220.**	**3072.3**
Stddev	29.0	23.	19.3
%RSD	.76690	.04995	.62907
#1	3757.9	45236.	3058.6
#2	3798.9	45204.	3086.0

Sample Name: CCB Acquired: 11/7/2018 21:56:57 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00089**	**.00231**	**-.00348**	**.00244**	W **.00300**	**.00002**	**.00414**	**.01521**	**-.00009**	**.00001**	**-.00026**	**-.00254**
Stddev	.00067	.00069	.00754	.00108	.00024	.00029	.00033	.00122	.00005	.00003	.00027	.00005
%RSD	75.136	29.892	216.86	44.433	8.0732	1836.8	7.9235	8.0015	52.703	300.66	103.04	2.0936
#1	.00136	.00279	-.00881	.00167	.00283	.00022	.00390	.01607	-.00013	-.00001	-.00045	-.00250
#2	.00042	.00182	.00186	.00321	.00317	-.00019	.00437	.01435	-.00006	.00004	-.00007	-.00258
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					.00200							
Low Limit					-.00200							

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.10739**	**.36169**	**.00208**	F **.15001**	W **.00160**	**.00061**	F **.87730**	**.00009**	**-.00162**	**-.00101**	F **.10909**	**.00093**
Stddev	.00769	.03699	.00372	.18353	.00075	.00002	.01655	.00027	.00401	.00010	.00247	.00022
%RSD	7.1614	10.228	178.97	122.34	46.901	2.8970	1.8864	314.04	248.18	10.083	2.2603	23.143
#1	.11283	.38785	-.00055	.27979	.00212	.00063	.86559	.00027	-.00445	-.00094	.11083	.00078
#2	.10195	.33553	.00470	.02024	.00107	.00060	.88900	-.00010	.00122	-.00108	.10734	.00109
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Fail	Chk Warn	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit	.10000			.10000	.00100		.50000				.10000	
Low Limit	-.10000			-.20000	-.01000		-.50000				-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00121**	**-.01023**	**-.02188**	**-.00223**	**.00040**	**.00298**	**.00134**	**.00081**	**-.05365**	**.00040**	**-.00018**	**.00268**
Stddev	.00431	.01958	.04191	.00033	.00001	.00298	.00040	.00200	.00959	.00061	.00062	.00293
%RSD	357.32	191.51	191.51	14.588	1.7002	99.768	29.687	246.95	17.881	153.21	339.70	109.16
#1	-.00425	.00362	.00775	-.00200	.00040	.00509	.00162	.00222	-.04687	-.00003	.00026	.00061
#2	.00184	-.02407	-.05152	-.00246	.00039	.00088	.00106	-.00060	-.06044	.00083	-.00063	.00475
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3829.5**	**47181.**	**3148.2**
Stddev	1.7	246.	1.9
%RSD	.04483	.52235	.06035
#1	3828.3	47007.	3149.6
#2	3830.7	47356.	3146.9

Sample Name: CCVL-5415520 Acquired: 11/7/2018 21:59:33 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01092**	**.11348**	**.01451**	**.10337**	**.01198**	**.00083**	**.12394**	**.22239**	**.00508**	**.01056**	**.01023**	**.01412**
Stddev	.00100	.00263	.00421	.00163	.00025	.00001	.00083	.00392	.00006	.00015	.00000	.00031
%RSD	9.1125	2.3170	29.001	1.5769	2.1219	1.7649	.66793	1.7621	1.2285	1.3845	.03425	2.1787
#1	.01163	.11534	.01153	.10452	.01180	.00084	.12452	.22516	.00512	.01066	.01023	.01390
#2	.01022	.11162	.01748	.10221	.01215	.00082	.12335	.21962	.00503	.01046	.01022	.01434
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09139**	**3.8102**	**.01984**	**.20500**	**.01049**	**.01926**	F **1.8835**	**.04274**	**2.9574**	**.00910**	F **.18686**	**.01980**
Stddev	.00859	.0957	.00018	.00164	.00003	.00022	.0013	.00129	.0614	.00035	.00685	.00201
%RSD	9.4034	2.5106	.91828	.79793	.28999	1.1545	.06911	3.0160	2.0747	3.8119	3.6681	10.158
#1	.08531	3.8778	.01997	.20385	.01052	.01942	1.8845	.04365	3.0008	.00935	.19171	.02122
#2	.09746	3.7425	.01971	.20616	.01047	.01911	1.8826	.04183	2.9140	.00886	.18201	.01837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							1.0000				.10000	
Range							30.000%				30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01539**	**.46504**	**.99518**	**.10228**	**.01120**	**.01727**	**.01045**	**.01567**	**.06258**	**.01028**	**.02134**	F **.02118**
Stddev	.00555	.01017	.02177	.00336	.00018	.00287	.00056	.00209	.06322	.00033	.00043	.00390
%RSD	36.098	2.1871	2.1871	3.2842	1.5839	16.592	5.3452	13.346	101.02	3.2327	2.0002	18.412
#1	.01146	.45785	.97979	.10466	.01108	.01525	.01084	.01715	.10728	.01005	.02164	.02394
#2	.01931	.47223	1.0106	.09991	.01133	.01930	.01005	.01419	.01788	.01052	.02104	.01842
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail
Value												.01500
Range												30.000%

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3994.5**	**48973.**	**3305.1**
Stddev	18.0	49.	8.9
%RSD	.45084	.10018	.27007
#1	3981.8	48938.	3298.8
#2	4007.3	49007.	3311.4

Sample Name: MB 280-436577/1-A Acquired: 11/7/2018 22:02:07 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 11/7 Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00015**	**.00225**	**.00597**	**.00044**	**.00109**	**.00011**	**.00791**	**.01842**	**.00013**
Stddev	.00049	.00053	.00549	.00045	.00003	.00034	.00042	.00140	.00044
%RSD	336.44	23.562	91.955	101.56	2.9751	297.36	5.3372	7.6182	348.57
#1	-.00020	.00187	.00209	.00012	.00106	-.00013	.00761	.01743	-.00019
#2	.00050	.00262	.00986	.00076	.00111	.00036	.00821	.01941	.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00022**	**.00051**	**-.00264**	**.01161**	**.29727**	**-.00117**	**-.00232**	**.00006**	**-.00028**
Stddev	.00023	.00011	.00022	.00352	.09869	.00262	.00467	.00005	.00011
%RSD	105.23	21.319	8.2758	30.342	33.198	224.72	201.78	84.942	39.402
#1	.00038	.00059	-.00279	.01410	.36705	.00069	-.00562	.00009	-.00036
#2	.00006	.00043	-.00248	.00912	.22749	-.00302	.00099	.00002	-.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **.69645**	**.00014**	**.00038**	**-.00179**	W **.06750**	**-.00406**	**.00237**	**.00683**	**.01462**
Stddev	.00017	.00003	.00422	.00192	.00583	.00126	.00306	.00039	.00084
%RSD	.02410	24.846	1101.9	107.26	8.6318	31.066	129.11	5.7517	5.7517
#1	.69633	.00016	-.00260	-.00314	.06338	-.00495	.00453	.00711	.01522
#2	.69657	.00011	.00336	-.00043	.07162	-.00317	.00021	.00655	.01403
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	None
High Limit	.50000				.05000				
Low Limit	-.50000				-.05000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00177**	**.00007**	**.00149**	**.00028**	**-.00117**	**.02931**	**.00082**	**.00036**	**.00154**
Stddev	.00012	.00012	.00061	.00050	.00200	.05341	.00015	.00044	.00058
%RSD	6.7045	180.15	40.829	178.49	171.28	182.25	18.742	121.26	37.843
#1	-.00169	.00015	.00106	-.00007	-.00259	.06707	.00071	.00067	.00195
#2	-.00186	-.00002	.00192	.00064	.00025	-.00846	.00093	.00005	.00113
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**4029.7**	**49536.**	**3337.0**
Stddev	2.1	144.	37.9
%RSD	.05259	.29142	1.1345
#1	4028.2	49433.	3310.2
#2	4031.2	49638.	3363.7

Sample Name: LCS 280-436577/2-A Acquired: 11/7/2018 22:04:43 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.03496**	**2.0528**	**1.0463**	**1.0258**	**2.1639**	**.05057**	**2.1182**	**49.576**	**.09770**
Stddev	.00008	.0335	.0198	.0099	.0054	.00017	.0338	.076	.00165
%RSD	.23312	1.6340	1.8931	.96199	.24901	.34518	1.5941	.15343	1.6914
#1	.03502	2.0766	1.0603	1.0328	2.1601	.05045	2.1420	49.630	.09886
#2	.03490	2.0291	1.0323	1.0188	2.1677	.05070	2.0943	49.522	.09653
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
High Limit	.05750								
Low Limit	.04275								

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50488**	**.20458**	**.25573**	**.90240**	**55.643**	**1.1124**	**49.668**	**.49577**	**1.0390**
Stddev	.00647	.00294	.00010	.00477	.032	.0021	.018	.00191	.0186
%RSD	1.2816	1.4365	.03878	.52833	.05802	.19253	.03531	.38486	1.7881
#1	.50946	.20666	.25580	.90578	55.620	1.1140	49.681	.49712	1.0522
#2	.50030	.20250	.25566	.89903	55.665	1.1109	49.656	.49443	1.0259
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **56.476**	**.50001**	**10.554**	**.51160**	**2.1601**	**.51336**	**2.1229**	F **6.7000**	**14.338**
Stddev	.655	.00664	.150	.00464	.0300	.01384	.0234	.0240	.051
%RSD	1.1592	1.3271	1.4211	.90601	1.3895	2.6955	1.1034	.35768	.35768
#1	56.013	.50470	10.660	.51488	2.1813	.52314	2.1394	6.7170	14.374
#2	56.939	.49532	10.448	.50833	2.1389	.50357	2.1063	6.6831	14.302
Check ?	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Fail	None
High Limit	56.000							11.000	
Low Limit	45.500							9.0000	

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.0608**	**1.0776**	**1.0092**	**1.0016**	**2.0691**	**2.1197**	**.51654**	**.49464**	**.52461**
Stddev	.0342	.0023	.0040	.0019	.0428	.0420	.00188	.00155	.00122
%RSD	1.6571	.20995	.40012	.19371	2.0703	1.9835	.36443	.31376	.23188
#1	2.0850	1.0792	1.0120	1.0029	2.0994	2.1494	.51787	.49574	.52547
#2	2.0367	1.0760	1.0063	1.0002	2.0388	2.0900	.51521	.49354	.52375
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3899.3**	**47732.**	**3322.3**
Stddev	2.2	43.	9.9
%RSD	.05572	.08990	.29948
#1	3897.8	47762.	3315.3
#2	3900.9	47702.	3329.3

Sample Name: 280-116564-E-1-A Acquired: 11/7/2018 22:07:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00080**	**.00528**	**.00618**	**.02393**	**.47028**	**-.00030**	**.00060**	**62.063**	**.00042**
Stddev	.00073	.00010	.00138	.00033	.00035	.00004	.00392	.040	.00000
%RSD	91.105	1.8932	22.382	1.3776	.07458	12.817	652.20	.06386	.96136
#1	.00132	.00521	.00715	.02417	.47053	-.00027	.00337	62.091	.00042
#2	.00029	.00535	.00520	.02370	.47003	-.00032	-.00217	62.035	.00041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00019**	**.00027**	**-.00184**	**.00414**	**4.0349**	**.01222**	**20.414**	**.00219**	**.00205**
Stddev	.00001	.00018	.00031	.00272	.0483	.00271	.061	.00008	.00050
%RSD	5.9456	66.890	16.565	65.565	1.1970	22.164	.29834	3.7063	24.541
#1	-.00018	.00014	-.00163	.00222	4.0690	.01414	20.457	.00213	.00169
#2	-.00019	.00040	-.00206	.00607	4.0007	.01030	20.371	.00224	.00240
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.873**	**.00086**	**.30599**	**-.00513**	**9.1988**	**.00420**	**-.00009**	**12.511**	**26.773**
Stddev	.687	.00049	.00274	.00165	.0913	.00410	.00615	.153	.327
%RSD	3.8461	57.458	.89456	32.158	.99207	97.650	6694.0	1.2216	1.2216
#1	18.359	.00051	.30405	-.00630	9.2634	.00709	.00425	12.619	27.004
#2	17.387	.00121	.30792	-.00396	9.1343	.00130	-.00444	12.403	26.542
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00126**	**.27102**	**.00287**	**.00145**	**.00013**	**-.04786**	**.00260**	**.00088**	**.00604**
Stddev	.00055	.00026	.00244	.00046	.00350	.00139	.00070	.00011	.00095
%RSD	44.167	.09777	85.227	31.891	2631.6	2.8950	26.988	11.930	15.744
#1	.00086	.27083	.00460	.00177	.00261	-.04884	.00210	.00096	.00537
#2	.00165	.27121	.00114	.00112	-.00234	-.04688	.00310	.00081	.00671
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3923.4**	**48195.**	**3324.6**
Stddev	25.1	223.	22.3
%RSD	.63869	.46216	.67186
#1	3941.1	48352.	3308.8
#2	3905.7	48037.	3340.4

Sample Name: 116564-E-1-A SD@5 Acquired: 11/7/2018 22:09:39 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00059**	**.00107**	**-.00265**	**.00576**	**.09671**	**.00014**	**.00457**	**12.741**	**-.00023**
Stddev	.00002	.00050	.00716	.00038	.00002	.00003	.00245	.058	.00001
%RSD	3.3214	46.203	269.98	6.5880	.02424	18.825	53.684	.45375	5.5622
#1	.00058	.00072	.00241	.00549	.09673	.00012	.00630	12.782	-.00024
#2	.00061	.00142	-.00772	.00603	.09670	.00016	.00283	12.700	-.00022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00034**	**.00034**	**-.00156**	**.02745**	**1.0855**	**.00349**	**4.2405**	**.00131**	**-.00049**
Stddev	.00013	.00007	.00005	.00182	.0315	.00031	.0006	.00003	.00070
%RSD	39.824	19.476	2.9702	6.6282	2.9004	8.9804	.01435	2.3310	144.55
#1	-.00024	.00029	-.00152	.02874	1.0632	.00326	4.2400	.00133	-.00098
#2	-.00043	.00039	-.00159	.02616	1.1078	.00371	4.2409	.00129	.00001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	589.592 { 57}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.9522**	**.00040**	**.05635**	**-.00166**	**1.8399**	**.00148**	**-.00096**	**2.5150**	**5.3821**
Stddev	.0006	.00003	.00149	.00078	.0590	.00304	.00117	.0650	.1391
%RSD	.01589	7.2956	2.6369	47.015	3.2056	204.81	121.44	2.5851	2.5851
#1	3.9527	.00038	.05740	-.00111	1.8816	.00363	-.00179	2.5610	5.4805
#2	3.9518	.00042	.05529	-.00221	1.7982	-.00067	-.00014	2.4690	5.2837
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00094**	**.05565**	**.00061**	**.00078**	**-.00148**	**-.00589**	**.00094**	**.00155**	**.00434**
Stddev	.00047	.00022	.00367	.00015	.00232	.01928	.00031	.00035	.00203
%RSD	50.183	.39554	598.51	19.264	157.06	327.03	33.175	22.315	46.920
#1	-.00127	.05550	-.00198	.00088	-.00311	-.01952	.00117	.00179	.00578
#2	-.00061	.05581	.00321	.00067	.00016	.00774	.00072	.00130	.00290
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3915.8**	**47952.**	**3261.1**
Stddev	2.3	158.	.2
%RSD	.05860	.32990	.00746
#1	3917.4	48064.	3261.3
#2	3914.2	47840.	3261.0

Sample Name: 280-116564-E-1-B MS Acquired: 11/7/2018 22:12:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03493**	**2.0403**	**1.0492**	**1.0361**	**2.6005**	**.05035**	W **2.0723**	**110.73**	**.09758**
Stddev	.00136	.0152	.0092	.0123	.0094	.00015	.0271	.18	.00145
%RSD	3.9025	.74651	.87646	1.1904	.36026	.29980	1.3083	.15815	1.4869
#1	.03589	2.0511	1.0557	1.0448	2.5939	.05024	2.0915	110.61	.09861
#2	.03396	2.0296	1.0427	1.0273	2.6072	.05045	2.0532	110.85	.09655
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49871**	**.20367**	**.25452**	**.89615**	**58.936**	**1.1211**	**69.300**	**.49448**	**1.0365**
Stddev	.00432	.00180	.00105	.00494	.148	.0022	.142	.00082	.0134
%RSD	.86704	.88317	.41188	.55171	.25032	.19322	.20440	.16536	1.2957
#1	.50177	.20494	.25526	.89265	58.831	1.1196	69.400	.49505	1.0459
#2	.49566	.20240	.25378	.89964	59.040	1.1227	69.200	.49390	1.0270
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**72.729**	**.49577**	**10.890**	**.50433**	**11.428**	**.50178**	**2.1009**	**15.452**	**33.067**
Stddev	.781	.00433	.124	.00240	.122	.00955	.0103	.025	.054
%RSD	1.0740	.87370	1.1356	.47514	1.0683	1.9040	.49061	.16271	.16271
#1	72.177	.49883	10.977	.50603	11.514	.50854	2.1082	15.470	33.105
#2	73.281	.49271	10.802	.50264	11.341	.49503	2.0936	15.434	33.029
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0423**	**1.3334**	**1.0006**	**.99654**	**2.0209**	**2.0822**	**.51897**	**.48978**	**.51933**
Stddev	.0147	.0028	.0041	.00417	.0237	.0025	.00304	.00199	.00296
%RSD	.71718	.20936	.41003	.41889	1.1704	.11948	.58611	.40577	.56903
#1	2.0527	1.3315	1.0035	.99949	2.0376	2.0804	.52112	.49119	.51724
#2	2.0320	1.3354	.99768	.99359	2.0042	2.0839	.51682	.48838	.52142
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3781.8**	**46370.**	**3223.3**
Stddev	44.7	245.	23.4
%RSD	1.1833	.52840	.72624
#1	3813.5	46197.	3206.7
#2	3750.2	46543.	3239.8

Sample Name: 280-116564-E-1-C MSD Acquired: 11/7/2018 22:14:33 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.03505**	**2.0077**	**1.0278**	**1.0308**	**2.5997**	**.05052**	W **2.0399**	**110.14**	**.09615**
Stddev	.00083	.0354	.0091	.0121	.0145	.00010	.0221	.35	.00127
%RSD	2.3727	1.7647	.88093	1.1739	.55893	.19485	1.0842	.31868	1.3236
#1	.03564	2.0327	1.0342	1.0393	2.5895	.05059	2.0555	109.89	.09705
#2	.03446	1.9826	1.0214	1.0222	2.6100	.05045	2.0242	110.39	.09525
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass
High Limit							2.0000		
Low Limit							-.20000		

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.49074**	**.20018**	**.25191**	**.88485**	**58.882**	**1.1165**	**68.893**	**.49217**	**1.0273**
Stddev	.00762	.00349	.00018	.00267	.186	.0031	.097	.00108	.0213
%RSD	1.5528	1.7410	.07170	.30154	.31539	.27312	.14148	.21998	2.0714
#1	.49613	.20264	.25179	.88673	58.751	1.1144	68.962	.49294	1.0424
#2	.48535	.19772	.25204	.88296	59.013	1.1187	68.824	.49141	1.0123
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**71.831**	**.48728**	**10.700**	**.49287**	**11.199**	**.49529**	**2.0645**	**16.864**	**36.089**
Stddev	.313	.00784	.150	.00999	.089	.00742	.0276	.048	.102
%RSD	.43525	1.6088	1.4011	2.0270	.79688	1.4971	1.3379	.28187	.28187
#1	72.052	.49283	10.806	.49994	11.262	.50053	2.0840	16.830	36.017
#2	71.610	.48174	10.594	.48581	11.136	.49005	2.0449	16.898	36.161
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	W **2.0195**	**1.3307**	**1.0030**	**.99746**	**1.9868**	**2.0233**	**.51545**	**.49022**	**.52314**
Stddev	.0300	.0045	.0022	.00061	.0338	.0029	.00148	.00173	.00230
%RSD	1.4859	.33476	.21771	.06069	1.7032	.14445	.28701	.35325	.43915
#1	2.0407	1.3276	1.0046	.99789	2.0107	2.0212	.51650	.48899	.52151
#2	1.9983	1.3339	1.0015	.99703	1.9628	2.0254	.51440	.49144	.52476
Check ?	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit	2.0000								
Low Limit	-.20000								

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3746.1**	**45103.**	**3161.0**
Stddev	33.0	228.	19.4
%RSD	.88127	.50537	.61311
#1	3722.7	44942.	3174.7
#2	3769.4	45264.	3147.3

Sample Name: 280-116571-D-1-A Acquired: 11/7/2018 22:16:54 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00093**	**.01580**	**.01470**	**.10530**	**.22213**	**.00012**	**.00876**	**113.34**	**.00060**
Stddev	.00041	.00013	.00003	.00004	.00094	.00013	.00133	.05	.00026
%RSD	44.018	.82425	.20320	.04030	.42209	107.37	15.237	.04537	42.763
#1	.00064	.01589	.01468	.10533	.22279	.00021	.00970	113.38	.00078
#2	.00121	.01571	.01472	.10527	.22147	.00003	.00782	113.30	.00042
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00143**	**.00278**	**-.00105**	**.01148**	**9.2468**	**.04173**	**20.752**	**.00182**	**.00876**
Stddev	.00016	.00004	.00015	.00020	.0058	.00813	.025	.00006	.00038
%RSD	11.489	1.5464	14.524	1.7447	.06285	19.487	.12091	3.1853	4.3500
#1	.00155	.00275	-.00094	.01134	9.2509	.04748	20.735	.00178	.00849
#2	.00131	.00281	-.00115	.01162	9.2427	.03598	20.770	.00186	.00903
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.568**	**.00296**	**.53970**	**-.00157**	**7.9524**	**.00520**	**.00833**	**7.8007**	**16.694**
Stddev	.262	.00014	.00902	.00005	.1427	.00098	.00886	.0727	.156
%RSD	1.3399	4.5626	1.6716	3.4080	1.7940	18.834	106.29	.93230	.93230
#1	19.753	.00287	.54608	-.00153	8.0533	.00589	.01460	7.8522	16.804
#2	19.382	.00306	.53333	-.00160	7.8515	.00451	.00207	7.7493	16.584
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00582**	**.60304**	**.00556**	**.00428**	**.00627**	**.04791**	**.01524**	**.00191**	**.00450**
Stddev	.00105	.00064	.00051	.00039	.00131	.05159	.00013	.00044	.00483
%RSD	18.105	.10618	9.1575	8.9919	20.846	107.69	.83919	22.794	107.45
#1	.00508	.60258	.00520	.00456	.00719	.08439	.01534	.00222	.00792
#2	.00657	.60349	.00592	.00401	.00534	.01143	.01515	.00161	.00108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3897.6**	**47361.**	**3279.6**
Stddev	12.2	49.	16.3
%RSD	.31224	.10336	.49697
#1	3889.0	47327.	3291.2
#2	3906.2	47396.	3268.1

Sample Name: CCVH-5408055 Acquired: 11/7/2018 22:19:30 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00365**	**50.499**	**-.01053**	**.00210**	**.00080**	**-.00030**	**1.0645**	**.02442**	**-.00007**	**.00148**	**.00056**	**-.00043**	**47.533**
Stddev	.00003	.086	.00680	.00042	.00001	.00007	.0014	.00210	.00012	.00037	.00004	.00053	.076
%RSD	.76158	.17068	64.540	20.031	1.8504	24.199	.13004	8.6185	165.23	24.731	7.0717	123.63	.15950
#1	-.00367	50.438	-.01534	.00180	.00081	-.00035	1.0655	.02293	-.00016	.00122	.00053	-.00005	47.479
#2	-.00363	50.560	-.00573	.00240	.00079	-.00025	1.0635	.02591	.00001	.00174	.00059	-.00081	47.586
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.35903**	**-.00216**	**-.09156**	**.00271**	**-.00085**	**276.22**	**.00347**	**.00344**	**-.00323**	**5.3205**	**.00757**	**.00976**	**.02645**
Stddev	.09362	.00155	.01074	.00004	.00025	1.28	.00002	.00288	.00113	.0510	.00488	.00748	.00757
%RSD	26.077	71.580	11.730	1.4937	29.820	.46212	.50989	83.756	34.989	.95787	64.382	76.576	28.636
#1	.29283	-.00107	-.09915	.00273	-.00067	275.32	.00346	.00140	-.00243	5.3565	.00413	.00448	.03181
#2	.42523	-.00325	-.08396	.00268	-.00102	277.12	.00348	.00547	-.00403	5.2844	.01102	.01505	.02110
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.05661**	**-.00130**	**.00042**	**5.0335**	**.01783**	**-.00079**	**10.656**	**-.00970**	**.00042**	**.08410**
Stddev	.01621	.00007	.00005	.0174	.00026	.00014	.046	.00044	.00055	.00131
%RSD	28.636	5.3314	11.226	.34487	1.4359	17.778	.43559	4.4982	130.21	1.5602
#1	.06807	-.00135	.00039	5.0458	.01801	-.00069	10.623	-.01001	.00003	.08317
#2	.04514	-.00125	.00045	5.0212	.01765	-.00089	10.688	-.00939	.00081	.08502
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3773.8**	**45499.**	**3171.0**
Stddev	14.5	134.	4.8
%RSD	.38498	.29484	.15276
#1	3784.0	45404.	3174.5
#2	3763.5	45594.	3167.6

Sample Name: CCV-5407546 Acquired: 11/7/2018 22:22:01 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.51061**	**.52968**	**1.0195**	**.50447**	**.53777**	**.50412**	**.00501**	**4.9696**	**.50246**	**.50767**	**.50896**	**.51814**
Stddev	.00022	.01130	.0200	.00956	.00294	.00200	.00512	.0163	.00983	.00983	.00968	.00041
%RSD	.04397	2.1342	1.9603	1.8955	.54701	.39632	102.25	.32820	1.9561	1.9363	1.9022	.07885
#1	.51045	.53767	1.0336	.51123	.53985	.50554	.00864	4.9811	.50941	.51462	.51580	.51785
#2	.51077	.52168	1.0053	.49771	.53569	.50271	.00139	4.9580	.49551	.50072	.50211	.51843
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.2200**	**54.739**	F **1.1171**	**20.176**	**.50201**	**.50373**	F **5.7782**	**.50549**	**1.0028**	**1.0171**	**.09064**	**1.0046**
Stddev	.0200	.141	.0003	.049	.00076	.01024	.0021	.01064	.0121	.0229	.00086	.0169
%RSD	.90138	.25672	.02464	.24116	.15101	2.0332	.03585	2.1055	1.2113	2.2494	.94854	1.6845
#1	2.2342	54.838	1.1173	20.210	.50254	.51097	5.7797	.51301	1.0114	1.0333	.09125	1.0165
#2	2.2059	54.639	1.1169	20.141	.50147	.49649	5.7767	.49796	.99424	1.0010	.09003	.99259
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value	2.5000		1.0000				5.0000					
Range	-10.000%		10.000%				10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0317**	**4.6978**	**10.053**	**1.0184**	**.53117**	**.01219**	**.49802**	**1.0392**	**-.01744**	**.50548**	**.49444**	**.50582**
Stddev	.0122	.0134	.029	.0192	.00292	.00267	.00239	.0185	.07561	.00143	.00130	.00309
%RSD	1.1824	.28527	.28527	1.8887	.54958	21.930	.48079	1.7769	433.43	.28382	.26255	.61067
#1	1.0404	4.6883	10.033	1.0320	.53323	.01030	.49971	1.0522	.03602	.50649	.49536	.50800
#2	1.0231	4.7073	10.074	1.0048	.52910	.01408	.49633	1.0261	-.07091	.50447	.49352	.50364
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3866.3**	**47007.**	**3250.5**
Stddev	7.6	100.	10.0
%RSD	.19634	.21320	.30684
#1	3860.9	46936.	3257.5
#2	3871.6	47078.	3243.4

Sample Name: CCB Acquired: 11/7/2018 22:24:23 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00026**	**-.00063**	**.00065**	**.00221**	**.00063**	**-.00025**	**.00525**	**.00851**	**-.00017**	**-.00014**	**.00002**	**-.00224**
Stddev	.00014	.00065	.00138	.00041	.00060	.00009	.00206	.00578	.00007	.00011	.00024	.00068
%RSD	56.231	103.79	210.46	18.499	94.670	37.120	39.234	67.912	44.625	80.870	1293.9	30.621
#1	.00015	-.00109	.00163	.00192	.00105	-.00031	.00671	.00442	-.00022	-.00022	-.00015	-.00272
#2	.00036	-.00017	-.00032	.00250	.00021	-.00018	.00380	.01259	-.00011	-.00006	.00019	-.00175
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00445**	**.23264**	**.00044**	**-.00298**	**-.00004**	**.00087**	**.34365**	**.00055**	**-.00271**	**-.00091**	W **.07297**	**.00061**
Stddev	.01156	.00741	.00058	.00011	.00001	.00044	.02348	.00051	.00251	.00116	.00092	.00272
%RSD	259.52	3.1834	129.51	3.6925	21.759	50.372	6.8324	92.338	92.414	127.96	1.2672	443.89
#1	.01263	.22740	.00085	-.00305	-.00005	.00056	.36026	.00019	-.00448	-.00173	.07231	.00254
#2	-.00372	.23788	.00004	-.00290	-.00004	.00118	.32705	.00091	-.00094	-.00009	.07362	-.00131
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit											.05000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00334**	**-.02629**	**-.05627**	**-.00000**	**-.00001**	**.00068**	**.00085**	**-.00158**	**-.00036**	**.00034**	**-.00168**	**.00224**
Stddev	.00204	.02793	.05977	.00048	.00002	.00348	.00028	.00226	.10758	.00100	.00150	.00095
%RSD	61.081	106.22	106.22	11632.	153.19	508.23	32.312	142.95	29691.	294.71	89.268	42.195
#1	-.00190	-.04604	-.09853	.00034	.00000	-.00177	.00105	.00002	.07571	-.00037	-.00062	.00291
#2	-.00478	-.00655	-.01401	-.00035	-.00003	.00314	.00066	-.00318	-.07644	.00104	-.00274	.00157
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3882.4**	**48674.**	**3231.2**
Stddev	17.4	7.	6.0
%RSD	.44853	.01340	.18599
#1	3894.8	48669.	3227.0
#2	3870.1	48678.	3235.5

Sample Name: CCVL-5415520 Acquired: 11/7/2018 22:27:00 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01199**	**.11408**	**.01655**	**.10208**	**.01225**	**.00078**	**.12137**	**.22649**	**.00525**	**.01106**	**.01094**	**.01352**
Stddev	.00054	.00173	.00122	.00267	.00054	.00017	.00469	.00703	.00002	.00030	.00048	.00115
%RSD	4.4721	1.5170	7.3886	2.6173	4.4482	22.007	3.8664	3.1049	.28622	2.7361	4.4226	8.5275
#1	.01237	.11530	.01569	.10397	.01264	.00066	.12469	.23147	.00526	.01127	.01128	.01434
#2	.01161	.11285	.01742	.10019	.01187	.00090	.11805	.22152	.00524	.01084	.01060	.01271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09599**	**3.7318**	**.02303**	**.21573**	**.01069**	**.01996**	F **1.4898**	**.04226**	**2.9742**	**.00669**	F **.16071**	**.01638**
Stddev	.00362	.0027	.00027	.00110	.00013	.00093	.0289	.00119	.0716	.00126	.00546	.00203
%RSD	3.7753	.07258	1.1671	.50785	1.1742	4.6693	1.9420	2.8125	2.4072	18.871	3.3989	12.414
#1	.09855	3.7337	.02284	.21650	.01060	.02062	1.5103	.04310	3.0248	.00580	.16458	.01781
#2	.09343	3.7299	.02322	.21495	.01078	.01930	1.4693	.04142	2.9236	.00758	.15685	.01494
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							1.0000				.10000	
Range							30.000%				30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02277**	**.49763**	**1.0649**	**.10272**	**.01118**	**.01639**	**.01044**	**.01730**	**.06839**	**.01117**	**.02272**	**.01943**
Stddev	.00566	.00645	.0138	.00336	.00011	.00583	.00030	.00200	.00351	.00084	.00074	.00427
%RSD	24.870	1.2970	1.2970	3.2708	.96882	35.604	2.8539	11.556	5.1262	7.4777	3.2433	21.982
#1	.02677	.50220	1.0747	.10510	.01126	.02051	.01065	.01872	.07087	.01058	.02324	.02245
#2	.01876	.49307	1.0552	.10035	.01111	.01226	.01023	.01589	.06591	.01176	.02220	.01641
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3974.9**	**48732.**	**3264.1**
Stddev	3.4	65.	.6
%RSD	.08498	.13398	.01794
#1	3972.5	48778.	3263.7
#2	3977.3	48686.	3264.5

Sample Name: 280-116571-D-2-A Acquired: 11/7/2018 22:29:34 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00057**	**.04156**	**.00820**	**.11090**	**.24044**	**-.00037**	**.00245**	**123.18**	**.00045**
Stddev	.00012	.00006	.00575	.00195	.00144	.00014	.00327	.13	.00009
%RSD	20.977	.14510	70.178	1.7626	.60007	37.077	133.32	.10712	20.395
#1	.00066	.04160	.00413	.11228	.23942	-.00027	.00476	123.08	.00051
#2	.00049	.04152	.01227	.10952	.24146	-.00046	.00014	123.27	.00038
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00011**	**.00268**	**-.00106**	**.03072**	**8.6771**	**.04023**	**21.879**	**.00039**	**.00212**
Stddev	.00008	.00023	.00031	.00115	.0766	.00201	.000	.00007	.00018
%RSD	74.048	8.4920	29.371	3.7511	.88217	5.0059	.00117	16.722	8.5265
#1	-.00016	.00284	-.00128	.02991	8.6230	.04165	21.880	.00035	.00199
#2	-.00005	.00251	-.00084	.03153	8.7312	.03880	21.879	.00044	.00224
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**21.327**	**.00140**	**.46888**	**-.00325**	**10.350**	**.00090**	**.00162**	**7.9612**	**17.037**
Stddev	.242	.00019	.01344	.00016	.200	.00541	.00888	.0420	.090
%RSD	1.1357	13.307	2.8656	5.0542	1.9308	600.07	548.17	.52756	.52756
#1	21.155	.00153	.47838	-.00313	10.491	-.00293	.00790	7.9909	17.101
#2	21.498	.00126	.45938	-.00336	10.208	.00473	-.00466	7.9315	16.973
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00078**	**.65798**	**.00191**	**.00134**	**-.00099**	**.00963**	**.01268**	**.00344**	**.00297**
Stddev	.00089	.00077	.00025	.00000	.00050	.08583	.00017	.00012	.00168
%RSD	114.52	.11667	13.236	.15902	50.414	891.47	1.3198	3.5445	56.481
#1	-.00141	.65743	.00209	.00134	-.00064	.07032	.01279	.00353	.00178
#2	-.00015	.65852	.00173	.00134	-.00134	-.05106	.01256	.00335	.00415
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3904.7**	**47661.**	**3301.1**
Stddev	12.0	18.	3.1
%RSD	.30837	.03824	.09391
#1	3913.2	47648.	3303.3
#2	3896.2	47674.	3298.9

Sample Name: 280-116571-D-3-A Acquired: 11/7/2018 22:32:07 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00027**	**.00785**	**.00510**	**.09463**	**.43986**	**-.00031**	**-.00216**	**145.48**	**.00009**
Stddev	.00001	.00044	.00406	.00284	.00119	.00040	.00178	.29	.00018
%RSD	3.1466	5.5969	79.674	3.0020	.26968	129.03	82.322	.19696	195.04
#1	.00028	.00817	.00223	.09664	.44070	-.00003	-.00090	145.68	.00022
#2	.00027	.00754	.00797	.09263	.43902	-.00059	-.00342	145.27	-.00003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00048**	**.00445**	**-.00042**	**.01501**	**10.801**	**.01781**	**26.995**	**.00030**	**.00168**
Stddev	.00008	.00004	.00145	.00081	.015	.00536	.082	.00008	.00020
%RSD	16.076	.91067	341.68	5.4243	.13783	30.092	.30279	28.145	12.083
#1	-.00054	.00448	-.00145	.01444	10.790	.02160	27.053	.00036	.00183
#2	-.00043	.00442	.00060	.01559	10.811	.01402	26.938	.00024	.00154
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.295**	**.00076**	**.08631**	**-.00315**	**14.585**	**.00139**	**-.00157**	**8.1266**	**17.391**
Stddev	.008	.00027	.00331	.00013	.268	.00116	.00664	.0795	.170
%RSD	.04130	35.362	3.8344	4.0098	1.8344	83.385	422.93	.97821	.97821
#1	19.301	.00057	.08865	-.00306	14.774	.00057	-.00626	8.1828	17.511
#2	19.289	.00095	.08397	-.00324	14.396	.00221	.00312	8.0704	17.271
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00147**	**.77153**	**-.00134**	**.00074**	**-.00210**	**-.00121**	**.00243**	**.00368**	**.00385**
Stddev	.00063	.00175	.00126	.00080	.00164	.03613	.00079	.00021	.00422
%RSD	42.696	.22711	93.915	107.97	78.146	2988.4	32.575	5.7251	109.64
#1	-.00191	.77277	-.00045	.00018	-.00325	-.02676	.00299	.00354	.00086
#2	-.00103	.77029	-.00224	.00131	-.00094	.02434	.00187	.00383	.00683
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3841.5**	**46768.**	**3249.9**
Stddev	16.1	165.	14.4
%RSD	.42009	.35373	.44313
#1	3852.9	46651.	3260.1
#2	3830.1	46885.	3239.7

Sample Name: 280-116571-D-4-A Acquired: 11/7/2018 22:34:41 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00020**	**.08011**	**.00084**	**.06615**	**.20983**	**-.00014**	**.00056**	**81.079**	**.00025**
Stddev	.00072	.00252	.00009	.00208	.00057	.00005	.00465	.388	.00015
%RSD	364.03	3.1405	10.621	3.1368	.27231	36.545	826.25	.47857	62.444
#1	-.00070	.08189	.00078	.06762	.21023	-.00010	-.00272	81.354	.00036
#2	.00031	.07834	.00090	.06469	.20942	-.00017	.00385	80.805	.00014
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00039**	**.00595**	**-.00071**	**.05134**	**3.4289**	**.01270**	**16.200**	**.00092**	**-.00054**
Stddev	.00018	.00000	.00059	.00045	.0962	.00200	.031	.00008	.00007
%RSD	46.353	.01087	83.625	.87292	2.8063	15.717	.19049	8.8233	12.682
#1	-.00052	.00595	-.00029	.05102	3.3609	.01129	16.222	.00086	-.00059
#2	-.00026	.00595	-.00112	.05165	3.4969	.01411	16.179	.00098	-.00049
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**34.462**	**.00019**	**.09305**	**-.00378**	**6.8807**	**.00182**	**-.00008**	**9.0782**	**19.427**
Stddev	.560	.00020	.00349	.00122	.1709	.00036	.00884	.1917	.410
%RSD	1.6261	107.09	3.7542	32.181	2.4841	19.942	11307.	2.1121	2.1121
#1	34.858	.00033	.09552	-.00464	7.0016	.00208	.00617	9.2138	19.718
#2	34.066	.00005	.09058	-.00292	6.7599	.00157	-.00633	8.9427	19.137
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00067**	**.42308**	**-.00155**	**.00221**	**-.00146**	**.03672**	**.00358**	**.00162**	**.00549**
Stddev	.00133	.00198	.00340	.00022	.00142	.02134	.00107	.00041	.00494
%RSD	199.54	.46709	220.11	10.165	97.198	58.122	29.725	25.287	89.901
#1	-.00161	.42448	.00086	.00205	-.00046	.05181	.00283	.00133	.00200
#2	.00027	.42168	-.00395	.00237	-.00246	.02163	.00434	.00190	.00898
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3892.8**	**47737.**	**3330.9**
Stddev	.1	350.	14.6
%RSD	.00149	.73312	.43889
#1	3892.8	47984.	3320.6
#2	3892.8	47489.	3341.2

Sample Name: 280-116571-D-5-A Acquired: 11/7/2018 22:37:14 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00042**	**.01398**	**.00759**	**.10781**	**.40853**	**-.00023**	**.00495**	**144.10**	**.00015**
Stddev	.00018	.01722	.00747	.00413	.00117	.00005	.00152	.00	.00035
%RSD	42.409	123.21	98.344	3.8277	.28675	24.304	30.701	.00106	224.62
#1	.00029	.02616	.00231	.11073	.40770	-.00019	.00388	144.10	.00040
#2	.00055	.00180	.01287	.10489	.40936	-.00026	.00603	144.10	-.00009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00008**	**.00512**	**-.00127**	**-.00021**	**3.8049**	**.01435**	**25.151**	**.00003**	**.00014**
Stddev	.00070	.00048	.00070	.00180	.0493	.00183	.117	.00009	.00129
%RSD	858.63	9.3806	54.721	871.14	1.2945	12.746	.46618	337.18	888.14
#1	.00058	.00545	-.00078	.00106	3.8397	.01564	25.233	-.00004	.00105
#2	-.00041	.00478	-.00176	-.00148	3.7701	.01306	25.068	.00009	-.00076
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.884**	**.00116**	**.11522**	**-.00493**	**10.742**	**-.00068**	**.00599**	**10.364**	**22.180**
Stddev	.746	.00010	.01298	.00118	.361	.00278	.00925	.060	.128
%RSD	1.3600	8.9142	11.267	23.834	3.3608	411.21	154.56	.57666	.57666
#1	54.356	.00123	.12440	-.00410	10.997	.00129	.01253	10.407	22.270
#2	55.412	.00108	.10604	-.00577	10.487	-.00265	-.00056	10.322	22.089
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00015**	**.69213**	**.00205**	**.00104**	**.00046**	**-.00692**	**.00661**	**.00396**	**.00339**
Stddev	.00424	.00034	.00138	.00026	.00391	.03904	.00039	.00035	.00146
%RSD	2799.3	.04939	66.980	24.790	843.02	564.39	5.8920	8.8157	43.155
#1	.00315	.69189	.00303	.00122	.00323	.02069	.00634	.00371	.00235
#2	-.00285	.69238	.00108	.00086	-.00230	-.03452	.00689	.00421	.00442
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3889.0**	**47134.**	**3263.9**
Stddev	12.5	203.	6.3
%RSD	.32154	.43094	.19332
#1	3897.9	46990.	3259.4
#2	3880.2	47278.	3268.4

Sample Name: 280-116571-D-6-A Acquired: 11/7/2018 22:39:47 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00039**	**.00322**	**.00643**	**.12059**	**.50647**	**.00014**	**-.00604**	**185.62**	**.00044**
Stddev	.00045	.00052	.00413	.00034	.00328	.00002	.00308	.78	.00000
%RSD	115.29	16.109	64.231	.28051	.64749	16.138	50.960	.42151	.71019
#1	.00007	.00359	.00351	.12083	.50879	.00016	-.00822	186.17	.00044
#2	.00071	.00286	.00934	.12035	.50415	.00013	-.00386	185.07	.00044
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00047**	**.00073**	**-.00049**	**-.00037**	**2.5129**	**.02049**	**31.067**	**.03524**	**-.00015**
Stddev	.00020	.00008	.00030	.00136	.0584	.00086	.122	.00032	.00000
%RSD	42.716	11.169	60.996	364.97	2.3228	4.1777	.39204	.89929	2.6328
#1	.00033	.00079	-.00028	-.00133	2.5542	.01989	31.153	.03546	-.00015
#2	.00061	.00067	-.00070	.00059	2.4716	.02110	30.981	.03501	-.00016
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.320**	**.00318**	**.16604**	**-.00361**	**9.9900**	**.00084**	**-.00130**	**13.113**	**28.061**
Stddev	.704	.00057	.00780	.00112	.1915	.00114	.00579	.113	.241
%RSD	1.7042	17.821	4.6999	31.169	1.9171	135.60	444.03	.85909	.85909
#1	41.818	.00278	.17156	-.00281	10.125	.00164	.00279	13.192	28.232
#2	40.822	.00358	.16053	-.00440	9.8546	.00003	-.00540	13.033	27.891
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00173**	**.96746**	**-.00246**	**.00049**	**.00100**	**-.00757**	**.00516**	**.00285**	**.00397**
Stddev	.00128	.00363	.00019	.00060	.00199	.01539	.00042	.00094	.00477
%RSD	73.794	.37568	7.8377	123.59	198.77	203.24	8.2270	32.937	120.06
#1	-.00083	.97003	-.00260	.00091	-.00041	-.01845	.00486	.00218	.00060
#2	-.00264	.96489	-.00233	.00006	.00240	.00331	.00546	.00351	.00734
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3826.4**	**46336.**	**3257.1**
Stddev	25.0	62.	2.7
%RSD	.65458	.13453	.08322
#1	3844.2	46292.	3255.2
#2	3808.7	46380.	3259.1

Sample Name: 280-116571-D-7-A Acquired: 11/7/2018 22:42:20 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00078**	**.01775**	**.00585**	**.07197**	**.06526**	**.00007**	**.00335**	**123.90**	**.00011**
Stddev	.00031	.00081	.00372	.00276	.00118	.00011	.00038	.40	.00020
%RSD	39.223	4.5374	63.572	3.8288	1.8148	146.38	11.471	.31973	172.18
#1	-.00056	.01832	.00322	.07392	.06442	-.00000	.00362	123.62	-.00002
#2	-.00100	.01718	.00848	.07002	.06610	.00015	.00307	124.18	.00025
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00053**	**.00180**	**-.00083**	**.06796**	**1.6958**	**.01903**	**27.744**	**.00235**	**.00029**
Stddev	.00047	.00004	.00012	.00426	.0013	.00205	.058	.00005	.00008
%RSD	89.884	2.3289	14.249	6.2707	.07769	10.757	.20959	1.9372	28.347
#1	-.00086	.00183	-.00075	.07097	1.6967	.02048	27.786	.00232	.00035
#2	-.00019	.00177	-.00091	.06495	1.6949	.01758	27.703	.00238	.00023
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.302**	**.00045**	**.09080**	**-.00279**	**33.851**	**.00095**	**-.01005**	**10.963**	**23.460**
Stddev	.258	.00081	.00175	.00030	1.076	.00539	.00116	.065	.138
%RSD	1.0197	182.42	1.9255	10.910	3.1792	565.07	11.498	.58880	.58880
#1	25.120	.00102	.09203	-.00257	34.612	-.00286	-.01086	10.917	23.363
#2	25.484	-.00013	.08956	-.00300	33.090	.00477	-.00923	11.008	23.558
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00137**	**.54083**	**-.00015**	**.00049**	**.00266**	**-.01536**	**.00408**	**.00148**	**.00760**
Stddev	.00050	.00089	.00147	.00011	.00005	.00997	.00025	.00031	.00023
%RSD	36.274	.16527	1013.4	23.075	1.7740	64.903	6.0335	20.640	2.9778
#1	-.00172	.54020	.00090	.00041	.00270	-.02240	.00425	.00126	.00744
#2	-.00102	.54146	-.00119	.00057	.00263	-.00831	.00391	.00170	.00776
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3834.8**	**46666.**	**3203.3**
Stddev	1.1	39.	.4
%RSD	.02986	.08303	.01245
#1	3834.0	46694.	3203.6
#2	3835.7	46639.	3203.1

Sample Name: 280-116571-D-8-A Acquired: 11/7/2018 22:44:55 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00146**	**.00593**	**.00183**	**.04695**	**.59367**	**-.00011**	**.00194**	**155.96**	**.00023**
Stddev	.00050	.00025	.00468	.00167	.00046	.00023	.00380	.17	.00011
%RSD	34.260	4.1909	256.14	3.5647	.07714	202.91	195.43	.10928	48.614
#1	.00182	.00575	-.00148	.04814	.59400	.00005	-.00074	155.84	.00031
#2	.00111	.00611	.00513	.04577	.59335	-.00028	.00463	156.08	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00036**	**.00238**	**-.00023**	**.00506**	**3.7656**	**.01401**	**29.710**	**.00029**	**-.00061**
Stddev	.00030	.00001	.00086	.00834	.0044	.00163	.031	.00013	.00056
%RSD	83.203	.60134	369.77	164.96	.11639	11.648	.10549	44.569	92.694
#1	-.00057	.00239	-.00084	.01095	3.7687	.01286	29.688	.00020	-.00101
#2	-.00015	.00237	.00038	-.00084	3.7625	.01516	29.732	.00039	-.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**55.647**	**.00070**	**.08964**	**-.00628**	**9.9738**	**.00537**	**-.00355**	**11.125**	**23.808**
Stddev	.498	.00006	.00346	.00030	.0952	.00170	.00212	.003	.006
%RSD	.89542	8.5122	3.8571	4.7087	.95411	31.596	59.710	.02467	.02467
#1	55.294	.00074	.09209	-.00607	10.041	.00657	-.00205	11.123	23.804
#2	55.999	.00065	.08720	-.00649	9.9065	.00417	-.00505	11.127	23.812
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00226**	**.70972**	**.00245**	**.00127**	**-.00185**	**-.00362**	**.00796**	**.00293**	**.00215**
Stddev	.00176	.00017	.00305	.00002	.00146	.03555	.00048	.00015	.00257
%RSD	77.828	.02387	124.53	1.3103	78.989	982.59	5.9741	5.1323	119.55
#1	-.00351	.70984	.00029	.00126	-.00082	.02152	.00762	.00304	.00033
#2	-.00102	.70960	.00461	.00129	-.00289	-.02875	.00829	.00282	.00397
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3749.9**	**45863.**	**3200.2**
Stddev	2.5	260.	14.1
%RSD	.06645	.56793	.44193
#1	3751.7	46047.	3210.2
#2	3748.2	45679.	3190.2

Sample Name: 280-116571-D-9-A Acquired: 11/7/2018 22:47:28 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00036**	**.00390**	**.00492**	**.07283**	**.13206**	**-.00012**	**.00111**	**152.64**	**.00058**
Stddev	.00039	.00048	.01472	.00119	.00021	.00000	.00115	.11	.00012
%RSD	108.22	12.210	299.10	1.6388	.15614	1.7960	103.08	.07187	19.801
#1	.00009	.00424	-.00549	.07367	.13191	-.00012	.00030	152.56	.00050
#2	.00064	.00356	.01533	.07198	.13221	-.00011	.00192	152.71	.00066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00005**	**.00100**	**-.00074**	**.00833**	**1.9445**	**.01669**	**34.752**	**.00019**	**-.00110**
Stddev	.00025	.00098	.00022	.00127	.0019	.00200	.053	.00015	.00017
%RSD	478.92	97.919	30.125	15.216	.09684	11.994	.15251	80.901	15.647
#1	.00012	.00169	-.00058	.00744	1.9458	.01811	34.789	.00008	-.00123
#2	-.00023	.00031	-.00090	.00923	1.9432	.01528	34.714	.00030	-.00098
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.613**	**.00086**	**.05647**	**-.00549**	**33.398**	**.00306**	**-.00368**	**11.259**	**24.094**
Stddev	.161	.00044	.00048	.00225	.755	.00197	.00695	.016	.034
%RSD	.56368	51.109	.84418	40.942	2.2615	64.415	188.93	.13943	.13943
#1	28.727	.00118	.05681	-.00708	33.932	.00445	-.00859	11.248	24.070
#2	28.499	.00055	.05614	-.00390	32.864	.00167	.00124	11.270	24.118
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00049**	**.57620**	**.00086**	**.00096**	**-.00304**	**-.03330**	**.00211**	**.00245**	**.00350**
Stddev	.00032	.00076	.00033	.00005	.00558	.01009	.00041	.00046	.00217
%RSD	64.288	.13208	39.011	5.5610	183.62	30.311	19.554	18.979	61.928
#1	.00071	.57674	.00110	.00100	-.00698	-.04044	.00182	.00212	.00504
#2	.00027	.57566	.00062	.00092	.00091	-.02616	.00240	.00278	.00197
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3772.6**	**46072.**	**3206.0**
Stddev	11.2	24.	17.1
%RSD	.29709	.05202	.53437
#1	3780.6	46055.	3218.1
#2	3764.7	46089.	3193.9

Sample Name: 280-116571-D-10-A Acquired: 11/7/2018 22:50:01 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00107**	**.00182**	**.00647**	**.05869**	**.53640**	**-.00015**	**.00578**	**137.89**	**.00042**
Stddev	.00075	.00049	.00036	.00049	.00216	.00029	.00564	.10	.00038
%RSD	69.587	26.660	5.5209	.82739	.40213	195.48	97.594	.07610	90.243
#1	.00160	.00217	.00622	.05903	.53792	-.00036	.00179	137.96	.00069
#2	.00054	.00148	.00673	.05834	.53487	.00006	.00977	137.81	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00053**	**.00282**	**-.00113**	**.00433**	**3.5784**	**.01672**	**40.203**	**.00063**	**-.00049**
Stddev	.00038	.00049	.00032	.00342	.0549	.00517	.099	.00001	.00055
%RSD	71.098	17.332	28.342	78.944	1.5353	30.935	.24555	2.0721	112.07
#1	-.00080	.00316	-.00090	.00191	3.6172	.02038	40.273	.00062	-.00010
#2	-.00026	.00247	-.00135	.00674	3.5396	.01307	40.134	.00064	-.00087
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**42.440**	**.00016**	**.04542**	**-.00480**	**34.141**	**.00297**	**-.00169**	**10.073**	**21.556**
Stddev	.285	.00002	.00105	.00227	.837	.00092	.00268	.015	.031
%RSD	.67052	13.174	2.3175	47.371	2.4518	30.903	158.24	.14578	.14578
#1	42.641	.00014	.04616	-.00641	34.733	.00232	-.00359	10.083	21.578
#2	42.239	.00017	.04467	-.00319	33.549	.00362	.00020	10.062	21.533
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00068**	**.66703**	**-.00037**	**.00070**	**.00109**	**-.04119**	**.00479**	**.00154**	**.00374**
Stddev	.00072	.00291	.00118	.00030	.00088	.05648	.00073	.00014	.00190
%RSD	106.39	.43677	317.51	42.565	80.841	137.10	15.317	9.1171	50.987
#1	-.00119	.66909	-.00121	.00049	.00047	-.00126	.00531	.00144	.00508
#2	-.00017	.66497	.00046	.00092	.00172	-.08113	.00427	.00164	.00239
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3832.0**	**46607.**	**3220.3**
Stddev	6.6	427.	13.0
%RSD	.17145	.91722	.40249
#1	3836.6	46305.	3211.1
#2	3827.3	46909.	3229.4

Sample Name: 280-116571-D-11-A Acquired: 11/7/2018 22:52:35 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 436577 6010B

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00050**	**.00177**	**-.00001**	**.05891**	**.52638**	**-.00001**	**.00186**	**135.55**	**.00030**
Stddev	.00077	.00074	.00487	.00136	.00067	.00013	.00460	.02	.00012
%RSD	156.14	41.777	76069.	2.3078	.12766	1213.5	247.73	.01220	41.122
#1	-.00005	.00229	-.00345	.05987	.52591	.00008	-.00140	135.56	.00039
#2	.00104	.00124	.00344	.05795	.52686	-.00011	.00511	135.53	.00021
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00021**	**.00269**	**-.00114**	**.00168**	**3.4271**	**.01201**	**39.600**	**.00058**	**.00004**
Stddev	.00008	.00019	.00049	.00125	.0640	.00175	.004	.00010	.00015
%RSD	40.648	7.1406	42.632	74.633	1.8673	14.598	.00974	16.947	354.01
#1	-.00015	.00283	-.00080	.00079	3.4723	.01325	39.603	.00065	-.00007
#2	-.00027	.00256	-.00149	.00257	3.3818	.01077	39.598	.00051	.00015
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.551**	**.00046**	**.04900**	**-.00399**	**33.949**	**.00139**	**-.00433**	**10.027**	**21.459**
Stddev	.508	.00034	.00178	.00150	.681	.00299	.00338	.066	.140
%RSD	1.2214	74.083	3.6351	37.660	2.0048	215.44	78.121	.65416	.65416
#1	41.910	.00070	.05026	-.00292	34.430	.00351	-.00672	9.9810	21.359
#2	41.192	.00022	.04774	-.00505	33.467	-.00073	-.00194	10.074	21.558
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00216**	**.65636**	**.00153**	**.00106**	**-.00125**	**-.04734**	**.00458**	**.00180**	**.00497**
Stddev	.00110	.00080	.00015	.00051	.00384	.04369	.00047	.00019	.00241
%RSD	50.871	.12152	9.5584	48.643	306.61	92.298	10.332	10.362	48.400
#1	-.00294	.65580	.00143	.00142	-.00396	-.01644	.00424	.00167	.00667
#2	-.00138	.65693	.00164	.00069	.00146	-.07824	.00491	.00193	.00327
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3805.0**	**46067.**	**3208.8**
Stddev	3.5	153.	4.2
%RSD	.09189	.33115	.13217
#1	3802.5	46175.	3205.8
#2	3807.4	45959.	3211.8

Sample Name: CCVH-5408055 Acquired: 11/7/2018 22:55:08 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00326**	**49.578**	**-.00397**	**.00007**	**.00117**	**-.00033**	**1.0476**	**.11739**	**.00015**	**.00192**	**.00048**	**-.00099**	**46.286**
Stddev	.00053	.187	.00018	.00039	.00033	.00016	.0308	.14184	.00016	.00001	.00018	.00012	.103
%RSD	16.253	.37805	4.4555	579.90	28.055	47.094	2.9420	120.82	109.62	.26564	37.470	12.064	.22276
#1	-.00364	49.711	-.00409	.00034	.00094	-.00022	1.0694	.01710	.00003	.00191	.00035	-.00108	46.359
#2	-.00289	49.446	-.00384	-.00021	.00140	-.00044	1.0258	.21769	.00026	.00192	.00060	-.00091	46.213
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.24622**	**-.00448**	**-.08248**	**.00249**	**-.00120**	**273.89**	**.00374**	**.00342**	**-.00309**	**5.1794**	**.00652**	**.00455**	**.04432**
Stddev	.08256	.00057	.00256	.00001	.00025	.25	.00044	.00265	.00137	.1316	.00544	.00280	.00173
%RSD	33.531	12.703	3.0986	.52328	21.229	.09073	11.639	77.515	44.422	2.5417	83.435	61.516	3.9030
#1	.30460	-.00408	-.08429	.00248	-.00102	274.06	.00405	.00530	-.00212	5.2725	.01036	.00257	.04555
#2	.18784	-.00488	-.08068	.00250	-.00138	273.71	.00343	.00155	-.00406	5.0863	.00267	.00653	.04310
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09485**	**-.00010**	**.00083**	**4.9485**	**.01689**	**-.00183**	**10.523**	**-.01031**	**-.00023**	**.08115**
Stddev	.00370	.00237	.00059	.0411	.00007	.00531	.047	.00032	.00020	.00386
%RSD	3.9030	2366.4	71.212	.82967	.43174	290.69	.44802	3.0962	87.167	4.7548
#1	.09747	-.00178	.00041	4.9775	.01684	.00193	10.557	-.01053	-.00037	.07842
#2	.09223	.00158	.00125	4.9195	.01695	-.00558	10.490	-.01008	-.00009	.08388
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3782.5**	**45508.**	**3156.4**
Stddev	8.3	349.	33.6
%RSD	.22023	.76678	1.0656
#1	3776.6	45261.	3180.1
#2	3788.4	45755.	3132.6

Sample Name: CCV-5407546 Acquired: 11/7/2018 22:57:39 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50110**	**.52193**	**1.0088**	**.49068**	**.53397**	**.49981**	**.00747**	**4.9448**	**.49139**	**.49868**	**.50034**	**.50771**
Stddev	.00049	.01312	.0262	.00818	.00278	.00122	.00518	.0250	.01005	.00973	.01072	.00131
%RSD	.09713	2.5132	2.5992	1.6664	.51977	.24487	69.359	.50493	2.0452	1.9505	2.1433	.25791
#1	.50076	.53121	1.0273	.49646	.53593	.50067	.01113	4.9272	.49849	.50556	.50792	.50863
#2	.50145	.51266	.99026	.48490	.53200	.49894	.00380	4.9625	.48428	.49181	.49276	.50678
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.1765**	**54.348**	F **1.1141**	**19.776**	**.49130**	**.49746**	F **5.6685**	**.49751**	**.98334**	**1.0027**	**.07109**	**.96930**
Stddev	.0074	.156	.0063	.062	.00119	.01291	.0659	.01009	.02329	.0203	.00170	.02933
%RSD	.33906	.28673	.56247	.31426	.24188	2.5942	1.1635	2.0284	2.3686	2.0192	2.3874	3.0262
#1	2.1713	54.458	1.1186	19.820	.49214	.50659	5.6218	.50465	.99981	1.0170	.07229	.99005
#2	2.1817	54.238	1.1097	19.732	.49046	.48834	5.7151	.49038	.96687	.98837	.06989	.94856
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value	2.5000		1.0000				5.0000					
Range	-10.000%		10.000%				10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0050**	**4.6611**	**9.9747**	**1.0017**	**.52881**	**.01162**	**.48734**	**1.0203**	**-.00084**	**.49687**	**.48253**	**.50024**
Stddev	.0261	.0073	.0155	.0191	.00236	.00035	.00058	.0194	.00277	.00042	.00088	.00872
%RSD	2.6003	.15582	.15582	1.9052	.44639	3.0397	.11951	1.9042	328.74	.08442	.18331	1.7423
#1	1.0235	4.6559	9.9637	1.0152	.53048	.01137	.48775	1.0341	.00112	.49658	.48315	.50640
#2	.98651	4.6662	9.9857	.98818	.52714	.01187	.48693	1.0066	-.00280	.49717	.48190	.49407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3834.0**	**46927.**	**3216.9**
Stddev	24.5	56.	1.8
%RSD	.63993	.11925	.05634
#1	3851.4	46967.	3218.2
#2	3816.7	46888.	3215.6

Sample Name: CCB Acquired: 11/7/2018 23:00:02 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00088**	**.01908**	**-.00040**	**.00034**	**.00083**	**-.00012**	**.00505**	**.00200**	**.00022**	**.00030**	**.00051**	**-.00282**
Stddev	.00096	.02512	.00341	.00128	.00075	.00032	.00079	.00963	.00033	.00043	.00069	.00011
%RSD	109.44	131.68	851.13	375.47	90.778	276.34	15.636	480.53	150.24	144.59	136.23	3.8602
#1	.00020	.03684	.00201	.00124	.00136	.00011	.00449	-.00480	.00045	.00061	.00100	-.00290
#2	.00156	.00131	-.00281	-.00056	.00030	-.00034	.00560	.00881	-.00001	-.00001	.00002	-.00274
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00391**	**.16041**	**-.00096**	**.00298**	**-.00009**	**.00103**	**.20493**	**.00074**	**-.00217**	**-.00235**	F **.10229**	**.00280**
Stddev	.00086	.02398	.00142	.00006	.00005	.00006	.01293	.00037	.00011	.00130	.05607	.00007
%RSD	21.876	14.950	148.13	2.0850	58.678	6.0991	6.3076	49.885	4.9473	55.420	54.817	2.6533
#1	.00331	.14345	-.00196	.00302	-.00005	.00098	.21407	.00100	-.00210	-.00327	.14194	.00274
#2	.00452	.17737	.00005	.00294	-.00012	.00107	.19579	.00048	-.00225	-.00143	.06264	.00285
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
High Limit											.10000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00236**	**-.00190**	**-.00406**	**-.00134**	**-.00000**	**.00387**	**.00042**	**-.00088**	**-.00968**	**.00032**	**.00156**	**.00251**
Stddev	.00252	.03797	.08125	.00007	.00012	.00163	.00080	.00138	.01068	.00072	.00023	.00304
%RSD	106.93	2001.7	2001.7	4.8915	2597.4	42.188	191.70	156.91	110.28	225.68	14.650	121.18
#1	-.00414	.02495	.05339	-.00139	-.00009	.00272	-.00015	-.00185	-.01724	.00082	.00140	.00036
#2	-.00057	-.02874	-.06151	-.00129	.00008	.00503	.00098	.00010	-.00213	-.00019	.00172	.00465
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3883.8**	**47329.**	**3160.3**
Stddev	11.9	527.	32.7
%RSD	.30708	1.1138	1.0344
#1	3875.3	46956.	3183.4
#2	3892.2	47701.	3137.2

Sample Name: CCVL-5415520 Acquired: 11/7/2018 23:02:38 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01146**	**.11199**	**.01523**	**.09987**	**.01170**	**.00094**	**.12171**	**.21414**	**.00500**	**.01070**	**.01009**	**.01394**
Stddev	.00110	.00203	.00208	.00160	.00015	.00030	.00132	.00209	.00010	.00047	.00025	.00035
%RSD	9.5920	1.8122	13.676	1.6019	1.3159	31.522	1.0878	.97717	2.0532	4.3497	2.4753	2.5374
#1	.01224	.11342	.01376	.10100	.01180	.00073	.12077	.21266	.00507	.01103	.01026	.01419
#2	.01068	.11055	.01670	.09874	.01159	.00115	.12265	.21562	.00493	.01037	.00991	.01369
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.08787**	**3.6339**	**.02142**	**.21098**	**.01033**	**.01913**	F **1.3132**	**.04296**	**2.9311**	**.00878**	F **.14468**	**.01946**
Stddev	.00415	.0012	.00897	.00266	.00001	.00073	.0030	.00073	.0626	.00178	.00103	.00269
%RSD	4.7236	.03251	41.869	1.2623	.08621	3.8205	.22909	1.6897	2.1352	20.307	.70943	13.818
#1	.09081	3.6348	.02777	.21286	.01032	.01965	1.3110	.04347	2.9754	.01004	.14396	.02136
#2	.08494	3.6331	.01508	.20910	.01034	.01862	1.3153	.04245	2.8869	.00752	.14541	.01755
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value							1.0000				.10000	
Range							30.000%				30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.02347**	**.45546**	**.97469**	**.10229**	**.01073**	**.01766**	**.01041**	**.01363**	F **.01669**	**.01075**	**.02182**	**.01773**
Stddev	.00138	.03887	.08317	.00270	.00021	.00023	.00013	.00019	.01609	.00019	.00015	.00203
%RSD	5.8772	8.5331	8.5331	2.6378	1.9708	1.3241	1.2197	1.3960	96.421	1.7810	.70862	11.470
#1	.02445	.42798	.91588	.10419	.01088	.01749	.01050	.01377	.02806	.01089	.02193	.01916
#2	.02250	.48295	1.0335	.10038	.01058	.01782	.01032	.01350	.00531	.01061	.02171	.01629
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass
Value									.06000			
Range									-30.000%			

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3961.9**	**48546.**	**3228.1**
Stddev	1.4	175.	23.6
%RSD	.03518	.35971	.73200
#1	3960.9	48423.	3211.4
#2	3962.9	48670.	3244.8

Sample Name: 280-116195-F-5-B Acquired: 11/8/2018 1:20:06 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: 10/31 Custom ID2: Custom ID3:
Comment: 435268 6010B (As)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00227**	k **.05951**	k **.03681**	**.33300**	k **.02124**	k **-.00000**	k **.04702**	W **581.93**	k **.00137**
Stddev	.00003	.00004	.00109	.00106	.00012	.00020	.00051	2.26	.00029
%RSD	1.1165	.07388	2.9611	.31690	.58263	14126.	1.0872	.38915	21.149
#1	k .00225	k .05947	k .03758	.33225	k .02116	k .00014	k .04738	583.53	k .00116
#2	k .00229	k .05954	k .03604	.33375	k .02133	k -.00014	k .04666	580.33	k .00157
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit								500.00	
Low Limit								-.40000	

Elem	Co2286	Cr2055	Cu3247	Fe2714	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	271.441 {124}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **.00835**	k **.00109**	k **-.00066**	k **42.760**	**3.1534**	**.02477**	k **250.71**	k **7.3525**	k **.00123**
Stddev	.00003	.00031	.00033	.567	.1368	.00387	.42	.0690	.00012
%RSD	.34739	28.402	49.248	1.3255	4.3374	15.607	.16600	.93872	9.5946
#1	k .00833	k .00087	k -.00089	k 42.360	3.2501	.02204	k 251.00	k 7.4013	k .00115
#2	k .00837	k .00131	k -.00043	k 43.161	3.0567	.02751	k 250.41	k 7.3037	k .00131
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.490**	k **.01262**	**.06980**	k **-.00291**	kF **605.66**	k **.00538**	k **-.00623**	**9.8805**	**21.144**
Stddev	.547	.00021	.00105	.00032	1.05	.00079	.00814	.0539	.115
%RSD	1.3186	1.6841	1.5083	10.946	.17413	14.782	130.67	.54512	.54512
#1	41.103	k .01247	.07055	k -.00313	k 604.91	k .00594	k -.00047	9.8424	21.063
#2	41.877	k .01277	.06906	k -.00268	k 606.40	k .00481	k -.01199	9.9185	21.226
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k **-.00411**	**1.0438**	k **.03493**	k **.00175**	k **.00072**	k **-.04252**	k **-.00048**	k **.00221**	k **.00549**
Stddev	.00098	.0042	.00214	.00085	.00183	.02203	.00065	.00032	.00274
%RSD	23.825	.40528	6.1194	48.362	255.20	51.802	137.25	14.583	49.892
#1	k -.00481	1.0408	k .03342	k .00115	k .00201	k -.02695	k -.00094	k .00198	k .00355
#2	k -.00342	1.0468	k .03645	k .00235	k -.00058	k -.05810	k -.00001	k .00244	k .00742
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3587.9**	**43843.**	**3206.7**
Stddev	11.3	137.	4.0
%RSD	.31474	.31151	.12442
#1	3595.9	43939.	3203.9
#2	3579.9	43746.	3209.5

Sample Name: 280-116195-F-6-B Acquired: 11/8/2018 1:22:52 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435268 6010B (As)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00129**	**.00155**	**.00805**	**.13072**	**.06899**	**-.00002**	**-.00222**	**154.07**	**.00036**
Stddev	.00042	.00037	.01024	.00109	.00040	.00008	.00127	.12	.00025
%RSD	32.346	23.698	127.23	.83161	.57536	376.38	57.059	.07813	69.960
#1	.00159	.00181	.00081	.13148	.06871	.00004	-.00312	154.16	.00054
#2	.00100	.00129	.01530	.12995	.06927	-.00008	-.00133	153.99	.00018
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00077**	**.00111**	**.00399**	**.17701**	**10.620**	**.01180**	**88.620**	**.13104**	**.00386**
Stddev	.00022	.00031	.00041	.00225	.080	.00176	.142	.00042	.00040
%RSD	28.849	28.392	10.260	1.2737	.75755	14.942	.16002	.32226	10.422
#1	.00093	.00088	.00428	.17861	10.677	.01305	88.720	.13134	.00415
#2	.00062	.00133	.00370	.17542	10.563	.01056	88.520	.13074	.00358
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.644**	**.00454**	**.34724**	**-.00207**	**148.25**	**.00106**	**-.00452**	**6.3152**	**13.514**
Stddev	.072	.00027	.00302	.00047	.48	.00216	.00391	.0472	.101
%RSD	.46132	5.9141	.87103	22.457	.32400	204.41	86.609	.74727	.74727
#1	15.593	.00435	.34511	-.00240	148.59	.00259	-.00728	6.2818	13.443
#2	15.695	.00473	.34938	-.00174	147.91	-.00047	-.00175	6.3485	13.586
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00180**	**.39287**	**-.00014**	**.00128**	**-.00246**	**-.01788**	**.00080**	**.00276**	**.00081**
Stddev	.00183	.00243	.00387	.00012	.00195	.02322	.00044	.00042	.00004
%RSD	101.66	.61927	2675.1	8.9897	79.375	129.90	54.744	15.373	4.5997
#1	-.00050	.39459	-.00288	.00120	-.00108	-.00146	.00049	.00306	.00079
#2	-.00309	.39115	.00259	.00136	-.00383	-.03430	.00112	.00246	.00084
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3731.2**	**45733.**	**3201.6**
Stddev	22.0	98.	13.9
%RSD	.58964	.21445	.43327
#1	3715.7	45664.	3211.5
#2	3746.8	45802.	3191.8

Sample Name: 280-116195-F-7-B Acquired: 11/8/2018 1:25:25 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435268 6010B (As)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00070**	**.03293**	**.00483**	**.16619**	**.01479**	**.00000**	**.00231**	**274.90**	**.00107**
Stddev	.00040	.00057	.00005	.00258	.00053	.00037	.00247	.41	.00000
%RSD	56.891	1.7369	.98058	1.5552	3.6058	19614.	107.07	.14889	.41253
#1	.00042	.03253	.00480	.16801	.01516	-.00026	.00056	275.19	.00107
#2	.00098	.03334	.00487	.16436	.01441	.00026	.00406	274.61	.00108
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00148**	**.00036**	**-.00058**	**.13285**	**4.0995**	**.02950**	**201.36**	**1.4077**	**.00001**
Stddev	.00011	.00030	.00039	.00136	.0221	.00078	.27	.0029	.00060
%RSD	7.3948	82.992	68.502	1.0259	.53780	2.6610	.13582	.20949	4023.9
#1	.00140	.00058	-.00030	.13188	4.0840	.03005	201.55	1.4098	.00044
#2	.00156	.00015	-.00086	.13381	4.1151	.02894	201.16	1.4056	-.00041
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**39.443**	**.00772**	**.00931**	**-.00164**	F **326.98**	**-.00110**	**-.01167**	**7.9848**	**17.087**
Stddev	.165	.00013	.00200	.00081	4.88	.00128	.00482	.0449	.096
%RSD	.41881	1.7049	21.434	49.484	1.4921	116.88	41.305	.56235	.56235
#1	39.560	.00762	.01073	-.00221	330.43	-.00019	-.00826	8.0166	17.155
#2	39.326	.00781	.00790	-.00107	323.53	-.00201	-.01508	7.9531	17.020
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00172**	**.76218**	**-.00185**	**.00175**	**.00008**	**-.10141**	**-.00068**	**.00121**	**.00124**
Stddev	.00142	.00046	.00173	.00033	.00255	.01459	.00050	.00062	.00184
%RSD	82.874	.06056	93.229	18.807	3092.7	14.386	72.579	51.083	148.31
#1	-.00071	.76251	-.00308	.00199	-.00172	-.11172	-.00103	.00078	-.00006
#2	-.00272	.76186	-.00063	.00152	.00188	-.09109	-.00033	.00165	.00254
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3612.2**	**44418.**	**3124.7**
Stddev	1.3	153.	2.9
%RSD	.03520	.34488	.09430
#1	3613.1	44526.	3126.8
#2	3611.3	44310.	3122.6

Sample Name: 280-116195-F-8-B Acquired: 11/8/2018 1:27:58 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435268 6010B (As)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00098**	**-.00132**	**.00537**	**.34276**	**.02555**	**-.00003**	**.00060**	**247.93**	**.00070**
Stddev	.00013	.00017	.00557	.00511	.00016	.00003	.00183	5.42	.00008
%RSD	13.525	13.042	103.69	1.4908	.61486	108.42	303.66	2.1880	12.147
#1	.00089	-.00120	.00143	.34638	.02566	-.00001	.00190	251.76	.00076
#2	.00108	-.00144	.00930	.33915	.02544	-.00005	-.00069	244.09	.00064
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00391**	**.00019**	**-.00080**	**1.0913**	**3.5974**	**.01792**	**133.60**	**4.3518**	**-.00001**
Stddev	.00018	.00024	.00015	.0153	.1297	.00148	.12	.0039	.00072
%RSD	4.6470	124.31	18.380	1.4044	3.6050	8.2437	.08608	.08837	10376.
#1	.00404	.00036	-.00091	1.1021	3.6891	.01897	133.68	4.3545	-.00051
#2	.00379	.00002	-.00070	1.0804	3.5057	.01688	133.52	4.3490	.00050
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**41.433**	**.00674**	**.02594**	**-.00413**	W **183.85**	**.00152**	**-.00194**	**7.6943**	**16.466**
Stddev	.463	.00006	.00340	.00126	3.47	.00009	.00423	.1520	.325
%RSD	1.1182	.93673	13.095	30.425	1.8866	6.0905	218.39	1.9750	1.9750
#1	41.760	.00678	.02834	-.00325	186.31	.00159	.00105	7.8017	16.696
#2	41.105	.00669	.02354	-.00502	181.40	.00146	-.00493	7.5868	16.236
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					180.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00311**	**.86999**	**-.00284**	**.00089**	**.00016**	**-.04062**	**.00003**	**.00134**	**.00497**
Stddev	.00123	.02050	.00154	.00012	.00109	.05312	.00030	.00108	.00532
%RSD	39.560	2.3558	54.112	13.143	668.60	130.77	1148.4	80.445	107.11
#1	-.00224	.88449	-.00175	.00080	-.00061	-.00306	-.00019	.00058	.00120
#2	-.00397	.85550	-.00392	.00097	.00093	-.07818	.00024	.00210	.00873
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3659.7**	**45118.**	**3111.8**
Stddev	14.3	11.	73.8
%RSD	.39154	.02527	2.3704
#1	3669.8	45126.	3059.6
#2	3649.6	45110.	3163.9

Sample Name: 280-116195-F-9-B Acquired: 11/8/2018 1:30:31 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435268 6010B (As)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00081**	**-.00694**	**.03071**	**.43845**	**.02342**	**-.00009**	**.00963**	**461.14**	**.00067**
Stddev	.00053	.00010	.00349	.00986	.00031	.00019	.00519	.05	.00003
%RSD	65.630	1.3995	11.382	2.2486	1.3355	198.58	53.922	.01101	4.1717
#1	.00043	-.00687	.03318	.44542	.02320	.00004	.00596	461.17	.00069
#2	.00118	-.00701	.02823	.43147	.02364	-.00022	.01330	461.10	.00065
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01806**	**.00040**	**-.00115**	**11.339**	**3.1096**	**.02954**	**192.34**	**5.3976**	**.00202**
Stddev	.00036	.00008	.00046	.015	.0497	.00172	.38	.0061	.00017
%RSD	1.9691	20.768	39.572	.13032	1.5995	5.8230	.19725	.11249	8.4814
#1	.01831	.00046	-.00083	11.350	3.0744	.03075	192.61	5.4019	.00214
#2	.01781	.00034	-.00147	11.329	3.1448	.02832	192.07	5.3933	.00190
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**54.607**	**.01886**	**.19965**	**-.00387**	F **452.76**	**.00556**	**-.00802**	**7.5464**	**16.149**
Stddev	.650	.00070	.00630	.00146	10.86	.00092	.00356	.0383	.082
%RSD	1.1906	3.7242	3.1537	37.857	2.3977	16.492	44.357	.50778	.50778
#1	55.067	.01936	.20411	-.00491	460.43	.00621	-.00550	7.5193	16.091
#2	54.147	.01836	.19520	-.00283	445.08	.00491	-.01054	7.5735	16.207
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00069**	**1.0873**	**.00374**	**.00062**	**-.00143**	**-.09945**	**.00056**	**.02883**	**.00325**
Stddev	.00148	.0011	.00718	.00029	.00121	.15844	.00049	.00003	.00140
%RSD	214.38	.10501	192.25	45.931	84.307	159.33	86.336	.08820	43.062
#1	-.00174	1.0865	-.00134	.00082	-.00228	.01259	.00022	.02882	.00226
#2	.00036	1.0881	.00881	.00042	-.00058	-.21148	.00091	.02885	.00424
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3610.3**	**44176.**	**3117.8**
Stddev	1.7	114.	11.2
%RSD	.04742	.25750	.35784
#1	3611.5	44257.	3109.9
#2	3609.1	44096.	3125.7

Sample Name: I0-116195-F-10-B Acquired: 11/8/2018 1:33:03 Type: Unk
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment: 435268 6010B (As)

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288
Line	328.068 {103}	167.079 {502}	189.042 {478}	208.959 {461}	455.403 { 74}	313.042 {108}	223.061 {451}	317.933 {106}	228.802 {447}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00076**	**.01067**	**.01262**	**.61432**	**.01821**	**.00009**	**.01304**	**451.03**	**.00053**
Stddev	.00072	.00003	.00320	.01155	.00017	.00009	.00039	.95	.00026
%RSD	94.649	.32467	25.358	1.8801	.90891	93.486	3.0132	.21060	48.148
#1	.00025	.01064	.01035	.62248	.01809	.00015	.01276	450.36	.00035
#2	.00127	.01069	.01488	.60615	.01833	.00003	.01331	451.70	.00072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Co2286	Cr2055	Cu3247	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020
Line	228.616 {447}	205.560 {464}	324.754 {104}	259.940 {130}	766.490 { 44}	670.784 { 50}	279.079 {121}2	257.610 {131}	202.030 {467}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01205**	**.00026**	**-.00145**	**10.926**	**6.1052**	**.05112**	**194.73**	**3.1017**	**.00015**
Stddev	.00008	.00045	.00006	.033	.0611	.00209	.05	.0002	.00066
%RSD	.63423	170.51	4.3829	.30571	1.0009	4.0892	.02530	.00611	432.75
#1	.01211	-.00005	-.00150	10.903	6.1485	.05259	194.69	3.1019	.00062
#2	.01200	.00058	-.00141	10.950	6.0620	.04964	194.76	3.1016	-.00031
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881	SiO2
Line	818.326 { 41}	231.604 {446}	178.284 {489}	220.353 {453}	182.034 {485}	206.833 {463}	196.090 {472}	288.158 {117}	288.158 {117}2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**61.785**	**.01096**	**.04341**	**-.00350**	F **455.12**	**.00487**	**-.00442**	**7.7641**	**16.615**
Stddev	1.321	.00016	.00045	.00224	8.85	.00032	.00251	.0799	.171
%RSD	2.1384	1.4410	1.0459	63.939	1.9439	6.5557	56.690	1.0288	1.0288
#1	60.851	.01107	.04309	-.00192	461.38	.00509	-.00619	7.7076	16.494
#2	62.719	.01084	.04373	-.00509	448.87	.00464	-.00265	7.8206	16.736
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit					200.00				
Low Limit					-.20000				

Elem	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Line	189.989 {477}	407.771 { 83}	283.730 {119}	334.904 {101}	190.856 {477}	370.152 { 91}	292.402 {115}	206.200 {163}	339.198 { 99}
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00359**	**1.1624**	**.00000**	**.00134**	**-.00094**	**-.04714**	**-.00009**	**.00410**	**.00466**
Stddev	.00000	.0041	.00424	.00016	.00253	.03499	.00088	.00012	.00083
%RSD	.03266	.35111	229890.	11.934	269.83	74.220	968.33	2.8827	17.846
#1	-.00359	1.1595	-.00299	.00145	-.00272	-.02240	-.00071	.00419	.00525
#2	-.00359	1.1653	.00300	.00122	.00085	-.07188	.00053	.00402	.00407
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Int. Std.	Y_2243	Y_3600	Y_3774
Line	224.306 {450}	360.073 { 94}	377.433 { 89}
Units	Cts/S	Cts/S	Cts/S
Avg	**3508.1**	**43493.**	**3089.0**
Stddev	5.8	208.	6.0
%RSD	.16426	.47802	.19363
#1	3512.1	43640.	3084.8
#2	3504.0	43346.	3093.2

Sample Name: CCVH-5408055 Acquired: 11/8/2018 1:35:35 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al3092	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00345**	**48.998**	**-.00826**	**.00083**	**.00089**	**-.00011**	**1.0452**	**.09184**	**.00004**	**.00157**	**.00053**	**-.00015**	**45.389**
Stddev	.00029	.287	.00180	.00027	.00023	.00005	.0140	.06643	.00003	.00038	.00019	.00086	.080
%RSD	8.4490	.58658	21.796	33.175	25.561	46.605	1.3398	72.337	89.745	24.209	35.783	580.80	.17570
#1	-.00366	49.201	-.00954	.00063	.00105	-.00015	1.0551	.13881	.00001	.00184	.00040	-.00076	45.445
#2	-.00324	48.795	-.00699	.00102	.00073	-.00007	1.0353	.04486	.00006	.00130	.00067	.00046	45.333
Check ?	None	Chk Pass	None	None	None	None	Chk Pass	None	None	None	None	None	Chk Pass
Value													
Range													

Elem	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na8183	Ni2316	P_1782	Pb2203	S_1820	Sb2068	Se1960	Si2881
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.11422**	**-.00202**	**-.07436**	**.00276**	**-.00093**	**272.45**	**.00357**	**-.00144**	**-.00180**	**5.2937**	**.00507**	**.00487**	**-.02548**
Stddev	.01671	.00577	.01380	.00006	.00035	1.93	.00043	.00114	.00118	.1163	.00083	.00537	.00070
%RSD	14.633	285.13	18.555	2.1264	37.365	.70875	12.169	79.387	65.692	2.1961	16.470	110.13	2.7434
#1	.12604	.00206	-.06460	.00280	-.00118	273.82	.00388	-.00063	-.00097	5.3759	.00448	.00867	-.02498
#2	.10240	-.00610	-.08411	.00271	-.00069	271.09	.00326	-.00225	-.00264	5.2115	.00566	.00108	-.02597
Check ?	None	None	None	None	None	Chk Pass	None	None	None	Chk Pass	None	None	None
Value													
Range													

Elem	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.05452**	**-.00063**	**.00053**	**4.9133**	**.01682**	**-.00103**	**10.415**	**-.00982**	**.00041**	**.07877**
Stddev	.00150	.00070	.00027	.0051	.00008	.00099	.112	.00014	.00016	.00135
%RSD	2.7434	111.72	50.923	.10320	.46456	95.327	1.0737	1.3963	37.797	1.7097
#1	-.05346	-.00113	.00073	4.9097	.01687	-.00173	10.494	-.00991	.00030	.07781
#2	-.05558	-.00013	.00034	4.9169	.01676	-.00034	10.336	-.00972	.00053	.07972
Check ?	None	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value										
Range										

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3793.5**	**45815.**	**3176.7**
Stddev	3.0	77.	7.8
%RSD	.07851	.16773	.24693
#1	3791.4	45869.	3171.1
#2	3795.6	45760.	3182.2

Sample Name: CCV-5407546 Acquired: 11/8/2018 1:38:06 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.50440**	**.54201**	**1.0246**	**.50058**	**.53499**	**.49791**	**.00112**	**4.9046**	**.50043**	**.50565**	**.50739**	**.51268**
Stddev	.00164	.02625	.0154	.00603	.00143	.00197	.00321	.0187	.00625	.00544	.00527	.00003
%RSD	.32550	4.8438	1.4990	1.2041	.26729	.39655	286.05	.38136	1.2498	1.0766	1.0384	.00604
#1	.50557	.56057	1.0355	.50485	.53600	.49930	.00340	4.9178	.50485	.50949	.51111	.51265
#2	.50324	.52344	1.0138	.49632	.53398	.49651	-.00115	4.8913	.49600	.50180	.50366	.51270
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **2.1676**	**54.925**	F **1.1275**	**19.896**	**.49421**	**.50352**	F **5.5048**	**.50356**	**.99831**	**1.0169**	**.21363**	**.99215**
Stddev	.0133	.138	.0051	.013	.00025	.00750	.0230	.00661	.00815	.0125	.12962	.01498
%RSD	.61498	.25131	.44933	.06441	.05096	1.4895	.41727	1.3125	.81634	1.2273	60.674	1.5103
#1	2.1771	55.022	1.1311	19.906	.49438	.50883	5.5211	.50824	1.0041	1.0258	.30528	1.0027
#2	2.1582	54.827	1.1239	19.887	.49403	.49822	5.4886	.49889	.99255	1.0081	.12198	.98156
Check ?	Chk Fail	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass
Value	2.5000		1.0000				5.0000					
Range	-10.000%		10.000%				10.000%					

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.0173**	**4.6369**	**9.9230**	**1.0134**	**.53086**	**.00952**	**.49071**	**1.0345**	**.00555**	**.49860**	**.48325**	**.50073**
Stddev	.0180	.0752	.1610	.0139	.00216	.00515	.00146	.0075	.03830	.00130	.00033	.00408
%RSD	1.7696	1.6221	1.6221	1.3757	.40774	54.096	.29709	.72918	690.08	.26102	.06761	.81438
#1	1.0300	4.5837	9.8092	1.0233	.53239	.00588	.49174	1.0398	-.02153	.49952	.48302	.49785
#2	1.0046	4.6901	10.037	1.0036	.52933	.01316	.48968	1.0291	.03264	.49768	.48348	.50362
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3849.5**	**46678.**	**3174.7**
Stddev	3.5	138.	11.0
%RSD	.09103	.29531	.34503
#1	3852.0	46580.	3167.0
#2	3847.0	46775.	3182.5

Sample Name: CCB Acquired: 11/8/2018 1:40:29 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00063**	**-.00009**	**.00183**	**.00017**	**.00088**	**.00004**	**.00401**	**.00743**	**-.00005**	**-.00002**	**.00010**	**-.00266**
Stddev	.00030	.00019	.01047	.00087	.00067	.00031	.00297	.00802	.00035	.00015	.00022	.00012
%RSD	48.041	201.15	570.81	514.72	75.559	809.29	74.160	107.97	781.16	808.58	212.94	4.3806
#1	.00085	.00004	.00924	.00078	.00136	-.00018	.00611	.01311	-.00029	.00009	.00025	-.00274
#2	.00042	-.00022	-.00557	-.00045	.00041	.00026	.00191	.00176	.00020	-.00012	-.00005	-.00258
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.00901**	**.02277**	**.00196**	**.00103**	**.00001**	**.00049**	**.05516**	**.00015**	**-.00049**	**-.00152**	W **.09067**	**.00180**
Stddev	.00357	.04414	.00207	.00153	.00010	.00018	.00856	.00007	.00492	.00016	.00829	.00436
%RSD	39.666	193.87	105.35	148.65	1650.4	37.361	15.515	47.977	996.63	10.493	9.1475	242.69
#1	.01153	.05398	.00342	.00211	.00007	.00036	.06121	.00010	.00298	-.00164	.09653	.00488
#2	.00648	-.00844	.00050	-.00005	-.00006	.00062	.04911	.00020	-.00397	-.00141	.08481	-.00129
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Warn	Chk Pass
High Limit											.05000	
Low Limit											-.20000	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.00048**	**-.03524**	**-.07541**	**-.00149**	**-.00018**	**.00109**	**.00067**	**-.00200**	**-.04252**	**.00044**	**-.00027**	**.00367**
Stddev	.00275	.00064	.00138	.00265	.00023	.00171	.00011	.00179	.06230	.00041	.00130	.00209
%RSD	569.50	1.8251	1.8251	178.51	130.70	157.04	15.983	89.231	146.53	93.593	479.53	56.942
#1	.00146	-.03569	-.07638	-.00336	-.00001	-.00012	.00059	-.00327	.00154	.00015	.00065	.00515
#2	-.00243	-.03478	-.07443	.00039	-.00034	.00230	.00074	-.00074	-.08657	.00074	-.00119	.00219
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit												
Low Limit												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3846.3**	**47279.**	**3126.1**
Stddev	23.3	75.	.4
%RSD	.60505	.15764	.01308
#1	3862.7	47331.	3126.3
#2	3829.8	47226.	3125.8

Sample Name: CCVL-5415520 Acquired: 11/8/2018 1:43:06 Type: QC
Method: 6500_025 Mode: CONC Corr. Factor: 1.000000
User: admin Prep Date: Custom ID2: Custom ID3:
Comment:

Elem	Ag3280	Al1670	As1890	B_2089	Ba4554	Be3130	Bi2230	Ca3179	Cd2288	Co2286	Cr2055	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01244**	**.11282**	**.01820**	**.09978**	**.01174**	**.00091**	**.11997**	**.23937**	**.00490**	**.01047**	**.01079**	**.01483**
Stddev	.00045	.00324	.00103	.00217	.00027	.00009	.00456	.00953	.00011	.00012	.00034	.00013
%RSD	3.6249	2.8704	5.6400	2.1769	2.2749	9.9045	3.7987	3.9798	2.2301	1.1707	3.1559	.84497
#1	.01276	.11511	.01748	.10131	.01193	.00097	.11675	.23263	.00497	.01056	.01103	.01492
#2	.01212	.11053	.01893	.09824	.01155	.00085	.12319	.24610	.00482	.01039	.01055	.01474
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

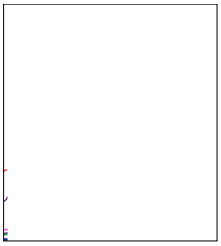
Elem	Fe2599	K_7664	Li6707	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	P_1782	Pb2203	S_1820	Sb2068
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.09046**	**3.5356**	**.02040**	**.21898**	**.01049**	**.02007**	**1.1863**	**.04225**	**2.9521**	**.00802**	F **.17081**	**.02268**
Stddev	.00160	.1022	.00417	.00748	.00007	.00089	.0181	.00077	.0570	.00119	.00010	.00277
%RSD	1.7665	2.8914	20.434	3.4148	.65842	4.4274	1.5253	1.8249	1.9312	14.804	.05765	12.198
#1	.09159	3.6079	.02335	.22427	.01054	.02070	1.1991	.04279	2.9924	.00886	.17088	.02463
#2	.08933	3.4633	.01745	.21370	.01044	.01944	1.1735	.04170	2.9118	.00718	.17074	.02072
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass
Value											.10000	
Range											30.000%	

Elem	Se1960	Si2881	SiO2	Sn1899	Sr4077	Th2837	Ti3349	Tl1908	U_3701	V_2924	Zn2062	Zr3391
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.01813**	**.46682**	**.99899**	**.10124**	**.01121**	**.01376**	**.01011**	**.01530**	**.06883**	**.01117**	**.02103**	**.01917**
Stddev	.00755	.03337	.07142	.00346	.00010	.00481	.00016	.00314	.01481	.00033	.00040	.00112
%RSD	41.637	7.1489	7.1489	3.4159	.90938	34.940	1.5856	20.509	21.523	2.9862	1.8811	5.8372
#1	.02347	.44322	.94849	.10369	.01114	.01036	.01023	.01752	.07931	.01093	.02131	.01838
#2	.01279	.49042	1.0495	.09880	.01129	.01716	.01000	.01308	.05835	.01140	.02075	.01997
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value												
Range												

Int. Std.	Y_2243	Y_3600	Y_3774
Units	Cts/S	Cts/S	Cts/S
Avg	**3898.7**	**47629.**	**3137.1**
Stddev	5.6	265.	20.1
%RSD	.14267	.55698	.64196
#1	3894.7	47817.	3122.9
#2	3902.6	47442.	3151.3

Current Signal

[No Gas]



Mass	Range	Count	Avg. Count	RSD [%]
7	50000	14903	14815.1	1.45
9	1000000	25672	25339.1	1.58
59	500000	14928	14674.3	1.76
66	500000	2240	2154.8	3.31
70	200000	634	635.4	3.79
75	500000	1368	1374.4	4.06
89	500000	21379	21797.6	1.89
105	500000	282	280.8	5.97
118	500000	473	489.1	4.06
137	100000	2762	2731.2	2.95
140	500	24239	23844.1	1.98
205	1000000	21560	21519.4	0.55
6	1000000	3380	3355.9	1.84
70/140	1000	2.616 %	2.665 %	2.84
156/140	10	1.832 %	1.724 %	4.31

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.00
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-65	V	Cell Entrance	-32	V	Deflect	15.4	V
Extract 2	-130.0	V	Omega Lens	7.1	V	Cell Exit	-60	V	Plate Bias	-50	V

Cell Parameters

Use Gas	false		H2 Flow	0.0	mL/min	OctP Bias	-8.0	V	Energy Discrimination		3.0
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	190	V			

Qpole Parameters

Mass Gain	129		Axis Gain	0.9999		QP Bias	-5.0	V			
Mass Offset	124		Axis Offset	-0.02							

Torch Axis Parameters

Torch H	-1.0	mm	Torch V	-0.2	mm						

EM Parameters

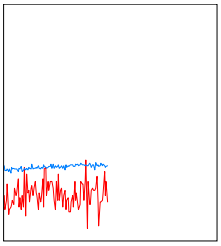
Discriminator	4.5	mV	Analog HV	1921	V	Pulse HV	1064	V			

Meters

IF/BK Press	2.20E+2	Pa	Carrier Gas(BP)	3.72E+2	kPa	Reflected Power	8	W			
Analyzer Press	1.49E-4	Pa	Carrier Gas	0.90	L/min						

Current Signal

[HMI He]



Mass	Range	Count	Avg. Count	RSD [%]
7	100	16	19.3	27.99
51	500	208	176.4	10.04
59	5000	2469	2442.7	4.84
66	200	292	263.4	7.44
70	200	70	79.2	14.48
75	20	6	6.9	42.75
78	20	0	0.1	384.81
115	5000	2286	2028.3	6.17
118	50	59	67.1	13.76
137	500	302	318.1	9.06
140	10000	6374	6157.7	4.77
205	20000	9110	9235.3	3.24
238	50000	15748	15533.2	2.92
70/140	2	1.098 %	1.288 %	14.26
156/140	1	0.314 %	0.235 %	28.54

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas	0.23	
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	℃	Plasma Gas	15.0	
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas	0.9	

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-75	V	Cell Entrance	-36	V	Deflect	1.2	V
Extract 2	-140.0	V	Omega Lens	7.5	V	Cell Exit	-64	V	Plate Bias	-60	V

Cell Parameters

Use Gas	true		H2 Flow	0.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0
He Flow	5.0	mL/min	3rd Gas Flow	0	%	OctP RF	190	V		

Qpole Parameters

Mass Gain	129		Axis Gain	0.9999		QP Bias	-15.0	V			
Mass Offset	124		Axis Offset	-0.02							

Torch Axis Parameters

Torch H	-1.0	mm	Torch V	-0.2	mm						

EM Parameters

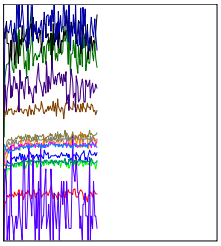
Discriminator	4.5	mV	Analog HV	1921	V	Pulse HV	1064	V			

Meters

IF/BK Press	2.20E+2	Pa	Carrier Gas(BP)	2.50E+2	kPa	Reflected Power	7	W			
Analyzer Press	2.76E-4	Pa	Carrier Gas	0.67	L/min						

Current Signal

[HMI H2]



Mass	Range	Count	Avg. Count	RSD [%]
7	2000	395	386.3	9.59
9	5000	1659	1601.6	7.33
59	10000	3713	3524.4	6.73
63	2000	848	818.2	7.92
70	500	367	397.3	8.64
78	20	1	2.9	80.56
89	50000	20908	20058.7	3.30
115	50000	21323	21204.0	3.05
118	500	479	432.6	5.64
137	5000	2756	2783.3	3.04
140	50000	22765	21878.6	3.57
205	50000	16830	16527.9	2.30
238	50000	19638	19911.8	2.26
70/140	2	1.612 %	1.815 %	7.82
156/140	2	1.292 %	1.307 %	7.32

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.14
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-65	V	Cell Entrance	-40	V	Deflect	1.8	V
Extract 2	-140.0	V	Omega Lens	7.7	V	Cell Exit	-58	V	Plate Bias	-60	V

Cell Parameters

Use Gas	true		H2 Flow	4.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	190	V		

Qpole Parameters

Mass Gain	129		Axis Gain	0.9999		QP Bias	-15.0	V			
Mass Offset	124		Axis Offset	-0.02							

Torch Axis Parameters

Torch H	-1.0	mm	Torch V	-0.2	mm						

EM Parameters

Discriminator	4.5	mV	Analog HV	1921	V	Pulse HV	1064	V			

Meters

IF/BK Press	2.27E+2	Pa	Carrier Gas(BP)	2.98E+2	kPa	Reflected Power	8	W			
Analyzer Press	6.96E-4	Pa	Carrier Gas	0.75	L/min						

US EPA Tune Check Sample Report

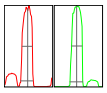
Batch Folder D:\MassHunter Data\li111318.b
Report Comment
Instrument Name G3281A JP09320047

[HMI H2]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	2426	1.21	5.00	
9	10308	0.97	5.00	

Mas	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	2460	2387	2445	2410	2441
9	10416	10314	10143	10321	10343

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	391	7.00	6.9 - 7.1		0.776	0.750	[F]
9	1605	8.95	8.9 - 9.1		0.795	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 60.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.14	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.7	V	Deflect	1.8	V
Extract 2	-140.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-65	V	Cell Exit	-58	V			

 # # Cell Parameters # #

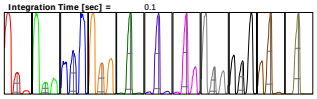
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	4.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[HMI He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
24	6395	1.17	5.00	
25	892	3.12	5.00	
26	1133	1.02	5.00	
59	15086	1.44	5.00	
103	38613	0.67	5.00	
115	12369	2.13	5.00	
205	46165	1.11	5.00	
206	15284	1.11	5.00	
207	13437	1.56	5.00	
208	31640	2.02	5.00	
238	80135	1.02	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
24	6341	6364	6321	6463	6486
25	890	852	929	903	886
26	1139	1147	1117	1137	1127
59	14789	14992	15052	15316	15283
103	38300	38430	38713	38655	38968
115	12002	12186	12578	12470	12608
205	45392	45950	46303	46497	46686
206	15150	15094	15486	15264	15424
207	13225	13270	13423	13521	13745
208	30706	31419	31661	32017	32396
238	78960	79813	80295	80426	81184

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
24	1022	23.950	23.9 - 24.1		0.783	0.750	[F]
25	142	24.950	24.9 - 25.1		0.785	0.750	[F]
26	189	25.950	25.9 - 26.1		0.771	0.750	[F]
59	2634	59.000	58.9 - 59.1		0.732	0.750	
103	7409	103.050	102.9 - 103.1		0.714	0.750	
115	2351	115.050	114.9 - 115.1		0.702	0.750	
205	9286	205.000	204.9 - 205.1		0.704	0.750	
206	3063	206.000	205.9 - 206.1		0.701	0.750	
207	2589	207.000	206.9 - 207.1		0.699	0.750	
208	6455	208.000	207.9 - 208.1		0.703	0.750	
238	15709	237.950	237.9 - 238.1		0.697	0.750	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 283 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.5	V	Deflect	1.2	V
Extract 2	-140.0	V	Cell Entrance	-36	V	Plate Bias	-60	V
Omega Bias	-75	V	Cell Exit	-64	V			

 # # Cell Parameters # #

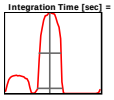
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	5.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	0.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	88760	4.85	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	96244	88581	86802	85891	86281

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
7	14299	6.950	6.9 - 7.1		0.778	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 36.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.00	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.1	V	Deflect	15.4	V
Extract 2	-130.0	V	Cell Entrance	-32	V	Plate Bias	-50	V
Omega Bias	-65	V	Cell Exit	-60	V			

 # # Cell Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-8.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	0.0	mL/min			
Use Gas	false		3rd Gas Flow	0	%			

	Mass	Element Name	Current Value
	9		0.103962186983054
	23		0.112513196865611
	24		0.116459890138477
	27		0.120365196887005
	39		0.121677555445533
	45		0.122529757141761
	51		0.12915347042873
	55		0.130266882275223
	56		0.122581316146514
	59		0.133429571135787
	60		Signal too low
	63		0.134274081710326
	66		Signal too low
	72		Signal too low
	75		Signal too low
	77		Signal too low
	82		Signal too low
	95		0.132128961067334
	100		0.136270568337033
	101		0.135680299918171
	102		0.138977353202637
	104		0.139282220165467
	105		0.139512714863625
	106		0.141425587395661
	111		0.141718918105697
	114		0.144661955928334

	Mass	Element Name	Current Value
	115		0.144831050357484
	118		0.141633235018473
	121		0.142016602628633
	137		Signal too low
	175		0.151780443292718
	193		0.150155411033534
	208		0.154821750351394
	209		0.152651466836735
	232		0.164025559000869
	238		0.164610492579452

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	001WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T11:43:01-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	002WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T11:46:49-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	003WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T11:50:37-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	004WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T11:54:23-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	005WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T11:58:12-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	006WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:02:02-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name	icis-5425622
Data File Name	007CALB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:05:51-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	127169	0.00
Li	7	2	HMI He	6368	0.02
Li	7	3	No Gas	4107817	0.00
Be	9	1	HMI H2	10	1000.00
B	11	1	HMI H2	340	7.69
Na	23	1	HMI H2	247220	0.00
Na	23	2	HMI He	18369	0.01
Mg	24	2	HMI He	1223	0.21
Al	27	2	HMI He	467	3.90
K	39	2	HMI He	15546	0.04
Ca	44	2	HMI He	100	17.32
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	2114	0.30
Cr	52	2	HMI He	203	11.43
Mn	55	2	HMI He	33	51.96
Fe	57	2	HMI He	333	8.17
Co	59	2	HMI He	27	292.73
Ni	60	2	HMI He	143	23.00
Cu	63	2	HMI He	1490	0.47
Zn	66	2	HMI He	300	6.94
As	75	2	HMI He	31	86.51
Se	78	1	HMI H2	13	723.27
Sr	88	2	HMI He	23	742.31
Zr	90	2	HMI He	67	51.96
Nb	93	2	HMI He	947	1.14
Mo	95	2	HMI He	233	13.29
Pd	105	2	HMI He	33	274.95
Ag	107	2	HMI He	120	6.94
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	93	46.40
Sb	121	2	HMI He	40	62.50
Ba	137	2	HMI He	27	214.81
W	182	2	HMI He	1070	0.44
Pt	195	2	HMI He	50	222.70
Tl	205	2	HMI He	193	9.39
Pb	208	2	HMI He	1660	0.48
Th	232	2	HMI He	460	2.50
U	238	2	HMI He	173	5.08

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	799603	1.34
Sc (IS)	45	1	HMI H2	27250068	1.13
Sc (IS)	45	2	HMI He	961093	0.81
Sc (IS)	45	3	No Gas	44977381	0.82
Ge Internal Standard	72	1	HMI H2	10711203	0.47
Ge Internal Standard	72	2	HMI He	1070512	0.62
In Internal Standard	115	2	HMI He	3347290	1.85
Ho-165	165	2	HMI He	16750041	0.38

Calibration Standard Report

Sample Table

Sample Name	ic-5425623
Data File Name	008CALS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:09:45-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	444482	0.00
Li	7	2	HMI He	22294	0.01
Li	7	3	No Gas	14128118	0.00
Be	9	1	HMI H2	36502	0.01
B	11	1	HMI H2	39907	0.00
Na	23	1	HMI H2	33297038	0.00
Na	23	2	HMI He	2322152	0.00
Mg	24	2	HMI He	1064179	0.00
Al	27	2	HMI He	277794	0.00
K	39	1	HMI H2	41169684	0.00
K	39	2	HMI He	536087	0.00
Ca	40	1	HMI H2	48458751	0.00
Ca	44	2	HMI He	28399	0.01
Ti	47	2	HMI He	2444	0.17
V	51	2	HMI He	104150	0.00
Cr	52	2	HMI He	133028	0.00
Mn	55	2	HMI He	50890	0.00
Fe	57	2	HMI He	249409	0.00
Co	59	2	HMI He	230700	0.00
Ni	60	2	HMI He	64849	0.00
Cu	63	2	HMI He	184822	0.00
Zn	66	2	HMI He	26806	0.00
As	75	2	HMI He	16345	0.01
Se	78	1	HMI H2	25659	0.01
Sr	88	2	HMI He	53773	0.00
Zr	90	2	HMI He	2257	0.13
Nb	93	2	HMI He	603915	0.00
Mo	95	2	HMI He	84522	0.00
Pd	105	2	HMI He	136345	0.00
Ag	107	2	HMI He	288164	0.00
Cd	111	2	HMI He	37919	0.00
Sn	120	2	HMI He	100017	0.00
Sb	121	2	HMI He	87136	0.00
Ba	137	2	HMI He	29439	0.01
Nd	146	2	HMI He	112755	0.00
Sm	147	2	HMI He	96321	0.00
Sm	150	2	HMI He	93305	0.00
Gd	156	1	HMI H2	512833	0.00
Gd	157	1	HMI H2	390574	0.00
W	182	2	HMI He	427073	0.00
Pt	195	2	HMI He	358689	0.00
Tl	205	2	HMI He	790480	0.00
Pb	208	2	HMI He	1050366	0.00
Th	232	2	HMI He	1250247	0.00
U	238	2	HMI He	1359810	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	784506	4.00	799603	98.11	60	120	
Sc (IS)	45	1	HMI H2	26670535	0.29	27250068	97.87	60	120	
Sc (IS)	45	2	HMI He	954848	0.30	961093	99.35	60	120	
Sc (IS)	45	3	No Gas	43314644	0.14	44977381	96.30	60	120	
Ge Internal Standard	72	1	HMI H2	10451173	0.92	10711203	97.57	60	120	
Ge Internal Standard	72	2	HMI He	1061326	1.07	1070512	99.14	60	120	
In Internal Standard	115	2	HMI He	3316963	2.55	3347290	99.09	60	120	
Ho-165	165	2	HMI He	16656105	0.90	16750041	99.44	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-5425625
Data File Name	009_ICV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:17:42-07:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	452.278	ppb	1.851	276345	400	113.1	90	110	>+\-10%
Li	7	2	45	440.893	ppb	9.830	13950	400	110.2	90	110	>+\-10%
Li	7	3	45	459.880	ppb	2.630	8640108	400	115.0	90	110	>+\-10%
Be	9	1	6	37.571	ppb	5.558	14297	40	93.9	90	110	
B	11	1	6	36.167	ppb	6.308	15248	40	90.4	90	110	
Na	23	1	45	3996.278	ppb	0.614	13808805	4000	99.9	90	110	>+\-10%
Na	23	2	45	3981.211	ppb	7.517	975494	4000	99.5	90	110	
Mg	24	2	45	3948.005	ppb	9.750	438484	4000	98.7	90	110	
Al	27	2	45	8002.053	ppb	10.544	231621	4000	200.1	90	110	>+\-10%
K	39	1	45	3826.282	ppb	0.585	22975180	4000	95.7	90	110	
K	39	2	45	4042.255	ppb	6.847	235650	4000	101.1	90	110	
Ca	40	1	45	4025.678	ppb	0.212	20135146	4000	100.6	90	110	
Ca	44	2	45	4169.957	ppb	9.102	12403	4000	104.2	90	110	
Ti	47	2	45	40.763	ppb	7.811	1040	40	101.9	90	110	
V	51	2	72	39.310	ppb	9.740	43614	40	98.3	90	110	
Cr	52	2	72	40.101	ppb	10.614	55220	40	100.3	90	110	
Mn	55	2	72	41.356	ppb	6.977	21781	40	103.4	90	110	
Fe	57	2	72	7935.026	ppb	8.350	204613	4000	198.4	90	110	>+\-10%
Co	59	2	72	39.654	ppb	7.582	94575	40	99.1	90	110	
Ni	60	2	72	41.055	ppb	10.707	27591	40	102.6	90	110	
Cu	63	2	72	39.286	ppb	8.246	75967	40	98.2	90	110	
Zn	66	2	72	35.406	ppb	11.615	9997	40	88.5	90	110	>+\-10%
As	75	2	72	38.648	ppb	7.598	6549	40	96.6	90	110	
Se	78	1	72	38.612	ppb	2.411	10134	40	96.5	90	110	
Sr	88	2	72	43.909	ppb	9.561	24409	40	109.8	90	110	
Zr	90	2	72	6.998	ppb	18.345	227	40	17.5	90	110	>+\-10%
Nb	93	2	72	68.872	ppb	8.193	215569	80	86.1	90	110	>+\-10%
Mo	95	2	115	39.535	ppb	7.083	34754	40	98.8	90	110	
Pd	105	2	115	40.565	ppb	5.864	57325	40	101.4	90	110	
Ag	107	2	115	37.426	ppb	7.556	111737	40	93.6	90	110	
Cd	111	2	115	40.239	ppb	9.424	15790	40	100.6	90	110	
Sn	120	2	115	39.601	ppb	9.392	41039	40	99.0	90	110	
Sb	121	2	115	41.511	ppb	6.419	37495	40	103.8	90	110	
Ba	137	2	115	39.787	ppb	5.539	12156	40	99.5	90	110	
W	182	2	165	78.297	ppb	8.490	340664	40	195.7	90	110	>+\-10%
Pt	195	2	165	38.204	ppb	8.005	139558	40	95.5	90	110	
Tl	205	2	165	39.006	ppb	6.096	314247	40	97.5	90	110	
Pb	208	2	165	39.094	ppb	8.475	419050	40	97.7	90	110	
Th	232	2	165	39.006	ppb	9.044	496632	40	97.5	90	110	
U	238	2	165	38.605	ppb	9.447	534349	40	96.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	817058	2.88	799603	102.18	60	120	
Sc (IS)	45	1	HMI H2	27378425	0.44	27250068	100.47	60	120	
Sc (IS)	45	2	HMI He	998406	5.60	961093	103.88	60	120	
Sc (IS)	45	3	No Gas	43348351	0.93	44977381	96.38	60	120	
Ge Internal Standard	72	1	HMI H2	10683497	0.28	10711203	99.74	60	120	
Ge Internal Standard	72	2	HMI He	1099530	4.60	1070512	102.71	60	120	
In Internal Standard	115	2	HMI He	3441636	5.12	3347290	102.82	60	120	
Ho-165	165	2	HMI He	17001783	4.88	16750041	101.50	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	010WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:27:06-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.000	ppb	-6731.102558	10	0.5
Na	23	2	45	11.541	ppb	30.17030951	22835	25
Mg	24	2	45	0.429	ppb	206.4012087	1377	25
Al	27	2	45	-8.557	ppb	-18.80064515	247	15
K	39	2	45	-12.044	ppb	-18.2813844	16186	50
Ca	44	2	45	-9.300	ppb	-102.0136061	80	25
V	51	2	72	0.486	ppb	40.94262622	2817	1
Cr	52	2	72	0.107	ppb	36.94639287	373	1
Mn	55	2	72	0.236	ppb	4.164145131	167	0.5
Fe	57	2	72	-1.087	ppb	-311.3701875	330	25
Co	59	2	72	0.007	ppb	64.86236547	47	0.5
Ni	60	2	72	0.051	ppb	49.65576284	190	1
Cu	63	2	72	0.275	ppb	40.47255536	2154	1
Zn	66	2	72	0.254	ppb	94.78910238	397	5
As	75	2	72	0.009	ppb	810.1249902	35	1
Se	78	1	72	0.064	ppb	36.03367124	31	1
Nb	93	2	72	3.278	ppb	13.82253324	11769	2
Mo	95	2	115	-0.180	ppb	-5.455377432	90	0.5
Pd	105	2	115	0.002	ppb	605.5990664	40	1
Ag	107	2	115	-0.014	ppb	-116.0072605	90	1
Cd	111	2	115	0.016	ppb	173.2050808	7	0.5
Sn	120	2	115	0.095	ppb	82.44360814	210	1
Sb	121	2	115	0.085	ppb	21.59638198	127	0.6
Ba	137	2	115	-0.051	ppb	-89.64494611	13	0.5
W	182	2	165	0.091	ppb	64.95778	1534	1
Pt	195	2	165	0.006	ppb	74.82552327	73	1
Tl	205	2	165	0.000	ppb	1774.278929	207	0.1
Pb	208	2	165	0.059	ppb	15.79532492	2400	0.5
Th	232	2	165	0.030	ppb	34.3663303	873	1
U	238	2	165	0.015	ppb	53.70342815	393	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	816356	0.46	799603	102.10	60	120	
Sc (IS)	45	1	HMI H2	28174228	0.13	27250068	103.39	60	120	
Sc (IS)	45	2	HMI He	1042673	0.98	961093	108.49	60	120	
Sc (IS)	45	3	No Gas	43906099	0.83	44977381	97.62	60	120	
Ge Internal Standard	72	1	HMI H2	10941172	0.32	10711203	102.15	60	120	
Ge Internal Standard	72	2	HMI He	1153903	0.29	1070512	107.79	60	120	
In Internal Standard	115	2	HMI He	3715469	2.12	3347290	111.00	60	120	
Ho-165	165	2	HMI He	17575129	0.43	16750041	104.93	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	011WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:30:55-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	007CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.010	ppb	323.0607858	13	0.5
Na	23	2	45	10.830	ppb	29.41423353	22164	25
Mg	24	2	45	0.592	ppb	227.5303374	1363	25
Al	27	2	45	-5.772	ppb	-47.08287318	323	15
K	39	2	45	-7.046	ppb	-232.619304	16106	50
Ca	44	2	45	-12.193	ppb	-63.91985091	70	25
V	51	2	72	0.487	ppb	45.9759983	2770	1
Cr	52	2	72	0.067	ppb	76.66443016	310	1
Mn	55	2	72	0.192	ppb	9.799820045	140	0.5
Fe	57	2	72	-2.593	ppb	-100.8696612	283	25
Co	59	2	72	0.002	ppb	416.9313045	33	0.5
Ni	60	2	72	0.101	ppb	108.5416343	220	1
Cu	63	2	72	0.095	ppb	137.5982044	1764	1
Zn	66	2	72	0.175	ppb	158.271898	367	5
As	75	2	72	-0.018	ppb	-255.4987444	29	1
Se	78	1	72	0.010	ppb	263.4759376	16	1
Nb	93	2	72	2.013	ppb	14.83799575	7516	2
Mo	95	2	115	-0.198	ppb	-34.5793603	70	0.5
Pd	105	2	115	-0.004	ppb	-157.8385085	30	1
Ag	107	2	115	0.003	ppb	70.86874116	137	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.033	ppb	158.1210395	137	1
Sb	121	2	115	0.015	ppb	65.87010449	57	0.6
Ba	137	2	115	-0.028	ppb	-105.5247707	20	0.5
W	182	2	165	0.048	ppb	105.2722264	1330	1
Pt	195	2	165	-0.006	ppb	-115.4258151	30	1
Tl	205	2	165	0.004	ppb	93.49642804	237	0.1
Pb	208	2	165	0.078	ppb	32.9587293	2587	0.5
Th	232	2	165	0.012	ppb	61.69720273	633	1
U	238	2	165	0.013	ppb	48.50024082	363	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	791889	8.72	799603	99.04	60	120	
Sc (IS)	45	1	HMI H2	26413540	9.89	27250068	96.93	60	120	
Sc (IS)	45	2	HMI He	1021002	3.56	961093	106.23	60	120	
Sc (IS)	45	3	No Gas	43698739	0.88	44977381	97.16	60	120	
Ge Internal Standard	72	1	HMI H2	10439292	8.67	10711203	97.46	60	120	
Ge Internal Standard	72	2	HMI He	1136101	3.43	1070512	106.13	60	120	
In Internal Standard	115	2	HMI He	3568171	4.00	3347290	106.60	60	120	
Ho-165	165	2	HMI He	17471166	3.76	16750041	104.31	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5425622
Data File Name	012CALB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:34:43-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	129174	0.00
Li	7	2	HMI He	6285	0.06
Li	7	3	No Gas	3990544	0.00
Be	9	1	HMI H2	13	859.23
B	11	1	HMI H2	370	7.04
Na	23	1	HMI H2	206175	0.00
Na	23	2	HMI He	15175	0.01
Mg	24	2	HMI He	160	10.33
Al	27	2	HMI He	133	37.45
K	39	2	HMI He	16740	0.02
Ca	44	2	HMI He	37	113.62
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	2584	0.26
Cr	52	2	HMI He	323	1.46
Mn	55	2	HMI He	53	162.38
Fe	57	2	HMI He	127	14.39
Co	59	2	HMI He	27	353.88
Ni	60	2	HMI He	167	19.82
Cu	63	2	HMI He	1557	0.59
Zn	66	2	HMI He	363	4.63
As	75	2	HMI He	31	143.65
Se	78	1	HMI H2	12	734.93
Sr	88	2	HMI He	37	214.72
Zr	90	2	HMI He	87	40.68
Nb	93	2	HMI He	5128	0.02
Mo	95	2	HMI He	40	108.25
Pd	105	2	HMI He	47	140.28
Ag	107	2	HMI He	80	87.00
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	187	14.44
Sb	121	2	HMI He	53	173.42
Ba	137	2	HMI He	20	661.44
W	182	2	HMI He	1163	0.94
Pt	195	2	HMI He	33	187.35
Tl	205	2	HMI He	147	16.32
Pb	208	2	HMI He	1283	0.91
Th	232	2	HMI He	507	4.87
U	238	2	HMI He	207	9.46

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	821388	1.87
Sc (IS)	45	1	HMI H2	28135324	0.36
Sc (IS)	45	2	HMI He	1028528	0.82
Sc (IS)	45	3	No Gas	44911069	0.78
Ge Internal Standard	72	1	HMI H2	10990003	0.73
Ge Internal Standard	72	2	HMI He	1134301	0.24
In Internal Standard	115	2	HMI He	3548151	1.71
Ho-165	165	2	HMI He	17324298	1.50

Calibration Standard Report

Sample Table

Sample Name	ic-5425623
Data File Name	013CALS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:38:32-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	454715	0.00
Li	7	2	HMI He	22204	0.01
Li	7	3	No Gas	13258338	0.00
Be	9	1	HMI H2	36983	0.01
B	11	1	HMI H2	40934	0.00
Na	23	1	HMI H2	34636881	0.00
Na	23	2	HMI He	2428571	0.00
Mg	24	2	HMI He	1110709	0.00
Al	27	2	HMI He	293324	0.00
K	39	1	HMI H2	42706908	0.00
K	39	2	HMI He	559094	0.00
Ca	40	1	HMI H2	49900781	0.00
Ca	44	2	HMI He	30510	0.01
Ti	47	2	HMI He	2607	0.20
V	51	2	HMI He	106990	0.00
Cr	52	2	HMI He	137061	0.00
Mn	55	2	HMI He	53606	0.00
Fe	57	2	HMI He	258629	0.00
Co	59	2	HMI He	235974	0.00
Ni	60	2	HMI He	67303	0.00
Cu	63	2	HMI He	188632	0.00
Zn	66	2	HMI He	27290	0.01
As	75	2	HMI He	16706	0.01
Se	78	1	HMI H2	25904	0.00
Sr	88	2	HMI He	55848	0.01
Zr	90	2	HMI He	1187	0.67
Nb	93	2	HMI He	633137	0.00
Mo	95	2	HMI He	85776	0.00
Pd	105	2	HMI He	134350	0.00
Ag	107	2	HMI He	290920	0.00
Cd	111	2	HMI He	38658	0.01
Sn	120	2	HMI He	101008	0.00
Sb	121	2	HMI He	88947	0.00
Ba	137	2	HMI He	30054	0.00
Nd	146	2	HMI He	115622	0.00
Sm	147	2	HMI He	98876	0.00
Sm	150	2	HMI He	96026	0.00
Gd	156	1	HMI H2	511651	0.00
Gd	157	1	HMI H2	384758	0.00
W	182	2	HMI He	424286	0.00
Pt	195	2	HMI He	357151	0.00
Tl	205	2	HMI He	792502	0.00
Pb	208	2	HMI He	1056825	0.00
Th	232	2	HMI He	1247779	0.00
U	238	2	HMI He	1364719	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	810648	0.04	821388	98.69	60	120	
Sc (IS)	45	1	HMI H2	27106606	0.72	28135324	96.34	60	120	
Sc (IS)	45	2	HMI He	994958	0.55	1028528	96.74	60	120	
Sc (IS)	45	3	No Gas	40910815	0.57	44911069	91.09	60	120	
Ge Internal Standard	72	1	HMI H2	10592210	0.56	10990003	96.38	60	120	
Ge Internal Standard	72	2	HMI He	1094871	0.43	1134301	96.52	60	120	
In Internal Standard	115	2	HMI He	3351449	0.40	3548151	94.46	60	120	
Ho-165	165	2	HMI He	17041623	0.53	17324298	98.37	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-5425625
Data File Name	014_ICV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:42:20-07:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	471.599	ppb	1.993	278109	400	117.9	90	110	>+\-10%
Li	7	2	45	526.242	ppb	5.608	14267	400	131.6	90	110	>+\-10%
Li	7	3	45	464.027	ppb	1.100	8223608	400	116.0	90	110	>+\-10%
Be	9	1	6	39.754	ppb	1.699	14818	40	99.4	90	110	
B	11	1	6	38.228	ppb	1.794	15989	40	95.6	90	110	
Na	23	1	45	3955.940	ppb	0.906	13718996	4000	98.9	90	110	>+\-10%
Na	23	2	45	4066.285	ppb	3.432	975708	4000	101.7	90	110	
Mg	24	2	45	4077.475	ppb	3.517	443630	4000	101.9	90	110	
Al	27	2	45	8232.827	ppb	4.310	236527	4000	205.8	90	110	>+\-10%
K	39	1	45	3950.928	ppb	2.019	22774835	4000	98.8	90	110	
K	39	2	45	4111.593	ppb	2.368	234524	4000	102.8	90	110	
Ca	40	1	45	3966.835	ppb	1.568	19673712	4000	99.2	90	110	
Ca	44	2	45	4157.872	ppb	6.134	12446	4000	103.9	90	110	
Ti	47	2	45	46.110	ppb	6.975	1177	40	115.3	90	110	>+\-10%
V	51	2	72	40.566	ppb	4.589	44356	40	101.4	90	110	
Cr	52	2	72	39.061	ppb	2.636	53105	40	97.7	90	110	
Mn	55	2	72	41.512	ppb	2.300	22031	40	103.8	90	110	
Fe	57	2	72	8153.159	ppb	4.066	208415	4000	203.8	90	110	>+\-10%
Co	59	2	72	40.236	ppb	1.989	93867	40	100.6	90	110	
Ni	60	2	72	40.817	ppb	4.929	27240	40	102.0	90	110	
Cu	63	2	72	40.658	ppb	1.459	76688	40	101.6	90	110	
Zn	66	2	72	37.260	ppb	4.969	10267	40	93.2	90	110	
As	75	2	72	38.520	ppb	3.187	6379	40	96.3	90	110	
Se	78	1	72	38.699	ppb	2.197	9877	40	96.7	90	110	
Sr	88	2	72	44.445	ppb	1.923	24552	40	111.1	90	110	>+\-10%
Zr	90	2	72	8.938	ppb	22.644	180	40	22.3	90	110	>+\-10%
Nb	93	2	72	72.278	ppb	0.183	229316	80	90.3	90	110	
Mo	95	2	115	40.918	ppb	1.504	34921	40	102.3	90	110	
Pd	105	2	115	41.546	ppb	2.089	55524	40	103.9	90	110	
Ag	107	2	115	38.446	ppb	3.399	111236	40	96.1	90	110	
Cd	111	2	115	40.135	ppb	3.806	15429	40	100.3	90	110	
Sn	120	2	115	39.702	ppb	3.973	39969	40	99.3	90	110	
Sb	121	2	115	41.880	ppb	1.891	37087	40	104.7	90	110	
Ba	137	2	115	39.659	ppb	5.861	11856	40	99.1	90	110	
W	182	2	165	82.680	ppb	1.704	346700	40	206.7	90	110	>+\-10%
Pt	195	2	165	39.791	ppb	1.532	140406	40	99.5	90	110	
Tl	205	2	165	40.353	ppb	1.445	315975	40	100.9	90	110	
Pb	208	2	165	40.743	ppb	1.379	426071	40	101.9	90	110	
Th	232	2	165	40.986	ppb	2.533	505398	40	102.5	90	110	
U	238	2	165	40.254	ppb	2.945	542686	40	100.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	816571	0.20	821388	99.41	60	120	
Sc (IS)	45	1	HMI H2	26904283	0.57	28135324	95.62	60	120	
Sc (IS)	45	2	HMI He	974868	2.01	1028528	94.78	60	120	
Sc (IS)	45	3	No Gas	41531025	0.41	44911069	92.47	60	120	
Ge Internal Standard	72	1	HMI H2	10428109	0.66	10990003	94.89	60	120	
Ge Internal Standard	72	2	HMI He	1082339	1.16	1134301	95.42	60	120	
In Internal Standard	115	2	HMI He	3333138	2.05	3548151	93.94	60	120	
Ho-165	165	2	HMI He	16835143	1.39	17324298	97.18	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-5425625
Data File Name	015_ICV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:46:28-07:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	458.273	ppb	0.816	276742	400	114.6	90	110	>+\-10%
Li	7	2	45	502.315	ppb	2.896	14284	400	125.6	90	110	>+\-10%
Li	7	3	45	459.323	ppb	2.492	8113939	400	114.8	90	110	>+\-10%
Be	9	1	6	40.061	ppb	1.178	15011	40	100.2	90	110	
B	11	1	6	37.761	ppb	0.657	15883	40	94.4	90	110	
Na	23	1	45	3930.299	ppb	1.293	13780620	4000	98.3	90	110	>+\-10%
Na	23	2	45	3943.318	ppb	0.863	973700	4000	98.6	90	110	
Mg	24	2	45	3950.502	ppb	0.854	442133	4000	98.8	90	110	
Al	27	2	45	7972.917	ppb	1.014	235616	4000	199.3	90	110	>+\-10%
K	39	1	45	3968.586	ppb	2.080	23082378	4000	99.2	90	110	
K	39	2	45	4040.944	ppb	1.113	237340	4000	101.0	90	110	
Ca	40	1	45	3974.853	ppb	1.471	19929092	4000	99.4	90	110	
Ca	44	2	45	3883.065	ppb	2.770	11959	4000	97.1	90	110	
Ti	47	2	45	37.433	ppb	12.208	983	40	93.6	90	110	
V	51	2	72	39.705	ppb	2.747	44365	40	99.3	90	110	
Cr	52	2	72	40.125	ppb	2.536	55664	40	100.3	90	110	
Mn	55	2	72	39.320	ppb	1.577	21296	40	98.3	90	110	
Fe	57	2	72	7963.582	ppb	0.377	207795	4000	199.1	90	110	>+\-10%
Co	59	2	72	39.307	ppb	1.158	93581	40	98.3	90	110	
Ni	60	2	72	40.103	ppb	0.916	27324	40	100.3	90	110	
Cu	63	2	72	40.275	ppb	0.840	77542	40	100.7	90	110	
Zn	66	2	72	35.914	ppb	1.709	10114	40	89.8	90	110	>+\-10%
As	75	2	72	39.275	ppb	0.372	6637	40	98.2	90	110	
Se	78	1	72	38.165	ppb	3.511	9836	40	95.4	90	110	
Sr	88	2	72	43.717	ppb	2.807	24649	40	109.3	90	110	
Zr	90	2	72	4.096	ppb	43.562	130	40	10.2	90	110	>+\-10%
Nb	93	2	72	73.622	ppb	1.179	238264	80	92.0	90	110	
Mo	95	2	115	38.157	ppb	0.452	34055	40	95.4	90	110	
Pd	105	2	115	42.046	ppb	1.297	58760	40	105.1	90	110	
Ag	107	2	115	38.467	ppb	1.821	116408	40	96.2	90	110	
Cd	111	2	115	38.322	ppb	2.476	15406	40	95.8	90	110	
Sn	120	2	115	38.382	ppb	1.366	40423	40	96.0	90	110	
Sb	121	2	115	40.616	ppb	2.665	37592	40	101.5	90	110	
Ba	137	2	115	38.122	ppb	2.939	11926	40	95.3	90	110	
W	182	2	165	80.542	ppb	0.158	346527	40	201.4	90	110	>+\-10%
Pt	195	2	165	38.254	ppb	1.736	138465	40	95.6	90	110	
Tl	205	2	165	39.178	ppb	0.597	314717	40	97.9	90	110	
Pb	208	2	165	39.109	ppb	0.705	419616	40	97.8	90	110	
Th	232	2	165	39.446	ppb	0.686	499057	40	98.6	90	110	
U	238	2	165	38.894	ppb	1.036	538003	40	97.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	820901	0.45	821388	99.94	60	120	
Sc (IS)	45	1	HMI H2	27199735	0.79	28135324	96.67	60	120	
Sc (IS)	45	2	HMI He	1002345	0.57	1028528	97.45	60	120	
Sc (IS)	45	3	No Gas	41209392	0.80	44911069	91.76	60	120	
Ge Internal Standard	72	1	HMI H2	10532999	1.10	10990003	95.84	60	120	
Ge Internal Standard	72	2	HMI He	1104452	0.48	1134301	97.37	60	120	
In Internal Standard	115	2	HMI He	3484700	0.41	3548151	98.21	60	120	
Ho-165	165	2	HMI He	17269071	0.63	17324298	99.68	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	icv-5425625
Data File Name	016_ICV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:51:55-07:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	458.917	ppb	0.706	278042	400	114.7	90	110	>+\-10%
Li	7	2	45	476.931	ppb	5.590	14097	400	119.2	90	110	>+\-10%
Li	7	3	45	448.230	ppb	1.258	7964189	400	112.1	90	110	>+\-10%
Be	9	1	6	39.344	ppb	2.057	14805	40	98.4	90	110	
B	11	1	6	37.196	ppb	4.033	15716	40	93.0	90	110	
Na	23	1	45	3937.839	ppb	1.003	13861038	4000	98.4	90	110	>+\-10%
Na	23	2	45	3986.592	ppb	7.415	999073	4000	99.7	90	110	
Mg	24	2	45	4000.869	ppb	6.878	454546	4000	100.0	90	110	
Al	27	2	45	8087.626	ppb	7.103	242615	4000	202.2	90	110	>+\-10%
K	39	1	45	4049.851	ppb	1.647	23440804	4000	101.2	90	110	
K	39	2	45	4097.857	ppb	5.170	244214	4000	102.4	90	110	
Ca	40	1	45	3985.512	ppb	0.323	20062127	4000	99.6	90	110	
Ca	44	2	45	4086.539	ppb	7.287	12776	4000	102.2	90	110	
Ti	47	2	45	43.965	ppb	2.062	1173	40	109.9	90	110	
V	51	2	72	41.072	ppb	7.577	46288	40	102.7	90	110	
Cr	52	2	72	41.170	ppb	5.242	57727	40	102.9	90	110	
Mn	55	2	72	40.550	ppb	5.607	22195	40	101.4	90	110	
Fe	57	2	72	8078.944	ppb	7.905	212963	4000	202.0	90	110	>+\-10%
Co	59	2	72	39.365	ppb	5.923	94721	40	98.4	90	110	
Ni	60	2	72	39.247	ppb	3.920	27050	40	98.1	90	110	
Cu	63	2	72	40.367	ppb	5.078	78559	40	100.9	90	110	
Zn	66	2	72	36.843	ppb	4.216	10481	40	92.1	90	110	
As	75	2	72	38.878	ppb	3.981	6643	40	97.2	90	110	
Se	78	1	72	37.666	ppb	2.733	9801	40	94.2	90	110	
Sr	88	2	72	43.543	ppb	3.484	24830	40	108.9	90	110	
Zr	90	2	72	14.912	ppb	19.657	253	40	37.3	90	110	>+\-10%
Nb	93	2	72	72.559	ppb	6.255	237395	80	90.7	90	110	
Mo	95	2	115	38.500	ppb	7.714	34497	40	96.3	90	110	
Pd	105	2	115	41.564	ppb	7.321	58326	40	103.9	90	110	
Ag	107	2	115	38.741	ppb	6.268	117756	40	96.9	90	110	
Cd	111	2	115	39.757	ppb	7.090	16050	40	99.4	90	110	
Sn	120	2	115	40.305	ppb	8.544	42604	40	100.8	90	110	
Sb	121	2	115	41.260	ppb	8.465	38335	40	103.1	90	110	
Ba	137	2	115	40.446	ppb	10.642	12690	40	101.1	90	110	
W	182	2	165	81.218	ppb	6.577	346230	40	203.0	90	110	>+\-10%
Pt	195	2	165	39.482	ppb	6.612	141614	40	98.7	90	110	
Tl	205	2	165	39.842	ppb	4.574	317301	40	99.6	90	110	
Pb	208	2	165	40.112	ppb	6.730	426402	40	100.3	90	110	
Th	232	2	165	40.405	ppb	7.181	506449	40	101.0	90	110	
U	238	2	165	39.238	ppb	7.592	537676	40	98.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	824323	0.42	821388	100.36	60	120	
Sc (IS)	45	1	HMI H2	27306318	0.71	28135324	97.05	60	120	
Sc (IS)	45	2	HMI He	1019291	3.77	1028528	99.10	60	120	
Sc (IS)	45	3	No Gas	40989581	0.40	44911069	91.27	60	120	
Ge Internal Standard	72	1	HMI H2	10632617	0.22	10990003	96.75	60	120	
Ge Internal Standard	72	2	HMI He	1117568	3.10	1134301	98.52	60	120	
In Internal Standard	115	2	HMI He	3506647	4.53	3548151	98.83	60	120	
Ho-165	165	2	HMI He	17140509	3.91	17324298	98.94	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	icb-5425622
Data File Name	017_ICB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T12:56:14-07:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	-3.581	ppb	-78.9	3686331	10	
Be	9	1	-0.001	ppb	-2683.1	13	0.5	
B	11	1	1.201	ppb	7.4	873	0.5	>RL
Na	23	1	2.017	ppb	46.6	209280	25	
Na	23	2	2.244	ppb	88.9	15766	25	
Mg	24	2	1.014	ppb	45.1	277	25	
Al	27	2	1.397	ppb	118.5	177	15	
K	39	1	54.934	ppb	38.9	10404133	50	>RL
K	39	2	-17.183	ppb	-39.1	15809	50	
Ca	40	1	1.127	ppb	14.1	51120	50	
Ca	44	2	-4.178	ppb	-177.7	23	25	
Ti	47	2	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	1.202	ppb	22.4	3884	1	>RL
Cr	52	2	-0.028	ppb	-52.8	283	1	
Mn	55	2	0.108	ppb	50.8	113	0.5	
Fe	57	2	4.980	ppb	12.6	260	25	
Co	59	2	0.005	ppb	198.8	40	0.5	
Ni	60	2	0.072	ppb	50.8	217	1	
Cu	63	2	0.041	ppb	192.5	1637	1	
Zn	66	2	-0.239	ppb	-30.9	297	5	
As	75	2	-0.034	ppb	-115.5	25	1	
Se	78	1	0.031	ppb	146.3	20	1	
Sr	88	2	-0.017	ppb	-116.1	27	0.5	
Zr	90	2	0.579	ppb	909.2	93	1	
Nb	93	2	4.612	ppb	17.7	20132	2	>RL
Mo	95	2	0.072	ppb	56.9	107	0.5	
Pd	105	2	0.018	ppb	99.3	73	1	
Ag	107	2	0.004	ppb	340.1	93	1	
Cd	111	2	0.016	ppb	173.2	7	0.5	
Sn	120	2	0.047	ppb	101.1	240	1	
Sb	121	2	0.198	ppb	16.7	243	0.6	
Ba	137	2	0.247	ppb	22.3	100	0.5	
W	182	2	0.245	ppb	3.3	2247	1	
Pt	195	2	0.006	ppb	67.3	57	1	
Tl	205	2	0.026	ppb	19.3	363	0.1	
Pb	208	2	-0.002	ppb	-1470.0	1283	0.5	
Th	232	2	0.038	ppb	41.0	1000	1	
U	238	2	0.030	ppb	26.7	627	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	831578	2.91	821388	101.24	60	120	
Sc (IS)	45	1	HMI H2	27593986	0.12	28135324	98.08	60	120	
Sc (IS)	45	2	HMI He	1030695	1.04	1028528	100.21	60	120	
Sc (IS)	45	3	No Gas	41886403	0.70	44911069	93.27	60	120	
Ge Internal Standard	72	1	HMI H2	10826144	0.59	10990003	98.51	60	120	
Ge Internal Standard	72	2	HMI He	1134093	0.24	1134301	99.98	60	120	
In Internal Standard	115	2	HMI He	3601621	0.41	3548151	101.51	60	120	
Ho-165	165	2	HMI He	17569098	0.50	17324298	101.41	60	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	icvl-5425626
Data File Name	018LICV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T13:00:03-07:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	6.316	ppb	32.143	3815998	50	12.6	70	130	>+/-30%
Be	9	1	6	1.010	ppb	6.872	397	1	101.0	70	130	
Na	23	2	45	53.914	ppb	2.621	28405	50	107.8	70	130	>+/-30%
Mg	24	2	45	56.032	ppb	9.816	6535	50	112.1	70	130	
Al	27	2	45	35.126	ppb	14.648	1190	30	117.1	70	130	
K	39	2	45	97.019	ppb	10.743	22007	100	97.0	70	130	
Ca	44	2	45	51.555	ppb	51.445	197	50	103.1	70	130	
V	51	2	72	5.668	ppb	2.681	8676	5	113.4	70	130	
Cr	52	2	72	1.983	ppb	1.485	3117	2	99.1	70	130	
Mn	55	2	72	1.026	ppb	15.807	620	1	102.6	70	130	
Fe	57	2	72	58.944	ppb	4.950	1697	50	117.9	70	130	
Co	59	2	72	1.067	ppb	7.571	2620	1	106.7	70	130	
Ni	60	2	72	2.052	ppb	13.678	1587	2	102.6	70	130	
Cu	63	2	72	2.167	ppb	5.648	5728	2	108.3	70	130	
Zn	66	2	72	9.468	ppb	5.055	2990	10	94.7	70	130	
As	75	2	72	4.788	ppb	9.279	854	5	95.8	70	130	
Se	78	1	72	4.944	ppb	7.321	1319	5	98.9	70	130	
Sr	88	2	72	1.153	ppb	19.835	700	1	115.3	70	130	
Zr	90	2	72	11.472	ppb	5.012	217	0.5	2294.4	70	130	>+/-30%
Nb	93	2	72	15.324	ppb	8.734	54730	2	766.2	70	130	>+/-30%
Mo	95	2	115	2.092	ppb	8.140	1957	2	104.6	70	130	
Pd	105	2	115	0.002	ppb	1523.845	50	1	0.2	70	130	>+/-30%
Ag	107	2	115	5.161	ppb	2.936	16127	5	103.2	70	130	
Cd	111	2	115	1.008	ppb	3.267	417	1	100.8	70	130	
Sn	120	2	115	9.645	ppb	3.763	10581	10	96.4	70	130	
Sb	121	2	115	2.149	ppb	7.235	2097	2	107.5	70	130	
Ba	137	2	115	1.213	ppb	19.580	410	1	121.3	70	130	
W	182	2	165	5.115	ppb	5.021	23391	1	511.5	70	130	>+/-30%
Pt	195	2	165	0.015	ppb	48.085	90	1	1.5	70	130	>+/-30%
Tl	205	2	165	1.022	ppb	6.926	8460	1	102.2	70	130	
Pb	208	2	165	1.021	ppb	3.538	12363	1	102.1	70	130	
Th	232	2	165	2.250	ppb	1.160	29337	2	112.5	70	130	
U	238	2	165	1.029	ppb	3.176	14633	1	102.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	830342	3.73	821388	101.09	60	120	
Sc (IS)	45	1	HMI H2	27554205	0.58	28135324	97.93	60	120	
Sc (IS)	45	2	HMI He	1020437	1.47	1028528	99.21	60	120	
Sc (IS)	45	3	No Gas	42239598	0.82	44911069	94.05	60	120	
Ge Internal Standard	72	1	HMI H2	10810905	0.80	10990003	98.37	60	120	
Ge Internal Standard	72	2	HMI He	1128611	0.53	1134301	99.50	60	120	
In Internal Standard	115	2	HMI He	3582444	0.97	3548151	100.97	60	120	
Ho-165	165	2	HMI He	17498912	0.91	17324298	101.01	60	120	

CRI Report

Sample Table

Sample Name	cri-5425627
Data File Name	019RLST.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T13:03:52-07:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	13.730	ppb	22.604	131237	10	137.3	80	120	>+\-20%
Li	7	2	45	19.026	ppb	25.969	6538	10	190.3	80	120	>+\-20%
Li	7	3	45	4.840	ppb	146.516	3801975	10	48.4	80	120	>+\-20%
Be	9	1	6	1.043	ppb	14.116	393	1	104.3	80	120	
B	11	1	6	1.355	ppb	23.144	903	1	135.5	80	120	>+\-20%
Na	23	1	45	102.760	ppb	2.139	562188	100	102.8	80	120	
Na	23	2	45	99.877	ppb	0.861	39714	100	99.9	80	120	
Mg	24	2	45	102.909	ppb	5.500	11862	100	102.9	80	120	
Al	27	2	45	103.618	ppb	4.703	3244	100	103.6	80	120	
K	39	2	45	93.106	ppb	12.735	21754	100	93.1	80	120	
Ca	40	1	45	104.162	ppb	0.800	573795	100	104.2	80	120	
Ca	44	2	45	114.653	ppb	40.933	393	100	114.7	80	120	
Ti	47	2	45	2.003	ppb	65.883	53	1	200.3	80	120	>+\-20%
V	51	2	72	1.503	ppb	10.834	4151	1	150.3	80	120	>+\-20%
Cr	52	2	72	1.040	ppb	7.987	1770	1	104.0	80	120	
Mn	55	2	72	1.372	ppb	11.374	803	1	137.2	80	120	>+\-20%
Fe	57	2	72	108.303	ppb	5.242	2984	100	108.3	80	120	
Co	59	2	72	1.018	ppb	6.564	2480	1	101.8	80	120	
Ni	60	2	72	1.145	ppb	24.971	950	1	114.5	80	120	
Cu	63	2	72	1.373	ppb	5.348	4157	1	137.3	80	120	>+\-20%
Zn	66	2	72	0.892	ppb	23.950	603	1	89.2	80	120	
As	75	2	72	0.955	ppb	10.190	193	1	95.5	80	120	
Se	78	1	72	0.890	ppb	11.523	245	1	89.0	80	120	
Sr	88	2	72	1.118	ppb	11.618	673	1	111.8	80	120	
Zr	90	2	72	0.711	ppb	389.729	93	1	71.1	80	120	>+\-20%
Nb	93	2	72	2.110	ppb	7.530	11822	2	105.5	80	120	
Mo	95	2	115	0.994	ppb	21.146	943	1	99.4	80	120	
Pd	105	2	115	0.993	ppb	1.651	1460	1	99.3	80	120	
Ag	107	2	115	0.995	ppb	2.232	3147	1	99.5	80	120	
Cd	111	2	115	1.123	ppb	18.032	460	1	112.3	80	120	
Sn	120	2	115	0.995	ppb	19.445	1250	1	99.5	80	120	
Sb	121	2	115	1.058	ppb	5.558	1050	1	105.8	80	120	
Ba	137	2	115	1.288	ppb	13.575	430	1	128.8	80	120	>+\-20%
W	182	2	165	1.076	ppb	7.041	5795	1	107.6	80	120	
Pt	195	2	165	1.009	ppb	4.160	3697	1	100.9	80	120	
Tl	205	2	165	0.960	ppb	3.231	7879	1	96.0	80	120	
Pb	208	2	165	0.972	ppb	0.743	11716	1	97.2	80	120	
Th	232	2	165	0.930	ppb	1.771	12303	1	93.0	80	120	
U	238	2	165	0.909	ppb	4.749	12824	1	90.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	799967	1.39	821388	97.39	60	120	
Sc (IS)	45	1	HMI H2	27581057	0.53	28135324	98.03	60	120	
Sc (IS)	45	2	HMI He	1018714	1.02	1028528	99.05	60	120	
Sc (IS)	45	3	No Gas	42249563	0.53	44911069	94.07	60	120	
Ge Internal Standard	72	1	HMI H2	10734634	1.00	10990003	97.68	60	120	
Ge Internal Standard	72	2	HMI He	1118203	0.80	1134301	98.58	60	120	
In Internal Standard	115	2	HMI He	3552688	0.24	3548151	100.13	60	120	
Ho-165	165	2	HMI He	17326395	1.01	17324298	100.01	60	120	

CRI Report

Sample Table

Sample Name	cri-
Data File Name	020RLST.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T13:12:40-07:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-3.815	ppb	-154.904	128518	10	-38.1	80	120	>+\-20%
Li	7	2	45	-4.632	ppb	-20.678	6375	10	-46.3	80	120	>+\-20%
Li	7	3	45	-2.343	ppb	-284.263	3701478	10	-23.4	80	120	>+\-20%
Be	9	1	6	-0.009	ppb	-518.148	10	1	-0.9	80	120	>+\-20%
B	11	1	6	0.151	ppb	86.728	427	1	15.1	80	120	>+\-20%
Na	23	1	45	-2.092	ppb	-39.870	199727	100	-2.1	80	120	>+\-20%
Na	23	2	45	-1.908	ppb	-82.584	15095	100	-1.9	80	120	>+\-20%
Mg	24	2	45	0.645	ppb	72.260	240	100	0.6	80	120	>+\-20%
Al	27	2	45	45.408	ppb	6.421	1550	100	45.4	80	120	>+\-20%
K	39	2	45	-3.699	ppb	-110.106	16981	100	-3.7	80	120	>+\-20%
Ca	40	1	45	3.262	ppb	8.667	63494	100	3.3	80	120	>+\-20%
Ca	44	2	45	4.861	ppb	34.113	53	100	4.9	80	120	>+\-20%
Ti	47	2	45	0.000	ppb	#DIV/0!	0	1	0.0	80	120	>+\-20%
V	51	2	72	5.369	ppb	6.071	8526	1	536.9	80	120	>+\-20%
Cr	52	2	72	-0.050	ppb	-107.120	257	1	-5.0	80	120	>+\-20%
Mn	55	2	72	1.028	ppb	5.021	633	1	102.8	80	120	
Fe	57	2	72	0.912	ppb	169.763	153	100	0.9	80	120	>+\-20%
Co	59	2	72	0.008	ppb	77.958	47	1	0.8	80	120	>+\-20%
Ni	60	2	72	0.048	ppb	63.336	203	1	4.8	80	120	>+\-20%
Cu	63	2	72	2.073	ppb	1.140	5661	1	207.3	80	120	>+\-20%
Zn	66	2	72	0.086	ppb	54.123	393	1	8.6	80	120	>+\-20%
As	75	2	72	-0.014	ppb	-78.664	29	1	-1.4	80	120	>+\-20%
Se	78	1	72	0.010	ppb	345.034	15	1	1.0	80	120	>+\-20%
Sr	88	2	72	0.016	ppb	339.900	47	1	1.6	80	120	>+\-20%
Zr	90	2	72	-0.700	ppb	-534.896	80	1	-70.0	80	120	>+\-20%
Nb	93	2	72	-0.468	ppb	-20.241	3661	2	-23.4	80	120	>+\-20%
Mo	95	2	115	0.013	ppb	237.848	53	1	1.3	80	120	>+\-20%
Pd	105	2	115	-0.008	ppb	-218.569	37	1	-0.8	80	120	>+\-20%
Ag	107	2	115	0.003	ppb	297.769	93	1	0.3	80	120	>+\-20%
Cd	111	2	115	0.016	ppb	173.205	7	1	1.6	80	120	>+\-20%
Sn	120	2	115	0.072	ppb	85.578	270	1	7.2	80	120	>+\-20%
Sb	121	2	115	0.002	ppb	1414.306	57	1	0.2	80	120	>+\-20%
Ba	137	2	115	0.874	ppb	22.118	307	1	87.4	80	120	
W	182	2	165	0.037	ppb	67.897	1323	1	3.7	80	120	>+\-20%
Pt	195	2	165	-0.002	ppb	-90.777	27	1	-0.2	80	120	>+\-20%
Tl	205	2	165	0.002	ppb	344.411	163	1	0.2	80	120	>+\-20%
Pb	208	2	165	-0.006	ppb	-223.104	1223	1	-0.6	80	120	>+\-20%
Th	232	2	165	0.001	ppb	165.623	520	1	0.1	80	120	>+\-20%
U	238	2	165	0.003	ppb	74.397	250	1	0.3	80	120	>+\-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	811617	0.43	821388	98.81	60	120	
Sc (IS)	45	1	HMI H2	28280572	0.71	28135324	100.52	60	120	
Sc (IS)	45	2	HMI He	1056278	0.89	1028528	102.70	60	120	
Sc (IS)	45	3	No Gas	41919718	0.32	44911069	93.34	60	120	
Ge Internal Standard	72	1	HMI H2	10953639	0.48	10990003	99.67	60	120	
Ge Internal Standard	72	2	HMI He	1151880	0.44	1134301	101.55	60	120	
In Internal Standard	115	2	HMI He	3652401	0.69	3548151	102.94	60	120	
Ho-165	165	2	HMI He	17364768	0.92	17324298	100.23	60	120	

CRI Report

Sample Table

Sample Name	cri5425628
Data File Name	021_CRI.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T13:16:28-07:00
Sample Type	AFCRI
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	0.223	ppb	5.967	97	0.2	111.3	80	120	
Na	23	2	45	18.365	ppb	29.080	19620	20	91.8	80	120	
Mg	24	2	45	21.818	ppb	4.347	2647	20	109.1	80	120	
Al	27	2	45	23.699	ppb	8.447	847	20	118.5	80	120	
K	39	2	45	12.456	ppb	170.142	17328	20	62.3	80	120	AFCRI Main CR1 Failed
Ca	44	2	45	26.545	ppb	103.050	120	20	132.7	80	120	AFCRI Main CR1 Failed
V	51	2	72	0.431	ppb	107.188	3044	0.2	215.4	80	120	AFCRI Main CR1 Failed
Cr	52	2	72	0.211	ppb	12.506	620	0.2	105.3	80	120	
(Cr)	53	2	72	0.977	ppb	54.228	1227	0.2	488.4	80	120	AFCRI Main CR1 Failed
Mn	55	2	72	0.247	ppb	26.164	190	0.2	123.5	80	120	AFCRI Main CR1 Failed
Fe	57	2	72	22.457	ppb	17.638	727	20	112.3	80	120	
Co	59	2	72	0.234	ppb	21.898	597	0.2	116.9	80	120	
Ni	60	2	72	0.289	ppb	42.677	367	0.2	144.4	80	120	AFCRI Main CR1 Failed
Cu	63	2	72	0.157	ppb	83.019	1857	0.2	78.7	80	120	AFCRI Main CR1 Failed
Zn	66	2	72	0.159	ppb	208.948	407	0.2	79.5	80	120	AFCRI Main CR1 Failed
As	75	2	72	0.179	ppb	73.116	62	0.2	89.7	80	120	
Se	78	1	72	0.233	ppb	32.874	73	0.2	116.3	80	120	
(Se)	82	1	72	1.080	ppb	70.070	760	0.2	540.2	80	120	AFCRI Main CR1 Failed
Nb	93	2	72	-0.096	ppb	-167.925	4801	0.4	-24.1	80	120	AFCRI Main CR1 Failed
Mo	95	2	115	0.285	ppb	25.801	300	0.2	142.4	80	120	AFCRI Main CR1 Failed
Pd	105	2	115	0.184	ppb	36.863	310	0.2	92.2	80	120	
Ag	107	2	115	0.206	ppb	4.231	717	0.2	102.9	80	120	
Cd	111	2	115	0.203	ppb	49.288	83	0.2	101.3	80	120	
(Cd)	114	2	115	0.200	ppb	44.482	227	0.2	100.2	80	120	
Sn	120	2	115	0.153	ppb	34.886	350	0.2	76.3	80	120	AFCRI Main CR1 Failed
Sb	121	2	115	0.230	ppb	33.577	270	0.2	114.9	80	120	
Ba	137	2	115	0.251	ppb	44.866	100	0.2	125.5	80	120	AFCRI Main CR1 Failed
W	182	2	165	0.243	ppb	8.107	2190	0.2	121.6	80	120	AFCRI Main CR1 Failed
Pt	195	2	165	0.225	ppb	18.532	840	0.2	112.3	80	120	
Tl	205	2	165	0.202	ppb	4.682	1757	0.2	100.9	80	120	
(Pb)	206	2	165	0.192	ppb	42.638	850	0.2	96.1	80	120	
(Pb)	207	2	165	0.199	ppb	8.833	707	0.2	99.7	80	120	
Pb	208	2	165	0.196	ppb	19.042	3357	0.2	97.9	80	120	
Th	232	2	165	0.171	ppb	3.748	2650	0.2	85.4	80	120	
U	238	2	165	0.210	ppb	2.427	3101	0.2	105.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	819613	3.25	821388	99.78	60	120	
Sc (IS)	45	1	HMI H2	27913423	0.88	28135324	99.21	60	120	
Sc (IS)	45	2	HMI He	1021886	1.04	1028528	99.35	60	120	
Sc (IS)	45	3	No Gas	42631534	0.32	44911069	94.92	60	120	
Ge Internal Standard	72	1	HMI H2	10811152	0.40	10990003	98.37	60	120	
Ge Internal Standard	72	2	HMI He	1131223	0.91	1134301	99.73	60	120	
In Internal Standard	115	2	HMI He	3561923	1.09	3548151	100.39	60	120	
Ho-165	165	2	HMI He	17179050	1.69	17324298	99.16	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5425629
Data File Name	022ICSA.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T13:20:19-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-1.297	ppb	-39.5	3487722	1	
Be	9	1	6	-0.017	ppb	-192.4	7	1	
B	11	1	6	0.690	ppb	27.5	610	1	
Na	23	1	45	98245.630	ppb	0.5	313768362	100000	
K	39	1	45	97429.584	ppb	0.6	304271655	100000	
Ca	40	1	45	98018.158	ppb	1.1	452949913	100000	
Ti	47	2	45	1944.711	ppb	0.9	47100	1	>RL or LOD
V	51	2	72	0.773	ppb	10.5	3017	1	
Cr	52	2	72	0.222	ppb	42.9	563	1	
Mn	55	2	72	1.034	ppb	7.9	553	1	>RL or LOD
Co	59	2	72	0.014	ppb	39.1	53	1	
Ni	60	2	72	0.407	ppb	36.3	397	1	
Cu	63	2	72	0.751	ppb	26.6	2657	1	
Zn	66	2	72	1.027	ppb	15.1	573	1	>RL or LOD
As	75	2	72	0.097	ppb	41.0	42	1	
Se	78	1	72	0.047	ppb	76.5	21	1	
Sr	88	2	72	1.015	ppb	23.4	550	1	>RL or LOD
Zr	90	2	72	7.633	ppb	76.7	153	1	>RL or LOD
Nb	93	2	72	0.333	ppb	60.9	5478	1	
Mo	95	2	115	2039.182	ppb	1.7	1625647	2000	>RL or LOD
Pd	105	2	115	-0.020	ppb	-23.4	17	1	
Ag	107	2	115	0.029	ppb	54.6	150	1	
Cd	111	2	115	0.325	ppb	33.4	117	1	
Sn	120	2	115	1.649	ppb	5.8	1710	1	>RL or LOD
Sb	121	2	115	0.069	ppb	19.0	103	1	
Ba	137	2	115	0.045	ppb	141.3	30	1	
W	182	2	165	0.193	ppb	25.9	1844	1	
Pt	195	2	165	0.010	ppb	93.9	63	1	
Tl	205	2	165	0.010	ppb	19.7	213	1	
Pb	208	2	165	0.121	ppb	18.3	2387	1	
Th	232	2	165	0.038	ppb	3.8	913	1	
U	238	2	165	-0.001	ppb	-44.4	177	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	767581	0.34	821388	93.45	60	120	
Sc (IS)	45	1	HMI H2	25123170	0.91	28135324	89.29	60	120	
Sc (IS)	45	2	HMI He	924407	1.00	1028528	89.88	60	120	
Sc (IS)	45	3	No Gas	39387880	0.38	44911069	87.70	60	120	
Ge Internal Standard	72	1	HMI H2	9519385	1.10	10990003	86.62	60	120	
Ge Internal Standard	72	2	HMI He	1000610	0.27	1134301	88.21	60	120	
In Internal Standard	115	2	HMI He	3116434	0.95	3548151	87.83	60	120	
Ho-165	165	2	HMI He	16026842	0.31	17324298	92.51	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5425630
Data File Name	023ICSB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T13:24:05-07:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	896.035	ppb	0.907	382080	100	896.0	80	120	
Li	7	2	45	956.362	ppb	3.561	19340	100	956.4	80	120	
Li	7	3	45	879.273	ppb	1.293	11714261	100	879.3	80	120	
Be	9	1	6	89.805	ppb	2.644	29486	100	89.8	80	120	
B	11	1	6	75.875	ppb	2.007	27650	100	75.9	80	120	>+\-20%
Na	23	1	45	99422.925	ppb	0.698	311394982	100	99422.9	80	120	>+\-20%
K	39	1	45	99576.722	ppb	0.365	304768902	100	99576.7	80	120	>+\-20%
Ca	40	1	45	99589.626	ppb	0.385	451335980	100	99589.6	80	120	>+\-20%
V	51	2	72	91.947	ppb	1.056	89165	100	91.9	80	120	
Cr	52	2	72	93.011	ppb	1.203	115342	100	93.0	80	120	
Mn	55	2	72	92.465	ppb	1.905	44844	100	92.5	80	120	
Co	59	2	72	92.886	ppb	1.550	198270	100	92.9	80	120	
Ni	60	2	72	92.165	ppb	1.098	56119	100	92.2	80	120	
Cu	63	2	72	91.573	ppb	0.664	156361	100	91.6	80	120	
Zn	66	2	72	87.767	ppb	4.138	21704	100	87.8	80	120	
As	75	2	72	91.080	ppb	1.578	13765	100	91.1	80	120	
Se	78	1	72	90.592	ppb	1.353	21026	100	90.6	80	120	
Sr	88	2	72	96.667	ppb	3.669	48832	100	96.7	80	120	
Zr	90	2	72	4.776	ppb	43.973	123	100	4.8	80	120	>+\-20%
Nb	93	2	72	190.900	ppb	1.639	546877	100	190.9	80	120	
Mo	95	2	115	2035.001	ppb	1.090	1597730	100	2035.0	80	120	>+\-20%
Pd	105	2	115	96.079	ppb	1.582	118196	100	96.1	80	120	
Ag	107	2	115	89.437	ppb	2.135	238267	100	89.4	80	120	
Cd	111	2	115	89.050	ppb	0.711	31530	100	89.1	80	120	
Sn	120	2	115	96.700	ppb	0.769	89454	100	96.7	80	120	
Sb	121	2	115	101.955	ppb	0.679	83054	100	102.0	80	120	
Ba	137	2	115	92.389	ppb	1.607	25428	100	92.4	80	120	
W	182	2	165	97.250	ppb	0.111	386176	100	97.3	80	120	
Pt	195	2	165	92.385	ppb	2.232	308795	100	92.4	80	120	
Tl	205	2	165	88.900	ppb	0.781	659350	100	88.9	80	120	
Pb	208	2	165	89.651	ppb	1.121	886783	100	89.7	80	120	
Th	232	2	165	93.177	ppb	1.325	1088038	100	93.2	80	120	
U	238	2	165	91.541	ppb	1.022	1169137	100	91.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	719703	0.61	821388	87.62	60	120	
Sc (IS)	45	1	HMI H2	24637194	0.28	28135324	87.57	60	120	
Sc (IS)	45	2	HMI He	894983	0.25	1028528	87.02	60	120	
Sc (IS)	45	3	No Gas	39616714	0.55	44911069	88.21	60	120	
Ge Internal Standard	72	1	HMI H2	9489960	0.57	10990003	86.35	60	120	
Ge Internal Standard	72	2	HMI He	990381	0.40	1134301	87.31	60	120	
In Internal Standard	115	2	HMI He	3069198	1.27	3548151	86.50	60	120	
Ho-165	165	2	HMI He	15947846	0.32	17324298	92.05	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	024SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T13:29:14-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-8.395	ppb	-8.395	-35.65	121726	500000	
Li	7	2	45	2.089	ppb	2.089	366.10	6075	500000	
Li	7	3	45	-8.230	ppb	-8.230	-55.75	3630337	50000	
Be	9	1	6	0.045	ppb	0.045	120.71	30	2000	
B	11	1	6	0.520	ppb	0.520	43.58	577	2000	
Na	23	1	45	63.593	ppb	63.593	3.27	417835	2000	
Na	23	2	45	51.855	ppb	51.855	11.13	27005	400000	
Mg	24	2	45	17.352	ppb	17.352	14.44	2064	400000	
Al	27	2	45	21.960	ppb	21.960	20.67	767	400000	
K	39	1	45	52.767	ppb	52.767	15.06	10217455	400000	
K	39	2	45	17.030	ppb	17.030	64.45	17011	400000	
Ca	40	1	45	25.327	ppb	25.327	5.05	170962	400000	
Ca	44	2	45	11.807	ppb	11.807	130.33	70	400000	
Ti	47	2	45	0.394	ppb	0.394	101.70	10	4000	
V	51	2	72	0.906	ppb	0.906	17.97	3477	2000	
Cr	52	2	72	0.010	ppb	0.010	161.06	330	5000	
Mn	55	2	72	0.058	ppb	0.058	68.27	83	10000	
Fe	57	2	72	20.324	ppb	20.324	22.08	653	400000	
Co	59	2	72	0.003	ppb	0.003	283.86	33	2000	
Ni	60	2	72	0.050	ppb	0.050	53.13	197	5000	
Cu	63	2	72	-0.007	ppb	-0.007	-1659.00	1503	5000	
Zn	66	2	72	9.238	ppb	9.238	12.06	2867	5000	
As	75	2	72	0.004	ppb	0.004	377.44	31	2000	
Se	78	1	72	0.027	ppb	0.027	173.95	19	2000	
Sr	88	2	72	0.026	ppb	0.026	252.32	50	4000	
Zr	90	2	72	0.810	ppb	0.810	251.02	93	1000	
Nb	93	2	72	1.585	ppb	1.585	9.22	10044	200	
Mo	95	2	115	1.622	ppb	1.622	13.92	1483	2000	
Pd	105	2	115	0.027	ppb	0.027	104.15	83	100	
Ag	107	2	115	0.008	ppb	0.008	126.15	103	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	-0.012	ppb	-0.012	-415.97	170	2000	
Sb	121	2	115	0.020	ppb	0.020	101.01	70	1000	
Ba	137	2	115	0.032	ppb	0.032	255.33	30	5000	
W	182	2	165	0.040	ppb	0.040	136.20	1297	100	
Pt	195	2	165	0.028	ppb	0.028	48.89	130	100	
Tl	205	2	165	0.026	ppb	0.026	12.28	343	2000	
Pb	208	2	165	0.012	ppb	0.012	71.78	1373	5000	
Th	232	2	165	0.045	ppb	0.045	17.23	1050	2000	
U	238	2	165	0.038	ppb	0.038	12.30	717	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	812080	0.51	821388	98.87	60	120	
Sc (IS)	45	1	HMI H2	27117701	0.49	28135324	96.38	60	120	
Sc (IS)	45	2	HMI He	989042	3.17	1028528	96.16	60	120	
Sc (IS)	45	3	No Gas	41769467	0.56	44911069	93.00	60	120	
Ge Internal Standard	72	1	HMI H2	10643594	0.20	10990003	96.85	60	120	
Ge Internal Standard	72	2	HMI He	1106909	2.52	1134301	97.59	60	120	
In Internal Standard	115	2	HMI He	3489007	2.69	3548151	98.33	60	120	
Ho-165	165	2	HMI He	16839523	2.64	17324298	97.20	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-5347646
Data File Name	025_LR.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T13:45:03-07:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	1898.672	ppb	0.461	694211	2000	94.9	90	110	
V	51	2	72	2031.035	ppb	2.797	2074894	2000	101.6	90	110	
Cr	52	2	72	4804.231	ppb	1.667	6415867	5000	96.1	90	110	
(Cr)	53	2	72	4658.742	ppb	0.970	793018	5000	93.2	90	110	
Mn	55	2	72	9779.247	ppb	0.765	5114512	10000	97.8	90	110	
Co	59	2	72	1968.205	ppb	0.492	4535040	2000	98.4	90	110	
Ni	60	2	72	4939.002	ppb	0.949	3238429	5000	98.8	90	110	
Cu	63	2	72	4648.444	ppb	0.519	8495454	5000	93.0	90	110	
Zn	66	2	72	4542.228	ppb	1.354	1195303	5000	90.8	90	110	
As	75	2	72	1869.844	ppb	1.128	304488	2000	93.5	90	110	
Se	78	1	72	1960.407	ppb	0.810	480066	2000	98.0	90	110	
(Se)	82	1	72	1780.790	ppb	0.255	199904	2000	89.0	90	110	LRS Main CR1 Failed
Mo	95	2	115	1917.804	ppb	1.878	1633509	2000	95.9	90	110	
Cd	111	2	115	1935.691	ppb	2.142	743385	2000	96.8	90	110	
(Cd)	114	2	115	1982.975	ppb	1.789	1971316	2000	99.1	90	110	
Sn	120	2	115	2019.148	ppb	2.544	2022586	2000	101.0	90	110	
Sb	121	2	115	991.928	ppb	2.306	876025	1000	99.2	90	110	
Ba	137	2	115	5026.382	ppb	2.367	1499692	5000	100.5	90	110	
Tl	205	2	165	979.815	ppb	1.235	7411400	2000	49.0	90	110	LRS Main CR1 Failed
(Pb)	206	2	165	4854.785	ppb	1.528	11839725	5000	97.1	90	110	
(Pb)	207	2	165	4831.578	ppb	0.783	10909677	5000	96.6	90	110	
Pb	208	2	165	4889.989	ppb	1.159	49276071	5000	97.8	90	110	
Th	232	2	165	1029.688	ppb	1.177	12260506	2000	51.5	90	110	LRS Main CR1 Failed
U	238	2	165	2077.261	ppb	0.985	27059161	2000	103.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	801725	0.66	821388	97.61	60	120	
Sc (IS)	45	1	HMI H2	25913606	0.62	28135324	92.10	60	120	
Sc (IS)	45	2	HMI He	983921	1.55	1028528	95.66	60	120	
Sc (IS)	45	3	No Gas	39816710	0.15	44911069	88.66	60	120	
Ge Internal Standard	72	1	HMI H2	10017648	0.29	10990003	91.15	60	120	
Ge Internal Standard	72	2	HMI He	1069163	0.65	1134301	94.26	60	120	
In Internal Standard	115	2	HMI He	3330009	1.82	3548151	93.85	60	120	
Ho-165	165	2	HMI He	16269166	1.03	17324298	93.91	60	120	

Sample Report

Sample Table

Sample Name	RINSE
Data File Name	026SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T13:48:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-2.602	ppb	-2.602	-94.79	121565	500000	
Li	7	2	45	-18.133	ppb	-18.133	-175.74	5691	500000	
Li	7	3	45	4.265	ppb	4.265	20.06	3874314	50000	
Be	9	1	6	0.452	ppb	0.452	34.17	183	2000	
B	11	1	6	0.064	ppb	0.064	202.72	397	2000	
Na	23	1	45	-12.343	ppb	-12.343	-9.14	153554	2000	
Na	23	2	45	-13.159	ppb	-13.159	-9.15	11315	400000	
Mg	24	2	45	0.039	ppb	0.039	931.87	157	400000	
Al	27	2	45	1.485	ppb	1.485	198.98	170	400000	
K	39	1	45	-41.202	ppb	-41.202	-31.14	9744012	400000	
K	39	2	45	-5.334	ppb	-5.334	-311.81	15646	400000	
Ca	40	1	45	0.623	ppb	0.623	28.67	46922	400000	
Ca	44	2	45	6.271	ppb	6.271	276.55	53	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.662	ppb	0.662	43.69	3124	2000	
Cr	52	2	72	0.406	ppb	0.406	18.86	850	5000	
Mn	55	2	72	0.977	ppb	0.977	9.55	563	10000	
Fe	57	2	72	1.192	ppb	1.192	119.82	150	400000	
Co	59	2	72	0.178	ppb	0.178	14.18	437	2000	
Ni	60	2	72	0.343	ppb	0.343	44.88	383	5000	
Cu	63	2	72	0.322	ppb	0.322	47.32	2064	5000	
Zn	66	2	72	0.364	ppb	0.364	65.30	440	5000	
As	75	2	72	0.238	ppb	0.238	49.12	69	2000	
Se	78	1	72	0.541	ppb	0.541	16.96	147	2000	
Sr	88	2	72	-0.057	ppb	-0.057	-18.39	3	4000	
Zr	90	2	72	-1.423	ppb	-1.423	-75.08	67	1000	
Nb	93	2	72	-0.757	ppb	-0.757	-2.55	2520	200	
Mo	95	2	115	3.397	ppb	3.397	10.12	2964	2000	
Pd	105	2	115	-0.013	ppb	-0.013	-86.05	27	100	
Ag	107	2	115	-0.008	ppb	-0.008	-175.33	53	100	
Cd	111	2	115	0.232	ppb	0.232	29.42	90	2000	
Sn	120	2	115	4.401	ppb	4.401	5.64	4634	2000	
Sb	121	2	115	4.820	ppb	4.820	3.38	4354	1000	
Ba	137	2	115	0.424	ppb	0.424	46.35	147	5000	
W	182	2	165	-0.009	ppb	-0.009	-346.76	1080	100	
Pt	195	2	165	0.009	ppb	0.009	64.95	63	100	
Tl	205	2	165	0.174	ppb	0.174	21.40	1483	2000	
Pb	208	2	165	0.531	ppb	0.531	8.43	6704	5000	
Th	232	2	165	0.654	ppb	0.654	5.66	8450	2000	
U	238	2	165	1.221	ppb	1.221	4.11	16455	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	822894	0.38	821388	100.18	60	120	
Sc (IS)	45	1	HMI H2	26662973	0.94	28135324	94.77	60	120	
Sc (IS)	45	2	HMI He	978849	0.88	1028528	95.17	60	120	
Sc (IS)	45	3	No Gas	43116643	0.12	44911069	96.00	60	120	
Ge Internal Standard	72	1	HMI H2	10248094	1.12	10990003	93.25	60	120	
Ge Internal Standard	72	2	HMI He	1073273	0.43	1134301	94.62	60	120	
In Internal Standard	115	2	HMI He	3366435	0.56	3548151	94.88	60	120	
Ho-165	165	2	HMI He	16628963	0.80	17324298	95.99	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	027_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T13:52:35-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	481.213	ppb	1.677	280525	500	96.2	90	110	
Li	7	2	45	503.187	ppb	4.266	13920	500	100.6	90	110	
Li	7	3	45	496.219	ppb	2.030	8666752	500	99.2	90	110	
Be	9	1	6	49.877	ppb	3.657	18475	50	99.8	90	110	
B	11	1	6	48.548	ppb	1.000	20084	50	97.1	90	110	
Na	23	1	45	4872.655	ppb	1.872	16808485	5000	97.5	90	110	
Na	23	2	45	5121.416	ppb	0.887	1226950	5000	102.4	90	110	
Mg	24	2	45	4992.759	ppb	0.826	543962	5000	99.9	90	110	
Al	27	2	45	5030.800	ppb	1.254	144789	5000	100.6	90	110	
K	39	1	45	4850.695	ppb	1.285	25625925	5000	97.0	90	110	
K	39	2	45	5055.924	ppb	1.674	285118	5000	101.1	90	110	
Ca	40	1	45	4919.857	ppb	0.742	24326694	5000	98.4	90	110	
Ca	44	2	45	4937.889	ppb	1.718	14798	5000	98.8	90	110	
Ti	47	2	45	50.572	ppb	7.877	1293	50	101.1	90	110	
V	51	2	72	50.615	ppb	2.285	54633	50	101.2	90	110	
Cr	52	2	72	50.903	ppb	1.148	68977	50	101.8	90	110	
Mn	55	2	72	50.158	ppb	1.151	26552	50	100.3	90	110	
Fe	57	2	72	4979.670	ppb	1.024	127111	5000	99.6	90	110	
Co	59	2	72	51.041	ppb	1.227	118829	50	102.1	90	110	
Ni	60	2	72	51.968	ppb	2.614	34579	50	103.9	90	110	
Cu	63	2	72	50.414	ppb	1.621	94541	50	100.8	90	110	
Zn	66	2	72	47.958	ppb	5.836	13096	50	95.9	90	110	
As	75	2	72	50.857	ppb	1.409	8395	50	101.7	90	110	
Se	78	1	72	51.041	ppb	4.484	12903	50	102.1	90	110	
Sr	88	2	72	49.535	ppb	1.470	27307	50	99.1	90	110	
Zr	90	2	72	37.094	ppb	25.607	487	50	74.2	90	110	>+\-10%
Nb	93	2	72	87.435	ppb	2.106	275775	100	87.4	90	110	>+\-10%
Mo	95	2	115	49.403	ppb	1.568	42461	50	98.8	90	110	
Pd	105	2	115	50.447	ppb	1.336	67912	50	100.9	90	110	
Ag	107	2	115	49.956	ppb	0.987	145606	50	99.9	90	110	
Cd	111	2	115	50.240	ppb	4.210	19451	50	100.5	90	110	
Sn	120	2	115	50.388	ppb	1.614	51072	50	100.8	90	110	
Sb	121	2	115	51.517	ppb	4.497	45930	50	103.0	90	110	
Ba	137	2	115	51.134	ppb	1.110	15403	50	102.3	90	110	
W	182	2	165	49.225	ppb	0.741	204957	50	98.5	90	110	
Pt	195	2	165	49.144	ppb	0.720	171784	50	98.3	90	110	
Tl	205	2	165	50.914	ppb	0.216	394935	50	101.8	90	110	
Pb	208	2	165	50.878	ppb	0.568	526799	50	101.8	90	110	
Th	232	2	165	51.703	ppb	0.510	631565	50	103.4	90	110	
U	238	2	165	50.191	ppb	0.712	670430	50	100.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	811617	0.19	821388	98.81	60	120	
Sc (IS)	45	1	HMI H2	26834361	0.38	28135324	95.38	60	120	
Sc (IS)	45	2	HMI He	975930	1.33	1028528	94.89	60	120	
Sc (IS)	45	3	No Gas	42158283	0.63	44911069	93.87	60	120	
Ge Internal Standard	72	1	HMI H2	10333982	0.34	10990003	94.03	60	120	
Ge Internal Standard	72	2	HMI He	1080102	0.89	1134301	95.22	60	120	
In Internal Standard	115	2	HMI He	3356887	0.73	3548151	94.61	60	120	
Ho-165	165	2	HMI He	16676804	0.20	17324298	96.26	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	028_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T13:56:21-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-0.817	ppb	-320.2	3847593	10	
Be	9	1	6	0.081	ppb	26.4	43	0.5	
B	11	1	6	1.452	ppb	4.0	963	0.5	>RL
Na	23	1	45	-6.990	ppb	-5.8	175608	25	
Na	23	2	45	-6.843	ppb	-23.9	13053	25	
Mg	24	2	45	0.880	ppb	43.0	253	25	
Al	27	2	45	0.792	ppb	230.4	153	15	
K	39	1	45	11.639	ppb	312.8	10139074	50	
K	39	2	45	-15.547	ppb	-141.3	15375	50	
Ca	40	1	45	1.306	ppb	7.8	51414	50	
Ca	44	2	45	9.032	ppb	124.7	63	25	
Ti	47	2	45	0.513	ppb	86.6	13	0.5	>RL
V	51	2	72	0.995	ppb	19.4	3537	1	
Cr	52	2	72	0.061	ppb	77.0	397	1	
Mn	55	2	72	0.202	ppb	27.5	160	0.5	
Fe	57	2	72	1.064	ppb	91.8	150	25	
Co	59	2	72	0.040	ppb	27.0	120	0.5	
Ni	60	2	72	0.811	ppb	26.8	707	1	
Cu	63	2	72	0.049	ppb	259.0	1597	1	
Zn	66	2	72	0.391	ppb	35.5	457	5	
As	75	2	72	0.105	ppb	106.2	48	1	
Se	78	1	72	0.119	ppb	39.3	43	1	
Sr	88	2	72	-0.034	ppb	-80.4	17	0.5	
Zr	90	2	72	1.183	ppb	239.6	97	1	>RL
Nb	93	2	72	2.478	ppb	15.5	12750	2	>RL
Mo	95	2	115	0.361	ppb	35.5	357	0.5	
Pd	105	2	115	0.025	ppb	26.8	80	1	
Ag	107	2	115	0.005	ppb	70.5	93	1	
Cd	111	2	115	0.025	ppb	173.2	10	0.5	
Sn	120	2	115	0.595	ppb	24.4	797	1	
Sb	121	2	115	0.842	ppb	13.7	820	0.6	>RL
Ba	137	2	115	0.066	ppb	167.7	40	0.5	
W	182	2	165	0.099	ppb	44.5	1544	1	
Pt	195	2	165	0.014	ppb	35.2	80	1	
Tl	205	2	165	0.046	ppb	16.7	503	0.1	
Pb	208	2	165	0.112	ppb	22.9	2414	0.5	
Th	232	2	165	0.066	ppb	2.9	1300	1	
U	238	2	165	0.163	ppb	5.0	2390	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	819377	4.51	821388	99.76	60	120	
Sc (IS)	45	1	HMI H2	27268920	0.39	28135324	96.92	60	120	
Sc (IS)	45	2	HMI He	997132	1.28	1028528	96.95	60	120	
Sc (IS)	45	3	No Gas	43396198	0.28	44911069	96.63	60	120	
Ge Internal Standard	72	1	HMI H2	10645280	0.28	10990003	96.86	60	120	
Ge Internal Standard	72	2	HMI He	1095794	0.80	1134301	96.61	60	120	
In Internal Standard	115	2	HMI He	3444101	1.00	3548151	97.07	60	120	
Ho-165	165	2	HMI He	16811803	0.99	17324298	97.04	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	029LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:00:10-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	12.840	ppb	20.842	4023957	50	25.7	70	130	>+/-30%
Be	9	1	6	0.945	ppb	11.890	360	1	94.5	70	130	
Na	23	2	45	46.083	ppb	1.815	26064	50	92.2	70	130	
Mg	24	2	45	52.071	ppb	10.709	5992	50	104.1	70	130	
Al	27	2	45	37.048	ppb	15.742	1227	30	123.5	70	130	
K	39	2	45	109.650	ppb	9.533	22371	100	109.7	70	130	
Ca	44	2	45	67.584	ppb	34.091	243	50	135.2	70	130	>+/-30%
V	51	2	72	5.941	ppb	12.307	8776	5	118.8	70	130	
Cr	52	2	72	2.049	ppb	6.033	3140	2	102.4	70	130	
Mn	55	2	72	1.033	ppb	1.408	610	1	103.3	70	130	
Fe	57	2	72	47.960	ppb	4.478	1373	50	95.9	70	130	
Co	59	2	72	1.111	ppb	5.781	2670	1	111.1	70	130	
Ni	60	2	72	2.261	ppb	1.666	1694	2	113.1	70	130	
Cu	63	2	72	2.241	ppb	2.851	5745	2	112.0	70	130	
Zn	66	2	72	11.746	ppb	12.283	3544	10	117.5	70	130	
As	75	2	72	4.787	ppb	6.463	835	5	95.7	70	130	
Se	78	1	72	4.869	ppb	10.210	1273	5	97.4	70	130	
Sr	88	2	72	0.884	ppb	14.913	533	1	88.4	70	130	
Zr	90	2	72	14.309	ppb	43.676	243	0.5	2861.8	70	130	>+/-30%
Nb	93	2	72	8.519	ppb	9.097	31977	2	425.9	70	130	>+/-30%
Mo	95	2	115	2.138	ppb	6.415	1907	2	106.9	70	130	
Pd	105	2	115	0.015	ppb	214.638	67	1	1.5	70	130	>+/-30%
Ag	107	2	115	5.372	ppb	5.734	16007	5	107.4	70	130	
Cd	111	2	115	0.948	ppb	23.386	373	1	94.8	70	130	
Sn	120	2	115	10.549	ppb	3.773	11028	10	105.5	70	130	
Sb	121	2	115	2.636	ppb	8.383	2440	2	131.8	70	130	>+/-30%
Ba	137	2	115	1.309	ppb	9.819	420	1	130.9	70	130	>+/-30%
W	182	2	165	5.102	ppb	5.844	22343	1	510.2	70	130	>+/-30%
Pt	195	2	165	0.035	ppb	71.615	153	1	3.5	70	130	>+/-30%
Tl	205	2	165	1.053	ppb	11.409	8340	1	105.3	70	130	
Pb	208	2	165	1.071	ppb	6.108	12356	1	107.1	70	130	
Th	232	2	165	2.430	ppb	2.728	30283	2	121.5	70	130	
U	238	2	165	1.082	ppb	5.950	14702	1	108.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	804097	2.41	821388	97.89	60	120	
Sc (IS)	45	1	HMI H2	27221449	2.11	28135324	96.75	60	120	
Sc (IS)	45	2	HMI He	1004949	1.46	1028528	97.71	60	120	
Sc (IS)	45	3	No Gas	43797973	0.49	44911069	97.52	60	120	
Ge Internal Standard	72	1	HMI H2	10615137	1.89	10990003	96.59	60	120	
Ge Internal Standard	72	2	HMI He	1104238	0.77	1134301	97.35	60	120	
In Internal Standard	115	2	HMI He	3418087	1.16	3548151	96.33	60	120	
Ho-165	165	2	HMI He	16758906	1.97	17324298	96.74	60	120	

Blank Report

Sample Table

Sample Name	MB 280-437100/1-A
Data File Name	030_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:03:56-07:00
Sample Type	Blank
Dilution	1
Comment	437100 200.8
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-5.650	ppb	-73.77729811	132042	0.5
Li	7	2	45	8.944	ppb	148.3976133	6265	0.5
Li	7	3	45	2.714	ppb	61.49257187	3906598	10
Be	9	1	6	0.068	ppb	107.5374319	40	0.5
B	11	1	6	0.159	ppb	61.97414921	453	0.5
Na	23	1	45	-8.185	ppb	-24.76451472	183404	25
Na	23	2	45	-3.936	ppb	-128.9029892	13817	25
Mg	24	2	45	1.559	ppb	59.83897215	330	25
Al	27	2	45	5.300	ppb	47.64794406	287	15
K	39	1	45	3.026	ppb	5341.487693	10809757	50
K	39	2	45	-1.959	ppb	-763.212647	16196	50
Ca	40	1	45	8.135	ppb	8.949096999	91622	50
Ca	44	2	45	2.527	ppb	326.385378	43	25
Ti	47	2	45	0.127	ppb	173.2050808	3	0.5
V	51	2	72	0.906	ppb	14.69640009	3471	1
Cr	52	2	72	0.086	ppb	58.87262686	433	1
Mn	55	2	72	0.360	ppb	25.59516206	247	0.5
Fe	57	2	72	2.304	ppb	35.00598684	183	25
Co	59	2	72	0.009	ppb	54.89151541	47	0.5
Ni	60	2	72	0.124	ppb	67.76849073	247	1
Cu	63	2	72	0.395	ppb	20.62464316	2260	1
Zn	66	2	72	2.082	ppb	27.49085672	920	5
As	75	2	72	0.059	ppb	68.81105984	41	1
Se	78	1	72	0.058	ppb	94.38038473	28	1
Sr	88	2	72	0.020	ppb	192.1111107	47	0.5
Zr	90	2	72	1.410	ppb	115.4268364	100	1
Nb	93	2	72	-0.533	ppb	-16.42758075	3304	2
Mo	95	2	115	0.165	ppb	32.73185202	183	0.5
Pd	105	2	115	-0.016	ppb	-26.37264754	23	1
Ag	107	2	115	-0.003	ppb	-548.5103533	67	1
Cd	111	2	115	0.059	ppb	66.42648198	23	0.5
Sn	120	2	115	0.302	ppb	29.10828446	490	1
Sb	121	2	115	0.260	ppb	30.79873808	287	0.6
Ba	137	2	115	0.035	ppb	159.8437706	30	0.5
W	182	2	165	-0.022	ppb	-217.0855463	1037	1
Pt	195	2	165	0.005	ppb	56.73907239	50	1
Tl	205	2	165	0.018	ppb	42.1942179	283	0.1
Pb	208	2	165	0.103	ppb	26.01726726	2320	0.5
Th	232	2	165	0.012	ppb	37.24433332	633	1
U	238	2	165	0.035	ppb	19.55508887	667	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	859027	5.16	821388	104.58	60	120	
Sc (IS)	45	1	HMI H2	29207269	5.28	28135324	103.81	60	120	
Sc (IS)	45	2	HMI He	1001512	0.31	1028528	97.37	60	120	
Sc (IS)	45	3	No Gas	43653034	0.54	44911069	97.20	60	120	
Ge Internal Standard	72	1	HMI H2	11300959	5.36	10990003	102.83	60	120	
Ge Internal Standard	72	2	HMI He	1104208	0.71	1134301	97.35	60	120	
In Internal Standard	115	2	HMI He	3415700	1.15	3548151	96.27	60	120	
Ho-165	165	2	HMI He	16787420	0.57	17324298	96.90	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-437100/2-A
Data File Name	031_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:07:43-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	437100 200.8
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	64.889	64.889	ppb	9.426	150201	400	16.2	80	120	>+/-20%
Li	7	2	45	64.122	64.122	ppb	48.304	7229	400	16.0	80	120	>+/-20%
Li	7	3	45	67.322	67.322	ppb	6.411	4608329	400	16.8	80	120	>+/-20%
Be	9	1	6	33.203	33.203	ppb	1.940	12903	40	83.0	80	120	
Na	23	2	45	-5.306	-5.306	ppb	-19.466	13610	40	-13.3	80	120	>+/-20%
Mg	24	2	45	1.621	1.621	ppb	41.154	340	40	4.1	80	120	>+/-20%
Al	27	2	45	348.921	348.921	ppb	3.745	10521	40	872.3	80	120	>+/-20%
K	39	2	45	-0.625	-0.625	ppb	-533.460	16417	40	-1.6	80	120	>+/-20%
Ca	44	2	45	158.813	158.813	ppb	34.709	527	40	397.0	80	120	>+/-20%
V	51	2	72	35.000	35.000	ppb	1.646	39708	40	87.5	80	120	
Cr	52	2	72	34.313	34.313	ppb	0.963	48013	40	85.8	80	120	
Mn	55	2	72	34.768	34.768	ppb	0.280	18980	40	86.9	80	120	
Fe	57	2	72	340.206	340.206	ppb	3.689	9063	40	850.5	80	120	>+/-20%
Co	59	2	72	33.932	33.932	ppb	2.332	81408	40	84.8	80	120	
Ni	60	2	72	33.598	33.598	ppb	2.564	23096	40	84.0	80	120	
Cu	63	2	72	34.217	34.217	ppb	1.711	66608	40	85.5	80	120	
Zn	66	2	72	31.844	31.844	ppb	3.099	9077	40	79.6	80	120	>+/-20%
As	75	2	72	31.621	31.621	ppb	4.178	5389	40	79.1	80	120	>+/-20%
Se	78	1	72	33.115	33.115	ppb	4.240	8806	40	82.8	80	120	
Nb	93	2	72	-0.760	-0.760	ppb	-16.839	2607	40	-1.9	80	120	>+/-20%
Mo	95	2	115	32.678	32.678	ppb	1.680	28951	40	81.7	80	120	
Pd	105	2	115	-0.007	-0.007	ppb	-62.806	37	40	0.0	80	120	>+/-20%
Ag	107	2	115	35.892	35.892	ppb	0.746	107808	40	89.7	80	120	
Cd	111	2	115	33.652	33.652	ppb	5.526	13430	40	84.1	80	120	
Sn	120	2	115	33.121	33.121	ppb	2.388	34644	40	82.8	80	120	
Sb	121	2	115	35.005	35.005	ppb	3.002	32161	40	87.5	80	120	
Ba	137	2	115	33.919	33.919	ppb	6.483	10531	40	84.8	80	120	
W	182	2	165	32.981	32.981	ppb	0.522	139318	40	82.5	80	120	
Pt	195	2	165	0.005	0.005	ppb	55.842	50	40	0.0	80	120	>+/-20%
Tl	205	2	165	34.072	34.072	ppb	0.449	267459	40	85.2	80	120	
Pb	208	2	165	34.136	34.136	ppb	0.862	358034	40	85.3	80	120	
Th	232	2	165	32.832	32.832	ppb	1.214	405966	40	82.1	80	120	
U	238	2	165	32.999	32.999	ppb	0.826	446059	40	82.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	851143	0.15	821388	103.62	60	120	
Sc (IS)	45	1	HMI H2	27912080	1.41	28135324	99.21	60	120	
Sc (IS)	45	2	HMI He	1010683	0.92	1028528	98.27	60	120	
Sc (IS)	45	3	No Gas	44023441	1.69	44911069	98.02	60	120	
Ge Internal Standard	72	1	HMI H2	10862467	0.89	10990003	98.84	60	120	
Ge Internal Standard	72	2	HMI He	1112907	0.75	1134301	98.11	60	120	
In Internal Standard	115	2	HMI He	3458649	0.80	3548151	97.48	60	120	
Ho-165	165	2	HMI He	16873784	0.28	17324298	97.40	60	120	

Sample Report

Sample Table

Sample Name	280-116420-C-1-B
Data File Name	032SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:11:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437100 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	421.214	ppb	421.214	2.80	221527	500000	
Li	7	2	45	382.490	ppb	382.490	4.82	10864	500000	
Li	7	3	45	406.613	ppb	406.613	0.85	6928363	50000	
Be	9	1	6	0.034	ppb	0.034	178.28	20	2000	
B	11	1	6	2061.297	ppb	2061.297	1.70	644604	2000	
Na	23	1	45	1301860.335	ppb	1301860.335	1.12	3768830557	2000	>LDR
Na	23	2	45	1285283.901	ppb	1285283.901	2.00	275202369	400000	
Mg	24	2	45	51085.118	ppb	51085.118	2.20	5032387	400000	
Al	27	2	45	38.498	ppb	38.498	13.79	1117	400000	
K	39	1	45	14585.248	ppb	14585.248	1.29	48488489	400000	
K	39	2	45	13082.631	ppb	13082.631	2.15	644364	400000	
Ca	40	1	45	450290.814	ppb	450290.814	0.66	1887185305	400000	
Ca	44	2	45	526931.327	ppb	526931.327	2.30	1424469	400000	
Ti	47	2	45	1.442	ppb	1.442	46.13	33	4000	
V	51	2	72	6.526	ppb	6.526	3.98	7966	2000	
Cr	52	2	72	12.013	ppb	12.013	2.23	14318	5000	
Mn	55	2	72	1.112	ppb	1.112	9.31	553	10000	
Fe	57	2	72	81.875	ppb	81.875	20.55	1914	400000	
Co	59	2	72	0.049	ppb	0.049	27.05	120	2000	
Ni	60	2	72	0.596	ppb	0.596	40.20	480	5000	
Cu	63	2	72	1.595	ppb	1.595	15.32	3837	5000	
Zn	66	2	72	1.821	ppb	1.821	39.39	720	5000	
As	75	2	72	1.180	ppb	1.180	14.37	194	2000	
Se	78	1	72	37.314	ppb	37.314	3.80	7790	2000	
Sr	88	2	72	13803.363	ppb	13803.363	2.36	6588549	4000	
Zr	90	2	72	262.091	ppb	262.091	5.34	2544	1000	
Nb	93	2	72	-0.375	ppb	-0.375	-31.05	3224	200	
Mo	95	2	115	66.902	ppb	66.902	5.27	49759	2000	
Pd	105	2	115	0.233	ppb	0.233	19.93	310	100	
Ag	107	2	115	0.036	ppb	0.036	16.07	157	100	
Cd	111	2	115	0.039	ppb	0.039	113.43	13	2000	
Sn	120	2	115	0.371	ppb	0.371	13.60	477	2000	
Sb	121	2	115	0.265	ppb	0.265	43.40	247	1000	
Ba	137	2	115	19.474	ppb	19.474	5.85	5085	5000	
W	182	2	165	0.184	ppb	0.184	24.94	1627	100	
Pt	195	2	165	0.001	ppb	0.001	412.60	30	100	
Tl	205	2	165	0.041	ppb	0.041	17.00	397	2000	
Pb	208	2	165	0.394	ppb	0.394	11.31	4587	5000	
Th	232	2	165	0.222	ppb	0.222	1.47	2764	2000	
U	238	2	165	3.723	ppb	3.723	0.35	43106	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	624594	0.19	821388	76.04	60	120	
Sc (IS)	45	1	HMI H2	22786021	1.10	28135324	80.99	60	120	
Sc (IS)	45	2	HMI He	882619	1.15	1028528	85.81	60	120	
Sc (IS)	45	3	No Gas	37550924	0.15	44911069	83.61	60	120	
Ge Internal Standard	72	1	HMI H2	8528674	1.33	10990003	77.60	60	120	
Ge Internal Standard	72	2	HMI He	936424	0.52	1134301	82.56	60	120	
In Internal Standard	115	2	HMI He	2906116	2.03	3548151	81.91	60	120	
Ho-165	165	2	HMI He	14403663	0.91	17324298	83.14	60	120	

Sample Report

Sample Table

Sample Name	280-116420-C-2-D
Data File Name	033SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:15:29-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437100 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	247.201	ppb	247.201	0.99	182036	500000	
Li	7	2	45	232.949	ppb	232.949	12.01	8986	500000	
Li	7	3	45	233.144	ppb	233.144	0.56	5714363	50000	
Be	9	1	6	0.048	ppb	0.048	99.69	27	2000	
B	11	1	6	1577.620	ppb	1577.620	1.25	545473	2000	
Na	23	1	45	628527.845	ppb	628527.845	0.56	1912149465	2000	>LDR
Na	23	2	45	614818.259	ppb	614818.259	0.41	135619815	400000	
Mg	24	2	45	12534.464	ppb	12534.464	1.16	1272003	400000	
Al	27	2	45	93.904	ppb	93.904	7.94	2634	400000	
K	39	1	45	7998.403	ppb	7998.403	0.52	31946415	400000	
K	39	2	45	7187.064	ppb	7187.064	0.15	371328	400000	
Ca	40	1	45	167408.234	ppb	167408.234	0.55	737285242	400000	
Ca	44	2	45	177532.069	ppb	177532.069	0.85	494426	400000	
Ti	47	2	45	5.038	ppb	5.038	16.54	120	4000	
V	51	2	72	14.713	ppb	14.713	1.82	15949	2000	
Cr	52	2	72	5.964	ppb	5.964	2.43	7559	5000	
Mn	55	2	72	2.028	ppb	2.028	16.00	1017	10000	
Fe	57	2	72	91.184	ppb	91.184	4.28	2214	400000	
Co	59	2	72	0.060	ppb	0.060	27.25	150	2000	
Ni	60	2	72	0.528	ppb	0.528	4.58	460	5000	
Cu	63	2	72	0.738	ppb	0.738	23.43	2577	5000	
Zn	66	2	72	3.243	ppb	3.243	8.43	1093	5000	
As	75	2	72	16.907	ppb	16.907	6.33	2545	2000	
Se	78	1	72	2.502	ppb	2.502	10.26	561	2000	
Sr	88	2	72	4002.863	ppb	4002.863	1.40	1994435	4000	
Zr	90	2	72	70.626	ppb	70.626	8.78	770	1000	
Nb	93	2	72	-0.335	ppb	-0.335	-20.17	3481	200	
Mo	95	2	115	109.846	ppb	109.846	1.67	84763	2000	
Pd	105	2	115	0.055	ppb	0.055	97.84	107	100	
Ag	107	2	115	0.025	ppb	0.025	89.25	133	100	
Cd	111	2	115	0.010	ppb	0.010	173.21	3	2000	
Sn	120	2	115	0.097	ppb	0.097	100.02	247	2000	
Sb	121	2	115	0.236	ppb	0.236	8.60	233	1000	
Ba	137	2	115	14.754	ppb	14.754	5.39	4004	5000	
W	182	2	165	0.368	ppb	0.368	5.43	2407	100	
Pt	195	2	165	-0.003	ppb	-0.003	-194.66	20	100	
Tl	205	2	165	0.013	ppb	0.013	98.85	220	2000	
Pb	208	2	165	0.136	ppb	0.136	13.88	2404	5000	
Th	232	2	165	0.139	ppb	0.139	3.78	1994	2000	
U	238	2	165	1.972	ppb	1.972	1.02	24147	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	690485	0.86	821388	84.06	60	120	
Sc (IS)	45	1	HMI H2	23942396	0.69	28135324	85.10	60	120	
Sc (IS)	45	2	HMI He	909120	0.46	1028528	88.39	60	120	
Sc (IS)	45	3	No Gas	39766098	0.35	44911069	88.54	60	120	
Ge Internal Standard	72	1	HMI H2	9023312	0.79	10990003	82.10	60	120	
Ge Internal Standard	72	2	HMI He	977366	0.98	1134301	86.16	60	120	
In Internal Standard	115	2	HMI He	3015065	0.47	3548151	84.98	60	120	
Ho-165	165	2	HMI He	15179605	1.04	17324298	87.62	60	120	

Sample Report

Sample Table

Sample Name	280-116420-C-3-B
Data File Name	034SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:19:20-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437100 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	278.282	ppb	278.282	3.77	188245	500000	
Li	7	2	45	251.067	ppb	251.067	15.60	9207	500000	
Li	7	3	45	248.319	ppb	248.319	0.56	5753027	50000	
Be	9	1	6	0.051	ppb	0.051	39.51	27	2000	
B	11	1	6	1748.825	ppb	1748.825	3.26	592196	2000	
Na	23	1	45	717487.242	ppb	717487.242	2.58	2149650315	2000	>LDR
Na	23	2	45	693329.237	ppb	693329.237	0.43	152087151	400000	
Mg	24	2	45	14289.274	ppb	14289.274	0.77	1441982	400000	
Al	27	2	45	433.882	ppb	433.882	5.72	11672	400000	
K	39	1	45	7987.047	ppb	7987.047	2.34	31432506	400000	
K	39	2	45	7217.496	ppb	7217.496	0.58	370765	400000	
Ca	40	1	45	140228.847	ppb	140228.847	2.91	608203031	400000	
Ca	44	2	45	146673.063	ppb	146673.063	0.48	406236	400000	
Ti	47	2	45	14.213	ppb	14.213	11.84	337	4000	
V	51	2	72	26.889	ppb	26.889	2.38	27310	2000	
Cr	52	2	72	7.628	ppb	7.628	2.78	9590	5000	
Mn	55	2	72	4.505	ppb	4.505	7.24	2200	10000	
Fe	57	2	72	276.540	ppb	276.540	6.94	6492	400000	
Co	59	2	72	0.151	ppb	0.151	6.01	340	2000	
Ni	60	2	72	2.809	ppb	2.809	11.91	1827	5000	
Cu	63	2	72	1.119	ppb	1.119	6.61	3211	5000	
Zn	66	2	72	4.339	ppb	4.339	19.17	1357	5000	
As	75	2	72	21.446	ppb	21.446	1.30	3219	2000	
Se	78	1	72	2.496	ppb	2.496	5.36	556	2000	
Sr	88	2	72	3170.377	ppb	3170.377	2.27	1579654	4000	
Zr	90	2	72	80.769	ppb	80.769	12.02	870	1000	
Nb	93	2	72	-0.480	ppb	-0.480	-2.87	3074	200	
Mo	95	2	115	115.610	ppb	115.610	2.24	89723	2000	
Pd	105	2	115	0.035	ppb	0.035	113.87	83	100	
Ag	107	2	115	0.008	ppb	0.008	372.88	90	100	
Cd	111	2	115	0.038	ppb	0.038	114.14	13	2000	
Sn	120	2	115	0.275	ppb	0.275	3.18	410	2000	
Sb	121	2	115	0.159	ppb	0.159	23.99	173	1000	
Ba	137	2	115	17.926	ppb	17.926	6.22	4888	5000	
W	182	2	165	12.005	ppb	12.005	1.26	46141	100	
Pt	195	2	165	-0.004	ppb	-0.004	-93.74	17	100	
Tl	205	2	165	0.010	ppb	0.010	100.75	200	2000	
Pb	208	2	165	0.192	ppb	0.192	7.07	2927	5000	
Th	232	2	165	0.164	ppb	0.164	7.70	2260	2000	
U	238	2	165	2.315	ppb	2.315	2.18	28239	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	676552	1.78	821388	82.37	60	120	
Sc (IS)	45	1	HMI H2	23584555	1.21	28135324	83.83	60	120	
Sc (IS)	45	2	HMI He	904085	1.13	1028528	87.90	60	120	
Sc (IS)	45	3	No Gas	39065128	1.34	44911069	86.98	60	120	
Ge Internal Standard	72	1	HMI H2	8954534	0.34	10990003	81.48	60	120	
Ge Internal Standard	72	2	HMI He	977361	0.58	1134301	86.16	60	120	
In Internal Standard	115	2	HMI He	3032463	0.64	3548151	85.47	60	120	
Ho-165	165	2	HMI He	15137781	0.33	17324298	87.38	60	120	

Sample Report

Sample Table

Sample Name	280-116420-C-3-C MS
Data File Name	035SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:23:11-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437100 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	309.298	ppb	309.298	4.12	202635	500000	
Li	7	2	45	300.420	ppb	300.420	8.99	10050	500000	
Li	7	3	45	275.501	ppb	275.501	1.02	6189265	50000	
Be	9	1	6	33.220	ppb	33.220	3.47	10474	2000	
B	11	1	6	1631.269	ppb	1631.269	2.23	564031	2000	
Na	23	1	45	644125.621	ppb	644125.621	0.17	1983899064	2000	>LDR
Na	23	2	45	637881.018	ppb	637881.018	1.01	141631725	400000	
Mg	24	2	45	13165.602	ppb	13165.602	1.03	1344835	400000	
Al	27	2	45	716.879	ppb	716.879	4.32	19454	400000	
K	39	1	45	7223.158	ppb	7223.158	0.22	30079034	400000	
K	39	2	45	6614.447	ppb	6614.447	0.68	345219	400000	
Ca	40	1	45	126161.431	ppb	126161.431	0.29	562529685	400000	
Ca	44	2	45	135413.388	ppb	135413.388	1.02	379617	400000	
Ti	47	2	45	13.371	ppb	13.371	20.43	320	4000	
V	51	2	72	54.996	ppb	54.996	1.92	54325	2000	
Cr	52	2	72	38.358	ppb	38.358	1.41	47813	5000	
Mn	55	2	72	35.388	ppb	35.388	3.09	17221	10000	
Fe	57	2	72	556.005	ppb	556.005	2.27	13133	400000	
Co	59	2	72	30.979	ppb	30.979	0.89	66259	2000	
Ni	60	2	72	32.644	ppb	32.644	2.95	20001	5000	
Cu	63	2	72	31.150	ppb	31.150	2.02	54189	5000	
Zn	66	2	72	31.210	ppb	31.210	3.95	7939	5000	
As	75	2	72	50.033	ppb	50.033	1.36	7586	2000	
Se	78	1	72	31.823	ppb	31.823	5.86	7147	2000	
Sr	88	2	72	2955.933	ppb	2955.933	1.04	1495043	4000	
Zr	90	2	72	4203.910	ppb	4203.910	2.57	42080	1000	
Nb	93	2	72	-0.637	ppb	-0.637	-20.90	2674	200	
Mo	95	2	115	141.678	ppb	141.678	1.59	109924	2000	
Pd	105	2	115	0.019	ppb	0.019	105.61	63	100	
Ag	107	2	115	30.566	ppb	30.566	3.15	80460	100	
Cd	111	2	115	30.402	ppb	30.402	1.35	10631	2000	
Sn	120	2	115	31.227	ppb	31.227	3.84	28630	2000	
Sb	121	2	115	34.068	ppb	34.068	2.45	27448	1000	
Ba	137	2	115	48.155	ppb	48.155	3.52	13103	5000	
W	182	2	165	41.369	ppb	41.369	0.11	158453	100	
Pt	195	2	165	-0.002	ppb	-0.002	-420.62	23	100	
Tl	205	2	165	29.523	ppb	29.523	0.74	210502	2000	
Pb	208	2	165	29.767	ppb	29.767	1.21	283710	5000	
Th	232	2	165	30.726	ppb	30.726	1.11	345101	2000	
U	238	2	165	32.517	ppb	32.517	1.26	399216	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	690645	1.26	821388	84.08	60	120	
Sc (IS)	45	1	HMI H2	24239981	0.34	28135324	86.15	60	120	
Sc (IS)	45	2	HMI He	915167	1.32	1028528	88.98	60	120	
Sc (IS)	45	3	No Gas	40278606	0.54	44911069	89.69	60	120	
Ge Internal Standard	72	1	HMI H2	9173664	0.40	10990003	83.47	60	120	
Ge Internal Standard	72	2	HMI He	992108	1.41	1134301	87.46	60	120	
In Internal Standard	115	2	HMI He	3031745	1.79	3548151	85.45	60	120	
Ho-165	165	2	HMI He	15325165	0.34	17324298	88.46	60	120	

Sample Report

Sample Table

Sample Name	280-116420-C-3-D MSD
Data File Name	036SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:27:03-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437100 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	315.914	ppb	315.914	2.02	206532	500000	
Li	7	2	45	282.866	ppb	282.866	10.72	9864	500000	
Li	7	3	45	284.208	ppb	284.208	2.43	6189360	50000	
Be	9	1	6	33.334	ppb	33.334	1.60	10668	2000	
B	11	1	6	1652.074	ppb	1652.074	1.85	579859	2000	
Na	23	1	45	657287.051	ppb	657287.051	1.37	2043643330	2000	>LDR
Na	23	2	45	639763.245	ppb	639763.245	1.06	143184325	400000	
Mg	24	2	45	13113.801	ppb	13113.801	0.78	1350283	400000	
Al	27	2	45	774.374	ppb	774.374	5.26	21163	400000	
K	39	1	45	7184.872	ppb	7184.872	1.63	30252201	400000	
K	39	2	45	6650.395	ppb	6650.395	1.42	349740	400000	
Ca	40	1	45	127989.626	ppb	127989.626	1.02	576107071	400000	
Ca	44	2	45	134705.838	ppb	134705.838	2.11	380619	400000	
Ti	47	2	45	11.580	ppb	11.580	11.61	280	4000	
V	51	2	72	56.865	ppb	56.865	1.72	56273	2000	
Cr	52	2	72	38.492	ppb	38.492	1.18	48130	5000	
Mn	55	2	72	35.349	ppb	35.349	2.45	17254	10000	
Fe	57	2	72	574.649	ppb	574.649	4.53	13614	400000	
Co	59	2	72	31.423	ppb	31.423	0.98	67411	2000	
Ni	60	2	72	33.476	ppb	33.476	0.63	20576	5000	
Cu	63	2	72	30.997	ppb	30.997	1.83	54082	5000	
Zn	66	2	72	32.421	ppb	32.421	9.10	8253	5000	
As	75	2	72	50.112	ppb	50.112	2.62	7621	2000	
Se	78	1	72	33.768	ppb	33.768	0.81	7603	2000	
Sr	88	2	72	2993.046	ppb	2993.046	1.47	1518182	4000	
Zr	90	2	72	4383.149	ppb	4383.149	1.86	44016	1000	
Nb	93	2	72	-0.865	ppb	-0.865	-10.48	2030	200	
Mo	95	2	115	140.342	ppb	140.342	1.47	109014	2000	
Pd	105	2	115	0.044	ppb	0.044	97.52	93	100	
Ag	107	2	115	31.067	ppb	31.067	3.64	81893	100	
Cd	111	2	115	29.769	ppb	29.769	1.17	10424	2000	
Sn	120	2	115	30.873	ppb	30.873	3.54	28353	2000	
Sb	121	2	115	33.559	ppb	33.559	1.52	27067	1000	
Ba	137	2	115	49.284	ppb	49.284	5.50	13431	5000	
W	182	2	165	42.599	ppb	42.599	0.38	162286	100	
Pt	195	2	165	0.000	ppb	0.000	2057.62	30	100	
Tl	205	2	165	30.253	ppb	30.253	0.78	214583	2000	
Pb	208	2	165	30.540	ppb	30.540	1.60	289526	5000	
Th	232	2	165	31.701	ppb	31.701	0.73	354172	2000	
U	238	2	165	33.399	ppb	33.399	0.79	407901	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	701028	0.86	821388	85.35	60	120	
Sc (IS)	45	1	HMI H2	24471117	0.60	28135324	86.98	60	120	
Sc (IS)	45	2	HMI He	922466	0.89	1028528	89.69	60	120	
Sc (IS)	45	3	No Gas	39751127	1.16	44911069	88.51	60	120	
Ge Internal Standard	72	1	HMI H2	9199564	0.46	10990003	83.71	60	120	
Ge Internal Standard	72	2	HMI He	995155	1.16	1134301	87.73	60	120	
In Internal Standard	115	2	HMI He	3035686	1.17	3548151	85.56	60	120	
Ho-165	165	2	HMI He	15245754	0.44	17324298	88.00	60	120	

Sample Report

Sample Table

Sample Name	280-116531-E-1-A
Data File Name	037SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:30:55-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437100 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	11.581	ppb	11.581	37.14	120059	500000	
Li	7	2	45	0.991	ppb	0.991	1901.36	5675	500000	
Li	7	3	45	-7.519	ppb	-7.519	-24.83	3590460	50000	
Be	9	1	6	0.011	ppb	0.011	290.10	17	2000	
B	11	1	6	684.218	ppb	684.218	0.72	264441	2000	
Na	23	1	45	135850.713	ppb	135850.713	0.34	438100047	2000	>LDR
Na	23	2	45	137612.452	ppb	137612.452	3.60	30942391	400000	
Mg	24	2	45	13060.845	ppb	13060.845	4.91	1350644	400000	
Al	27	2	45	9.163	ppb	9.163	36.43	370	400000	
K	39	1	45	7827.915	ppb	7827.915	0.94	33332473	400000	
K	39	2	45	8220.931	ppb	8220.931	3.37	430688	400000	
Ca	40	1	45	14488.161	ppb	14488.161	0.78	67651686	400000	
Ca	44	2	45	15462.582	ppb	15462.582	2.24	43917	400000	
Ti	47	2	45	0.135	ppb	0.135	173.21	3	4000	
V	51	2	72	0.543	ppb	0.543	25.75	2864	2000	
Cr	52	2	72	0.061	ppb	0.061	128.31	370	5000	
Mn	55	2	72	293.991	ppb	293.991	3.90	147265	10000	
Fe	57	2	72	22.555	ppb	22.555	11.70	660	400000	
Co	59	2	72	0.811	ppb	0.811	5.47	1814	2000	
Ni	60	2	72	3.628	ppb	3.628	7.36	2427	5000	
Cu	63	2	72	0.464	ppb	0.464	22.45	2217	5000	
Zn	66	2	72	1.847	ppb	1.847	13.33	793	5000	
As	75	2	72	0.028	ppb	0.028	40.70	33	2000	
Se	78	1	72	0.116	ppb	0.116	45.44	39	2000	
Sr	88	2	72	202.191	ppb	202.191	4.30	105540	4000	
Zr	90	2	72	26.412	ppb	26.412	33.56	350	1000	
Nb	93	2	72	-1.188	ppb	-1.188	-6.93	1137	200	
Mo	95	2	115	4.697	ppb	4.697	7.77	3827	2000	
Pd	105	2	115	-0.017	ppb	-0.017	-47.02	20	100	
Ag	107	2	115	0.008	ppb	0.008	17.44	93	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.144	ppb	0.144	20.79	303	2000	
Sb	121	2	115	0.122	ppb	0.122	72.74	150	1000	
Ba	137	2	115	6.564	ppb	6.564	10.06	1874	5000	
W	182	2	165	0.194	ppb	0.194	20.92	1794	100	
Pt	195	2	165	0.003	ppb	0.003	384.68	40	100	
Tl	205	2	165	0.028	ppb	0.028	63.25	333	2000	
Pb	208	2	165	0.022	ppb	0.022	55.59	1367	5000	
Th	232	2	165	0.065	ppb	0.065	20.63	1200	2000	
U	238	2	165	0.052	ppb	0.052	11.16	833	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	771274	0.37	821388	93.90	60	120	
Sc (IS)	45	1	HMI H2	25371824	0.56	28135324	90.18	60	120	
Sc (IS)	45	2	HMI He	926730	1.60	1028528	90.10	60	120	
Sc (IS)	45	3	No Gas	41229307	0.67	44911069	91.80	60	120	
Ge Internal Standard	72	1	HMI H2	9807402	0.58	10990003	89.24	60	120	
Ge Internal Standard	72	2	HMI He	1024056	1.52	1134301	90.28	60	120	
In Internal Standard	115	2	HMI He	3158005	2.17	3548151	89.00	60	120	
Ho-165	165	2	HMI He	15564938	1.72	17324298	89.84	60	120	

Sample Report

Sample Table

Sample Name	280-116606-A-1-D
Data File Name	038SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:34:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437100 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.821	ppb	4.821	13.79	120707	500000	
Li	7	2	45	-18.881	ppb	-18.881	-111.33	5661	500000	
Li	7	3	45	-10.766	ppb	-10.766	-11.06	3573226	50000	
Be	9	1	6	-0.027	ppb	-0.027	-61.86	3	2000	
B	11	1	6	216.812	ppb	216.812	2.55	84437	2000	
Na	23	1	45	97843.411	ppb	97843.411	1.30	322878509	2000	>LDR
Na	23	2	45	95272.709	ppb	95272.709	1.16	22566921	400000	
Mg	24	2	45	18232.286	ppb	18232.286	1.55	1985649	400000	
Al	27	2	45	22.765	ppb	22.765	27.21	780	400000	
K	39	1	45	15456.211	ppb	15456.211	0.63	57967601	400000	
K	39	2	45	15539.213	ppb	15539.213	0.43	843236	400000	
Ca	40	1	45	59244.900	ppb	59244.900	0.67	282922382	400000	
Ca	44	2	45	58862.749	ppb	58862.749	0.21	175970	400000	
Ti	47	2	45	1.042	ppb	1.042	93.74	27	4000	
V	51	2	72	7.949	ppb	7.949	3.78	10458	2000	
Cr	52	2	72	0.293	ppb	0.293	15.70	690	5000	
Mn	55	2	72	13.148	ppb	13.148	6.64	6869	10000	
Fe	57	2	72	28.943	ppb	28.943	35.14	843	400000	
Co	59	2	72	0.152	ppb	0.152	29.47	373	2000	
Ni	60	2	72	1.033	ppb	1.033	25.38	827	5000	
Cu	63	2	72	1.291	ppb	1.291	21.29	3794	5000	
Zn	66	2	72	34.198	ppb	34.198	3.34	9260	5000	
As	75	2	72	3.555	ppb	3.555	1.90	603	2000	
Se	78	1	72	0.260	ppb	0.260	23.71	73	2000	
Sr	88	2	72	256.650	ppb	256.650	1.99	138721	4000	
Zr	90	2	72	62.647	ppb	62.647	7.13	750	1000	
Nb	93	2	72	-1.231	ppb	-1.231	-5.04	1050	200	
Mo	95	2	115	1.801	ppb	1.801	5.57	1557	2000	
Pd	105	2	115	-0.026	ppb	-0.026	-29.77	10	100	
Ag	107	2	115	0.017	ppb	0.017	69.84	123	100	
Cd	111	2	115	0.061	ppb	0.061	64.43	23	2000	
Sn	120	2	115	0.202	ppb	0.202	26.66	373	2000	
Sb	121	2	115	0.371	ppb	0.371	10.76	373	1000	
Ba	137	2	115	22.343	ppb	22.343	1.94	6619	5000	
W	182	2	165	0.009	ppb	0.009	345.36	1123	100	
Pt	195	2	165	0.003	ppb	0.003	223.33	40	100	
Tl	205	2	165	0.009	ppb	0.009	80.53	207	2000	
Pb	208	2	165	0.087	ppb	0.087	22.82	2084	5000	
Th	232	2	165	0.032	ppb	0.032	66.49	853	2000	
U	238	2	165	5.131	ppb	5.131	3.48	66851	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	775057	0.79	821388	94.36	60	120	
Sc (IS)	45	1	HMI H2	25959375	0.74	28135324	92.27	60	120	
Sc (IS)	45	2	HMI He	975777	1.16	1028528	94.87	60	120	
Sc (IS)	45	3	No Gas	41395017	0.64	44911069	92.17	60	120	
Ge Internal Standard	72	1	HMI H2	9839169	0.50	10990003	89.53	60	120	
Ge Internal Standard	72	2	HMI He	1060080	0.36	1134301	93.46	60	120	
In Internal Standard	115	2	HMI He	3296596	1.11	3548151	92.91	60	120	
Ho-165	165	2	HMI He	16225715	0.66	17324298	93.66	60	120	

Sample Report

Sample Table

Sample Name	280-116606-A-2-B
Data File Name	039SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:38:31-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437100 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	4.654	ppb	4.654	86.11	120986	500000	
Li	7	2	45	-0.466	ppb	-0.466	-3093.33	5988	500000	
Li	7	3	45	-9.796	ppb	-9.796	-51.36	3574346	50000	
Be	9	1	6	-0.008	ppb	-0.008	-574.90	10	2000	
B	11	1	6	65.906	ppb	65.906	1.15	26601	2000	
Na	23	1	45	10890.117	ppb	10890.117	0.35	36208157	2000	>LDR
Na	23	2	45	11015.618	ppb	11015.618	0.97	2636458	400000	
Mg	24	2	45	6050.502	ppb	6050.502	0.94	662735	400000	
Al	27	2	45	91.755	ppb	91.755	7.06	2780	400000	
K	39	1	45	2556.859	ppb	2556.859	2.15	17662528	400000	
K	39	2	45	2712.383	ppb	2712.383	0.64	161179	400000	
Ca	40	1	45	17542.846	ppb	17542.846	0.13	84039660	400000	
Ca	44	2	45	17501.481	ppb	17501.481	0.43	52632	400000	
Ti	47	2	45	8.956	ppb	8.956	30.86	230	4000	
V	51	2	72	7.970	ppb	7.970	5.19	10604	2000	
Cr	52	2	72	0.110	ppb	0.110	41.30	453	5000	
Mn	55	2	72	10.596	ppb	10.596	8.08	5611	10000	
Fe	57	2	72	171.765	ppb	171.765	4.05	4471	400000	
Co	59	2	72	0.133	ppb	0.133	8.06	333	2000	
Ni	60	2	72	0.191	ppb	0.191	68.76	283	5000	
Cu	63	2	72	0.922	ppb	0.922	13.35	3164	5000	
Zn	66	2	72	4.065	ppb	4.065	12.20	1417	5000	
As	75	2	72	0.647	ppb	0.647	19.72	135	2000	
Se	78	1	72	0.169	ppb	0.169	95.54	52	2000	
Sr	88	2	72	75.944	ppb	75.944	1.94	41565	4000	
Zr	90	2	72	32.517	ppb	32.517	23.07	433	1000	
Nb	93	2	72	-1.257	ppb	-1.257	-0.75	980	200	
Mo	95	2	115	0.732	ppb	0.732	8.70	670	2000	
Pd	105	2	115	-0.013	ppb	-0.013	-113.93	27	100	
Ag	107	2	115	-0.009	ppb	-0.009	-64.49	50	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.101	ppb	0.101	59.19	280	2000	
Sb	121	2	115	0.082	ppb	0.082	79.68	123	1000	
Ba	137	2	115	24.263	ppb	24.263	1.34	7356	5000	
W	182	2	165	0.030	ppb	0.030	145.64	1220	100	
Pt	195	2	165	0.001	ppb	0.001	2081.84	33	100	
Tl	205	2	165	-0.001	ppb	-0.001	-564.23	133	2000	
Pb	208	2	165	0.051	ppb	0.051	34.16	1730	5000	
Th	232	2	165	0.020	ppb	0.020	13.14	717	2000	
U	238	2	165	0.631	ppb	0.631	4.35	8457	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	795702	0.66	821388	96.87	60	120	
Sc (IS)	45	1	HMI H2	26032035	1.33	28135324	92.52	60	120	
Sc (IS)	45	2	HMI He	981114	0.39	1028528	95.39	60	120	
Sc (IS)	45	3	No Gas	41301429	1.29	44911069	91.96	60	120	
Ge Internal Standard	72	1	HMI H2	9975903	1.09	10990003	90.77	60	120	
Ge Internal Standard	72	2	HMI He	1072827	0.13	1134301	94.58	60	120	
In Internal Standard	115	2	HMI He	3373958	0.52	3548151	95.09	60	120	
Ho-165	165	2	HMI He	16359291	0.86	17324298	94.43	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	040_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:42:18-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	506.088	ppb	1.277	277956	500	101.2	90	110	
Li	7	2	45	514.251	ppb	8.060	14074	500	102.9	90	110	
Li	7	3	45	426.625	ppb	2.228	8330761	500	85.3	90	110	>+\-10%
Be	9	1	6	49.430	ppb	2.520	17761	50	98.9	90	110	
B	11	1	6	66.501	ppb	0.661	26558	50	133.0	90	110	>+\-10%
Na	23	1	45	5557.024	ppb	0.895	18431733	5000	111.1	90	110	>+\-10%
Na	23	2	45	5608.359	ppb	0.303	1340419	5000	112.2	90	110	>+\-10%
Mg	24	2	45	5019.792	ppb	1.486	546120	5000	100.4	90	110	
Al	27	2	45	5193.107	ppb	2.377	149243	5000	103.9	90	110	
K	39	1	45	5120.398	ppb	1.218	25514646	5000	102.4	90	110	
K	39	2	45	5055.087	ppb	0.646	284669	5000	101.1	90	110	
Ca	40	1	45	5002.646	ppb	0.955	23816824	5000	100.1	90	110	
Ca	44	2	45	4914.492	ppb	4.387	14701	5000	98.3	90	110	
Ti	47	2	45	47.019	ppb	6.511	1200	50	94.0	90	110	
V	51	2	72	51.828	ppb	1.469	54994	50	103.7	90	110	
Cr	52	2	72	50.407	ppb	0.869	67225	50	100.8	90	110	
Mn	55	2	72	51.069	ppb	0.595	26602	50	102.1	90	110	
Fe	57	2	72	4929.111	ppb	2.185	123810	5000	98.6	90	110	
Co	59	2	72	49.438	ppb	0.755	113266	50	98.9	90	110	
Ni	60	2	72	50.162	ppb	3.597	32849	50	100.3	90	110	
Cu	63	2	72	49.617	ppb	1.264	91589	50	99.2	90	110	
Zn	66	2	72	45.849	ppb	5.553	12329	50	91.7	90	110	
As	75	2	72	48.486	ppb	4.180	7879	50	97.0	90	110	
Se	78	1	72	48.188	ppb	0.578	11601	50	96.4	90	110	
Sr	88	2	72	52.204	ppb	2.649	28316	50	104.4	90	110	
Zr	90	2	72	158.083	ppb	7.003	1774	50	316.2	90	110	>+\-10%
Nb	93	2	72	83.230	ppb	1.013	258582	100	83.2	90	110	>+\-10%
Mo	95	2	115	47.564	ppb	0.805	40659	50	95.1	90	110	
Pd	105	2	115	49.059	ppb	0.311	65678	50	98.1	90	110	
Ag	107	2	115	47.880	ppb	1.160	138802	50	95.8	90	110	
Cd	111	2	115	48.330	ppb	2.135	18613	50	96.7	90	110	
Sn	120	2	115	48.247	ppb	2.487	48640	50	96.5	90	110	
Sb	121	2	115	49.320	ppb	1.478	43723	50	98.6	90	110	
Ba	137	2	115	50.601	ppb	1.924	15159	50	101.2	90	110	
W	182	2	165	48.651	ppb	0.634	198102	50	97.3	90	110	
Pt	195	2	165	47.685	ppb	0.539	163012	50	95.4	90	110	
Tl	205	2	165	49.964	ppb	1.462	378975	50	99.9	90	110	
Pb	208	2	165	50.042	ppb	1.047	506700	50	100.1	90	110	
Th	232	2	165	49.984	ppb	1.874	597067	50	100.0	90	110	
U	238	2	165	49.353	ppb	1.632	644622	50	98.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	787370	0.46	821388	95.86	60	120	
Sc (IS)	45	1	HMI H2	25838797	0.78	28135324	91.84	60	120	
Sc (IS)	45	2	HMI He	974546	0.97	1028528	94.75	60	120	
Sc (IS)	45	3	No Gas	44033593	1.73	44911069	98.05	60	120	
Ge Internal Standard	72	1	HMI H2	9839719	0.94	10990003	89.53	60	120	
Ge Internal Standard	72	2	HMI He	1062883	0.61	1134301	93.70	60	120	
In Internal Standard	115	2	HMI He	3338485	0.50	3548151	94.09	60	120	
Ho-165	165	2	HMI He	16308597	0.92	17324298	94.14	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	041_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:46:05-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-8.224	ppb	-8.1	3761488	10	
Be	9	1	6	-0.036	ppb	0.0	0	0.5	
B	11	1	6	13.230	ppb	10.9	5708	0.5	>RL
Na	23	1	45	306.591	ppb	2.2	1237974	25	>RL
Na	23	2	45	280.872	ppb	8.6	81584	25	>RL
Mg	24	2	45	1.155	ppb	17.9	280	25	
Al	27	2	45	1.487	ppb	193.7	170	15	
K	39	1	45	92.142	ppb	51.8	10205798	50	>RL
K	39	2	45	12.227	ppb	97.3	16700	50	
Ca	40	1	45	7.151	ppb	6.7	79197	50	
Ca	44	2	45	0.462	ppb	1035.2	37	25	
Ti	47	2	45	0.132	ppb	173.2	3	0.5	
V	51	2	72	2.145	ppb	10.7	4658	1	>RL
Cr	52	2	72	-0.050	ppb	-85.3	240	1	
Mn	55	2	72	0.056	ppb	39.9	80	0.5	
Fe	57	2	72	0.905	ppb	111.9	143	25	
Co	59	2	72	-0.001	ppb	-848.3	23	0.5	
Ni	60	2	72	0.813	ppb	13.9	697	1	
Cu	63	2	72	0.182	ppb	41.9	1814	1	
Zn	66	2	72	0.487	ppb	52.9	473	5	
As	75	2	72	0.010	ppb	446.9	31	1	
Se	78	1	72	0.072	ppb	67.7	29	1	
Sr	88	2	72	0.094	ppb	49.6	87	0.5	
Zr	90	2	72	-2.712	ppb	-80.2	53	1	
Nb	93	2	72	2.383	ppb	14.5	12256	2	>RL
Mo	95	2	115	0.202	ppb	28.8	210	0.5	
Pd	105	2	115	0.037	ppb	96.7	93	1	
Ag	107	2	115	0.018	ppb	151.1	127	1	
Cd	111	2	115	0.070	ppb	114.1	27	0.5	
Sn	120	2	115	0.123	ppb	32.2	300	1	
Sb	121	2	115	0.407	ppb	23.0	410	0.6	
Ba	137	2	115	-0.041	ppb	-46.7	7	0.5	
W	182	2	165	0.077	ppb	17.7	1417	1	
Pt	195	2	165	0.008	ppb	74.3	60	1	
Tl	205	2	165	0.008	ppb	52.5	200	0.1	
Pb	208	2	165	0.016	ppb	58.2	1377	0.5	
Th	232	2	165	0.031	ppb	14.2	857	1	
U	238	2	165	0.044	ppb	35.9	770	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	809701	4.42	821388	98.58	60	120	
Sc (IS)	45	1	HMI H2	26754217	1.68	28135324	95.09	60	120	
Sc (IS)	45	2	HMI He	985688	3.25	1028528	95.83	60	120	
Sc (IS)	45	3	No Gas	43275453	1.00	44911069	96.36	60	120	
Ge Internal Standard	72	1	HMI H2	10290540	0.58	10990003	93.64	60	120	
Ge Internal Standard	72	2	HMI He	1078010	2.82	1134301	95.04	60	120	
In Internal Standard	115	2	HMI He	3352459	3.11	3548151	94.48	60	120	
Ho-165	165	2	HMI He	16422135	2.82	17324298	94.79	60	120	

Blank Report

Sample Table

Sample Name	MB 280-437144/1-A
Data File Name	042_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:49:52-07:00
Sample Type	Blank
Dilution	1
Comment	437144 200.8
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	14.447	ppb	115.1214012	118205	0.5
Li	7	2	45	35.259	ppb	16.82083392	6642	0.5
Li	7	3	45	-7.285	ppb	-59.35905649	3818909	10
Be	9	1	6	-0.017	ppb	-101.6387037	7	0.5
B	11	1	6	10.723	ppb	13.96532071	4518	0.5
Na	23	1	45	217.347	ppb	25.42606592	853980	25
Na	23	2	45	176.945	ppb	2.981216357	57325	25
Mg	24	2	45	2.902	ppb	17.38963089	477	25
Al	27	2	45	23.814	ppb	15.80772537	827	15
K	39	1	45	323.096	ppb	147.4318039	10060592	50
K	39	2	45	13.880	ppb	76.9390824	16927	50
Ca	40	1	45	27.926	ppb	40.96848654	164090	50
Ca	44	2	45	15.913	ppb	125.651592	83	25
Ti	47	2	45	0.383	ppb	100.7271256	10	0.5
V	51	2	72	1.459	ppb	12.33071287	3971	1
Cr	52	2	72	-0.006	ppb	-440.9911829	300	1
Mn	55	2	72	1.788	ppb	9.680557846	997	0.5
Fe	57	2	72	14.070	ppb	22.45900019	480	25
Co	59	2	72	0.021	ppb	67.93317749	73	0.5
Ni	60	2	72	0.127	ppb	98.4751648	243	1
Cu	63	2	72	0.146	ppb	92.93807559	1757	1
Zn	66	2	72	4.054	ppb	17.80098174	1427	5
As	75	2	72	-0.043	ppb	-33.78348299	23	1
Se	78	1	72	0.069	ppb	84.99049595	27	1
Sr	88	2	72	0.124	ppb	69.77664911	103	0.5
Zr	90	2	72	2.502	ppb	61.92763491	110	1
Nb	93	2	72	0.522	ppb	50.13675276	6512	2
Mo	95	2	115	0.176	ppb	17.40823353	190	0.5
Pd	105	2	115	-0.004	ppb	-546.6138668	40	1
Ag	107	2	115	-0.003	ppb	-57.01265078	67	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.052	ppb	70.00323285	230	1
Sb	121	2	115	0.152	ppb	21.35265997	187	0.6
Ba	137	2	115	3.855	ppb	2.616592057	1187	0.5
W	182	2	165	0.018	ppb	156.7078172	1180	1
Pt	195	2	165	0.013	ppb	71.3207765	77	1
Tl	205	2	165	-0.002	ppb	-165.4367628	127	0.1
Pb	208	2	165	0.085	ppb	30.43703337	2094	0.5
Th	232	2	165	0.004	ppb	176.4048742	527	1
U	238	2	165	0.014	ppb	53.18680711	387	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	781551	9.50	821388	95.15	60	120	
Sc (IS)	45	1	HMI H2	24891774	13.57	28135324	88.47	60	120	
Sc (IS)	45	2	HMI He	993971	1.41	1028528	96.64	60	120	
Sc (IS)	45	3	No Gas	43827176	0.60	44911069	97.59	60	120	
Ge Internal Standard	72	1	HMI H2	9726565	11.17	10990003	88.50	60	120	
Ge Internal Standard	72	2	HMI He	1081757	0.82	1134301	95.37	60	120	
In Internal Standard	115	2	HMI He	3380039	0.42	3548151	95.26	60	120	
Ho-165	165	2	HMI He	16504756	1.43	17324298	95.27	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-437144/2-A
Data File Name	043_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:53:40-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	437144 200.8
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	66.653	66.653	ppb	9.303	146529	400	16.7	80	120	>+/-20%
Li	7	2	45	72.232	72.232	ppb	24.349	7229	400	18.1	80	120	>+/-20%
Li	7	3	45	55.144	55.144	ppb	4.736	4488478	400	13.8	80	120	>+/-20%
Be	9	1	6	30.117	30.117	ppb	3.259	11422	40	75.3	80	120	>+/-20%
Na	23	2	45	110.759	110.759	ppb	4.331	41315	40	276.9	80	120	>+/-20%
Mg	24	2	45	1.495	1.495	ppb	24.033	320	40	3.7	80	120	>+/-20%
Al	27	2	45	331.834	331.834	ppb	2.936	9834	40	829.6	80	120	>+/-20%
K	39	2	45	14.223	14.223	ppb	95.071	16924	40	35.6	80	120	>+/-20%
Ca	44	2	45	146.141	146.141	ppb	22.178	480	40	365.4	80	120	>+/-20%
V	51	2	72	33.577	33.577	ppb	0.989	37075	40	83.9	80	120	
Cr	52	2	72	31.787	31.787	ppb	2.145	43195	40	79.5	80	120	>+/-20%
Mn	55	2	72	33.173	33.173	ppb	3.828	17582	40	82.9	80	120	
Fe	57	2	72	321.985	321.985	ppb	4.201	8333	40	805.0	80	120	>+/-20%
Co	59	2	72	31.185	31.185	ppb	0.626	72619	40	78.0	80	120	>+/-20%
Ni	60	2	72	30.617	30.617	ppb	1.239	20439	40	76.5	80	120	>+/-20%
Cu	63	2	72	31.349	31.349	ppb	0.584	59356	40	78.4	80	120	>+/-20%
Zn	66	2	72	30.462	30.462	ppb	1.588	8443	40	76.2	80	120	>+/-20%
As	75	2	72	29.216	29.216	ppb	3.052	4835	40	73.0	80	120	>+/-20%
Se	78	1	72	30.619	30.619	ppb	1.639	7789	40	76.5	80	120	>+/-20%
Nb	93	2	72	0.173	0.173	ppb	133.788	5421	40	0.4	80	120	>+/-20%
Mo	95	2	115	30.276	30.276	ppb	0.707	26168	40	75.7	80	120	>+/-20%
Pd	105	2	115	-0.008	-0.008	ppb	-99.391	33	40	0.0	80	120	>+/-20%
Ag	107	2	115	31.845	31.845	ppb	1.897	93308	40	79.6	80	120	>+/-20%
Cd	111	2	115	30.351	30.351	ppb	0.625	11812	40	75.9	80	120	>+/-20%
Sn	120	2	115	30.410	30.410	ppb	4.031	31049	40	76.0	80	120	>+/-20%
Sb	121	2	115	31.922	31.922	ppb	1.283	28617	40	79.8	80	120	>+/-20%
Ba	137	2	115	30.614	30.614	ppb	7.150	9277	40	76.5	80	120	>+/-20%
W	182	2	165	29.972	29.972	ppb	1.572	123222	40	74.9	80	120	>+/-20%
Pt	195	2	165	0.003	0.003	ppb	202.256	40	40	0.0	80	120	>+/-20%
Tl	205	2	165	31.289	31.289	ppb	1.142	238856	40	78.2	80	120	>+/-20%
Pb	208	2	165	31.329	31.329	ppb	0.903	319646	40	78.3	80	120	>+/-20%
Th	232	2	165	30.145	30.145	ppb	0.305	362522	40	75.4	80	120	>+/-20%
U	238	2	165	30.150	30.150	ppb	1.285	396330	40	75.4	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	830580	0.11	821388	101.12	60	120	
Sc (IS)	45	1	HMI H2	27121684	1.00	28135324	96.40	60	120	
Sc (IS)	45	2	HMI He	992616	0.92	1028528	96.51	60	120	
Sc (IS)	45	3	No Gas	44079053	0.62	44911069	98.15	60	120	
Ge Internal Standard	72	1	HMI H2	10391709	0.46	10990003	94.56	60	120	
Ge Internal Standard	72	2	HMI He	1080124	0.76	1134301	95.22	60	120	
In Internal Standard	115	2	HMI He	3373790	0.70	3548151	95.09	60	120	
Ho-165	165	2	HMI He	16409272	0.52	17324298	94.72	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-437144/3-A
Data File Name	044SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T14:57:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	69.413	ppb	69.413	13.79	147966	500000	
Li	7	2	45	51.409	ppb	51.409	69.57	6962	500000	
Li	7	3	45	55.012	ppb	55.012	7.41	4509239	50000	
Be	9	1	6	30.206	ppb	30.206	1.48	11495	2000	
B	11	1	6	31.777	ppb	31.777	4.52	13630	2000	
Na	23	1	45	83.151	ppb	83.151	2.31	486949	2000	
Na	23	2	45	81.261	ppb	81.261	5.91	34564	400000	
Mg	24	2	45	1.671	ppb	1.671	28.20	343	400000	
Al	27	2	45	321.042	ppb	321.042	5.92	9620	400000	
K	39	1	45	277.248	ppb	277.248	8.87	10990781	400000	
K	39	2	45	9.699	ppb	9.699	173.18	16850	400000	
Ca	40	1	45	14.677	ppb	14.677	2.28	118245	400000	
Ca	44	2	45	160.082	ppb	160.082	20.83	527	400000	
Ti	47	2	45	0.512	ppb	0.512	114.36	13	4000	
V	51	2	72	33.062	ppb	33.062	1.87	36948	2000	
Cr	52	2	72	31.219	ppb	31.219	3.93	42888	5000	
Mn	55	2	72	30.576	ppb	30.576	2.02	16387	10000	
Fe	57	2	72	306.188	ppb	306.188	3.92	8016	400000	
Co	59	2	72	30.990	ppb	30.990	2.79	72954	2000	
Ni	60	2	72	30.850	ppb	30.850	0.53	20823	5000	
Cu	63	2	72	31.305	ppb	31.305	4.92	59912	5000	
Zn	66	2	72	29.282	ppb	29.282	5.22	8216	5000	
As	75	2	72	29.613	ppb	29.613	2.34	4955	2000	
Se	78	1	72	29.899	ppb	29.899	1.94	7650	2000	
Sr	88	2	72	31.425	ppb	31.425	2.05	17528	4000	
Zr	90	2	72	3910.568	ppb	3910.568	1.51	43100	1000	
Nb	93	2	72	-0.335	ppb	-0.335	-59.32	3891	200	
Mo	95	2	115	30.328	ppb	30.328	4.73	26452	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-26.07	23	100	
Ag	107	2	115	31.672	ppb	31.672	2.23	93675	100	
Cd	111	2	115	30.194	ppb	30.194	4.14	11859	2000	
Sn	120	2	115	30.805	ppb	30.805	4.65	31734	2000	
Sb	121	2	115	31.711	ppb	31.711	4.34	28691	1000	
Ba	137	2	115	31.457	ppb	31.457	2.01	9621	5000	
W	182	2	165	29.296	ppb	29.296	3.47	121215	100	
Pt	195	2	165	-0.003	ppb	-0.003	-150.08	20	100	
Tl	205	2	165	30.873	ppb	30.873	2.17	237184	2000	
Pb	208	2	165	31.251	ppb	31.251	3.65	320826	5000	
Th	232	2	165	29.712	ppb	29.712	3.80	359523	2000	
U	238	2	165	29.955	ppb	29.955	3.36	396223	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	833493	0.72	821388	101.47	60	120	
Sc (IS)	45	1	HMI H2	27216799	0.78	28135324	96.74	60	120	
Sc (IS)	45	2	HMI He	1003206	1.85	1028528	97.54	60	120	
Sc (IS)	45	3	No Gas	44299378	0.68	44911069	98.64	60	120	
Ge Internal Standard	72	1	HMI H2	10451108	0.59	10990003	95.10	60	120	
Ge Internal Standard	72	2	HMI He	1092219	1.33	1134301	96.29	60	120	
In Internal Standard	115	2	HMI He	3406191	1.89	3548151	96.00	60	120	
Ho-165	165	2	HMI He	16517391	1.72	17324298	95.34	60	120	

Sample Report

Sample Table

Sample Name	280-116655-A-5-J
Data File Name	045SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:01:15-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.076	ppb	1.076	311.60	124235	500000	
Li	7	2	45	15.123	ppb	15.123	282.97	6215	500000	
Li	7	3	45	-10.418	ppb	-10.418	-94.45	3876681	50000	
Be	9	1	6	0.035	ppb	0.035	190.78	27	2000	
B	11	1	6	17.777	ppb	17.777	6.13	7596	2000	
Na	23	1	45	26771.465	ppb	26771.465	2.44	91962752	2000	>LDR
Na	23	2	45	27344.053	ppb	27344.053	3.03	6492203	400000	
Mg	24	2	45	15449.157	ppb	15449.157	4.99	1683582	400000	
Al	27	2	45	62.416	ppb	62.416	18.65	1921	400000	
K	39	1	45	1844.015	ppb	1844.015	4.47	15990166	400000	
K	39	2	45	1755.741	ppb	1755.741	4.21	109438	400000	
Ca	40	1	45	38353.020	ppb	38353.020	2.26	190373624	400000	
Ca	44	2	45	38452.497	ppb	38452.497	3.75	115039	400000	
Ti	47	2	45	1.421	ppb	1.421	87.80	37	4000	
V	51	2	72	1.967	ppb	1.967	6.22	4471	2000	
Cr	52	2	72	0.146	ppb	0.146	10.02	503	5000	
Mn	55	2	72	15.592	ppb	15.592	1.98	8256	10000	
Fe	57	2	72	79.605	ppb	79.605	11.13	2140	400000	
Co	59	2	72	0.090	ppb	0.090	50.30	233	2000	
Ni	60	2	72	0.732	ppb	0.732	22.82	640	5000	
Cu	63	2	72	0.839	ppb	0.839	18.81	3017	5000	
Zn	66	2	72	8.687	ppb	8.687	0.76	2644	5000	
As	75	2	72	0.432	ppb	0.432	22.95	101	2000	
Se	78	1	72	0.108	ppb	0.108	65.86	39	2000	
Sr	88	2	72	78.802	ppb	78.802	6.36	43220	4000	
Zr	90	2	72	240.029	ppb	240.029	10.96	2680	1000	
Nb	93	2	72	-0.575	ppb	-0.575	-15.86	3087	200	
Mo	95	2	115	349.580	ppb	349.580	4.63	294074	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-291.68	33	100	
Ag	107	2	115	0.003	ppb	0.003	509.26	83	100	
Cd	111	2	115	0.114	ppb	0.114	25.01	43	2000	
Sn	120	2	115	0.283	ppb	0.283	35.81	453	2000	
Sb	121	2	115	1.103	ppb	1.103	11.61	1010	1000	
Ba	137	2	115	35.552	ppb	35.552	3.85	10501	5000	
W	182	2	165	0.123	ppb	0.123	46.10	1574	100	
Pt	195	2	165	0.006	ppb	0.006	228.69	50	100	
Tl	205	2	165	0.034	ppb	0.034	43.71	390	2000	
Pb	208	2	165	0.075	ppb	0.075	8.68	1944	5000	
Th	232	2	165	0.116	ppb	0.116	14.30	1840	2000	
U	238	2	165	1.085	ppb	1.085	4.20	14208	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	813059	1.26	821388	98.99	60	120	
Sc (IS)	45	1	HMI H2	26985206	1.42	28135324	95.91	60	120	
Sc (IS)	45	2	HMI He	976775	1.61	1028528	94.97	60	120	
Sc (IS)	45	3	No Gas	44955423	10.93	44911069	100.10	60	120	
Ge Internal Standard	72	1	HMI H2	10351159	1.32	10990003	94.19	60	120	
Ge Internal Standard	72	2	HMI He	1075677	1.36	1134301	94.83	60	120	
In Internal Standard	115	2	HMI He	3290107	2.20	3548151	92.73	60	120	
Ho-165	165	2	HMI He	16137202	1.51	17324298	93.15	60	120	

Sample Report

Sample Table

Sample Name	280-116655-A-5-K MS
Data File Name	046SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:05:01-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	65.450	ppb	65.450	3.09	143060	500000	
Li	7	2	45	50.332	ppb	50.332	37.98	6808	500000	
Li	7	3	45	55.732	ppb	55.732	7.55	4410217	50000	
Be	9	1	6	32.640	ppb	32.640	1.57	12002	2000	
B	11	1	6	41.265	ppb	41.265	2.15	16997	2000	
Na	23	1	45	26853.644	ppb	26853.644	1.27	90772212	2000	>LDR
Na	23	2	45	26437.639	ppb	26437.639	0.44	6319371	400000	
Mg	24	2	45	14970.147	ppb	14970.147	1.75	1642552	400000	
Al	27	2	45	369.625	ppb	369.625	2.35	10834	400000	
K	39	1	45	1710.213	ppb	1710.213	2.76	15305897	400000	
K	39	2	45	1750.924	ppb	1750.924	2.51	109915	400000	
Ca	40	1	45	38599.073	ppb	38599.073	0.22	188533744	400000	
Ca	44	2	45	38135.288	ppb	38135.288	0.18	114861	400000	
Ti	47	2	45	2.202	ppb	2.202	62.03	57	4000	
V	51	2	72	34.435	ppb	34.435	1.16	37774	2000	
Cr	52	2	72	33.144	ppb	33.144	2.88	44804	5000	
Mn	55	2	72	47.277	ppb	47.277	0.94	24909	10000	
Fe	57	2	72	398.840	ppb	398.840	4.34	10244	400000	
Co	59	2	72	31.487	ppb	31.487	2.06	72961	2000	
Ni	60	2	72	31.777	ppb	31.777	2.49	21106	5000	
Cu	63	2	72	31.307	ppb	31.307	0.65	58988	5000	
Zn	66	2	72	35.639	ppb	35.639	4.13	9770	5000	
As	75	2	72	31.789	ppb	31.789	1.35	5234	2000	
Se	78	1	72	29.975	ppb	29.975	2.74	7505	2000	
Sr	88	2	72	109.939	ppb	109.939	1.56	60272	4000	
Zr	90	2	72	3973.705	ppb	3973.705	0.75	43106	1000	
Nb	93	2	72	-0.725	ppb	-0.725	-9.55	2624	200	
Mo	95	2	115	375.657	ppb	375.657	1.91	318448	2000	
Pd	105	2	115	-0.010	ppb	-0.010	-145.95	30	100	
Ag	107	2	115	33.190	ppb	33.190	1.77	95511	100	
Cd	111	2	115	32.603	ppb	32.603	3.96	12460	2000	
Sn	120	2	115	32.871	ppb	32.871	1.34	32947	2000	
Sb	121	2	115	33.906	ppb	33.906	3.35	29846	1000	
Ba	137	2	115	67.617	ppb	67.617	0.35	20099	5000	
W	182	2	165	31.166	ppb	31.166	1.78	126703	100	
Pt	195	2	165	-0.004	ppb	-0.004	-79.01	17	100	
Tl	205	2	165	31.710	ppb	31.710	0.77	239466	2000	
Pb	208	2	165	31.581	ppb	31.581	0.62	318740	5000	
Th	232	2	165	30.715	ppb	30.715	0.38	365389	2000	
U	238	2	165	32.487	ppb	32.487	0.41	422455	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	805460	0.88	821388	98.06	60	120	
Sc (IS)	45	1	HMI H2	26549462	0.52	28135324	94.36	60	120	
Sc (IS)	45	2	HMI He	982980	0.24	1028528	95.57	60	120	
Sc (IS)	45	3	No Gas	43250778	0.74	44911069	96.30	60	120	
Ge Internal Standard	72	1	HMI H2	10227015	0.16	10990003	93.06	60	120	
Ge Internal Standard	72	2	HMI He	1074894	0.55	1134301	94.76	60	120	
In Internal Standard	115	2	HMI He	3313634	0.94	3548151	93.39	60	120	
Ho-165	165	2	HMI He	16232726	0.56	17324298	93.70	60	120	

Sample Report

Sample Table

Sample Name	280-116655-A-5-L MSD
Data File Name	047SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:08:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	65.190	ppb	65.190	9.27	142105	500000	
Li	7	2	45	76.798	ppb	76.798	26.38	7199	500000	
Li	7	3	45	62.077	ppb	62.077	10.51	4424532	50000	
Be	9	1	6	32.854	ppb	32.854	0.25	11965	2000	
B	11	1	6	43.037	ppb	43.037	2.35	17541	2000	
Na	23	1	45	27524.141	ppb	27524.141	0.36	92474845	2000	>LDR
Na	23	2	45	27212.151	ppb	27212.151	0.28	6475581	400000	
Mg	24	2	45	15309.979	ppb	15309.979	0.11	1672509	400000	
Al	27	2	45	406.335	ppb	406.335	1.31	11845	400000	
K	39	1	45	1822.398	ppb	1822.398	1.89	15570141	400000	
K	39	2	45	1762.715	ppb	1762.715	0.51	110063	400000	
Ca	40	1	45	39607.858	ppb	39607.858	1.54	192276017	400000	
Ca	44	2	45	38060.473	ppb	38060.473	0.93	114134	400000	
Ti	47	2	45	5.327	ppb	5.327	104.96	137	4000	
V	51	2	72	34.567	ppb	34.567	3.58	37730	2000	
Cr	52	2	72	32.596	ppb	32.596	1.11	43857	5000	
Mn	55	2	72	47.756	ppb	47.756	1.30	25039	10000	
Fe	57	2	72	402.726	ppb	402.726	2.51	10291	400000	
Co	59	2	72	31.905	ppb	31.905	1.69	73580	2000	
Ni	60	2	72	32.862	ppb	32.862	4.88	21717	5000	
Cu	63	2	72	31.502	ppb	31.502	1.32	59065	5000	
Zn	66	2	72	33.827	ppb	33.827	1.56	9247	5000	
As	75	2	72	31.037	ppb	31.037	1.95	5086	2000	
Se	78	1	72	31.267	ppb	31.267	3.88	7805	2000	
Sr	88	2	72	112.317	ppb	112.317	1.13	61280	4000	
Zr	90	2	72	4067.198	ppb	4067.198	1.19	43906	1000	
Nb	93	2	72	-0.866	ppb	-0.866	-16.09	2180	200	
Mo	95	2	115	381.961	ppb	381.961	1.01	321495	2000	
Pd	105	2	115	-0.010	ppb	-0.010	-74.98	30	100	
Ag	107	2	115	33.308	ppb	33.308	0.98	95169	100	
Cd	111	2	115	31.966	ppb	31.966	4.29	12133	2000	
Sn	120	2	115	32.570	ppb	32.570	2.25	32409	2000	
Sb	121	2	115	34.917	ppb	34.917	1.83	30518	1000	
Ba	137	2	115	68.826	ppb	68.826	2.16	20313	5000	
W	182	2	165	31.665	ppb	31.665	1.62	128922	100	
Pt	195	2	165	-0.001	ppb	-0.001	-587.60	27	100	
Tl	205	2	165	32.354	ppb	32.354	0.82	244747	2000	
Pb	208	2	165	32.158	ppb	32.158	0.66	325083	5000	
Th	232	2	165	31.323	ppb	31.323	1.15	373217	2000	
U	238	2	165	32.817	ppb	32.817	1.12	427424	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	797704	0.94	821388	97.12	60	120	
Sc (IS)	45	1	HMI H2	26388841	0.73	28135324	93.79	60	120	
Sc (IS)	45	2	HMI He	978665	0.23	1028528	95.15	60	120	
Sc (IS)	45	3	No Gas	42768586	0.71	44911069	95.23	60	120	
Ge Internal Standard	72	1	HMI H2	10197682	0.28	10990003	92.79	60	120	
Ge Internal Standard	72	2	HMI He	1069731	0.39	1134301	94.31	60	120	
In Internal Standard	115	2	HMI He	3289925	0.77	3548151	92.72	60	120	
Ho-165	165	2	HMI He	16259881	0.92	17324298	93.86	60	120	

Sample Report

Sample Table

Sample Name	280-116655-A-6-D
Data File Name	048SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:12:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.541	ppb	2.541	88.91	122760	500000	
Li	7	2	45	2.648	ppb	2.648	985.07	6035	500000	
Li	7	3	45	-5.170	ppb	-5.170	-51.02	3777376	50000	
Be	9	1	6	-0.009	ppb	-0.009	-523.82	10	2000	
B	11	1	6	17.063	ppb	17.063	5.76	7225	2000	
Na	23	1	45	26940.761	ppb	26940.761	0.47	91105619	2000	>LDR
Na	23	2	45	27144.518	ppb	27144.518	0.83	6469115	400000	
Mg	24	2	45	15172.148	ppb	15172.148	1.56	1660042	400000	
Al	27	2	45	58.769	ppb	58.769	12.27	1824	400000	
K	39	1	45	1756.096	ppb	1756.096	2.42	15458591	400000	
K	39	2	45	1774.156	ppb	1774.156	0.59	110848	400000	
Ca	40	1	45	38863.408	ppb	38863.408	0.38	189898697	400000	
Ca	44	2	45	37716.817	ppb	37716.817	0.61	113276	400000	
Ti	47	2	45	1.831	ppb	1.831	82.63	47	4000	
V	51	2	72	1.137	ppb	1.137	16.02	3634	2000	
Cr	52	2	72	0.256	ppb	0.256	17.10	653	5000	
Mn	55	2	72	16.433	ppb	16.433	1.68	8736	10000	
Fe	57	2	72	89.352	ppb	89.352	4.31	2400	400000	
Co	59	2	72	0.089	ppb	0.089	15.23	233	2000	
Ni	60	2	72	0.872	ppb	0.872	23.96	737	5000	
Cu	63	2	72	0.694	ppb	0.694	8.80	2764	5000	
Zn	66	2	72	8.005	ppb	8.005	12.56	2474	5000	
As	75	2	72	0.434	ppb	0.434	40.10	101	2000	
Se	78	1	72	0.185	ppb	0.185	78.58	57	2000	
Sr	88	2	72	80.150	ppb	80.150	2.16	44177	4000	
Zr	90	2	72	151.997	ppb	151.997	2.66	1737	1000	
Nb	93	2	72	-1.025	ppb	-1.025	-8.05	1707	200	
Mo	95	2	115	344.151	ppb	344.151	0.44	291747	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-393.99	33	100	
Ag	107	2	115	-0.001	ppb	-0.001	-981.74	73	100	
Cd	111	2	115	0.122	ppb	0.122	75.48	47	2000	
Sn	120	2	115	0.133	ppb	0.133	30.08	307	2000	
Sb	121	2	115	1.135	ppb	1.135	17.34	1047	1000	
Ba	137	2	115	37.032	ppb	37.032	2.60	11015	5000	
W	182	2	165	0.145	ppb	0.145	29.33	1677	100	
Pt	195	2	165	0.004	ppb	0.004	190.47	43	100	
Tl	205	2	165	0.023	ppb	0.023	21.38	310	2000	
Pb	208	2	165	0.058	ppb	0.058	7.86	1787	5000	
Th	232	2	165	0.122	ppb	0.122	16.11	1934	2000	
U	238	2	165	1.080	ppb	1.080	3.80	14269	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	803683	0.64	821388	97.84	60	120	
Sc (IS)	45	1	HMI H2	26559546	0.52	28135324	94.40	60	120	
Sc (IS)	45	2	HMI He	980197	1.62	1028528	95.30	60	120	
Sc (IS)	45	3	No Gas	43102298	0.45	44911069	95.97	60	120	
Ge Internal Standard	72	1	HMI H2	10220672	0.15	10990003	93.00	60	120	
Ge Internal Standard	72	2	HMI He	1080467	0.38	1134301	95.25	60	120	
In Internal Standard	115	2	HMI He	3313272	0.35	3548151	93.38	60	120	
Ho-165	165	2	HMI He	16273472	0.44	17324298	93.93	60	120	

Sample Report

Sample Table

Sample Name	280-116655-A-13-A
Data File Name	049SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:16:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	6.785	ppb	6.785	39.14	123735	500000	
Li	7	2	45	-23.097	ppb	-23.097	-134.47	5615	500000	
Li	7	3	45	-1.571	ppb	-1.571	-229.85	3754532	50000	
Be	9	1	6	-0.018	ppb	-0.018	-89.83	7	2000	
B	11	1	6	21.015	ppb	21.015	4.93	8740	2000	
Na	23	1	45	41649.770	ppb	41649.770	1.08	140286368	2000	>LDR
Na	23	2	45	41412.724	ppb	41412.724	0.78	9849008	400000	
Mg	24	2	45	12946.897	ppb	12946.897	1.31	1414626	400000	
Al	27	2	45	35.356	ppb	35.356	22.21	1147	400000	
K	39	1	45	2041.535	ppb	2041.535	0.69	16320461	400000	
K	39	2	45	1903.525	ppb	1903.525	1.11	117604	400000	
Ca	40	1	45	32704.806	ppb	32704.806	0.09	159303728	400000	
Ca	44	2	45	31647.442	ppb	31647.442	1.58	94924	400000	
Ti	47	2	45	0.520	ppb	0.520	43.41	13	4000	
V	51	2	72	1.269	ppb	1.269	12.58	3744	2000	
Cr	52	2	72	0.115	ppb	0.115	71.90	460	5000	
Mn	55	2	72	35.880	ppb	35.880	3.90	18883	10000	
Fe	57	2	72	111.175	ppb	111.175	6.22	2937	400000	
Co	59	2	72	0.099	ppb	0.099	35.10	253	2000	
Ni	60	2	72	1.229	ppb	1.229	18.91	967	5000	
Cu	63	2	72	0.831	ppb	0.831	8.17	2997	5000	
Zn	66	2	72	9.606	ppb	9.606	4.13	2880	5000	
As	75	2	72	0.618	ppb	0.618	13.10	131	2000	
Se	78	1	72	0.238	ppb	0.238	16.11	71	2000	
Sr	88	2	72	90.178	ppb	90.178	1.31	49361	4000	
Zr	90	2	72	69.495	ppb	69.495	13.92	833	1000	
Nb	93	2	72	-1.120	ppb	-1.120	-5.49	1403	200	
Mo	95	2	115	157.744	ppb	157.744	1.63	133741	2000	
Pd	105	2	115	-0.015	ppb	-0.015	-157.61	23	100	
Ag	107	2	115	-0.009	ppb	-0.009	-78.77	50	100	
Cd	111	2	115	0.026	ppb	0.026	100.26	10	2000	
Sn	120	2	115	0.060	ppb	0.060	83.32	233	2000	
Sb	121	2	115	0.498	ppb	0.498	20.90	487	1000	
Ba	137	2	115	28.203	ppb	28.203	5.57	8393	5000	
W	182	2	165	0.014	ppb	0.014	385.47	1153	100	
Pt	195	2	165	0.001	ppb	0.001	555.67	33	100	
Tl	205	2	165	0.007	ppb	0.007	8.52	193	2000	
Pb	208	2	165	0.058	ppb	0.058	67.14	1800	5000	
Th	232	2	165	0.037	ppb	0.037	31.29	917	2000	
U	238	2	165	1.030	ppb	1.030	1.30	13668	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	796882	0.51	821388	97.02	60	120	
Sc (IS)	45	1	HMI H2	26475213	0.57	28135324	94.10	60	120	
Sc (IS)	45	2	HMI He	978843	0.10	1028528	95.17	60	120	
Sc (IS)	45	3	No Gas	42433668	1.03	44911069	94.48	60	120	
Ge Internal Standard	72	1	HMI H2	10222308	0.72	10990003	93.01	60	120	
Ge Internal Standard	72	2	HMI He	1073099	0.37	1134301	94.60	60	120	
In Internal Standard	115	2	HMI He	3313259	0.56	3548151	93.38	60	120	
Ho-165	165	2	HMI He	16330632	0.86	17324298	94.26	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	050_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:20:10-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	497.338	ppb	1.486	280137	500	99.5	90	110	
Li	7	2	45	499.311	ppb	5.897	13840	500	99.9	90	110	
Li	7	3	45	482.695	ppb	2.422	8794871	500	96.5	90	110	
Be	9	1	6	51.814	ppb	6.000	18479	50	103.6	90	110	
B	11	1	6	57.414	ppb	5.768	22808	50	114.8	90	110	>+\-10%
Na	23	1	45	5129.667	ppb	0.422	17334489	5000	102.6	90	110	
Na	23	2	45	5327.467	ppb	1.441	1274105	5000	106.5	90	110	
Mg	24	2	45	5086.031	ppb	0.498	553412	5000	101.7	90	110	
Al	27	2	45	5222.274	ppb	1.247	150104	5000	104.4	90	110	
K	39	1	45	5072.114	ppb	0.543	25819116	5000	101.4	90	110	
K	39	2	45	5120.280	ppb	0.804	288166	5000	102.4	90	110	
Ca	40	1	45	5032.616	ppb	0.602	24390075	5000	100.7	90	110	
Ca	44	2	45	5153.050	ppb	1.749	15419	5000	103.1	90	110	
Ti	47	2	45	49.597	ppb	8.189	1267	50	99.2	90	110	
V	51	2	72	51.479	ppb	2.289	54463	50	103.0	90	110	
Cr	52	2	72	50.432	ppb	1.407	67041	50	100.9	90	110	
Mn	55	2	72	51.364	ppb	2.734	26666	50	102.7	90	110	
Fe	57	2	72	4920.442	ppb	2.222	123191	5000	98.4	90	110	
Co	59	2	72	50.539	ppb	1.217	115416	50	101.1	90	110	
Ni	60	2	72	50.062	ppb	1.941	32678	50	100.1	90	110	
Cu	63	2	72	49.810	ppb	0.450	91643	50	99.6	90	110	
Zn	66	2	72	46.509	ppb	2.802	12463	50	93.0	90	110	
As	75	2	72	50.268	ppb	1.240	8140	50	100.5	90	110	
Se	78	1	72	49.792	ppb	0.104	12319	50	99.6	90	110	
Sr	88	2	72	51.949	ppb	2.908	28089	50	103.9	90	110	
Zr	90	2	72	313.564	ppb	5.386	3427	50	627.1	90	110	>+\-10%
Nb	93	2	72	84.455	ppb	1.044	261464	100	84.5	90	110	>+\-10%
Mo	95	2	115	49.316	ppb	3.318	41916	50	98.6	90	110	
Pd	105	2	115	49.614	ppb	1.487	66050	50	99.2	90	110	
Ag	107	2	115	48.378	ppb	0.949	139468	50	96.8	90	110	
Cd	111	2	115	49.602	ppb	4.347	19000	50	99.2	90	110	
Sn	120	2	115	49.033	ppb	2.375	49158	50	98.1	90	110	
Sb	121	2	115	48.535	ppb	0.949	42796	50	97.1	90	110	
Ba	137	2	115	49.747	ppb	2.827	14819	50	99.5	90	110	
W	182	2	165	48.812	ppb	0.197	196707	50	97.6	90	110	
Pt	195	2	165	48.079	ppb	1.317	162657	50	96.2	90	110	
Tl	205	2	165	50.232	ppb	0.827	377111	50	100.5	90	110	
Pb	208	2	165	50.342	ppb	0.843	504493	50	100.7	90	110	
Th	232	2	165	50.353	ppb	0.884	595298	50	100.7	90	110	
U	238	2	165	49.349	ppb	0.366	637971	50	98.7	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	782722	4.03	821388	95.29	60	120	
Sc (IS)	45	1	HMI H2	26301727	0.65	28135324	93.48	60	120	
Sc (IS)	45	2	HMI He	974590	0.76	1028528	94.76	60	120	
Sc (IS)	45	3	No Gas	43453006	0.59	44911069	96.75	60	120	
Ge Internal Standard	72	1	HMI H2	10112056	0.64	10990003	92.01	60	120	
Ge Internal Standard	72	2	HMI He	1059432	0.60	1134301	93.40	60	120	
In Internal Standard	115	2	HMI He	3320150	0.94	3548151	93.57	60	120	
Ho-165	165	2	HMI He	16140243	0.05	17324298	93.17	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	051_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:23:57-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-5.170	ppb	-35.1	3960392	10	
Be	9	1	6	0.007	ppb	729.3	17	0.5	
B	11	1	6	6.056	ppb	6.6	2920	0.5	>RL
Na	23	1	45	28.618	ppb	1.9	299382	25	>RL
Na	23	2	45	27.074	ppb	15.8	21336	25	>RL
Mg	24	2	45	3.206	ppb	45.9	513	25	
Al	27	2	45	0.108	ppb	2376.1	133	15	
K	39	1	45	40.791	ppb	56.6	10248908	50	
K	39	2	45	-0.013	ppb	-64540.2	16290	50	
Ca	40	1	45	7.145	ppb	5.6	80806	50	
Ca	44	2	45	11.236	ppb	87.8	70	25	
Ti	47	2	45	0.255	ppb	86.6	7	0.5	
V	51	2	72	2.444	ppb	3.7	5011	1	>RL
Cr	52	2	72	-0.044	ppb	-73.3	250	1	
Mn	55	2	72	0.017	ppb	340.3	60	0.5	
Fe	57	2	72	0.597	ppb	210.7	137	25	
Co	59	2	72	0.009	ppb	27.2	47	0.5	
Ni	60	2	72	0.726	ppb	26.0	643	1	
Cu	63	2	72	-0.046	ppb	-67.2	1407	1	
Zn	66	2	72	0.305	ppb	140.6	430	5	
As	75	2	72	-0.024	ppb	-235.1	26	1	
Se	78	1	72	0.029	ppb	33.0	19	1	
Sr	88	2	72	-0.021	ppb	-49.0	23	0.5	
Zr	90	2	72	0.935	ppb	203.0	93	1	
Nb	93	2	72	2.305	ppb	20.1	12103	2	>RL
Mo	95	2	115	0.288	ppb	2.4	287	0.5	
Pd	105	2	115	0.065	ppb	58.0	133	1	
Ag	107	2	115	-0.004	ppb	-193.1	63	1	
Cd	111	2	115	0.034	ppb	43.3	13	0.5	
Sn	120	2	115	0.055	ppb	164.4	233	1	
Sb	121	2	115	0.346	ppb	12.9	360	0.6	
Ba	137	2	115	-0.030	ppb	-110.1	10	0.5	
W	182	2	165	0.122	ppb	6.2	1597	1	
Pt	195	2	165	0.003	ppb	210.9	43	1	
Tl	205	2	165	0.006	ppb	105.8	187	0.1	
Pb	208	2	165	-0.015	ppb	-10.6	1067	0.5	
Th	232	2	165	0.030	ppb	7.4	847	1	
U	238	2	165	0.046	ppb	31.7	797	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	839130	0.15	821388	102.16	60	120	
Sc (IS)	45	1	HMI H2	27306660	0.83	28135324	97.05	60	120	
Sc (IS)	45	2	HMI He	1000799	0.40	1028528	97.30	60	120	
Sc (IS)	45	3	No Gas	45189504	0.98	44911069	100.62	60	120	
Ge Internal Standard	72	1	HMI H2	10427459	0.54	10990003	94.88	60	120	
Ge Internal Standard	72	2	HMI He	1087013	0.12	1134301	95.83	60	120	
In Internal Standard	115	2	HMI He	3376299	0.05	3548151	95.16	60	120	
Ho-165	165	2	HMI He	16409603	0.47	17324298	94.72	60	120	

Sample Report

Sample Table

Sample Name	280-116666-A-1-G
Data File Name	052SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:27:45-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	29.736	ppb	29.736	10.56	126517	500000	
Li	7	2	45	7.129	ppb	7.129	225.87	6205	500000	
Li	7	3	45	13.470	ppb	13.470	17.10	3878348	50000	
Be	9	1	6	-0.027	ppb	-0.027	-60.69	3	2000	
B	11	1	6	129.400	ppb	129.400	2.82	50363	2000	
Na	23	1	45	91733.811	ppb	91733.811	1.99	297835482	2000	>LDR
Na	23	2	45	82452.981	ppb	82452.981	8.87	19873337	400000	
Mg	24	2	45	16737.573	ppb	16737.573	10.78	1853657	400000	
Al	27	2	45	127.206	ppb	127.206	8.30	3854	400000	
K	39	1	45	7653.135	ppb	7653.135	1.59	33015990	400000	
K	39	2	45	7007.298	ppb	7007.298	7.98	395889	400000	
Ca	40	1	45	81595.358	ppb	81595.358	1.63	383334034	400000	
Ca	44	2	45	73236.726	ppb	73236.726	10.93	222601	400000	
Ti	47	2	45	3.437	ppb	3.437	18.49	90	4000	
V	51	2	72	2.484	ppb	2.484	21.02	4998	2000	
Cr	52	2	72	0.175	ppb	0.175	42.95	540	5000	
Mn	55	2	72	65.979	ppb	65.979	9.99	34733	10000	
Fe	57	2	72	209.785	ppb	209.785	14.43	5438	400000	
Co	59	2	72	0.361	ppb	0.361	27.19	863	2000	
Ni	60	2	72	1.909	ppb	1.909	8.83	1420	5000	
Cu	63	2	72	2.269	ppb	2.269	11.71	5645	5000	
Zn	66	2	72	13.628	ppb	13.628	20.59	3937	5000	
As	75	2	72	0.754	ppb	0.754	11.27	154	2000	
Se	78	1	72	1.909	ppb	1.909	16.02	471	2000	
Sr	88	2	72	615.603	ppb	615.603	10.57	337181	4000	
Zr	90	2	72	26.948	ppb	26.948	21.96	373	1000	
Nb	93	2	72	0.980	ppb	0.980	59.26	7863	200	
Mo	95	2	115	6.423	ppb	6.423	10.41	5541	2000	
Pd	105	2	115	0.004	ppb	0.004	319.05	50	100	
Ag	107	2	115	0.004	ppb	0.004	146.01	87	100	
Cd	111	2	115	0.026	ppb	0.026	99.71	10	2000	
Sn	120	2	115	0.075	ppb	0.075	97.22	253	2000	
Sb	121	2	115	0.257	ppb	0.257	13.83	280	1000	
Ba	137	2	115	59.142	ppb	59.142	9.79	17762	5000	
W	182	2	165	0.069	ppb	0.069	38.34	1397	100	
Pt	195	2	165	0.003	ppb	0.003	96.24	43	100	
Tl	205	2	165	0.010	ppb	0.010	51.39	220	2000	
Pb	208	2	165	0.395	ppb	0.395	13.00	5281	5000	
Th	232	2	165	0.050	ppb	0.050	23.31	1097	2000	
U	238	2	165	12.355	ppb	12.355	11.37	163996	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	772409	0.96	821388	94.04	60	120	
Sc (IS)	45	1	HMI H2	25542450	1.19	28135324	90.78	60	120	
Sc (IS)	45	2	HMI He	995428	4.59	1028528	96.78	60	120	
Sc (IS)	45	3	No Gas	42147281	0.85	44911069	93.85	60	120	
Ge Internal Standard	72	1	HMI H2	9858950	0.89	10990003	89.71	60	120	
Ge Internal Standard	72	2	HMI He	1077951	4.67	1134301	95.03	60	120	
In Internal Standard	115	2	HMI He	3356683	4.14	3548151	94.60	60	120	
Ho-165	165	2	HMI He	16627471	5.61	17324298	95.98	60	120	

Sample Report

Sample Table

Sample Name	280-116666-A-1-H MS
Data File Name	053SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:31:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	79.888	ppb	79.888	6.18	144439	500000	
Li	7	2	45	75.681	ppb	75.681	5.98	6969	500000	
Li	7	3	45	67.965	ppb	67.965	6.52	4387595	50000	
Be	9	1	6	32.194	ppb	32.194	3.96	11378	2000	
B	11	1	6	148.994	ppb	148.994	1.66	58070	2000	
Na	23	1	45	85460.621	ppb	85460.621	0.84	282023256	2000	>LDR
Na	23	2	45	85666.885	ppb	85666.885	1.73	19753327	400000	
Mg	24	2	45	17510.254	ppb	17510.254	2.43	1856270	400000	
Al	27	2	45	464.665	ppb	464.665	4.47	13126	400000	
K	39	1	45	6989.832	ppb	6989.832	1.12	31479324	400000	
K	39	2	45	7164.446	ppb	7164.446	1.16	386769	400000	
Ca	40	1	45	75503.302	ppb	75503.302	0.89	360513408	400000	
Ca	44	2	45	77296.686	ppb	77296.686	1.64	224913	400000	
Ti	47	2	45	3.757	ppb	3.757	35.29	93	4000	
V	51	2	72	35.066	ppb	35.066	2.44	36995	2000	
Cr	52	2	72	32.447	ppb	32.447	2.42	42240	5000	
Mn	55	2	72	100.565	ppb	100.565	2.11	50972	10000	
Fe	57	2	72	528.694	ppb	528.694	2.35	13036	400000	
Co	59	2	72	31.100	ppb	31.100	0.65	69402	2000	
Ni	60	2	72	32.919	ppb	32.919	1.56	21046	5000	
Cu	63	2	72	32.851	ppb	32.851	0.41	59538	5000	
Zn	66	2	72	43.594	ppb	43.594	5.77	11435	5000	
As	75	2	72	31.098	ppb	31.098	2.90	4930	2000	
Se	78	1	72	31.171	ppb	31.171	0.89	7583	2000	
Sr	88	2	72	662.813	ppb	662.813	1.74	349726	4000	
Zr	90	2	72	3744.518	ppb	3744.518	4.81	39109	1000	
Nb	93	2	72	0.502	ppb	0.502	23.79	6172	200	
Mo	95	2	115	38.545	ppb	38.545	3.34	31964	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-61.48	33	100	
Ag	107	2	115	31.132	ppb	31.132	2.12	87547	100	
Cd	111	2	115	30.362	ppb	30.362	5.74	11342	2000	
Sn	120	2	115	30.509	ppb	30.509	0.27	29890	2000	
Sb	121	2	115	33.443	ppb	33.443	2.57	28771	1000	
Ba	137	2	115	92.311	ppb	92.311	1.31	26804	5000	
W	182	2	165	30.767	ppb	30.767	2.20	123088	100	
Pt	195	2	165	-0.002	ppb	-0.002	-77.92	23	100	
Tl	205	2	165	30.542	ppb	30.542	2.29	226932	2000	
Pb	208	2	165	31.276	ppb	31.276	1.84	310586	5000	
Th	232	2	165	28.396	ppb	28.396	1.65	332402	2000	
U	238	2	165	43.779	ppb	43.779	2.23	560019	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	774136	0.37	821388	94.25	60	120	
Sc (IS)	45	1	HMI H2	25957432	0.64	28135324	92.26	60	120	
Sc (IS)	45	2	HMI He	949830	0.77	1028528	92.35	60	120	
Sc (IS)	45	3	No Gas	41849862	0.57	44911069	93.18	60	120	
Ge Internal Standard	72	1	HMI H2	9937990	0.67	10990003	90.43	60	120	
Ge Internal Standard	72	2	HMI He	1035123	1.01	1134301	91.26	60	120	
In Internal Standard	115	2	HMI He	3237806	0.36	3548151	91.25	60	120	
Ho-165	165	2	HMI He	15973371	1.35	17324298	92.20	60	120	

Sample Report

Sample Table

Sample Name	280-116666-A-1-I MSD
Data File Name	054SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:35:18-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	79.899	ppb	79.899	6.42	142040	500000	
Li	7	2	45	94.538	ppb	94.538	18.43	7312	500000	
Li	7	3	45	64.711	ppb	64.711	2.34	4288091	50000	
Be	9	1	6	32.413	ppb	32.413	2.37	11261	2000	
B	11	1	6	148.921	ppb	148.921	0.82	57059	2000	
Na	23	1	45	85730.989	ppb	85730.989	0.41	278231796	2000	>LDR
Na	23	2	45	84296.454	ppb	84296.454	11.40	19500783	400000	
Mg	24	2	45	17054.630	ppb	17054.630	10.88	1814376	400000	
Al	27	2	45	482.561	ppb	482.561	17.38	13637	400000	
K	39	1	45	7035.316	ppb	7035.316	0.52	31097934	400000	
K	39	2	45	7053.491	ppb	7053.491	9.17	382688	400000	
Ca	40	1	45	75743.152	ppb	75743.152	0.94	355670501	400000	
Ca	44	2	45	75640.725	ppb	75640.725	12.93	220676	400000	
Ti	47	2	45	5.862	ppb	5.862	7.48	147	4000	
V	51	2	72	33.793	ppb	33.793	12.67	35869	2000	
Cr	52	2	72	32.394	ppb	32.394	11.98	42326	5000	
Mn	55	2	72	99.409	ppb	99.409	12.17	50556	10000	
Fe	57	2	72	545.057	ppb	545.057	12.06	13490	400000	
Co	59	2	72	31.660	ppb	31.660	8.94	70979	2000	
Ni	60	2	72	32.198	ppb	32.198	14.50	20642	5000	
Cu	63	2	72	32.933	ppb	32.933	11.66	59903	5000	
Zn	66	2	72	41.006	ppb	41.006	9.38	10828	5000	
As	75	2	72	31.384	ppb	31.384	12.26	4993	2000	
Se	78	1	72	32.800	ppb	32.800	3.18	7844	2000	
Sr	88	2	72	652.769	ppb	652.769	11.65	345699	4000	
Zr	90	2	72	3771.268	ppb	3771.268	14.42	39500	1000	
Nb	93	2	72	-0.211	ppb	-0.211	-114.81	4074	200	
Mo	95	2	115	38.991	ppb	38.991	14.18	32302	2000	
Pd	105	2	115	-0.013	ppb	-0.013	-134.84	27	100	
Ag	107	2	115	31.477	ppb	31.477	9.70	88599	100	
Cd	111	2	115	30.702	ppb	30.702	18.10	11432	2000	
Sn	120	2	115	30.415	ppb	30.415	11.21	29807	2000	
Sb	121	2	115	32.450	ppb	32.450	11.97	27913	1000	
Ba	137	2	115	92.495	ppb	92.495	11.88	26854	5000	
W	182	2	165	30.513	ppb	30.513	12.52	122993	100	
Pt	195	2	165	0.002	ppb	0.002	362.90	37	100	
Tl	205	2	165	30.786	ppb	30.786	9.79	230716	2000	
Pb	208	2	165	31.085	ppb	31.085	11.78	311101	5000	
Th	232	2	165	28.452	ppb	28.452	13.00	335462	2000	
U	238	2	165	43.521	ppb	43.521	13.04	560751	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	761008	0.32	821388	92.65	60	120	
Sc (IS)	45	1	HMI H2	25526694	0.44	28135324	90.73	60	120	
Sc (IS)	45	2	HMI He	957745	6.76	1028528	93.12	60	120	
Sc (IS)	45	3	No Gas	41202024	0.61	44911069	91.74	60	120	
Ge Internal Standard	72	1	HMI H2	9768150	1.26	10990003	88.88	60	120	
Ge Internal Standard	72	2	HMI He	1043471	5.73	1134301	91.99	60	120	
In Internal Standard	115	2	HMI He	3255430	7.05	3548151	91.75	60	120	
Ho-165	165	2	HMI He	16174721	6.32	17324298	93.36	60	120	

Sample Report

Sample Table

Sample Name	280-116666-B-2-C
Data File Name	055SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:39:05-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	21.030	ppb	21.030	4.60	124172	500000	
Li	7	2	45	3.256	ppb	3.256	408.51	5848	500000	
Li	7	3	45	6.203	ppb	6.203	28.64	3731871	50000	
Be	9	1	6	-0.007	ppb	-0.007	-0.83	10	2000	
B	11	1	6	123.912	ppb	123.912	1.81	47289	2000	
Na	23	1	45	84014.322	ppb	84014.322	0.81	273619883	2000	>LDR
Na	23	2	45	83242.904	ppb	83242.904	0.85	19179521	400000	
Mg	24	2	45	17193.094	ppb	17193.094	0.81	1821260	400000	
Al	27	2	45	111.000	ppb	111.000	3.60	3227	400000	
K	39	1	45	7104.096	ppb	7104.096	0.92	31419635	400000	
K	39	2	45	6968.805	ppb	6968.805	1.30	376300	400000	
Ca	40	1	45	75109.962	ppb	75109.962	0.55	353936328	400000	
Ca	44	2	45	76037.026	ppb	76037.026	1.03	221057	400000	
Ti	47	2	45	2.276	ppb	2.276	36.18	57	4000	
V	51	2	72	1.818	ppb	1.818	12.56	4137	2000	
Cr	52	2	72	0.212	ppb	0.212	59.61	567	5000	
Mn	55	2	72	68.020	ppb	68.020	1.76	34355	10000	
Fe	57	2	72	200.593	ppb	200.593	5.91	4998	400000	
Co	59	2	72	0.394	ppb	0.394	17.14	900	2000	
Ni	60	2	72	1.564	ppb	1.564	9.11	1140	5000	
Cu	63	2	72	2.203	ppb	2.203	4.43	5298	5000	
Zn	66	2	72	14.994	ppb	14.994	9.82	4134	5000	
As	75	2	72	0.626	ppb	0.626	9.48	127	2000	
Se	78	1	72	1.412	ppb	1.412	18.93	348	2000	
Sr	88	2	72	624.526	ppb	624.526	0.59	328291	4000	
Zr	90	2	72	104.401	ppb	104.401	8.53	1163	1000	
Nb	93	2	72	-0.490	ppb	-0.490	-29.59	3214	200	
Mo	95	2	115	9.829	ppb	9.829	3.83	8063	2000	
Pd	105	2	115	0.003	ppb	0.003	955.95	47	100	
Ag	107	2	115	0.019	ppb	0.019	89.31	123	100	
Cd	111	2	115	0.100	ppb	0.100	42.65	37	2000	
Sn	120	2	115	0.221	ppb	0.221	16.91	380	2000	
Sb	121	2	115	0.227	ppb	0.227	10.50	240	1000	
Ba	137	2	115	60.303	ppb	60.303	1.86	17275	5000	
W	182	2	165	0.165	ppb	0.165	23.46	1727	100	
Pt	195	2	165	-0.002	ppb	-0.002	-79.53	23	100	
Tl	205	2	165	0.029	ppb	0.029	23.36	353	2000	
Pb	208	2	165	0.351	ppb	0.351	6.75	4654	5000	
Th	232	2	165	0.192	ppb	0.192	13.86	2707	2000	
U	238	2	165	12.315	ppb	12.315	0.58	157636	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	757069	0.20	821388	92.17	60	120	
Sc (IS)	45	1	HMI H2	25616846	0.46	28135324	91.05	60	120	
Sc (IS)	45	2	HMI He	948980	0.57	1028528	92.27	60	120	
Sc (IS)	45	3	No Gas	41321378	1.20	44911069	92.01	60	120	
Ge Internal Standard	72	1	HMI H2	9769140	0.48	10990003	88.89	60	120	
Ge Internal Standard	72	2	HMI He	1031112	0.52	1134301	90.90	60	120	
In Internal Standard	115	2	HMI He	3192671	1.33	3548151	89.98	60	120	
Ho-165	165	2	HMI He	15967290	0.13	17324298	92.17	60	120	

Sample Report

Sample Table

Sample Name	280-116666-B-3-C
Data File Name	056SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:42:52-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	16.310	ppb	16.310	7.97	122572	500000	
Li	7	2	45	35.959	ppb	35.959	75.59	6382	500000	
Li	7	3	45	1.102	ppb	1.102	684.40	3640856	50000	
Be	9	1	6	-0.007	ppb	-0.007	-2.33	10	2000	
B	11	1	6	121.169	ppb	121.169	1.60	46162	2000	
Na	23	1	45	78904.949	ppb	78904.949	0.67	256737416	2000	>LDR
Na	23	2	45	77554.822	ppb	77554.822	0.32	17951380	400000	
Mg	24	2	45	16849.512	ppb	16849.512	1.17	1792991	400000	
Al	27	2	45	103.115	ppb	103.115	1.12	3020	400000	
K	39	1	45	7706.708	ppb	7706.708	1.34	33245449	400000	
K	39	2	45	7757.514	ppb	7757.514	0.50	419064	400000	
Ca	40	1	45	68578.656	ppb	68578.656	0.96	322834669	400000	
Ca	44	2	45	69144.510	ppb	69144.510	0.74	201949	400000	
Ti	47	2	45	4.146	ppb	4.146	49.12	103	4000	
V	51	2	72	1.685	ppb	1.685	21.84	4071	2000	
Cr	52	2	72	0.256	ppb	0.256	16.61	633	5000	
Mn	55	2	72	79.729	ppb	79.729	1.54	40902	10000	
Fe	57	2	72	220.645	ppb	220.645	7.29	5571	400000	
Co	59	2	72	0.422	ppb	0.422	4.64	977	2000	
Ni	60	2	72	1.765	ppb	1.765	16.13	1287	5000	
Cu	63	2	72	2.521	ppb	2.521	2.46	5952	5000	
Zn	66	2	72	18.719	ppb	18.719	5.85	5161	5000	
As	75	2	72	0.408	ppb	0.408	15.45	94	2000	
Se	78	1	72	1.509	ppb	1.509	21.90	372	2000	
Sr	88	2	72	538.029	ppb	538.029	1.62	287269	4000	
Zr	90	2	72	47.361	ppb	47.361	9.46	580	1000	
Nb	93	2	72	-0.752	ppb	-0.752	-14.22	2477	200	
Mo	95	2	115	9.675	ppb	9.675	6.02	8113	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-60.86	33	100	
Ag	107	2	115	-0.002	ppb	-0.002	-228.07	67	100	
Cd	111	2	115	0.054	ppb	0.054	86.60	20	2000	
Sn	120	2	115	0.930	ppb	0.930	13.87	1083	2000	
Sb	121	2	115	0.263	ppb	0.263	18.10	277	1000	
Ba	137	2	115	44.586	ppb	44.586	2.58	13060	5000	
W	182	2	165	0.074	ppb	0.074	75.22	1377	100	
Pt	195	2	165	0.003	ppb	0.003	189.25	40	100	
Tl	205	2	165	0.000	ppb	0.000	-1508.94	133	2000	
Pb	208	2	165	0.304	ppb	0.304	3.04	4234	5000	
Th	232	2	165	0.072	ppb	0.072	10.80	1327	2000	
U	238	2	165	10.702	ppb	10.702	0.28	138305	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	755695	0.57	821388	92.00	60	120	
Sc (IS)	45	1	HMI H2	25590626	0.38	28135324	90.96	60	120	
Sc (IS)	45	2	HMI He	953318	0.60	1028528	92.69	60	120	
Sc (IS)	45	3	No Gas	40861987	1.51	44911069	90.98	60	120	
Ge Internal Standard	72	1	HMI H2	9792432	0.26	10990003	89.10	60	120	
Ge Internal Standard	72	2	HMI He	1047431	0.95	1134301	92.34	60	120	
In Internal Standard	115	2	HMI He	3264740	1.44	3548151	92.01	60	120	
Ho-165	165	2	HMI He	16116424	0.11	17324298	93.03	60	120	

Sample Report

Sample Table

Sample Name	280-116666-B-4-C
Data File Name	057SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:46:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	9.279	ppb	9.279	62.11	119485	500000	
Li	7	2	45	9.995	ppb	9.995	97.92	5901	500000	
Li	7	3	45	2.356	ppb	2.356	136.33	3633367	50000	
Be	9	1	6	-0.026	ppb	-0.026	-63.46	3	2000	
B	11	1	6	100.416	ppb	100.416	1.15	38016	2000	
Na	23	1	45	69075.098	ppb	69075.098	0.35	223084743	2000	>LDR
Na	23	2	45	68955.207	ppb	68955.207	0.36	15751556	400000	
Mg	24	2	45	16633.405	ppb	16633.405	0.86	1746566	400000	
Al	27	2	45	122.731	ppb	122.731	3.62	3524	400000	
K	39	1	45	7082.316	ppb	7082.316	0.82	31085096	400000	
K	39	2	45	6716.601	ppb	6716.601	0.35	360084	400000	
Ca	40	1	45	65997.192	ppb	65997.192	0.90	308344202	400000	
Ca	44	2	45	67085.142	ppb	67085.142	1.49	193330	400000	
Ti	47	2	45	3.246	ppb	3.246	12.48	80	4000	
V	51	2	72	1.902	ppb	1.902	6.63	4221	2000	
Cr	52	2	72	0.274	ppb	0.274	43.99	647	5000	
Mn	55	2	72	86.214	ppb	86.214	2.82	43533	10000	
Fe	57	2	72	232.097	ppb	232.097	4.23	5765	400000	
Co	59	2	72	0.304	ppb	0.304	25.13	700	2000	
Ni	60	2	72	1.570	ppb	1.570	19.33	1143	5000	
Cu	63	2	72	2.594	ppb	2.594	11.12	5985	5000	
Zn	66	2	72	10.641	ppb	10.641	6.61	3030	5000	
As	75	2	72	0.426	ppb	0.426	21.50	95	2000	
Se	78	1	72	1.490	ppb	1.490	9.72	364	2000	
Sr	88	2	72	542.475	ppb	542.475	0.82	285142	4000	
Zr	90	2	72	30.296	ppb	30.296	13.23	393	1000	
Nb	93	2	72	-0.835	ppb	-0.835	-6.29	2190	200	
Mo	95	2	115	8.294	ppb	8.294	4.11	6839	2000	
Pd	105	2	115	-0.005	ppb	-0.005	-354.55	37	100	
Ag	107	2	115	0.001	ppb	0.001	505.18	77	100	
Cd	111	2	115	0.036	ppb	0.036	86.61	13	2000	
Sn	120	2	115	0.113	ppb	0.113	35.48	277	2000	
Sb	121	2	115	0.093	ppb	0.093	46.04	127	1000	
Ba	137	2	115	45.439	ppb	45.439	3.99	13074	5000	
W	182	2	165	0.004	ppb	0.004	1119.18	1090	100	
Pt	195	2	165	0.004	ppb	0.004	198.87	43	100	
Tl	205	2	165	-0.001	ppb	-0.001	-516.60	130	2000	
Pb	208	2	165	0.305	ppb	0.305	4.03	4217	5000	
Th	232	2	165	0.053	ppb	0.053	26.47	1087	2000	
U	238	2	165	10.897	ppb	10.897	0.76	140013	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	749817	0.69	821388	91.29	60	120	
Sc (IS)	45	1	HMI H2	25398638	0.63	28135324	90.27	60	120	
Sc (IS)	45	2	HMI He	940729	0.82	1028528	91.46	60	120	
Sc (IS)	45	3	No Gas	40639056	0.37	44911069	90.49	60	120	
Ge Internal Standard	72	1	HMI H2	9703983	0.35	10990003	88.30	60	120	
Ge Internal Standard	72	2	HMI He	1031074	0.66	1134301	90.90	60	120	
In Internal Standard	115	2	HMI He	3207131	1.30	3548151	90.39	60	120	
Ho-165	165	2	HMI He	16024964	0.11	17324298	92.50	60	120	

Sample Report

Sample Table

Sample Name	280-116666-B-5-C
Data File Name	058SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:50:24-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	15.975	ppb	15.975	57.21	120687	500000	
Li	7	2	45	-4.749	ppb	-4.749	-245.14	5748	500000	
Li	7	3	45	0.249	ppb	0.249	2001.82	3616792	50000	
Be	9	1	6	-0.007	ppb	-0.007	-445.79	10	2000	
B	11	1	6	85.681	ppb	85.681	2.87	32266	2000	
Na	23	1	45	67673.073	ppb	67673.073	0.97	217037183	2000	>LDR
Na	23	2	45	65607.683	ppb	65607.683	1.48	15180814	400000	
Mg	24	2	45	17621.021	ppb	17621.021	2.24	1874007	400000	
Al	27	2	45	106.224	ppb	106.224	9.57	3104	400000	
K	39	1	45	4711.700	ppb	4711.700	1.59	23663465	400000	
K	39	2	45	4415.506	ppb	4415.506	1.18	245087	400000	
Ca	40	1	45	72046.157	ppb	72046.157	0.23	334294568	400000	
Ca	44	2	45	71866.003	ppb	71866.003	1.04	209811	400000	
Ti	47	2	45	3.475	ppb	3.475	58.81	87	4000	
V	51	2	72	1.388	ppb	1.388	4.06	3757	2000	
Cr	52	2	72	0.189	ppb	0.189	10.44	543	5000	
Mn	55	2	72	112.006	ppb	112.006	0.97	57201	10000	
Fe	57	2	72	221.998	ppb	221.998	2.40	5585	400000	
Co	59	2	72	0.238	ppb	0.238	12.66	560	2000	
Ni	60	2	72	0.933	ppb	0.933	10.83	750	5000	
Cu	63	2	72	5.008	ppb	5.008	8.11	10354	5000	
Zn	66	2	72	5.591	ppb	5.591	11.05	1770	5000	
As	75	2	72	0.460	ppb	0.460	35.11	102	2000	
Se	78	1	72	1.603	ppb	1.603	6.04	385	2000	
Sr	88	2	72	609.629	ppb	609.629	0.52	324200	4000	
Zr	90	2	72	29.898	ppb	29.898	22.46	393	1000	
Nb	93	2	72	-0.996	ppb	-0.996	-12.46	1737	200	
Mo	95	2	115	4.846	ppb	4.846	1.86	4104	2000	
Pd	105	2	115	0.002	ppb	0.002	350.17	47	100	
Ag	107	2	115	0.001	ppb	0.001	835.46	77	100	
Cd	111	2	115	0.026	ppb	0.026	99.28	10	2000	
Sn	120	2	115	0.075	ppb	0.075	76.70	247	2000	
Sb	121	2	115	0.162	ppb	0.162	7.73	190	1000	
Ba	137	2	115	60.444	ppb	60.444	1.50	17789	5000	
W	182	2	165	0.052	ppb	0.052	100.68	1307	100	
Pt	195	2	165	-0.001	ppb	-0.001	-457.12	27	100	
Tl	205	2	165	0.001	ppb	0.001	784.71	143	2000	
Pb	208	2	165	0.196	ppb	0.196	6.71	3187	5000	
Th	232	2	165	0.052	ppb	0.052	17.07	1097	2000	
U	238	2	165	13.226	ppb	13.226	1.37	172617	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	744705	0.33	821388	90.66	60	120	
Sc (IS)	45	1	HMI H2	25223963	1.60	28135324	89.65	60	120	
Sc (IS)	45	2	HMI He	952956	1.58	1028528	92.65	60	120	
Sc (IS)	45	3	No Gas	40677633	0.68	44911069	90.57	60	120	
Ge Internal Standard	72	1	HMI H2	9568422	0.89	10990003	87.06	60	120	
Ge Internal Standard	72	2	HMI He	1043169	1.21	1134301	91.97	60	120	
In Internal Standard	115	2	HMI He	3280942	1.43	3548151	92.47	60	120	
Ho-165	165	2	HMI He	16283779	1.79	17324298	93.99	60	120	

Sample Report

Sample Table

Sample Name	280-116748-C-1-C
Data File Name	059SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:54:10-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	11.318	ppb	11.318	103.93	126721	500000	
Li	7	2	45	22.149	ppb	22.149	28.02	6082	500000	
Li	7	3	45	31.917	ppb	31.917	35.94	3409660	50000	
Be	9	1	6	0.011	ppb	0.011	389.65	17	2000	
B	11	1	6	64.374	ppb	64.374	11.89	24881	2000	
Na	23	1	45	236801.654	ppb	236801.654	12.29	802941668	2000	>LDR
Na	23	2	45	254575.742	ppb	254575.742	1.27	58075446	400000	
Mg	24	2	45	290.907	ppb	290.907	5.49	30653	400000	
Al	27	2	45	60.204	ppb	60.204	0.78	1790	400000	
K	39	1	45	1090.171	ppb	1090.171	30.42	13413279	400000	
K	39	2	45	1446.618	ppb	1446.618	3.20	89492	400000	
Ca	40	1	45	1563.851	ppb	1563.851	12.83	7716862	400000	
Ca	44	2	45	2642.943	ppb	2642.943	6.95	7642	400000	
Ti	47	2	45	0.939	ppb	0.939	63.87	23	4000	
V	51	2	72	1.029	ppb	1.029	6.62	3304	2000	
Cr	52	2	72	2.092	ppb	2.092	1.12	2937	5000	
Mn	55	2	72	15.228	ppb	15.228	3.37	7596	10000	
Fe	57	2	72	816.592	ppb	816.592	2.38	19651	400000	
Co	59	2	72	0.077	ppb	0.077	28.90	193	2000	
Ni	60	2	72	0.946	ppb	0.946	5.64	737	5000	
Cu	63	2	72	15.770	ppb	15.770	1.95	28706	5000	
Zn	66	2	72	3.552	ppb	3.552	10.62	1210	5000	
As	75	2	72	0.034	ppb	0.034	111.88	33	2000	
Se	78	1	72	-0.023	ppb	-0.023	-47.41	5	2000	
Sr	88	2	72	204.560	ppb	204.560	1.31	105697	4000	
Zr	90	2	72	54.430	ppb	54.430	17.62	633	1000	
Nb	93	2	72	-0.495	ppb	-0.495	-26.19	3144	200	
Mo	95	2	115	0.841	ppb	0.841	22.78	717	2000	
Pd	105	2	115	-0.028	ppb	-0.028	-32.89	7	100	
Ag	107	2	115	-0.007	ppb	-0.007	-83.35	53	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.203	ppb	0.203	24.49	360	2000	
Sb	121	2	115	0.185	ppb	0.185	43.03	203	1000	
Ba	137	2	115	205.631	ppb	205.631	0.80	58418	5000	
W	182	2	165	0.485	ppb	0.485	9.73	2984	100	
Pt	195	2	165	-0.005	ppb	-0.005	-67.32	13	100	
Tl	205	2	165	-0.004	ppb	-0.004	-174.52	107	2000	
Pb	208	2	165	0.321	ppb	0.321	10.76	4344	5000	
Th	232	2	165	0.072	ppb	0.072	8.51	1307	2000	
U	238	2	165	0.022	ppb	0.022	55.14	470	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	765616	6.64	821388	93.21	60	120	
Sc (IS)	45	1	HMI H2	26822495	6.48	28135324	95.33	60	120	
Sc (IS)	45	2	HMI He	940232	2.04	1028528	91.42	60	120	
Sc (IS)	45	3	No Gas	35424343	6.46	44911069	78.88	60	120	
Ge Internal Standard	72	1	HMI H2	9999210	5.95	10990003	90.98	60	120	
Ge Internal Standard	72	2	HMI He	1013416	0.80	1134301	89.34	60	120	
In Internal Standard	115	2	HMI He	3169141	0.49	3548151	89.32	60	120	
Ho-165	165	2	HMI He	15917313	0.14	17324298	91.88	60	120	

Sample Report

Sample Table

Sample Name	280-116748-C-2-C
Data File Name	060SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T15:57:57-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437144 200.8
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	31.711	ppb	31.711	14.01	120328	500000	
Li	7	2	45	9.906	ppb	9.906	76.25	5898	500000	
Li	7	3	45	5.595	ppb	5.595	53.15	3500765	50000	
Be	9	1	6	-0.015	ppb	-0.015	-115.70	7	2000	
B	11	1	6	69.866	ppb	69.866	2.03	25159	2000	
Na	23	1	45	299876.116	ppb	299876.116	0.21	921226280	2000	>LDR
Na	23	2	45	290043.217	ppb	290043.217	0.29	66203349	400000	
Mg	24	2	45	421.261	ppb	421.261	4.01	44384	400000	
Al	27	2	45	119.104	ppb	119.104	6.95	3424	400000	
K	39	1	45	2134.072	ppb	2134.072	1.30	15172088	400000	
K	39	2	45	1493.457	ppb	1493.457	1.24	91960	400000	
Ca	40	1	45	1977.293	ppb	1977.293	0.46	8831812	400000	
Ca	44	2	45	3490.175	ppb	3490.175	3.22	10087	400000	
Ti	47	2	45	3.521	ppb	3.521	18.47	87	4000	
V	51	2	72	1.522	ppb	1.522	48.00	3817	2000	
Cr	52	2	72	1.671	ppb	1.671	3.52	2427	5000	
Mn	55	2	72	20.032	ppb	20.032	1.92	10071	10000	
Fe	57	2	72	1214.763	ppb	1214.763	2.64	29451	400000	
Co	59	2	72	0.075	ppb	0.075	42.42	190	2000	
Ni	60	2	72	2.157	ppb	2.157	1.33	1503	5000	
Cu	63	2	72	2.492	ppb	2.492	7.87	5761	5000	
Zn	66	2	72	1.679	ppb	1.679	18.30	750	5000	
As	75	2	72	0.104	ppb	0.104	62.27	44	2000	
Se	78	1	72	0.038	ppb	0.038	71.69	19	2000	
Sr	88	2	72	344.590	ppb	344.590	0.39	179703	4000	
Zr	90	2	72	28.975	ppb	28.975	22.43	377	1000	
Nb	93	2	72	-0.785	ppb	-0.785	-11.83	2320	200	
Mo	95	2	115	0.942	ppb	0.942	13.85	797	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-1746.88	40	100	
Ag	107	2	115	-0.013	ppb	-0.013	-43.02	37	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.141	ppb	0.141	76.80	300	2000	
Sb	121	2	115	0.071	ppb	0.071	33.16	107	1000	
Ba	137	2	115	284.418	ppb	284.418	2.20	80439	5000	
W	182	2	165	0.604	ppb	0.604	14.93	3431	100	
Pt	195	2	165	-0.001	ppb	-0.001	-568.56	27	100	
Tl	205	2	165	-0.004	ppb	-0.004	-170.80	107	2000	
Pb	208	2	165	0.217	ppb	0.217	3.88	3294	5000	
Th	232	2	165	0.063	ppb	0.063	8.01	1193	2000	
U	238	2	165	0.020	ppb	0.020	15.46	443	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	710369	0.51	821388	86.48	60	120	
Sc (IS)	45	1	HMI H2	24174701	0.05	28135324	85.92	60	120	
Sc (IS)	45	2	HMI He	940630	1.07	1028528	91.45	60	120	
Sc (IS)	45	3	No Gas	38825711	0.88	44911069	86.45	60	120	
Ge Internal Standard	72	1	HMI H2	9206338	0.90	10990003	83.77	60	120	
Ge Internal Standard	72	2	HMI He	1022869	0.30	1134301	90.18	60	120	
In Internal Standard	115	2	HMI He	3154785	0.96	3548151	88.91	60	120	
Ho-165	165	2	HMI He	15796651	0.46	17324298	91.18	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	061_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:01:44-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	491.498	ppb	4.415	265584	500	98.3	90	110	
Li	7	2	45	506.865	ppb	1.375	13597	500	101.4	90	110	
Li	7	3	45	470.162	ppb	0.957	7994716	500	94.0	90	110	
Be	9	1	6	50.856	ppb	2.628	17361	50	101.7	90	110	
B	11	1	6	58.160	ppb	2.147	22107	50	116.3	90	110	>+\-10%
Na	23	1	45	5329.598	ppb	0.207	17183320	5000	106.6	90	110	
Na	23	2	45	5402.884	ppb	1.578	1258160	5000	108.1	90	110	
Mg	24	2	45	5077.826	ppb	0.402	538099	5000	101.6	90	110	
Al	27	2	45	5238.454	ppb	0.422	146638	5000	104.8	90	110	
K	39	1	45	5177.191	ppb	0.831	24961972	5000	103.5	90	110	
K	39	2	45	5194.784	ppb	1.454	284510	5000	103.9	90	110	
Ca	40	1	45	5057.596	ppb	0.766	23395652	5000	101.2	90	110	
Ca	44	2	45	5218.173	ppb	1.261	15205	5000	104.4	90	110	
Ti	47	2	45	50.400	ppb	6.572	1253	50	100.8	90	110	
V	51	2	72	52.284	ppb	1.885	54105	50	104.6	90	110	
Cr	52	2	72	50.228	ppb	2.614	65350	50	100.5	90	110	
Mn	55	2	72	51.624	ppb	3.589	26235	50	103.2	90	110	
Fe	57	2	72	4919.926	ppb	1.056	120570	5000	98.4	90	110	
Co	59	2	72	50.054	ppb	1.365	111876	50	100.1	90	110	
Ni	60	2	72	49.691	ppb	2.568	31749	50	99.4	90	110	
Cu	63	2	72	49.782	ppb	1.927	89647	50	99.6	90	110	
Zn	66	2	72	45.960	ppb	0.102	12059	50	91.9	90	110	
As	75	2	72	49.414	ppb	0.768	7832	50	98.8	90	110	
Se	78	1	72	49.287	ppb	3.668	11577	50	98.6	90	110	
Sr	88	2	72	51.292	ppb	2.106	27144	50	102.6	90	110	
Zr	90	2	72	98.686	ppb	12.229	1110	50	197.4	90	110	>+\-10%
Nb	93	2	72	84.062	ppb	0.671	254749	100	84.1	90	110	>+\-10%
Mo	95	2	115	46.872	ppb	1.127	39426	50	93.7	90	110	
Pd	105	2	115	49.016	ppb	1.079	64566	50	98.0	90	110	
Ag	107	2	115	48.870	ppb	1.166	139399	50	97.7	90	110	
Cd	111	2	115	48.359	ppb	2.985	18323	50	96.7	90	110	
Sn	120	2	115	48.264	ppb	2.326	47877	50	96.5	90	110	
Sb	121	2	115	48.248	ppb	1.761	42092	50	96.5	90	110	
Ba	137	2	115	50.375	ppb	3.859	14849	50	100.8	90	110	
W	182	2	165	48.962	ppb	0.219	196541	50	97.9	90	110	
Pt	195	2	165	47.777	ppb	0.359	161004	50	95.6	90	110	
Tl	205	2	165	50.489	ppb	0.401	377556	50	101.0	90	110	
Pb	208	2	165	50.303	ppb	0.612	502143	50	100.6	90	110	
Th	232	2	165	50.480	ppb	0.845	594463	50	101.0	90	110	
U	238	2	165	49.671	ppb	1.297	639628	50	99.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	747990	0.23	821388	91.06	60	120	
Sc (IS)	45	1	HMI H2	25105007	0.74	28135324	89.23	60	120	
Sc (IS)	45	2	HMI He	949171	0.32	1028528	92.28	60	120	
Sc (IS)	45	3	No Gas	40082751	0.15	44911069	89.25	60	120	
Ge Internal Standard	72	1	HMI H2	9601243	0.61	10990003	87.36	60	120	
Ge Internal Standard	72	2	HMI He	1036910	0.14	1134301	91.41	60	120	
In Internal Standard	115	2	HMI He	3284942	0.67	3548151	92.58	60	120	
Ho-165	165	2	HMI He	16077225	0.06	17324298	92.80	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	062_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:05:30-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-7.369	ppb	-11.5	3534927	10	
Be	9	1	6	0.010	ppb	554.0	17	0.5	
B	11	1	6	5.547	ppb	4.1	2517	0.5	>RL
Na	23	1	45	182.209	ppb	1.3	784461	25	>RL
Na	23	2	45	164.655	ppb	2.6	53433	25	>RL
Mg	24	2	45	2.309	ppb	39.0	403	25	
Al	27	2	45	0.233	ppb	1150.5	133	15	
K	39	1	45	140.797	ppb	5.1	9970709	50	>RL
K	39	2	45	4.352	ppb	224.3	16133	50	
Ca	40	1	45	8.777	ppb	3.3	83893	50	
Ca	44	2	45	17.326	ppb	28.2	87	25	
Ti	47	2	45	0.130	ppb	173.2	3	0.5	
V	51	2	72	2.765	ppb	10.2	5231	1	>RL
Cr	52	2	72	0.000	ppb	19344.3	303	1	
Mn	55	2	72	0.057	ppb	114.1	80	0.5	
Fe	57	2	72	0.698	ppb	422.1	137	25	
Co	59	2	72	-0.002	ppb	-402.4	20	0.5	
Ni	60	2	72	0.675	ppb	20.6	597	1	
Cu	63	2	72	-0.062	ppb	-50.2	1347	1	
Zn	66	2	72	-0.155	ppb	-68.9	300	5	
As	75	2	72	-0.016	ppb	-357.6	27	1	
Se	78	1	72	0.005	ppb	328.7	12	1	
Sr	88	2	72	0.097	ppb	45.1	87	0.5	
Zr	90	2	72	1.420	ppb	207.7	97	1	>RL
Nb	93	2	72	2.296	ppb	12.5	11819	2	>RL
Mo	95	2	115	0.221	ppb	18.1	230	0.5	
Pd	105	2	115	0.060	ppb	6.4	127	1	
Ag	107	2	115	-0.006	ppb	-60.5	60	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.025	ppb	228.8	203	1	
Sb	121	2	115	0.429	ppb	14.1	437	0.6	
Ba	137	2	115	-0.008	ppb	-800.1	17	0.5	
W	182	2	165	0.086	ppb	39.6	1460	1	
Pt	195	2	165	-0.002	ppb	-140.4	23	1	
Tl	205	2	165	0.016	ppb	3.6	267	0.1	
Pb	208	2	165	-0.023	ppb	-39.8	993	0.5	
Th	232	2	165	0.026	ppb	43.4	803	1	
U	238	2	165	0.041	ppb	22.7	740	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	780462	0.85	821388	95.02	60	120	
Sc (IS)	45	1	HMI H2	25738184	0.63	28135324	91.48	60	120	
Sc (IS)	45	2	HMI He	976847	0.80	1028528	94.98	60	120	
Sc (IS)	45	3	No Gas	40575427	0.23	44911069	90.35	60	120	
Ge Internal Standard	72	1	HMI H2	9856993	0.51	10990003	89.69	60	120	
Ge Internal Standard	72	2	HMI He	1063740	0.75	1134301	93.78	60	120	
In Internal Standard	115	2	HMI He	3394441	0.60	3548151	95.67	60	120	
Ho-165	165	2	HMI He	16529044	0.57	17324298	95.41	60	120	

Blank Report

Sample Table

Sample Name	MB 280-434680/1-A
Data File Name	063_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:09:18-07:00
Sample Type	Blank
Dilution	1
Comment	434680 6020b
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-1.078	ppb	-138.3250379	116377	0.5
Li	7	2	45	3.033	ppb	1471.477805	6061	0.5
Li	7	3	45	-13.770	ppb	-33.54709517	3518320	10
Be	9	1	6	-0.027	ppb	-62.47775407	3	0.5
B	11	1	6	4.576	ppb	8.242244965	2077	0.5
Na	23	1	45	81.668	ppb	1.088480154	450054	25
Na	23	2	45	95.966	ppb	3.719211692	37405	25
Mg	24	2	45	0.854	ppb	21.75197111	247	25
Al	27	2	45	5.828	ppb	27.37393204	297	15
K	39	1	45	-1178.739	ppb	-1.325691667	5805581	50
K	39	2	45	-5.924	ppb	-125.8471952	15689	50
Ca	40	1	45	11.903	ppb	3.706190352	97476	50
Ca	44	2	45	19.395	ppb	21.0090715	93	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	0.892	ppb	18.28886495	3324	1
Cr	52	2	72	0.169	ppb	42.0860071	527	1
Mn	55	2	72	0.424	ppb	14.49389393	270	0.5
Fe	57	2	72	2.580	ppb	76.28991454	183	25
Co	59	2	72	0.001	ppb	2524.983283	27	0.5
Ni	60	2	72	0.103	ppb	24.25792954	223	1
Cu	63	2	72	-0.078	ppb	-33.52769985	1317	1
Zn	66	2	72	0.715	ppb	67.87344954	527	5
As	75	2	72	-0.012	ppb	-782.8204625	27	1
Se	78	1	72	0.017	ppb	227.6652786	15	1
Sr	88	2	72	0.010	ppb	175.0131613	40	0.5
Zr	90	2	72	5.166	ppb	83.75351681	137	1
Nb	93	2	72	2.478	ppb	16.20027997	12363	2
Mo	95	2	115	0.086	ppb	26.79265413	113	0.5
Pd	105	2	115	-0.014	ppb	-29.79768347	27	1
Ag	107	2	115	-0.004	ppb	-436.1607383	67	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.160	ppb	49.37541815	343	1
Sb	121	2	115	0.242	ppb	6.769908106	270	0.6
Ba	137	2	115	0.002	ppb	1482.831231	20	0.5
W	182	2	165	0.510	ppb	3.844983955	3261	1
Pt	195	2	165	0.003	ppb	275.0536203	43	1
Tl	205	2	165	0.012	ppb	36.98802531	237	0.1
Pb	208	2	165	0.065	ppb	21.54094124	1923	0.5
Th	232	2	165	0.324	ppb	10.08176242	4488	1
U	238	2	165	0.025	ppb	51.43002118	533	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	757995	0.74	821388	92.28	60	120	
Sc (IS)	45	1	HMI H2	25421188	0.72	28135324	90.35	60	120	
Sc (IS)	45	2	HMI He	983344	0.96	1028528	95.61	60	120	
Sc (IS)	45	3	No Gas	41096574	0.41	44911069	91.51	60	120	
Ge Internal Standard	72	1	HMI H2	9718329	1.14	10990003	88.43	60	120	
Ge Internal Standard	72	2	HMI He	1062420	0.71	1134301	93.66	60	120	
In Internal Standard	115	2	HMI He	3414041	1.10	3548151	96.22	60	120	
Ho-165	165	2	HMI He	16822664	0.16	17324298	97.10	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-434680/2-A
Data File Name	064_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:13:06-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	434680 6020b
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	72.861	72.861	ppb	15.214	140934	400	18.2	80	120	>+/-20%
Li	7	2	45	60.534	60.534	ppb	12.856	7052	400	15.1	80	120	>+/-20%
Li	7	3	45	64.613	64.613	ppb	2.551	4209660	400	16.2	80	120	>+/-20%
Be	9	1	6	38.640	38.640	ppb	2.426	13480	40	96.6	80	120	
Na	23	2	45	64.307	64.307	ppb	4.401	30189	40	160.8	80	120	>+/-20%
Mg	24	2	45	1.698	1.698	ppb	61.036	343	40	4.2	80	120	>+/-20%
Al	27	2	45	412.847	412.847	ppb	6.413	12222	40	1032.1	80	120	>+/-20%
K	39	2	45	-2.797	-2.797	ppb	-297.580	16033	40	-7.0	80	120	>+/-20%
Ca	44	2	45	242.751	242.751	ppb	30.494	773	40	606.9	80	120	>+/-20%
V	51	2	72	38.839	38.839	ppb	0.448	42583	40	97.1	80	120	
Cr	52	2	72	37.844	37.844	ppb	4.186	51462	40	94.6	80	120	
Mn	55	2	72	40.225	40.225	ppb	4.923	21343	40	100.6	80	120	
Fe	57	2	72	399.200	399.200	ppb	3.824	10321	40	998.0	80	120	>+/-20%
Co	59	2	72	38.454	38.454	ppb	2.633	89710	40	96.1	80	120	
Ni	60	2	72	37.763	37.763	ppb	2.859	25220	40	94.4	80	120	
Cu	63	2	72	37.848	37.848	ppb	1.812	71491	40	94.6	80	120	
Zn	66	2	72	35.283	35.283	ppb	1.521	9744	40	88.2	80	120	
As	75	2	72	35.648	35.648	ppb	4.430	5905	40	89.1	80	120	
Se	78	1	72	34.701	34.701	ppb	1.679	8288	40	86.8	80	120	
Nb	93	2	72	1.128	1.128	ppb	16.193	8396	40	2.8	80	120	>+/-20%
Mo	95	2	115	37.106	37.106	ppb	4.142	32659	40	92.8	80	120	
Pd	105	2	115	-0.011	-0.011	ppb	-168.455	30	40	0.0	80	120	>+/-20%
Ag	107	2	115	38.931	38.931	ppb	1.217	116197	40	97.3	80	120	
Cd	111	2	115	37.588	37.588	ppb	2.907	14902	40	94.0	80	120	
Sn	120	2	115	37.816	37.816	ppb	0.773	39286	40	94.5	80	120	
Sb	121	2	115	37.937	37.937	ppb	2.867	34634	40	94.8	80	120	
Ba	137	2	115	39.121	39.121	ppb	6.328	12066	40	97.8	80	120	
W	182	2	165	36.384	36.384	ppb	3.096	153552	40	91.0	80	120	
Pt	195	2	165	0.000	0.000	ppb	2253.566	33	40	0.0	80	120	>+/-20%
Tl	205	2	165	37.979	37.979	ppb	2.594	298066	40	94.9	80	120	
Pb	208	2	165	38.053	38.053	ppb	1.870	398928	40	95.1	80	120	
Th	232	2	165	37.381	37.381	ppb	1.788	462088	40	93.5	80	120	
U	238	2	165	37.328	37.328	ppb	2.485	504461	40	93.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	764305	1.16	821388	93.05	60	120	
Sc (IS)	45	1	HMI H2	25720515	0.89	28135324	91.42	60	120	
Sc (IS)	45	2	HMI He	994377	0.92	1028528	96.68	60	120	
Sc (IS)	45	3	No Gas	40455947	0.95	44911069	90.08	60	120	
Ge Internal Standard	72	1	HMI H2	9758667	0.46	10990003	88.80	60	120	
Ge Internal Standard	72	2	HMI He	1082300	0.56	1134301	95.42	60	120	
In Internal Standard	115	2	HMI He	3437126	0.89	3548151	96.87	60	120	
Ho-165	165	2	HMI He	16873373	0.88	17324298	97.40	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-1-B
Data File Name	065SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:27:24-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.284	ppb	-1.284	-242.79	116301	500000	
Li	7	2	45	-36.556	ppb	-36.556	-31.59	5631	500000	
Li	7	3	45	-17.196	ppb	-17.196	-15.98	3350107	50000	
Be	9	1	6	-0.026	ppb	-0.026	-64.52	3	2000	
B	11	1	6	11.924	ppb	11.924	5.04	4794	2000	
Na	23	1	45	11340.785	ppb	11340.785	0.19	36810958	2000	>LDR
Na	23	2	45	11003.632	ppb	11003.632	0.77	2739471	400000	
Mg	24	2	45	13289.036	ppb	13289.036	0.65	1513861	400000	
Al	27	2	45	9.002	ppb	9.002	27.25	403	400000	
K	39	1	45	2747.457	ppb	2747.457	0.79	17831640	400000	
K	39	2	45	3934.025	ppb	3934.025	0.44	235685	400000	
Ca	40	1	45	41033.036	ppb	41033.036	0.31	191882804	400000	
Ca	44	2	45	40303.856	ppb	40303.856	1.20	126028	400000	
Ti	47	2	45	0.374	ppb	0.374	99.99	10	4000	
V	51	2	72	21.594	ppb	21.594	3.25	25223	2000	
Cr	52	2	72	2.746	ppb	2.746	3.00	4094	5000	
Mn	55	2	72	1.894	ppb	1.894	11.41	1073	10000	
Fe	57	2	72	53.283	ppb	53.283	13.64	1510	400000	
Co	59	2	72	0.034	ppb	0.034	56.64	107	2000	
Ni	60	2	72	1.201	ppb	1.201	2.74	973	5000	
Cu	63	2	72	1.289	ppb	1.289	5.66	3941	5000	
Zn	66	2	72	2.634	ppb	2.634	19.89	1067	5000	
As	75	2	72	1.422	ppb	1.422	14.83	269	2000	
Se	78	1	72	4.458	ppb	4.458	12.05	1060	2000	
Sr	88	2	72	166.190	ppb	166.190	0.88	93397	4000	
Zr	90	2	72	125.477	ppb	125.477	9.10	1477	1000	
Nb	93	2	72	-0.093	ppb	-0.093	-218.80	4691	200	
Mo	95	2	115	3.786	ppb	3.786	3.02	3417	2000	
Pd	105	2	115	-0.012	ppb	-0.012	-60.36	30	100	
Ag	107	2	115	-0.013	ppb	-0.013	-68.83	40	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.086	ppb	0.086	85.71	273	2000	
Sb	121	2	115	0.110	ppb	0.110	23.77	153	1000	
Ba	137	2	115	46.630	ppb	46.630	2.85	14595	5000	
W	182	2	165	2.257	ppb	2.257	1.29	10505	100	
Pt	195	2	165	0.003	ppb	0.003	393.62	43	100	
Tl	205	2	165	0.001	ppb	0.001	441.77	150	2000	
Pb	208	2	165	0.033	ppb	0.033	21.38	1583	5000	
Th	232	2	165	0.121	ppb	0.121	12.94	1970	2000	
U	238	2	165	0.632	ppb	0.632	2.92	8677	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	747131	0.06	821388	90.96	60	120	
Sc (IS)	45	1	HMI H2	25418636	0.25	28135324	90.34	60	120	
Sc (IS)	45	2	HMI He	1020533	0.03	1028528	99.22	60	120	
Sc (IS)	45	3	No Gas	39502124	0.27	44911069	87.96	60	120	
Ge Internal Standard	72	1	HMI H2	9632140	0.29	10990003	87.64	60	120	
Ge Internal Standard	72	2	HMI He	1102093	0.86	1134301	97.16	60	120	
In Internal Standard	115	2	HMI He	3487851	0.80	3548151	98.30	60	120	
Ho-165	165	2	HMI He	16738020	1.69	17324298	96.62	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-1-Bsd@5
Data File Name	066SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:31:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-4.073	ppb	-4.073	-50.39	116872	500000	
Li	7	2	45	4.911	ppb	4.911	123.77	6112	500000	
Li	7	3	45	-7.915	ppb	-7.915	-13.16	3487877	50000	
Be	9	1	6	-0.036	ppb	-0.036	0.00	0	2000	
B	11	1	6	4.479	ppb	4.479	5.52	2100	2000	
Na	23	1	45	2337.285	ppb	2337.285	0.41	7830765	2000	
Na	23	2	45	2266.829	ppb	2266.829	0.79	557554	400000	
Mg	24	2	45	2750.510	ppb	2750.510	0.68	303260	400000	
Al	27	2	45	10.941	ppb	10.941	34.41	447	400000	
K	39	1	45	583.181	ppb	583.181	2.30	11341423	400000	
K	39	2	45	793.176	ppb	793.176	2.07	58805	400000	
Ca	40	1	45	8383.018	ppb	8383.018	0.48	39723286	400000	
Ca	44	2	45	8309.063	ppb	8309.063	2.84	25166	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	5.100	ppb	5.100	6.48	7729	2000	
Cr	52	2	72	0.468	ppb	0.468	22.52	940	5000	
Mn	55	2	72	0.112	ppb	0.112	16.52	110	10000	
Fe	57	2	72	3.101	ppb	3.101	44.70	200	400000	
Co	59	2	72	-0.002	ppb	-0.002	-367.83	20	2000	
Ni	60	2	72	0.133	ppb	0.133	48.47	247	5000	
Cu	63	2	72	-0.067	ppb	-0.067	-111.58	1360	5000	
Zn	66	2	72	1.230	ppb	1.230	38.68	673	5000	
As	75	2	72	0.207	ppb	0.207	33.24	64	2000	
Se	78	1	72	1.058	ppb	1.058	2.13	267	2000	
Sr	88	2	72	33.072	ppb	33.072	3.80	18269	4000	
Zr	90	2	72	11.054	ppb	11.054	77.70	203	1000	
Nb	93	2	72	-0.837	ppb	-0.837	-3.58	2294	200	
Mo	95	2	115	0.909	ppb	0.909	11.00	833	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-70.35	23	100	
Ag	107	2	115	-0.006	ppb	-0.006	-115.56	60	100	
Cd	111	2	115	0.017	ppb	0.017	173.21	7	2000	
Sn	120	2	115	-0.006	ppb	-0.006	-110.67	173	2000	
Sb	121	2	115	0.032	ppb	0.032	123.25	80	1000	
Ba	137	2	115	8.641	ppb	8.641	16.34	2667	5000	
W	182	2	165	0.488	ppb	0.488	4.81	3127	100	
Pt	195	2	165	-0.002	ppb	-0.002	-297.60	23	100	
Tl	205	2	165	0.001	ppb	0.001	938.73	147	2000	
Pb	208	2	165	-0.013	ppb	-0.013	-89.85	1093	5000	
Th	232	2	165	0.001	ppb	0.001	1050.62	500	2000	
U	238	2	165	0.129	ppb	0.129	5.95	1917	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	780351	0.25	821388	95.00	60	120	
Sc (IS)	45	1	HMI H2	25734945	0.38	28135324	91.47	60	120	
Sc (IS)	45	2	HMI He	987343	0.33	1028528	96.00	60	120	
Sc (IS)	45	3	No Gas	40094293	0.71	44911069	89.27	60	120	
Ge Internal Standard	72	1	HMI H2	9892340	0.26	10990003	90.01	60	120	
Ge Internal Standard	72	2	HMI He	1081521	0.45	1134301	95.35	60	120	
In Internal Standard	115	2	HMI He	3417238	0.64	3548151	96.31	60	120	
Ho-165	165	2	HMI He	16607261	0.06	17324298	95.86	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-1-C MS
Data File Name	067SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:34:56-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	67.681	ppb	67.681	6.59	133924	500000	
Li	7	2	45	66.681	ppb	66.681	40.77	6895	500000	
Li	7	3	45	51.188	ppb	51.188	7.80	3979770	50000	
Be	9	1	6	39.608	ppb	39.608	1.19	13156	2000	
B	11	1	6	42.970	ppb	42.970	1.65	15976	2000	
Na	23	1	45	11409.836	ppb	11409.836	0.62	36029771	2000	>LDR
Na	23	2	45	11364.090	ppb	11364.090	5.65	2657205	400000	
Mg	24	2	45	14033.639	ppb	14033.639	6.49	1501416	400000	
Al	27	2	45	398.947	ppb	398.947	6.74	11392	400000	
K	39	1	45	2678.264	ppb	2678.264	2.07	17141773	400000	
K	39	2	45	3963.567	ppb	3963.567	7.48	222855	400000	
Ca	40	1	45	41287.229	ppb	41287.229	0.10	187837704	400000	
Ca	44	2	45	41216.462	ppb	41216.462	5.57	121070	400000	
Ti	47	2	45	1.306	ppb	1.306	106.79	33	4000	
V	51	2	72	59.128	ppb	59.128	5.19	61451	2000	
Cr	52	2	72	40.485	ppb	40.485	5.29	53225	5000	
Mn	55	2	72	38.861	ppb	38.861	5.28	19945	10000	
Fe	57	2	72	396.758	ppb	396.758	2.63	9927	400000	
Co	59	2	72	37.317	ppb	37.317	6.73	84167	2000	
Ni	60	2	72	37.664	ppb	37.664	6.96	24318	5000	
Cu	63	2	72	36.111	ppb	36.111	6.78	66018	5000	
Zn	66	2	72	34.036	ppb	34.036	5.96	9103	5000	
As	75	2	72	38.024	ppb	38.024	5.81	6090	2000	
Se	78	1	72	39.836	ppb	39.836	4.32	9164	2000	
Sr	88	2	72	207.301	ppb	207.301	7.87	110564	4000	
Zr	90	2	72	5113.269	ppb	5113.269	5.04	53987	1000	>LDR
Nb	93	2	72	-0.544	ppb	-0.544	-28.58	3094	200	
Mo	95	2	115	41.191	ppb	41.191	4.55	34918	2000	
Pd	105	2	115	-0.023	ppb	-0.023	-17.10	13	100	
Ag	107	2	115	38.618	ppb	38.618	6.56	110956	100	
Cd	111	2	115	37.326	ppb	37.326	7.13	14245	2000	
Sn	120	2	115	38.880	ppb	38.880	4.59	38892	2000	
Sb	121	2	115	38.203	ppb	38.203	3.53	33599	1000	
Ba	137	2	115	84.964	ppb	84.964	5.22	25220	5000	
W	182	2	165	39.556	ppb	39.556	4.72	161254	100	
Pt	195	2	165	-0.002	ppb	-0.002	-351.55	23	100	
Tl	205	2	165	39.625	ppb	39.625	5.93	300470	2000	
Pb	208	2	165	38.673	ppb	38.673	6.11	391683	5000	
Th	232	2	165	39.050	ppb	39.050	6.33	466340	2000	
U	238	2	165	39.314	ppb	39.314	5.99	513334	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	727682	0.18	821388	88.59	60	120	
Sc (IS)	45	1	HMI H2	24729578	0.74	28135324	87.90	60	120	
Sc (IS)	45	2	HMI He	960244	4.42	1028528	93.36	60	120	
Sc (IS)	45	3	No Gas	39444684	0.15	44911069	87.83	60	120	
Ge Internal Standard	72	1	HMI H2	9400108	0.60	10990003	85.53	60	120	
Ge Internal Standard	72	2	HMI He	1047805	3.31	1134301	92.37	60	120	
In Internal Standard	115	2	HMI He	3313207	3.33	3548151	93.38	60	120	
Ho-165	165	2	HMI He	16325228	3.74	17324298	94.23	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-1-D MSD
Data File Name	068SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:38:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	68.824	ppb	68.824	10.59	134314	500000	
Li	7	2	45	54.214	ppb	54.214	45.59	6688	500000	
Li	7	3	45	59.178	ppb	59.178	8.79	3958192	50000	
Be	9	1	6	39.453	ppb	39.453	0.77	13006	2000	
B	11	1	6	44.245	ppb	44.245	2.35	16316	2000	
Na	23	1	45	11538.719	ppb	11538.719	0.93	36447269	2000	>LDR
Na	23	2	45	11430.335	ppb	11430.335	0.85	2667178	400000	
Mg	24	2	45	14044.085	ppb	14044.085	1.22	1499796	400000	
Al	27	2	45	418.691	ppb	418.691	5.30	11932	400000	
K	39	1	45	2637.531	ppb	2637.531	1.12	17026358	400000	
K	39	2	45	4001.059	ppb	4001.059	0.83	224438	400000	
Ca	40	1	45	41729.808	ppb	41729.808	0.45	189915611	400000	
Ca	44	2	45	41679.355	ppb	41679.355	1.07	122189	400000	
Ti	47	2	45	1.331	ppb	1.331	62.83	33	4000	
V	51	2	72	59.580	ppb	59.580	0.83	61865	2000	
Cr	52	2	72	40.646	ppb	40.646	1.59	53403	5000	
Mn	55	2	72	39.738	ppb	39.738	2.42	20382	10000	
Fe	57	2	72	384.237	ppb	384.237	4.14	9607	400000	
Co	59	2	72	37.243	ppb	37.243	1.03	83976	2000	
Ni	60	2	72	38.004	ppb	38.004	2.73	24528	5000	
Cu	63	2	72	36.243	ppb	36.243	1.10	66226	5000	
Zn	66	2	72	34.661	ppb	34.661	1.31	9257	5000	
As	75	2	72	37.039	ppb	37.039	1.49	5930	2000	
Se	78	1	72	39.954	ppb	39.954	0.96	9195	2000	
Sr	88	2	72	208.929	ppb	208.929	0.84	111434	4000	
Zr	90	2	72	5132.782	ppb	5132.782	1.05	54158	1000	>LDR
Nb	93	2	72	-0.599	ppb	-0.599	-4.80	2930	200	
Mo	95	2	115	42.150	ppb	42.150	2.42	35873	2000	
Pd	105	2	115	-0.023	ppb	-0.023	-37.61	13	100	
Ag	107	2	115	38.372	ppb	38.372	1.87	110749	100	
Cd	111	2	115	36.903	ppb	36.903	3.07	14148	2000	
Sn	120	2	115	38.373	ppb	38.373	1.46	38545	2000	
Sb	121	2	115	38.227	ppb	38.227	3.96	33749	1000	
Ba	137	2	115	84.751	ppb	84.751	3.17	25261	5000	
W	182	2	165	39.086	ppb	39.086	2.18	160869	100	
Pt	195	2	165	-0.002	ppb	-0.002	-252.54	23	100	
Tl	205	2	165	38.453	ppb	38.453	0.56	294445	2000	
Pb	208	2	165	38.359	ppb	38.359	0.09	392341	5000	
Th	232	2	165	38.783	ppb	38.783	0.57	467736	2000	
U	238	2	165	39.018	ppb	39.018	0.27	514484	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	722212	0.35	821388	87.93	60	120	
Sc (IS)	45	1	HMI H2	24738081	0.49	28135324	87.93	60	120	
Sc (IS)	45	2	HMI He	956721	1.13	1028528	93.02	60	120	
Sc (IS)	45	3	No Gas	38515801	0.81	44911069	85.76	60	120	
Ge Internal Standard	72	1	HMI H2	9404586	0.63	10990003	85.57	60	120	
Ge Internal Standard	72	2	HMI He	1046014	0.86	1134301	92.22	60	120	
In Internal Standard	115	2	HMI He	3323405	0.03	3548151	93.67	60	120	
Ho-165	165	2	HMI He	16461202	0.66	17324298	95.02	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-1-B pds
Data File Name	069SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:42:28-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	197.564	ppb	197.564	3.70	170956	500000	
Li	7	2	45	197.846	ppb	197.846	19.97	8863	500000	
Li	7	3	45	177.120	ppb	177.120	4.49	5049550	50000	
Be	9	1	6	212.349	ppb	212.349	0.84	69190	2000	
B	11	1	6	11.669	ppb	11.669	10.72	4494	2000	
Na	23	1	45	10873.212	ppb	10873.212	1.22	33924459	2000	>LDR
Na	23	2	45	10879.987	ppb	10879.987	1.02	2524939	400000	
Mg	24	2	45	13233.010	ppb	13233.010	1.29	1405163	400000	
Al	27	2	45	2165.230	ppb	2165.230	2.30	60816	400000	
K	39	1	45	2444.637	ppb	2444.637	2.42	16245021	400000	
K	39	2	45	3782.961	ppb	3782.961	1.88	211848	400000	
Ca	40	1	45	39401.708	ppb	39401.708	0.70	177077531	400000	
Ca	44	2	45	39994.446	ppb	39994.446	1.20	116571	400000	
Ti	47	2	45	5.083	ppb	5.083	4.24	127	4000	
V	51	2	72	228.211	ppb	228.211	1.02	227540	2000	
Cr	52	2	72	209.379	ppb	209.379	0.90	270680	5000	
Mn	55	2	72	213.795	ppb	213.795	2.30	108176	10000	
Fe	57	2	72	2011.561	ppb	2011.561	0.11	49221	400000	
Co	59	2	72	199.066	ppb	199.066	1.15	443586	2000	
Ni	60	2	72	199.980	ppb	199.980	0.99	126946	5000	
Cu	63	2	72	197.245	ppb	197.245	0.53	349961	5000	
Zn	66	2	72	198.496	ppb	198.496	1.05	50831	5000	
As	75	2	72	195.555	ppb	195.555	0.70	30820	2000	
Se	78	1	72	194.795	ppb	194.795	0.43	44108	2000	
Sr	88	2	72	375.380	ppb	375.380	1.62	197870	4000	
Zr	90	2	72	27623.944	ppb	27623.944	0.57	287753	1000	>LDR
Nb	93	2	72	10.103	ppb	10.103	4.23	34644	200	
Mo	95	2	115	198.672	ppb	198.672	0.56	167242	2000	
Pd	105	2	115	0.030	ppb	0.030	104.67	83	100	
Ag	107	2	115	42.468	ppb	42.468	2.31	121326	100	
Cd	111	2	115	198.863	ppb	198.863	1.32	75467	2000	
Sn	120	2	115	203.139	ppb	203.139	0.37	201246	2000	
Sb	121	2	115	205.113	ppb	205.113	0.72	179046	1000	
Ba	137	2	115	253.777	ppb	253.777	1.56	74837	5000	
W	182	2	165	203.005	ppb	203.005	0.19	825551	100	
Pt	195	2	165	0.066	ppb	0.066	11.23	257	100	
Tl	205	2	165	215.506	ppb	215.506	0.89	1639034	2000	
Pb	208	2	165	204.963	ppb	204.963	0.75	2077721	5000	
Th	232	2	165	255.306	ppb	255.306	0.47	3056709	2000	
U	238	2	165	231.433	ppb	231.433	1.36	3031132	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	714316	0.63	821388	86.96	60	120	
Sc (IS)	45	1	HMI H2	24429068	0.84	28135324	86.83	60	120	
Sc (IS)	45	2	HMI He	951230	0.45	1028528	92.48	60	120	
Sc (IS)	45	3	No Gas	38689698	0.58	44911069	86.15	60	120	
Ge Internal Standard	72	1	HMI H2	9261118	0.18	10990003	84.27	60	120	
Ge Internal Standard	72	2	HMI He	1033893	0.41	1134301	91.15	60	120	
In Internal Standard	115	2	HMI He	3289873	0.45	3548151	92.72	60	120	
Ho-165	165	2	HMI He	16355741	0.08	17324298	94.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	070_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:46:16-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	503.872	ppb	1.635	266547	500	100.8	90	110	
Li	7	2	45	469.956	ppb	7.920	13026	500	94.0	90	110	
Li	7	3	45	475.655	ppb	2.156	7948007	500	95.1	90	110	
Be	9	1	6	49.608	ppb	3.612	17047	50	99.2	90	110	
B	11	1	6	52.393	ppb	3.105	20084	50	104.8	90	110	
Na	23	1	45	5156.775	ppb	1.161	16456376	5000	103.1	90	110	
Na	23	2	45	5199.788	ppb	2.408	1210953	5000	104.0	90	110	
Mg	24	2	45	5059.106	ppb	1.538	535946	5000	101.2	90	110	
Al	27	2	45	5192.280	ppb	2.600	145289	5000	103.8	90	110	
K	39	1	45	5095.268	ppb	1.483	24453957	5000	101.9	90	110	
K	39	2	45	5143.057	ppb	0.330	281778	5000	102.9	90	110	
Ca	40	1	45	5053.235	ppb	0.359	23129278	5000	101.1	90	110	
Ca	44	2	45	4970.028	ppb	2.749	14484	5000	99.4	90	110	
Ti	47	2	45	46.387	ppb	10.804	1153	50	92.8	90	110	
V	51	2	72	52.164	ppb	2.199	53820	50	104.3	90	110	
Cr	52	2	72	49.734	ppb	1.820	64510	50	99.5	90	110	
Mn	55	2	72	50.185	ppb	0.226	25423	50	100.4	90	110	
Fe	57	2	72	4902.404	ppb	0.852	119760	5000	98.0	90	110	
Co	59	2	72	49.975	ppb	0.891	111349	50	100.0	90	110	
Ni	60	2	72	48.659	ppb	0.962	30994	50	97.3	90	110	
Cu	63	2	72	48.499	ppb	2.086	87089	50	97.0	90	110	
Zn	66	2	72	45.804	ppb	2.208	11982	50	91.6	90	110	
As	75	2	72	50.160	ppb	1.392	7924	50	100.3	90	110	
Se	78	1	72	49.525	ppb	0.117	11545	50	99.0	90	110	
Sr	88	2	72	50.395	ppb	0.945	26586	50	100.8	90	110	
Zr	90	2	72	81.823	ppb	25.341	930	50	163.6	90	110	>+\-10%
Nb	93	2	72	75.668	ppb	1.045	229042	100	75.7	90	110	>+\-10%
Mo	95	2	115	47.688	ppb	2.347	39891	50	95.4	90	110	
Pd	105	2	115	48.583	ppb	1.332	63642	50	97.2	90	110	
Ag	107	2	115	48.033	ppb	1.405	136231	50	96.1	90	110	
Cd	111	2	115	49.662	ppb	1.777	18713	50	99.3	90	110	
Sn	120	2	115	48.983	ppb	3.106	48301	50	98.0	90	110	
Sb	121	2	115	51.808	ppb	1.074	44938	50	103.6	90	110	
Ba	137	2	115	50.291	ppb	2.124	14739	50	100.6	90	110	
W	182	2	165	49.097	ppb	1.359	198004	50	98.2	90	110	
Pt	195	2	165	47.285	ppb	0.968	160097	50	94.6	90	110	
Tl	205	2	165	50.664	ppb	0.435	380664	50	101.3	90	110	
Pb	208	2	165	50.528	ppb	0.438	506795	50	101.1	90	110	
Th	232	2	165	50.713	ppb	0.873	600029	50	101.4	90	110	
U	238	2	165	49.917	ppb	0.581	645835	50	99.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	752980	0.53	821388	91.67	60	120	
Sc (IS)	45	1	HMI H2	24841078	0.74	28135324	88.29	60	120	
Sc (IS)	45	2	HMI He	948997	1.30	1028528	92.27	60	120	
Sc (IS)	45	3	No Gas	39593693	0.74	44911069	88.16	60	120	
Ge Internal Standard	72	1	HMI H2	9527919	0.30	10990003	86.70	60	120	
Ge Internal Standard	72	2	HMI He	1033633	0.74	1134301	91.13	60	120	
In Internal Standard	115	2	HMI He	3266741	1.42	3548151	92.07	60	120	
Ho-165	165	2	HMI He	16153926	0.95	17324298	93.24	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	071_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:50:02-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-7.006	ppb	-75.5	3521944	10	
Be	9	1	6	0.031	ppb	143.0	23	0.5	
B	11	1	6	3.776	ppb	16.0	1797	0.5	>RL
Na	23	1	45	15.727	ppb	3.8	232395	25	
Na	23	2	45	17.530	ppb	115.7	17555	25	
Mg	24	2	45	3.350	ppb	89.9	477	25	
Al	27	2	45	5.844	ppb	97.0	273	15	
K	39	1	45	73.551	ppb	19.5	9451340	50	>RL
K	39	2	45	7.052	ppb	416.9	15569	50	
Ca	40	1	45	5.841	ppb	1.3	67774	50	
Ca	44	2	45	9.772	ppb	94.8	60	25	
Ti	47	2	45	0.125	ppb	173.2	3	0.5	
V	51	2	72	2.743	ppb	14.5	4968	1	>RL
Cr	52	2	72	-0.014	ppb	-240.1	270	1	
Mn	55	2	72	0.082	ppb	71.4	90	0.5	
Fe	57	2	72	6.127	ppb	127.4	253	25	
Co	59	2	72	0.012	ppb	83.0	50	0.5	
Ni	60	2	72	0.678	ppb	24.2	570	1	
Cu	63	2	72	-0.115	ppb	-53.8	1197	1	
Zn	66	2	72	-0.183	ppb	-161.8	277	5	
As	75	2	72	0.020	ppb	189.2	31	1	
Se	78	1	72	0.119	ppb	29.6	39	1	
Sr	88	2	72	0.049	ppb	137.9	57	0.5	
Zr	90	2	72	2.038	ppb	105.4	100	1	>RL
Nb	93	2	72	4.112	ppb	28.0	16447	2	>RL
Mo	95	2	115	0.171	ppb	27.4	177	0.5	
Pd	105	2	115	0.035	ppb	80.9	87	1	
Ag	107	2	115	0.011	ppb	114.4	103	1	
Cd	111	2	115	0.054	ppb	50.0	20	0.5	
Sn	120	2	115	0.277	ppb	49.9	437	1	
Sb	121	2	115	0.630	ppb	19.8	587	0.6	>RL
Ba	137	2	115	-0.063	ppb	0.0	0	0.5	
W	182	2	165	0.196	ppb	20.6	1840	1	
Pt	195	2	165	0.020	ppb	76.2	93	1	
Tl	205	2	165	0.032	ppb	36.0	367	0.1	
Pb	208	2	165	0.020	ppb	70.4	1380	0.5	
Th	232	2	165	0.069	ppb	34.4	1260	1	
U	238	2	165	0.091	ppb	41.2	1323	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	768268	0.35	821388	93.53	60	120	
Sc (IS)	45	1	HMI H2	24918844	0.36	28135324	88.57	60	120	
Sc (IS)	45	2	HMI He	940649	10.56	1028528	91.46	60	120	
Sc (IS)	45	3	No Gas	40385709	0.34	44911069	89.92	60	120	
Ge Internal Standard	72	1	HMI H2	9634523	0.41	10990003	87.67	60	120	
Ge Internal Standard	72	2	HMI He	1018852	8.57	1134301	89.82	60	120	
In Internal Standard	115	2	HMI He	3259627	9.71	3548151	91.87	60	120	
Ho-165	165	2	HMI He	15955029	10.19	17324298	92.10	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-9-B
Data File Name	072SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:53:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.804	ppb	-1.804	-243.15	112733	500000	
Li	7	2	45	-13.518	ppb	-13.518	-129.10	5648	500000	
Li	7	3	45	-15.425	ppb	-15.425	-30.81	3408637	50000	
Be	9	1	6	-0.006	ppb	-0.006	-482.04	10	2000	
B	11	1	6	2.702	ppb	2.702	3.34	1323	2000	
Na	23	1	45	0.980	ppb	0.980	102.01	183866	2000	
Na	23	2	45	0.318	ppb	0.318	455.25	14221	400000	
Mg	24	2	45	0.628	ppb	0.628	122.18	217	400000	
Al	27	2	45	7.497	ppb	7.497	22.83	337	400000	
K	39	1	45	-1273.685	ppb	-1273.685	-2.35	5352016	400000	
K	39	2	45	-24.077	ppb	-24.077	-20.88	14351	400000	
Ca	40	1	45	7.955	ppb	7.955	0.90	76700	400000	
Ca	44	2	45	10.005	ppb	10.005	139.11	63	400000	
Ti	47	2	45	0.264	ppb	0.264	173.21	7	4000	
V	51	2	72	0.724	ppb	0.724	45.08	3084	2000	
Cr	52	2	72	0.468	ppb	0.468	28.49	903	5000	
Mn	55	2	72	0.074	ppb	0.074	67.29	87	10000	
Fe	57	2	72	5.054	ppb	5.054	20.65	240	400000	
Co	59	2	72	-0.001	ppb	-0.001	-1332.42	23	2000	
Ni	60	2	72	0.012	ppb	0.012	9.21	160	5000	
Cu	63	2	72	0.757	ppb	0.757	20.01	2770	5000	
Zn	66	2	72	1.266	ppb	1.266	38.33	657	5000	
As	75	2	72	0.025	ppb	0.025	146.94	33	2000	
Se	78	1	72	0.077	ppb	0.077	39.39	28	2000	
Sr	88	2	72	0.044	ppb	0.044	139.37	57	4000	
Zr	90	2	72	5.473	ppb	5.473	26.59	137	1000	
Nb	93	2	72	3.062	ppb	3.062	16.33	13824	200	
Mo	95	2	115	0.061	ppb	0.061	21.54	90	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-26.41	23	100	
Ag	107	2	115	0.007	ppb	0.007	156.30	97	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.064	ppb	0.064	80.19	240	2000	
Sb	121	2	115	0.364	ppb	0.364	31.06	373	1000	
Ba	137	2	115	0.015	ppb	0.015	126.59	23	5000	
W	182	2	165	0.471	ppb	0.471	10.09	3037	100	
Pt	195	2	165	0.002	ppb	0.002	236.89	40	100	
Tl	205	2	165	0.010	ppb	0.010	44.52	213	2000	
Pb	208	2	165	0.083	ppb	0.083	46.09	2070	5000	
Th	232	2	165	0.228	ppb	0.228	14.70	3234	2000	
U	238	2	165	0.041	ppb	0.041	29.17	740	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	734282	1.03	821388	89.40	60	120	
Sc (IS)	45	1	HMI H2	24673613	0.94	28135324	87.70	60	120	
Sc (IS)	45	2	HMI He	958936	0.86	1028528	93.23	60	120	
Sc (IS)	45	3	No Gas	39997826	0.61	44911069	89.06	60	120	
Ge Internal Standard	72	1	HMI H2	9410902	0.32	10990003	85.63	60	120	
Ge Internal Standard	72	2	HMI He	1038804	0.43	1134301	91.58	60	120	
In Internal Standard	115	2	HMI He	3347207	1.56	3548151	94.34	60	120	
Ho-165	165	2	HMI He	16489134	0.35	17324298	95.18	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-10-B
Data File Name	073SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T16:58:15-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	7.996	ppb	7.996	62.13	115795	500000	
Li	7	2	45	2.521	ppb	2.521	1014.35	5898	500000	
Li	7	3	45	-10.320	ppb	-10.320	-41.18	3329278	50000	
Be	9	1	6	-0.026	ppb	-0.026	-67.37	3	2000	
B	11	1	6	22.780	ppb	22.780	0.93	8586	2000	
Na	23	1	45	39006.012	ppb	39006.012	0.52	122583685	2000	>LDR
Na	23	2	45	37635.975	ppb	37635.975	0.39	8768724	400000	
Mg	24	2	45	6222.885	ppb	6222.885	0.87	666080	400000	
Al	27	2	45	15.682	ppb	15.682	30.65	567	400000	
K	39	1	45	5357.523	ppb	5357.523	0.97	25095680	400000	
K	39	2	45	6636.872	ppb	6636.872	0.96	362814	400000	
Ca	40	1	45	19847.164	ppb	19847.164	1.11	90202019	400000	
Ca	44	2	45	19861.179	ppb	19861.179	0.45	58367	400000	
Ti	47	2	45	1.324	ppb	1.324	105.96	33	4000	
V	51	2	72	0.394	ppb	0.394	28.36	2750	2000	
Cr	52	2	72	0.526	ppb	0.526	1.24	977	5000	
Mn	55	2	72	41.139	ppb	41.139	2.32	20906	10000	
Fe	57	2	72	366.027	ppb	366.027	5.11	9073	400000	
Co	59	2	72	0.068	ppb	0.068	13.95	177	2000	
Ni	60	2	72	0.233	ppb	0.233	69.89	300	5000	
Cu	63	2	72	0.194	ppb	0.194	36.11	1767	5000	
Zn	66	2	72	2.645	ppb	2.645	0.85	1007	5000	
As	75	2	72	1.206	ppb	1.206	9.01	219	2000	
Se	78	1	72	0.013	ppb	0.013	275.72	13	2000	
Sr	88	2	72	109.821	ppb	109.821	1.03	58056	4000	
Zr	90	2	72	11.865	ppb	11.865	40.20	203	1000	
Nb	93	2	72	1.286	ppb	1.286	22.87	8513	200	
Mo	95	2	115	9.144	ppb	9.144	2.27	7779	2000	
Pd	105	2	115	-0.015	ppb	-0.015	-57.35	23	100	
Ag	107	2	115	-0.001	ppb	-0.001	-3121.78	73	100	
Cd	111	2	115	0.018	ppb	0.018	86.63	7	2000	
Sn	120	2	115	0.073	ppb	0.073	83.51	247	2000	
Sb	121	2	115	0.175	ppb	0.175	20.12	203	1000	
Ba	137	2	115	37.352	ppb	37.352	4.02	11092	5000	
W	182	2	165	0.783	ppb	0.783	12.01	4261	100	
Pt	195	2	165	0.002	ppb	0.002	106.02	37	100	
Tl	205	2	165	0.011	ppb	0.011	7.05	223	2000	
Pb	208	2	165	0.071	ppb	0.071	21.38	1930	5000	
Th	232	2	165	0.113	ppb	0.113	10.97	1827	2000	
U	238	2	165	0.095	ppb	0.095	18.46	1434	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	724560	0.23	821388	88.21	60	120	
Sc (IS)	45	1	HMI H2	24699806	0.92	28135324	87.79	60	120	
Sc (IS)	45	2	HMI He	958819	1.33	1028528	93.22	60	120	
Sc (IS)	45	3	No Gas	38520504	0.52	44911069	85.77	60	120	
Ge Internal Standard	72	1	HMI H2	9432833	0.13	10990003	85.83	60	120	
Ge Internal Standard	72	2	HMI He	1036534	0.70	1134301	91.38	60	120	
In Internal Standard	115	2	HMI He	3309043	1.46	3548151	93.26	60	120	
Ho-165	165	2	HMI He	16302803	0.68	17324298	94.10	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-11-B
Data File Name	074SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:02:03-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.632	ppb	1.632	121.89	112756	500000	
Li	7	2	45	-3.841	ppb	-3.841	-484.57	5738	500000	
Li	7	3	45	-6.874	ppb	-6.874	-80.54	3363218	50000	
Be	9	1	6	-0.026	ppb	-0.026	-68.27	3	2000	
B	11	1	6	22.047	ppb	22.047	3.72	8249	2000	
Na	23	1	45	39214.281	ppb	39214.281	0.24	122014805	2000	>LDR
Na	23	2	45	37893.159	ppb	37893.159	1.18	8734160	400000	
Mg	24	2	45	6247.697	ppb	6247.697	0.46	661619	400000	
Al	27	2	45	8.592	ppb	8.592	16.42	363	400000	
K	39	1	45	5310.980	ppb	5310.980	0.85	24709184	400000	
K	39	2	45	6695.369	ppb	6695.369	0.71	361994	400000	
Ca	40	1	45	19861.366	ppb	19861.366	0.48	89373389	400000	
Ca	44	2	45	19844.912	ppb	19844.912	0.87	57695	400000	
Ti	47	2	45	0.400	ppb	0.400	173.21	10	4000	
V	51	2	72	0.381	ppb	0.381	110.59	2717	2000	
Cr	52	2	72	0.400	ppb	0.400	22.41	807	5000	
Mn	55	2	72	34.392	ppb	34.392	1.76	17358	10000	
Fe	57	2	72	197.833	ppb	197.833	6.47	4921	400000	
Co	59	2	72	0.243	ppb	0.243	26.58	563	2000	
Ni	60	2	72	0.289	ppb	0.289	55.18	333	5000	
Cu	63	2	72	-0.136	ppb	-0.136	-86.44	1173	5000	
Zn	66	2	72	2.503	ppb	2.503	24.81	963	5000	
As	75	2	72	1.266	ppb	1.266	16.63	227	2000	
Se	78	1	72	0.025	ppb	0.025	237.38	16	2000	
Sr	88	2	72	108.829	ppb	108.829	1.80	57109	4000	
Zr	90	2	72	6.884	ppb	6.884	48.45	150	1000	
Nb	93	2	72	0.226	ppb	0.226	72.48	5318	200	
Mo	95	2	115	10.098	ppb	10.098	5.05	8636	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-49.61	33	100	
Ag	107	2	115	-0.018	ppb	-0.018	-22.07	23	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.146	ppb	0.146	67.94	320	2000	
Sb	121	2	115	0.174	ppb	0.174	33.77	203	1000	
Ba	137	2	115	37.517	ppb	37.517	1.05	11215	5000	
W	182	2	165	0.761	ppb	0.761	14.53	4178	100	
Pt	195	2	165	0.002	ppb	0.002	424.63	37	100	
Tl	205	2	165	0.001	ppb	0.001	658.43	147	2000	
Pb	208	2	165	0.010	ppb	0.010	95.15	1307	5000	
Th	232	2	165	0.064	ppb	0.064	9.55	1243	2000	
U	238	2	165	0.095	ppb	0.095	7.56	1440	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	718346	0.25	821388	87.46	60	120	
Sc (IS)	45	1	HMI H2	24454075	0.45	28135324	86.92	60	120	
Sc (IS)	45	2	HMI He	948559	0.51	1028528	92.22	60	120	
Sc (IS)	45	3	No Gas	38549014	1.05	44911069	85.83	60	120	
Ge Internal Standard	72	1	HMI H2	9304972	1.36	10990003	84.67	60	120	
Ge Internal Standard	72	2	HMI He	1028878	0.18	1134301	90.71	60	120	
In Internal Standard	115	2	HMI He	3329812	1.10	3548151	93.85	60	120	
Ho-165	165	2	HMI He	16321664	0.65	17324298	94.21	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-12-B
Data File Name	075SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:05:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	3.107	ppb	3.107	178.88	110323	500000	
Li	7	2	45	-15.972	ppb	-15.972	-159.63	5388	500000	
Li	7	3	45	-10.692	ppb	-10.692	-45.30	3237790	50000	
Be	9	1	6	-0.004	ppb	-0.004	-734.04	10	2000	
B	11	1	6	13.863	ppb	13.863	8.71	5104	2000	
Na	23	1	45	49438.931	ppb	49438.931	0.83	149883428	2000	>LDR
Na	23	2	45	48341.890	ppb	48341.890	0.70	10816097	400000	
Mg	24	2	45	19762.752	ppb	19762.752	1.03	2031926	400000	
Al	27	2	45	6.269	ppb	6.269	49.57	290	400000	
K	39	1	45	6040.923	ppb	6040.923	1.19	26179945	400000	
K	39	2	45	7405.240	ppb	7405.240	1.30	387178	400000	
Ca	40	1	45	84302.503	ppb	84302.503	0.76	369633528	400000	
Ca	44	2	45	85084.420	ppb	85084.420	1.05	240094	400000	
Ti	47	2	45	0.414	ppb	0.414	99.49	10	4000	
V	51	2	72	7.813	ppb	7.813	2.69	9767	2000	
Cr	52	2	72	0.921	ppb	0.921	17.78	1440	5000	
Mn	55	2	72	7.915	ppb	7.915	5.11	3931	10000	
Fe	57	2	72	170.640	ppb	170.640	1.59	4154	400000	
Co	59	2	72	0.099	ppb	0.099	7.98	237	2000	
Ni	60	2	72	0.238	ppb	0.238	34.78	293	5000	
Cu	63	2	72	0.200	ppb	0.200	11.63	1720	5000	
Zn	66	2	72	2.236	ppb	2.236	7.31	873	5000	
As	75	2	72	3.395	ppb	3.395	4.17	546	2000	
Se	78	1	72	5.500	ppb	5.500	3.23	1232	2000	
Sr	88	2	72	690.850	ppb	690.850	1.33	353310	4000	
Zr	90	2	72	4.273	ppb	4.273	67.41	120	1000	
Nb	93	2	72	-0.132	ppb	-0.132	-114.59	4158	200	
Mo	95	2	115	4.845	ppb	4.845	2.34	4037	2000	
Pd	105	2	115	-0.010	ppb	-0.010	-271.21	30	100	
Ag	107	2	115	-0.003	ppb	-0.003	-304.41	63	100	
Cd	111	2	115	0.018	ppb	0.018	86.61	7	2000	
Sn	120	2	115	0.148	ppb	0.148	36.06	313	2000	
Sb	121	2	115	0.201	ppb	0.201	10.73	220	1000	
Ba	137	2	115	73.492	ppb	73.492	0.94	21281	5000	
W	182	2	165	0.487	ppb	0.487	7.04	3034	100	
Pt	195	2	165	-0.008	ppb	-0.008	-20.92	3	100	
Tl	205	2	165	0.001	ppb	0.001	305.05	147	2000	
Pb	208	2	165	0.089	ppb	0.089	17.35	2084	5000	
Th	232	2	165	0.060	ppb	0.060	28.74	1187	2000	
U	238	2	165	7.230	ppb	7.230	1.80	93567	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	690885	0.16	821388	84.11	60	120	
Sc (IS)	45	1	HMI H2	23834897	0.68	28135324	84.72	60	120	
Sc (IS)	45	2	HMI He	921098	0.81	1028528	89.55	60	120	
Sc (IS)	45	3	No Gas	37502177	0.84	44911069	83.50	60	120	
Ge Internal Standard	72	1	HMI H2	9091902	0.62	10990003	82.73	60	120	
Ge Internal Standard	72	2	HMI He	1003206	0.80	1134301	88.44	60	120	
In Internal Standard	115	2	HMI He	3228295	0.71	3548151	90.99	60	120	
Ho-165	165	2	HMI He	16129173	0.48	17324298	93.10	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	076_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:09:39-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	487.422	ppb	1.734	258867	500	97.5	90	110	
Li	7	2	45	499.416	ppb	9.043	13226	500	99.9	90	110	
Li	7	3	45	472.101	ppb	2.709	7761718	500	94.4	90	110	
Be	9	1	6	49.359	ppb	2.467	16677	50	98.7	90	110	
B	11	1	6	49.891	ppb	4.113	18816	50	99.8	90	110	
Na	23	1	45	5142.388	ppb	0.291	16241921	5000	102.8	90	110	
Na	23	2	45	5218.922	ppb	0.929	1192651	5000	104.4	90	110	
Mg	24	2	45	5080.182	ppb	0.636	528092	5000	101.6	90	110	
Al	27	2	45	5266.593	ppb	2.032	144610	5000	105.3	90	110	
K	39	1	45	5063.223	ppb	0.978	24106701	5000	101.3	90	110	
K	39	2	45	5105.327	ppb	0.669	274540	5000	102.1	90	110	
Ca	40	1	45	5035.363	ppb	0.277	22809144	5000	100.7	90	110	
Ca	44	2	45	4956.482	ppb	3.939	14167	5000	99.1	90	110	
Ti	47	2	45	53.707	ppb	10.262	1310	50	107.4	90	110	
V	51	2	72	50.539	ppb	1.754	51258	50	101.1	90	110	
Cr	52	2	72	50.042	ppb	1.694	63723	50	100.1	90	110	
Mn	55	2	72	50.687	ppb	0.831	25209	50	101.4	90	110	
Fe	57	2	72	4897.927	ppb	1.199	117472	5000	98.0	90	110	
Co	59	2	72	49.914	ppb	0.961	109184	50	99.8	90	110	
Ni	60	2	72	48.689	ppb	1.780	30446	50	97.4	90	110	
Cu	63	2	72	48.751	ppb	0.263	85946	50	97.5	90	110	
Zn	66	2	72	44.671	ppb	2.815	11478	50	89.3	90	110	>+\-10%
As	75	2	72	49.625	ppb	0.308	7698	50	99.2	90	110	
Se	78	1	72	48.566	ppb	3.455	11210	50	97.1	90	110	
Sr	88	2	72	51.896	ppb	2.342	26880	50	103.8	90	110	
Zr	90	2	72	64.800	ppb	12.680	740	50	129.6	90	110	>+\-10%
Nb	93	2	72	76.128	ppb	1.151	226206	100	76.1	90	110	>+\-10%
Mo	95	2	115	46.871	ppb	2.577	38641	50	93.7	90	110	
Pd	105	2	115	48.424	ppb	1.341	62523	50	96.8	90	110	
Ag	107	2	115	47.548	ppb	0.923	132931	50	95.1	90	110	
Cd	111	2	115	48.056	ppb	2.805	17849	50	96.1	90	110	
Sn	120	2	115	48.190	ppb	3.278	46850	50	96.4	90	110	
Sb	121	2	115	49.842	ppb	1.758	42613	50	99.7	90	110	
Ba	137	2	115	50.063	ppb	3.753	14465	50	100.1	90	110	
W	182	2	165	48.932	ppb	0.314	195478	50	97.9	90	110	
Pt	195	2	165	47.499	ppb	0.892	159297	50	95.0	90	110	
Tl	205	2	165	50.726	ppb	0.841	377514	50	101.5	90	110	
Pb	208	2	165	50.474	ppb	0.777	501425	50	100.9	90	110	
Th	232	2	165	50.253	ppb	0.173	588956	50	100.5	90	110	
U	238	2	165	50.050	ppb	0.630	641411	50	100.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	740401	0.92	821388	90.14	60	120	
Sc (IS)	45	1	HMI H2	24583712	0.33	28135324	87.38	60	120	
Sc (IS)	45	2	HMI He	931113	0.62	1028528	90.53	60	120	
Sc (IS)	45	3	No Gas	38827871	0.57	44911069	86.46	60	120	
Ge Internal Standard	72	1	HMI H2	9434167	0.56	10990003	85.84	60	120	
Ge Internal Standard	72	2	HMI He	1014786	0.64	1134301	89.46	60	120	
In Internal Standard	115	2	HMI He	3219701	0.39	3548151	90.74	60	120	
Ho-165	165	2	HMI He	16000117	0.19	17324298	92.36	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	077_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:13:26-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-5.985	ppb	-73.7	3436506	10	
Be	9	1	6	0.071	ppb	61.8	37	0.5	
B	11	1	6	3.272	ppb	14.9	1560	0.5	>RL
Na	23	1	45	20.833	ppb	8.0	245603	25	
Na	23	2	45	19.566	ppb	8.6	18075	25	
Mg	24	2	45	0.444	ppb	96.1	190	25	
Al	27	2	45	3.154	ppb	48.2	207	15	
K	39	1	45	30.043	ppb	28.3	9210334	50	
K	39	2	45	3.149	ppb	131.0	15249	50	
Ca	40	1	45	3.891	ppb	2.0	58139	50	
Ca	44	2	45	-2.211	ppb	-461.0	27	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	2.187	ppb	2.7	4428	1	>RL
Cr	52	2	72	-0.068	ppb	-78.5	203	1	
Mn	55	2	72	0.119	ppb	34.6	107	0.5	
Fe	57	2	72	1.260	ppb	102.8	143	25	
Co	59	2	72	0.003	ppb	431.9	30	0.5	
Ni	60	2	72	0.768	ppb	10.2	627	1	
Cu	63	2	72	-0.176	ppb	-49.4	1087	1	
Zn	66	2	72	0.086	ppb	503.3	347	5	
As	75	2	72	-0.017	ppb	-72.9	25	1	
Se	78	1	72	0.025	ppb	69.6	16	1	
Sr	88	2	72	-0.006	ppb	-696.6	30	0.5	
Zr	90	2	72	-0.743	ppb	-391.6	70	1	
Nb	93	2	72	4.107	ppb	8.7	16537	2	>RL
Mo	95	2	115	0.142	ppb	20.7	157	0.5	
Pd	105	2	115	0.015	ppb	160.2	63	1	
Ag	107	2	115	0.010	ppb	231.0	103	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.172	ppb	21.3	343	1	
Sb	121	2	115	0.436	ppb	12.2	430	0.6	
Ba	137	2	115	-0.006	ppb	-611.2	17	0.5	
W	182	2	165	0.158	ppb	34.9	1714	1	
Pt	195	2	165	0.007	ppb	111.0	53	1	
Tl	205	2	165	0.012	ppb	57.9	227	0.1	
Pb	208	2	165	-0.023	ppb	-16.8	970	0.5	
Th	232	2	165	0.033	ppb	24.9	860	1	
U	238	2	165	0.049	ppb	7.7	830	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	747577	1.03	821388	91.01	60	120	
Sc (IS)	45	1	HMI H2	24623694	0.55	28135324	87.52	60	120	
Sc (IS)	45	2	HMI He	926949	0.36	1028528	90.12	60	120	
Sc (IS)	45	3	No Gas	39301444	0.98	44911069	87.51	60	120	
Ge Internal Standard	72	1	HMI H2	9426756	0.46	10990003	85.78	60	120	
Ge Internal Standard	72	2	HMI He	1014209	0.38	1134301	89.41	60	120	
In Internal Standard	115	2	HMI He	3292190	1.29	3548151	92.79	60	120	
Ho-165	165	2	HMI He	16121081	0.71	17324298	93.05	60	120	

Blank Report

Sample Table

Sample Name	MB 280-434124/1-A
Data File Name	078_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:17:14-07:00
Sample Type	Blank
Dilution	1
Comment	434124 6020b
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-0.121	ppb	-3639.401932	111319	0.5
Li	7	2	45	4.743	ppb	156.1027679	5791	0.5
Li	7	3	45	-16.328	ppb	-14.84464821	3357813	10
Be	9	1	6	-0.036	ppb	0	0	0.5
B	11	1	6	2.098	ppb	3.630183085	1093	0.5
Na	23	1	45	0.915	ppb	100.8259791	180561	25
Na	23	2	45	0.677	ppb	1009.6661	13934	25
Mg	24	2	45	1.455	ppb	42.21488609	297	25
Al	27	2	45	3.917	ppb	54.08669055	230	15
K	39	1	45	-1293.615	ppb	-1.884793215	5203776	50
K	39	2	45	-0.918	ppb	-2195.701831	15172	50
Ca	40	1	45	11.312	ppb	1.575116984	90377	50
Ca	44	2	45	14.025	ppb	110.85904	73	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	0.521	ppb	45.17613962	2807	1
Cr	52	2	72	0.132	ppb	44.80957547	457	1
Mn	55	2	72	2.007	ppb	8.455085907	1043	0.5
Fe	57	2	72	34.812	ppb	21.89479416	943	25
Co	59	2	72	0.000	ppb	-11204.63003	23	0.5
Ni	60	2	72	0.027	ppb	512.1424642	163	1
Cu	63	2	72	0.226	ppb	57.6463667	1777	1
Zn	66	2	72	1.144	ppb	58.38913152	607	5
As	75	2	72	-0.051	ppb	-96.00421447	20	1
Se	78	1	72	-0.004	ppb	-746.462568	9	1
Sr	88	2	72	0.033	ppb	110.8946752	50	0.5
Zr	90	2	72	-3.022	ppb	-65.1078731	47	1
Nb	93	2	72	2.864	ppb	14.25325228	12883	2
Mo	95	2	115	0.007	ppb	173.4808882	43	0.5
Pd	105	2	115	-0.003	ppb	-1058.064125	40	1
Ag	107	2	115	-0.016	ppb	-1.656355143	30	1
Cd	111	2	115	0.018	ppb	86.64853173	7	0.5
Sn	120	2	115	0.131	ppb	61.44208257	303	1
Sb	121	2	115	0.185	ppb	6.451201375	210	0.6
Ba	137	2	115	0.288	ppb	51.96270537	103	0.5
W	182	2	165	0.183	ppb	8.888123593	1820	1
Pt	195	2	165	0.002	ppb	303.0148433	40	1
Tl	205	2	165	0.005	ppb	90.96711471	173	0.1
Pb	208	2	165	0.002	ppb	299.2310162	1223	0.5
Th	232	2	165	0.107	ppb	17.88172036	1740	1
U	238	2	165	0.016	ppb	5.884610995	397	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	729307	1.30	821388	88.79	60	120	
Sc (IS)	45	1	HMI H2	24255540	0.40	28135324	86.21	60	120	
Sc (IS)	45	2	HMI He	936449	3.76	1028528	91.05	60	120	
Sc (IS)	45	3	No Gas	39498374	0.78	44911069	87.95	60	120	
Ge Internal Standard	72	1	HMI H2	9301690	0.37	10990003	84.64	60	120	
Ge Internal Standard	72	2	HMI He	1012251	3.39	1134301	89.24	60	120	
In Internal Standard	115	2	HMI He	3283380	2.41	3548151	92.54	60	120	
Ho-165	165	2	HMI He	16170791	3.61	17324298	93.34	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-434124/2-A
Data File Name	079_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:21:03-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	434124 6020b
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	75.176	75.176	ppb	3.628	135501	400	18.8	80	120	>+/-20%
Li	7	2	45	83.378	83.378	ppb	32.478	7069	400	20.8	80	120	>+/-20%
Li	7	3	45	56.819	56.819	ppb	13.288	3988177	400	14.2	80	120	>+/-20%
Be	9	1	6	38.097	38.097	ppb	4.825	12689	40	95.2	80	120	
Na	23	2	45	-6.110	-6.110	ppb	-35.534	12569	40	-15.3	80	120	>+/-20%
Mg	24	2	45	0.437	0.437	ppb	99.765	193	40	1.1	80	120	>+/-20%
Al	27	2	45	407.288	407.288	ppb	6.032	11492	40	1018.2	80	120	>+/-20%
K	39	2	45	-11.033	-11.033	ppb	-71.017	14848	40	-27.6	80	120	>+/-20%
Ca	44	2	45	188.337	188.337	ppb	15.883	580	40	470.8	80	120	>+/-20%
V	51	2	72	37.902	37.902	ppb	2.775	39675	40	94.8	80	120	
Cr	52	2	72	39.457	39.457	ppb	0.416	51150	40	98.6	80	120	
Mn	55	2	72	41.259	41.259	ppb	2.843	20873	40	103.1	80	120	
Fe	57	2	72	391.403	391.403	ppb	3.550	9650	40	978.5	80	120	>+/-20%
Co	59	2	72	39.092	39.092	ppb	1.985	86953	40	97.7	80	120	
Ni	60	2	72	37.559	37.559	ppb	4.730	23914	40	93.9	80	120	
Cu	63	2	72	37.283	37.283	ppb	1.204	67167	40	93.2	80	120	
Zn	66	2	72	35.388	35.388	ppb	2.145	9317	40	88.5	80	120	
As	75	2	72	34.337	34.337	ppb	2.094	5425	40	85.8	80	120	
Se	78	1	72	35.300	35.300	ppb	1.698	8109	40	88.3	80	120	
Nb	93	2	72	1.456	1.456	ppb	17.963	8980	40	3.6	80	120	>+/-20%
Mo	95	2	115	37.004	37.004	ppb	1.508	31600	40	92.5	80	120	
Pd	105	2	115	-0.021	-0.021	ppb	-21.044	17	40	-0.1	80	120	>+/-20%
Ag	107	2	115	38.552	38.552	ppb	0.944	111624	40	96.4	80	120	
Cd	111	2	115	37.772	37.772	ppb	3.411	14528	40	94.4	80	120	
Sn	120	2	115	37.224	37.224	ppb	1.142	37515	40	93.1	80	120	
Sb	121	2	115	37.407	37.407	ppb	3.436	33131	40	93.5	80	120	
Ba	137	2	115	38.476	38.476	ppb	3.767	11515	40	96.2	80	120	
W	182	2	165	36.000	36.000	ppb	1.052	146661	40	90.0	80	120	
Pt	195	2	165	0.000	0.000	ppb	-2783.191	30	40	0.0	80	120	>+/-20%
Tl	205	2	165	38.688	38.688	ppb	0.546	293064	40	96.7	80	120	
Pb	208	2	165	39.106	39.106	ppb	0.513	395666	40	97.8	80	120	
Th	232	2	165	38.062	38.062	ppb	0.558	454108	40	95.2	80	120	
U	238	2	165	37.944	37.944	ppb	0.523	494945	40	94.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	729820	1.02	821388	88.85	60	120	
Sc (IS)	45	1	HMI H2	24604748	0.81	28135324	87.45	60	120	
Sc (IS)	45	2	HMI He	947088	0.75	1028528	92.08	60	120	
Sc (IS)	45	3	No Gas	39020259	1.02	44911069	86.88	60	120	
Ge Internal Standard	72	1	HMI H2	9386812	1.25	10990003	85.41	60	120	
Ge Internal Standard	72	2	HMI He	1031917	0.72	1134301	90.97	60	120	
In Internal Standard	115	2	HMI He	3334092	0.24	3548151	93.97	60	120	
Ho-165	165	2	HMI He	16284140	0.56	17324298	94.00	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-1-A
Data File Name	080SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:24:52-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	7.362	ppb	7.362	85.12	111867	500000	
Li	7	2	45	-0.746	ppb	-0.746	-1664.69	5635	500000	
Li	7	3	45	-10.799	ppb	-10.799	-31.57	3270116	50000	
Be	9	1	6	-0.036	ppb	-0.036	0.00	0	2000	
B	11	1	6	24.953	ppb	24.953	3.19	9127	2000	
Na	23	1	45	76238.995	ppb	76238.995	0.89	231650410	2000	>LDR
Na	23	2	45	74241.877	ppb	74241.877	0.11	16657111	400000	
Mg	24	2	45	12498.240	ppb	12498.240	1.17	1289154	400000	
Al	27	2	45	12.840	ppb	12.840	29.36	470	400000	
K	39	1	45	22727.900	ppb	22727.900	0.57	74305234	400000	
K	39	2	45	25017.475	ppb	25017.475	0.95	1276455	400000	
Ca	40	1	45	38485.204	ppb	38485.204	0.41	169201191	400000	
Ca	44	2	45	37999.877	ppb	37999.877	0.71	107589	400000	
Ti	47	2	45	1.655	ppb	1.655	50.40	40	4000	
V	51	2	72	20.577	ppb	20.577	3.09	21924	2000	
Cr	52	2	72	2.309	ppb	2.309	5.88	3171	5000	
Mn	55	2	72	4.360	ppb	4.360	5.75	2180	10000	
Fe	57	2	72	8.954	ppb	8.954	35.35	323	400000	
Co	59	2	72	0.187	ppb	0.187	25.52	427	2000	
Ni	60	2	72	0.678	ppb	0.678	27.37	563	5000	
Cu	63	2	72	1.552	ppb	1.552	5.20	4027	5000	
Zn	66	2	72	5.357	ppb	5.357	15.44	1640	5000	
As	75	2	72	18.726	ppb	18.726	1.45	2881	2000	
Se	78	1	72	2.625	ppb	2.625	7.03	589	2000	
Sr	88	2	72	187.555	ppb	187.555	2.08	95671	4000	
Zr	90	2	72	177.094	ppb	177.094	11.16	1860	1000	
Nb	93	2	72	0.731	ppb	0.731	34.59	6625	200	
Mo	95	2	115	7.010	ppb	7.010	5.03	5841	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-218.66	33	100	
Ag	107	2	115	0.011	ppb	0.011	78.65	103	100	
Cd	111	2	115	0.063	ppb	0.063	89.46	23	2000	
Sn	120	2	115	0.284	ppb	0.284	32.22	447	2000	
Sb	121	2	115	0.949	ppb	0.949	16.25	863	1000	
Ba	137	2	115	25.796	ppb	25.796	5.14	7502	5000	
W	182	2	165	1.196	ppb	1.196	3.73	5805	100	
Pt	195	2	165	0.000	ppb	0.000	-5327.38	30	100	
Tl	205	2	165	0.018	ppb	0.018	38.30	267	2000	
Pb	208	2	165	-0.006	ppb	-0.006	-185.66	1123	5000	
Th	232	2	165	0.155	ppb	0.155	2.65	2274	2000	
U	238	2	165	9.692	ppb	9.692	1.66	123893	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	705428	0.03	821388	85.88	60	120	
Sc (IS)	45	1	HMI H2	23897942	0.77	28135324	84.94	60	120	
Sc (IS)	45	2	HMI He	924029	0.45	1028528	89.84	60	120	
Sc (IS)	45	3	No Gas	37887546	0.35	44911069	84.36	60	120	
Ge Internal Standard	72	1	HMI H2	9033258	0.84	10990003	82.20	60	120	
Ge Internal Standard	72	2	HMI He	1000449	0.75	1134301	88.20	60	120	
In Internal Standard	115	2	HMI He	3237553	0.67	3548151	91.25	60	120	
Ho-165	165	2	HMI He	15940766	0.94	17324298	92.01	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-2-A
Data File Name	081SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:28:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	6.161	ppb	6.161	163.44	110201	500000	
Li	7	2	45	-5.508	ppb	-5.508	-341.02	5485	500000	
Li	7	3	45	-9.762	ppb	-9.762	-22.25	3208616	50000	
Be	9	1	6	0.006	ppb	0.006	298.34	13	2000	
B	11	1	6	25.352	ppb	25.352	5.72	9103	2000	
Na	23	1	45	75491.482	ppb	75491.482	1.17	226709743	2000	>LDR
Na	23	2	45	73452.063	ppb	73452.063	1.12	16242208	400000	
Mg	24	2	45	12990.694	ppb	12990.694	1.19	1320628	400000	
Al	27	2	45	1383.540	ppb	1383.540	1.79	37245	400000	
K	39	1	45	23631.533	ppb	23631.533	1.50	76011032	400000	
K	39	2	45	26331.699	ppb	26331.699	1.13	1323296	400000	
Ca	40	1	45	41774.306	ppb	41774.306	0.73	181523797	400000	
Ca	44	2	45	41502.219	ppb	41502.219	2.73	115798	400000	
Ti	47	2	45	116.243	ppb	116.243	11.38	2774	4000	
V	51	2	72	22.194	ppb	22.194	3.20	23286	2000	
Cr	52	2	72	7.663	ppb	7.663	3.65	9784	5000	
Mn	55	2	72	53.070	ppb	53.070	2.09	25814	10000	
Fe	57	2	72	1487.678	ppb	1487.678	3.97	34973	400000	
Co	59	2	72	1.222	ppb	1.222	0.98	2637	2000	
Ni	60	2	72	4.267	ppb	4.267	8.38	2744	5000	
Cu	63	2	72	12.369	ppb	12.369	2.83	22345	5000	
Zn	66	2	72	20.684	ppb	20.684	13.01	5368	5000	
As	75	2	72	17.818	ppb	17.818	4.10	2721	2000	
Se	78	1	72	2.649	ppb	2.649	7.98	593	2000	
Sr	88	2	72	222.581	ppb	222.581	1.83	112637	4000	
Zr	90	2	72	2299.905	ppb	2299.905	4.74	23066	1000	
Nb	93	2	72	0.286	ppb	0.286	28.72	5301	200	
Mo	95	2	115	7.954	ppb	7.954	2.70	6538	2000	
Pd	105	2	115	-0.020	ppb	-0.020	-80.74	17	100	
Ag	107	2	115	1.185	ppb	1.185	3.77	3357	100	
Cd	111	2	115	0.136	ppb	0.136	59.97	50	2000	
Sn	120	2	115	0.474	ppb	0.474	50.57	623	2000	
Sb	121	2	115	1.670	ppb	1.670	2.66	1463	1000	
Ba	137	2	115	96.562	ppb	96.562	1.27	27672	5000	
W	182	2	165	1.541	ppb	1.541	7.95	7129	100	
Pt	195	2	165	0.000	ppb	0.000	-11692.20	30	100	
Tl	205	2	165	0.035	ppb	0.035	23.93	393	2000	
Pb	208	2	165	1.066	ppb	1.066	6.12	11643	5000	
Th	232	2	165	0.415	ppb	0.415	5.47	5278	2000	
U	238	2	165	20.575	ppb	20.575	1.94	261448	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	692913	0.93	821388	84.36	60	120	
Sc (IS)	45	1	HMI H2	23620569	0.87	28135324	83.95	60	120	
Sc (IS)	45	2	HMI He	910711	0.60	1028528	88.55	60	120	
Sc (IS)	45	3	No Gas	37069844	0.24	44911069	82.54	60	120	
Ge Internal Standard	72	1	HMI H2	9012495	0.42	10990003	82.01	60	120	
Ge Internal Standard	72	2	HMI He	992544	0.56	1134301	87.50	60	120	
In Internal Standard	115	2	HMI He	3195609	0.26	3548151	90.06	60	120	
Ho-165	165	2	HMI He	15859966	1.01	17324298	91.55	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-2-Asd@5
Data File Name	082SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:32:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.474	ppb	2.474	48.36	111708	500000	
Li	7	2	45	1.523	ppb	1.523	607.91	5668	500000	
Li	7	3	45	-12.600	ppb	-12.600	-12.70	3248445	50000	
Be	9	1	6	-0.016	ppb	-0.016	-217.73	7	2000	
B	11	1	6	6.415	ppb	6.415	1.84	2660	2000	
Na	23	1	45	15011.421	ppb	15011.421	0.87	46278853	2000	>LDR
Na	23	2	45	14813.097	ppb	14813.097	0.40	3333638	400000	
Mg	24	2	45	2445.262	ppb	2445.262	0.91	252272	400000	
Al	27	2	45	290.046	ppb	290.046	4.58	8016	400000	
K	39	1	45	4638.043	ppb	4638.043	1.61	22464540	400000	
K	39	2	45	4978.500	ppb	4978.500	0.12	265997	400000	
Ca	40	1	45	8195.788	ppb	8195.788	0.96	36478349	400000	
Ca	44	2	45	7974.931	ppb	7974.931	3.09	22602	400000	
Ti	47	2	45	19.694	ppb	19.694	8.24	477	4000	
V	51	2	72	5.556	ppb	5.556	1.43	7696	2000	
Cr	52	2	72	1.478	ppb	1.478	5.57	2164	5000	
Mn	55	2	72	10.257	ppb	10.257	1.01	5141	10000	
Fe	57	2	72	300.063	ppb	300.063	2.66	7306	400000	
Co	59	2	72	0.225	ppb	0.225	4.82	517	2000	
Ni	60	2	72	0.922	ppb	0.922	10.50	723	5000	
Cu	63	2	72	2.339	ppb	2.339	10.54	5451	5000	
Zn	66	2	72	5.024	ppb	5.024	7.93	1580	5000	
As	75	2	72	3.543	ppb	3.543	5.63	576	2000	
Se	78	1	72	0.542	ppb	0.542	13.60	133	2000	
Sr	88	2	72	44.332	ppb	44.332	3.50	22973	4000	
Zr	90	2	72	416.095	ppb	416.095	14.87	4332	1000	
Nb	93	2	72	-0.696	ppb	-0.696	-9.93	2564	200	
Mo	95	2	115	1.656	ppb	1.656	14.59	1430	2000	
Pd	105	2	115	0.002	ppb	0.002	1104.61	47	100	
Ag	107	2	115	0.258	ppb	0.258	21.95	810	100	
Cd	111	2	115	0.061	ppb	0.061	64.87	23	2000	
Sn	120	2	115	0.068	ppb	0.068	103.29	240	2000	
Sb	121	2	115	0.314	ppb	0.314	6.00	323	1000	
Ba	137	2	115	17.734	ppb	17.734	7.60	5245	5000	
W	182	2	165	0.309	ppb	0.309	24.68	2317	100	
Pt	195	2	165	0.063	ppb	0.063	10.31	243	100	
Tl	205	2	165	0.001	ppb	0.001	674.63	143	2000	
Pb	208	2	165	0.178	ppb	0.178	18.31	2974	5000	
Th	232	2	165	0.063	ppb	0.063	10.67	1220	2000	
U	238	2	165	3.954	ppb	3.954	1.16	51216	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	726858	0.14	821388	88.49	60	120	
Sc (IS)	45	1	HMI H2	24172866	0.54	28135324	85.92	60	120	
Sc (IS)	45	2	HMI He	923805	0.40	1028528	89.82	60	120	
Sc (IS)	45	3	No Gas	37821596	0.40	44911069	84.21	60	120	
Ge Internal Standard	72	1	HMI H2	9303670	0.53	10990003	84.66	60	120	
Ge Internal Standard	72	2	HMI He	1015191	0.33	1134301	89.50	60	120	
In Internal Standard	115	2	HMI He	3289231	0.63	3548151	92.70	60	120	
Ho-165	165	2	HMI He	16116103	0.47	17324298	93.03	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-2-B MS
Data File Name	083SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:36:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	74.543	ppb	74.543	6.41	127601	500000	
Li	7	2	45	55.814	ppb	55.814	57.84	6372	500000	
Li	7	3	45	58.453	ppb	58.453	3.97	3711697	50000	
Be	9	1	6	40.590	ppb	40.590	0.69	12496	2000	
B	11	1	6	56.942	ppb	56.942	0.38	19524	2000	
Na	23	1	45	72876.250	ppb	72876.250	0.09	215009737	2000	>LDR
Na	23	2	45	69970.225	ppb	69970.225	1.27	15424461	400000	
Mg	24	2	45	12356.438	ppb	12356.438	0.43	1252360	400000	
Al	27	2	45	1689.541	ppb	1689.541	0.23	45320	400000	
K	39	1	45	22741.241	ppb	22741.241	0.71	72183069	400000	
K	39	2	45	25091.758	ppb	25091.758	1.03	1257887	400000	
Ca	40	1	45	39960.571	ppb	39960.571	0.86	170580524	400000	
Ca	44	2	45	39773.208	ppb	39773.208	1.09	110638	400000	
Ti	47	2	45	98.067	ppb	98.067	7.96	2334	4000	
V	51	2	72	60.051	ppb	60.051	0.81	58779	2000	
Cr	52	2	72	44.282	ppb	44.282	1.48	54838	5000	
Mn	55	2	72	88.065	ppb	88.065	1.59	42540	10000	
Fe	57	2	72	1772.745	ppb	1772.745	1.73	41397	400000	
Co	59	2	72	38.862	ppb	38.862	1.13	82635	2000	
Ni	60	2	72	41.012	ppb	41.012	0.60	24952	5000	
Cu	63	2	72	49.495	ppb	49.495	0.87	84795	5000	
Zn	66	2	72	54.035	ppb	54.035	4.12	13430	5000	
As	75	2	72	52.851	ppb	52.851	2.23	7967	2000	
Se	78	1	72	38.418	ppb	38.418	2.29	8237	2000	
Sr	88	2	72	255.021	ppb	255.021	0.91	128257	4000	
Zr	90	2	72	5314.237	ppb	5314.237	1.90	52876	1000	>LDR
Nb	93	2	72	-0.173	ppb	-0.173	-90.63	3971	200	
Mo	95	2	115	42.159	ppb	42.159	2.26	34483	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-59.08	33	100	
Ag	107	2	115	37.658	ppb	37.658	1.17	104423	100	
Cd	111	2	115	36.562	ppb	36.562	1.21	13467	2000	
Sn	120	2	115	33.048	ppb	33.048	1.26	31918	2000	
Sb	121	2	115	38.155	ppb	38.155	4.04	32359	1000	
Ba	137	2	115	130.118	ppb	130.118	1.12	37255	5000	
W	182	2	165	36.877	ppb	36.877	1.32	146321	100	
Pt	195	2	165	0.006	ppb	0.006	87.43	50	100	
Tl	205	2	165	37.961	ppb	37.961	0.70	280135	2000	
Pb	208	2	165	38.903	ppb	38.903	0.80	383450	5000	
Th	232	2	165	37.927	ppb	37.927	1.56	440803	2000	
U	238	2	165	57.782	ppb	57.782	0.89	734156	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	674459	1.06	821388	82.11	60	120	
Sc (IS)	45	1	HMI H2	23203194	0.54	28135324	82.47	60	120	
Sc (IS)	45	2	HMI He	907933	1.24	1028528	88.28	60	120	
Sc (IS)	45	3	No Gas	36175798	0.87	44911069	80.55	60	120	
Ge Internal Standard	72	1	HMI H2	8762873	1.21	10990003	79.73	60	120	
Ge Internal Standard	72	2	HMI He	986392	0.34	1134301	86.96	60	120	
In Internal Standard	115	2	HMI He	3193306	1.22	3548151	90.00	60	120	
Ho-165	165	2	HMI He	15863961	0.58	17324298	91.57	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-2-C MSD
Data File Name	084SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:39:55-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	80.803	ppb	80.803	13.96	129059	500000	
Li	7	2	45	70.041	ppb	70.041	23.30	6628	500000	
Li	7	3	45	54.760	ppb	54.760	13.23	3708943	50000	
Be	9	1	6	40.069	ppb	40.069	0.95	12372	2000	
B	11	1	6	58.320	ppb	58.320	1.90	20048	2000	
Na	23	1	45	75976.967	ppb	75976.967	0.47	223618170	2000	>LDR
Na	23	2	45	71809.572	ppb	71809.572	0.78	15953322	400000	
Mg	24	2	45	12701.877	ppb	12701.877	1.89	1297213	400000	
Al	27	2	45	1755.245	ppb	1755.245	0.67	47444	400000	
K	39	1	45	23759.831	ppb	23759.831	0.80	74854284	400000	
K	39	2	45	25956.922	ppb	25956.922	0.39	1310813	400000	
Ca	40	1	45	41747.992	ppb	41747.992	0.49	177788204	400000	
Ca	44	2	45	41914.598	ppb	41914.598	1.09	117501	400000	
Ti	47	2	45	98.455	ppb	98.455	6.99	2360	4000	
V	51	2	72	60.400	ppb	60.400	0.83	59613	2000	
Cr	52	2	72	44.833	ppb	44.833	1.11	55992	5000	
Mn	55	2	72	88.351	ppb	88.351	0.41	43041	10000	
Fe	57	2	72	1761.456	ppb	1761.456	1.19	41487	400000	
Co	59	2	72	38.303	ppb	38.303	1.65	82143	2000	
Ni	60	2	72	40.752	ppb	40.752	2.88	25009	5000	
Cu	63	2	72	48.007	ppb	48.007	0.51	82988	5000	
Zn	66	2	72	54.212	ppb	54.212	2.44	13590	5000	
As	75	2	72	53.233	ppb	53.233	1.14	8093	2000	
Se	78	1	72	36.564	ppb	36.564	0.40	7894	2000	
Sr	88	2	72	258.731	ppb	258.731	0.75	131231	4000	
Zr	90	2	72	5468.226	ppb	5468.226	2.00	54867	1000	>LDR
Nb	93	2	72	-0.399	ppb	-0.399	-28.47	3361	200	
Mo	95	2	115	43.398	ppb	43.398	2.80	35606	2000	
Pd	105	2	115	-0.023	ppb	-0.023	-52.91	13	100	
Ag	107	2	115	37.243	ppb	37.243	2.09	103628	100	
Cd	111	2	115	38.850	ppb	38.850	6.06	14355	2000	
Sn	120	2	115	32.357	ppb	32.357	3.29	31356	2000	
Sb	121	2	115	37.366	ppb	37.366	2.96	31804	1000	
Ba	137	2	115	133.577	ppb	133.577	2.87	38372	5000	
W	182	2	165	36.576	ppb	36.576	2.31	145330	100	
Pt	195	2	165	-0.005	ppb	-0.005	-88.31	13	100	
Tl	205	2	165	37.359	ppb	37.359	0.45	276074	2000	
Pb	208	2	165	39.035	ppb	39.035	0.84	385272	5000	
Th	232	2	165	37.847	ppb	37.847	0.73	440494	2000	
U	238	2	165	58.735	ppb	58.735	0.90	747274	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	676443	0.33	821388	82.35	60	120	
Sc (IS)	45	1	HMI H2	23148203	0.24	28135324	82.27	60	120	
Sc (IS)	45	2	HMI He	914965	0.63	1028528	88.96	60	120	
Sc (IS)	45	3	No Gas	36458184	0.37	44911069	81.18	60	120	
Ge Internal Standard	72	1	HMI H2	8821870	0.36	10990003	80.27	60	120	
Ge Internal Standard	72	2	HMI He	994809	0.48	1134301	87.70	60	120	
In Internal Standard	115	2	HMI He	3204540	1.40	3548151	90.32	60	120	
Ho-165	165	2	HMI He	15885743	0.67	17324298	91.70	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-2-A pds
Data File Name	085SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:43:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	199.465	ppb	199.465	2.97	162648	500000	
Li	7	2	45	159.446	ppb	159.446	23.00	7879	500000	
Li	7	3	45	168.231	ppb	168.231	2.48	4674591	50000	
Be	9	1	6	209.361	ppb	209.361	2.57	63880	2000	
B	11	1	6	26.017	ppb	26.017	3.69	9010	2000	
Na	23	1	45	73227.171	ppb	73227.171	0.43	215682157	2000	>LDR
Na	23	2	45	70128.223	ppb	70128.223	0.23	15429303	400000	
Mg	24	2	45	12440.531	ppb	12440.531	0.68	1258274	400000	
Al	27	2	45	3578.109	ppb	3578.109	0.79	95648	400000	
K	39	1	45	23048.512	ppb	23048.512	0.19	72921844	400000	
K	39	2	45	25415.181	ppb	25415.181	1.94	1271176	400000	
Ca	40	1	45	40409.576	ppb	40409.576	0.20	172212071	400000	
Ca	44	2	45	41023.052	ppb	41023.052	1.39	113896	400000	
Ti	47	2	45	120.512	ppb	120.512	3.18	2860	4000	
V	51	2	72	221.757	ppb	221.757	1.25	212151	2000	
Cr	52	2	72	202.448	ppb	202.448	1.31	251047	5000	
Mn	55	2	72	256.107	ppb	256.107	0.42	124290	10000	
Fe	57	2	72	3392.023	ppb	3392.023	1.13	79541	400000	
Co	59	2	72	196.417	ppb	196.417	0.63	419806	2000	
Ni	60	2	72	197.677	ppb	197.677	0.28	120363	5000	
Cu	63	2	72	203.467	ppb	203.467	0.65	346220	5000	
Zn	66	2	72	216.058	ppb	216.058	1.82	53045	5000	
As	75	2	72	203.052	ppb	203.052	0.61	30695	2000	
Se	78	1	72	186.111	ppb	186.111	0.99	40046	2000	
Sr	88	2	72	428.770	ppb	428.770	1.17	216792	4000	
Zr	90	2	72	29940.907	ppb	29940.907	0.54	299164	1000	>LDR
Nb	93	2	72	8.381	ppb	8.381	2.29	28329	200	
Mo	95	2	115	195.361	ppb	195.361	1.80	159677	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-169.24	33	100	
Ag	107	2	115	37.882	ppb	37.882	0.77	105081	100	
Cd	111	2	115	192.661	ppb	192.661	0.82	70987	2000	
Sn	120	2	115	197.999	ppb	197.999	0.11	190447	2000	
Sb	121	2	115	206.997	ppb	206.997	0.78	175428	1000	
Ba	137	2	115	292.987	ppb	292.987	1.03	83882	5000	
W	182	2	165	197.922	ppb	197.922	0.11	781010	100	
Pt	195	2	165	0.041	ppb	0.041	37.50	167	100	
Tl	205	2	165	204.385	ppb	204.385	0.12	1508310	2000	
Pb	208	2	165	198.317	ppb	198.317	0.20	1950697	5000	
Th	232	2	165	247.900	ppb	247.900	0.66	2879972	2000	
U	238	2	165	245.490	ppb	245.490	0.51	3119758	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	668870	0.48	821388	81.43	60	120	
Sc (IS)	45	1	HMI H2	23164757	0.62	28135324	82.33	60	120	
Sc (IS)	45	2	HMI He	906090	0.92	1028528	88.10	60	120	
Sc (IS)	45	3	No Gas	36399267	0.49	44911069	81.05	60	120	
Ge Internal Standard	72	1	HMI H2	8800764	0.34	10990003	80.08	60	120	
Ge Internal Standard	72	2	HMI He	991716	0.59	1134301	87.43	60	120	
In Internal Standard	115	2	HMI He	3194079	0.59	3548151	90.02	60	120	
Ho-165	165	2	HMI He	15870234	0.37	17324298	91.61	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	086_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:47:28-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	498.478	ppb	1.320	254998	500	99.7	90	110	
Li	7	2	45	483.224	ppb	7.253	12846	500	96.6	90	110	
Li	7	3	45	461.688	ppb	0.293	7373381	500	92.3	90	110	
Be	9	1	6	50.836	ppb	2.668	16536	50	101.7	90	110	
B	11	1	6	51.403	ppb	1.700	18656	50	102.8	90	110	
Na	23	1	45	5192.251	ppb	0.760	15949219	5000	103.8	90	110	
Na	23	2	45	5164.317	ppb	0.486	1167858	5000	103.3	90	110	
Mg	24	2	45	5039.517	ppb	0.701	518312	5000	100.8	90	110	
Al	27	2	45	5254.833	ppb	0.352	142767	5000	105.1	90	110	
K	39	1	45	5148.481	ppb	0.472	23692984	5000	103.0	90	110	
K	39	2	45	5123.159	ppb	0.343	272529	5000	102.5	90	110	
Ca	40	1	45	5080.840	ppb	0.677	22384931	5000	101.6	90	110	
Ca	44	2	45	5038.760	ppb	5.459	14251	5000	100.8	90	110	
Ti	47	2	45	48.331	ppb	7.282	1167	50	96.7	90	110	
V	51	2	72	50.657	ppb	0.804	50943	50	101.3	90	110	
Cr	52	2	72	50.007	ppb	0.455	63141	50	100.0	90	110	
Mn	55	2	72	50.176	ppb	2.312	24745	50	100.4	90	110	
Fe	57	2	72	4878.935	ppb	2.008	116038	5000	97.6	90	110	
Co	59	2	72	49.117	ppb	1.098	106539	50	98.2	90	110	
Ni	60	2	72	49.034	ppb	2.228	30406	50	98.1	90	110	
Cu	63	2	72	47.964	ppb	1.634	83873	50	95.9	90	110	
Zn	66	2	72	45.300	ppb	4.929	11538	50	90.6	90	110	
As	75	2	72	49.738	ppb	0.897	7650	50	99.5	90	110	
Se	78	1	72	49.991	ppb	4.071	11197	50	100.0	90	110	
Sr	88	2	72	50.752	ppb	2.852	26065	50	101.5	90	110	
Zr	90	2	72	74.956	ppb	22.916	837	50	149.9	90	110	>+\-10%
Nb	93	2	72	74.105	ppb	1.166	218476	100	74.1	90	110	>+\-10%
Mo	95	2	115	47.290	ppb	1.746	38992	50	94.6	90	110	
Pd	105	2	115	47.509	ppb	0.967	61351	50	95.0	90	110	
Ag	107	2	115	47.089	ppb	1.112	131676	50	94.2	90	110	
Cd	111	2	115	48.020	ppb	0.476	17839	50	96.0	90	110	
Sn	120	2	115	48.736	ppb	2.549	47388	50	97.5	90	110	
Sb	121	2	115	50.108	ppb	1.243	42850	50	100.2	90	110	
Ba	137	2	115	48.026	ppb	3.998	13878	50	96.1	90	110	
W	182	2	165	48.518	ppb	1.510	194032	50	97.0	90	110	
Pt	195	2	165	46.879	ppb	1.599	157381	50	93.8	90	110	
Tl	205	2	165	50.062	ppb	0.933	372962	50	100.1	90	110	
Pb	208	2	165	50.025	ppb	1.225	497491	50	100.0	90	110	
Th	232	2	165	49.876	ppb	0.554	585167	50	99.8	90	110	
U	238	2	165	49.692	ppb	0.659	637502	50	99.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	712744	0.51	821388	86.77	60	120	
Sc (IS)	45	1	HMI H2	23911698	0.63	28135324	84.99	60	120	
Sc (IS)	45	2	HMI He	921243	0.61	1028528	89.57	60	120	
Sc (IS)	45	3	No Gas	37340913	0.58	44911069	83.14	60	120	
Ge Internal Standard	72	1	HMI H2	9155647	0.65	10990003	83.31	60	120	
Ge Internal Standard	72	2	HMI He	1006284	0.21	1134301	88.71	60	120	
In Internal Standard	115	2	HMI He	3220313	0.82	3548151	90.76	60	120	
Ho-165	165	2	HMI He	16017564	0.78	17324298	92.46	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	087_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:51:16-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-8.614	ppb	-34.5	3271920	10	
Be	9	1	6	0.014	ppb	456.7	17	0.5	
B	11	1	6	2.900	ppb	12.9	1393	0.5	>RL
Na	23	1	45	35.864	ppb	2.5	288156	25	>RL
Na	23	2	45	30.989	ppb	12.0	20291	25	>RL
Mg	24	2	45	2.681	ppb	23.6	413	25	
Al	27	2	45	4.476	ppb	83.9	240	15	
K	39	1	45	44.878	ppb	61.2	9112538	50	
K	39	2	45	-8.925	ppb	-174.5	14381	50	
Ca	40	1	45	14.157	ppb	1.2	103029	50	
Ca	44	2	45	7.475	ppb	117.9	53	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	2.194	ppb	7.6	4381	1	>RL
Cr	52	2	72	-0.023	ppb	-151.2	257	1	
Mn	55	2	72	0.046	ppb	39.1	70	0.5	
Fe	57	2	72	2.872	ppb	76.1	180	25	
Co	59	2	72	0.026	ppb	64.0	80	0.5	
Ni	60	2	72	0.174	ppb	69.8	253	1	
Cu	63	2	72	-0.096	ppb	-87.7	1210	1	
Zn	66	2	72	0.254	ppb	67.5	383	5	
As	75	2	72	0.033	ppb	232.8	33	1	
Se	78	1	72	0.084	ppb	32.1	29	1	
Sr	88	2	72	0.022	ppb	192.7	43	0.5	
Zr	90	2	72	2.329	ppb	49.7	100	1	>RL
Nb	93	2	72	3.727	ppb	7.7	15252	2	>RL
Mo	95	2	115	0.372	ppb	33.9	347	0.5	
Pd	105	2	115	0.039	ppb	98.6	93	1	
Ag	107	2	115	0.000	ppb	5012.9	73	1	
Cd	111	2	115	0.009	ppb	173.2	3	0.5	
Sn	120	2	115	0.243	ppb	41.6	407	1	
Sb	121	2	115	0.475	ppb	27.2	457	0.6	
Ba	137	2	115	0.016	ppb	440.8	23	0.5	
W	182	2	165	0.196	ppb	15.0	1837	1	
Pt	195	2	165	0.021	ppb	49.0	100	1	
Tl	205	2	165	0.024	ppb	3.6	310	0.1	
Pb	208	2	165	-0.001	ppb	-438.4	1167	0.5	
Th	232	2	165	0.036	ppb	11.7	883	1	
U	238	2	165	0.085	ppb	14.3	1267	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	732778	0.70	821388	89.21	60	120	
Sc (IS)	45	1	HMI H2	24246527	0.30	28135324	86.18	60	120	
Sc (IS)	45	2	HMI He	911644	2.99	1028528	88.64	60	120	
Sc (IS)	45	3	No Gas	37684330	0.53	44911069	83.91	60	120	
Ge Internal Standard	72	1	HMI H2	9293188	0.18	10990003	84.56	60	120	
Ge Internal Standard	72	2	HMI He	1002296	1.87	1134301	88.36	60	120	
In Internal Standard	115	2	HMI He	3239230	2.92	3548151	91.29	60	120	
Ho-165	165	2	HMI He	15882699	2.63	17324298	91.68	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-3-A
Data File Name	088SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:55:04-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.237	ppb	1.237	855.61	106773	500000	
Li	7	2	45	-22.280	ppb	-22.280	-75.48	5198	500000	
Li	7	3	45	-12.244	ppb	-12.244	-6.10	3187817	50000	
Be	9	1	6	0.293	ppb	0.293	19.42	100	2000	
B	11	1	6	22.951	ppb	22.951	3.11	7962	2000	
Na	23	1	45	64903.803	ppb	64903.803	0.89	191333970	2000	>LDR
Na	23	2	45	62413.806	ppb	62413.806	0.24	13702161	400000	
Mg	24	2	45	16392.010	ppb	16392.010	1.20	1654112	400000	
Al	27	2	45	8467.702	ppb	8467.702	2.87	225682	400000	
K	39	1	45	15419.599	ppb	15419.599	1.22	51662204	400000	
K	39	2	45	16917.218	ppb	16917.218	1.08	849208	400000	
Ca	40	1	45	50931.944	ppb	50931.944	1.09	217205897	400000	
Ca	44	2	45	51067.740	ppb	51067.740	0.52	141445	400000	
Ti	47	2	45	633.982	ppb	633.982	1.69	15015	4000	
V	51	2	72	36.733	ppb	36.733	1.68	36724	2000	
Cr	52	2	72	10.654	ppb	10.654	4.65	13370	5000	
Mn	55	2	72	263.598	ppb	263.598	0.99	126862	10000	
Fe	57	2	72	9758.264	ppb	9758.264	0.77	226725	400000	
Co	59	2	72	4.383	ppb	4.383	4.00	9313	2000	
Ni	60	2	72	6.736	ppb	6.736	3.62	4207	5000	
Cu	63	2	72	13.399	ppb	13.399	1.17	23874	5000	
Zn	66	2	72	219.543	ppb	219.543	1.97	53446	5000	
As	75	2	72	23.112	ppb	23.112	2.16	3489	2000	
Se	78	1	72	3.049	ppb	3.049	9.22	661	2000	
Sr	88	2	72	262.309	ppb	262.309	1.19	131545	4000	
Zr	90	2	72	953.694	ppb	953.694	1.14	9524	1000	
Nb	93	2	72	3.948	ppb	3.948	5.64	15589	200	
Mo	95	2	115	5.361	ppb	5.361	7.43	4384	2000	
Pd	105	2	115	0.006	ppb	0.006	215.91	50	100	
Ag	107	2	115	0.106	ppb	0.106	2.79	363	100	
Cd	111	2	115	0.055	ppb	0.055	50.54	20	2000	
Sn	120	2	115	0.521	ppb	0.521	28.59	663	2000	
Sb	121	2	115	1.764	ppb	1.764	18.23	1530	1000	
Ba	137	2	115	154.927	ppb	154.927	0.71	44046	5000	
W	182	2	165	0.772	ppb	0.772	10.74	4148	100	
Pt	195	2	165	-0.003	ppb	-0.003	-0.52	20	100	
Tl	205	2	165	0.067	ppb	0.067	19.94	637	2000	
Pb	208	2	165	2.781	ppb	2.781	2.18	28780	5000	
Th	232	2	165	1.697	ppb	1.697	1.40	20367	2000	
U	238	2	165	43.044	ppb	43.044	0.78	552338	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	667164	0.56	821388	81.22	60	120	
Sc (IS)	45	1	HMI H2	23182075	0.66	28135324	82.39	60	120	
Sc (IS)	45	2	HMI He	904014	0.18	1028528	87.89	60	120	
Sc (IS)	45	3	No Gas	37079459	0.24	44911069	82.56	60	120	
Ge Internal Standard	72	1	HMI H2	8744214	0.32	10990003	79.57	60	120	
Ge Internal Standard	72	2	HMI He	983544	0.72	1134301	86.71	60	120	
In Internal Standard	115	2	HMI He	3171043	0.64	3548151	89.37	60	120	
Ho-165	165	2	HMI He	16019779	0.28	17324298	92.47	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-4-A
Data File Name	089SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T17:58:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	6.700	ppb	6.700	85.93	109711	500000	
Li	7	2	45	-21.602	ppb	-21.602	-82.33	5265	500000	
Li	7	3	45	-11.878	ppb	-11.878	-23.25	3178910	50000	
Be	9	1	6	0.028	ppb	0.028	301.83	20	2000	
B	11	1	6	20.554	ppb	20.554	3.02	7335	2000	
Na	23	1	45	62395.514	ppb	62395.514	0.50	186305331	2000	>LDR
Na	23	2	45	59643.636	ppb	59643.636	0.43	13244907	400000	
Mg	24	2	45	13663.811	ppb	13663.811	1.01	1394523	400000	
Al	27	2	45	8.415	ppb	8.415	48.22	347	400000	
K	39	1	45	13982.977	ppb	13982.977	0.51	48262406	400000	
K	39	2	45	15264.996	ppb	15264.996	0.74	776468	400000	
Ca	40	1	45	46523.439	ppb	46523.439	0.08	200958630	400000	
Ca	44	2	45	46055.416	ppb	46055.416	0.77	129037	400000	
Ti	47	2	45	1.388	ppb	1.388	86.63	33	4000	
V	51	2	72	19.373	ppb	19.373	2.49	20649	2000	
Cr	52	2	72	2.457	ppb	2.457	4.21	3334	5000	
Mn	55	2	72	0.583	ppb	0.583	37.44	330	10000	
Fe	57	2	72	9.187	ppb	9.187	55.97	327	400000	
Co	59	2	72	0.384	ppb	0.384	7.33	847	2000	
Ni	60	2	72	0.319	ppb	0.319	42.92	340	5000	
Cu	63	2	72	0.308	ppb	0.308	45.06	1887	5000	
Zn	66	2	72	12.830	ppb	12.830	2.26	3457	5000	
As	75	2	72	18.759	ppb	18.759	2.60	2868	2000	
Se	78	1	72	2.512	ppb	2.512	7.04	557	2000	
Sr	88	2	72	227.103	ppb	227.103	0.22	115126	4000	
Zr	90	2	72	48.658	ppb	48.658	12.21	563	1000	
Nb	93	2	72	1.401	ppb	1.401	26.18	8493	200	
Mo	95	2	115	4.832	ppb	4.832	2.99	3977	2000	
Pd	105	2	115	-0.015	ppb	-0.015	-80.96	23	100	
Ag	107	2	115	-0.014	ppb	-0.014	-65.10	33	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.125	ppb	0.125	24.52	287	2000	
Sb	121	2	115	1.450	ppb	1.450	8.39	1273	1000	
Ba	137	2	115	51.470	ppb	51.470	0.56	14725	5000	
W	182	2	165	0.530	ppb	0.530	7.85	3187	100	
Pt	195	2	165	-0.001	ppb	-0.001	-385.83	27	100	
Tl	205	2	165	0.006	ppb	0.006	128.81	180	2000	
Pb	208	2	165	-0.029	ppb	-0.029	-57.97	900	5000	
Th	232	2	165	0.055	ppb	0.055	25.64	1120	2000	
U	238	2	165	37.717	ppb	37.717	1.08	484773	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	683254	0.23	821388	83.18	60	120	
Sc (IS)	45	1	HMI H2	23479821	0.41	28135324	83.45	60	120	
Sc (IS)	45	2	HMI He	914379	1.54	1028528	88.90	60	120	
Sc (IS)	45	3	No Gas	36938636	0.17	44911069	82.25	60	120	
Ge Internal Standard	72	1	HMI H2	8915966	0.60	10990003	81.13	60	120	
Ge Internal Standard	72	2	HMI He	994203	0.49	1134301	87.65	60	120	
In Internal Standard	115	2	HMI He	3188463	0.29	3548151	89.86	60	120	
Ho-165	165	2	HMI He	16046261	0.69	17324298	92.62	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-5-A
Data File Name	090SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:02:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.474	ppb	-1.474	-368.05	107377	500000	
Li	7	2	45	-10.110	ppb	-10.110	-72.78	5458	500000	
Li	7	3	45	-19.862	ppb	-19.862	-17.49	3109823	50000	
Be	9	1	6	-0.004	ppb	-0.004	-793.60	10	2000	
B	11	1	6	23.689	ppb	23.689	8.99	8423	2000	
Na	23	1	45	103695.972	ppb	103695.972	0.55	309514895	2000	>LDR
Na	23	2	45	99799.237	ppb	99799.237	1.27	22231167	400000	
Mg	24	2	45	8852.685	ppb	8852.685	0.98	906846	400000	
Al	27	2	45	11.005	ppb	11.005	16.46	417	400000	
K	39	1	45	5938.691	ppb	5938.691	0.74	25501547	400000	
K	39	2	45	7240.266	ppb	7240.266	1.39	377461	400000	
Ca	40	1	45	34807.595	ppb	34807.595	1.12	150362781	400000	
Ca	44	2	45	34425.125	ppb	34425.125	1.87	96791	400000	
Ti	47	2	45	1.652	ppb	1.652	99.31	40	4000	
V	51	2	72	27.342	ppb	27.342	2.68	28268	2000	
Cr	52	2	72	2.572	ppb	2.572	9.99	3484	5000	
Mn	55	2	72	1.067	ppb	1.067	16.30	567	10000	
Fe	57	2	72	18.221	ppb	18.221	11.94	540	400000	
Co	59	2	72	0.124	ppb	0.124	26.70	290	2000	
Ni	60	2	72	0.584	ppb	0.584	25.26	503	5000	
Cu	63	2	72	0.017	ppb	0.017	708.74	1397	5000	
Zn	66	2	72	1.187	ppb	1.187	10.41	610	5000	
As	75	2	72	23.705	ppb	23.705	2.23	3625	2000	
Se	78	1	72	2.582	ppb	2.582	5.90	572	2000	
Sr	88	2	72	165.161	ppb	165.161	1.70	83918	4000	
Zr	90	2	72	21.315	ppb	21.315	21.67	290	1000	
Nb	93	2	72	0.169	ppb	0.169	118.50	4991	200	
Mo	95	2	115	6.256	ppb	6.256	3.54	5181	2000	
Pd	105	2	115	-0.020	ppb	-0.020	-43.85	17	100	
Ag	107	2	115	-0.002	ppb	-0.002	-429.56	67	100	
Cd	111	2	115	0.045	ppb	0.045	125.33	17	2000	
Sn	120	2	115	0.046	ppb	0.046	72.78	213	2000	
Sb	121	2	115	0.937	ppb	0.937	6.95	847	1000	
Ba	137	2	115	49.687	ppb	49.687	2.40	14331	5000	
W	182	2	165	0.589	ppb	0.589	7.60	3394	100	
Pt	195	2	165	-0.004	ppb	-0.004	-82.98	17	100	
Tl	205	2	165	0.006	ppb	0.006	185.29	177	2000	
Pb	208	2	165	0.012	ppb	0.012	41.10	1297	5000	
Th	232	2	165	0.024	ppb	0.024	5.64	747	2000	
U	238	2	165	4.861	ppb	4.861	2.90	62130	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	684742	0.62	821388	83.36	60	120	
Sc (IS)	45	1	HMI H2	23480050	0.05	28135324	83.45	60	120	
Sc (IS)	45	2	HMI He	917707	1.20	1028528	89.23	60	120	
Sc (IS)	45	3	No Gas	36943357	1.03	44911069	82.26	60	120	
Ge Internal Standard	72	1	HMI H2	8908202	0.57	10990003	81.06	60	120	
Ge Internal Standard	72	2	HMI He	996397	0.65	1134301	87.84	60	120	
In Internal Standard	115	2	HMI He	3214648	0.66	3548151	90.60	60	120	
Ho-165	165	2	HMI He	15914353	0.89	17324298	91.86	60	120	

Sample Table

Sample Name	280-115729-A-6-A
Data File Name	091SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:06:24-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-8.816	ppb	-8.816	-98.98	104846	500000	
Li	7	2	45	-20.851	ppb	-20.851	-182.14	5285	500000	
Li	7	3	45	-20.832	ppb	-20.832	-5.09	3116700	50000	
Be	9	1	6	-0.004	ppb	-0.004	-862.35	10	2000	
B	11	1	6	24.183	ppb	24.183	7.79	8473	2000	
Na	23	1	45	104342.778	ppb	104342.778	3.15	310125209	2000	>LDR
Na	23	2	45	100985.285	ppb	100985.285	1.99	22413073	400000	
Mg	24	2	45	8916.932	ppb	8916.932	2.23	910046	400000	
Al	27	2	45	9.346	ppb	9.346	26.26	370	400000	
K	39	1	45	5919.991	ppb	5919.991	5.10	25338820	400000	
K	39	2	45	7300.438	ppb	7300.438	1.45	379110	400000	
Ca	40	1	45	34722.955	ppb	34722.955	3.42	149348594	400000	
Ca	44	2	45	34501.824	ppb	34501.824	1.45	96661	400000	
Ti	47	2	45	1.127	ppb	1.127	115.05	27	4000	
V	51	2	72	27.205	ppb	27.205	1.81	27995	2000	
Cr	52	2	72	3.511	ppb	3.511	7.82	4628	5000	
Mn	55	2	72	0.502	ppb	0.502	18.14	290	10000	
Fe	57	2	72	25.874	ppb	25.874	16.86	717	400000	
Co	59	2	72	0.034	ppb	0.034	42.35	97	2000	
Ni	60	2	72	0.627	ppb	0.627	21.99	527	5000	
Cu	63	2	72	0.681	ppb	0.681	8.20	2514	5000	
Zn	66	2	72	1.266	ppb	1.266	6.70	627	5000	
As	75	2	72	22.879	ppb	22.879	7.04	3481	2000	
Se	78	1	72	2.824	ppb	2.824	1.91	619	2000	
Sr	88	2	72	166.914	ppb	166.914	1.36	84380	4000	
Zr	90	2	72	7.770	ppb	7.770	75.90	153	1000	
Nb	93	2	72	-0.208	ppb	-0.208	-52.55	3891	200	
Mo	95	2	115	6.372	ppb	6.372	3.74	5285	2000	
Pd	105	2	115	-0.025	ppb	-0.025	-51.90	10	100	
Ag	107	2	115	0.020	ppb	0.020	12.88	130	100	
Cd	111	2	115	0.063	ppb	0.063	106.32	23	2000	
Sn	120	2	115	0.013	ppb	0.013	782.03	183	2000	
Sb	121	2	115	0.637	ppb	0.637	16.92	593	1000	
Ba	137	2	115	49.486	ppb	49.486	4.24	14291	5000	
W	182	2	165	0.656	ppb	0.656	15.55	3664	100	
Pt	195	2	165	-0.002	ppb	-0.002	-76.48	23	100	
Tl	205	2	165	0.012	ppb	0.012	37.06	227	2000	
Pb	208	2	165	-0.014	ppb	-0.014	-49.73	1043	5000	
Th	232	2	165	0.020	ppb	0.020	24.58	703	2000	
U	238	2	165	4.897	ppb	4.897	3.04	62650	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	675554	1.88	821388	82.25	60	120	
Sc (IS)	45	1	HMI H2	23397440	3.59	28135324	83.16	60	120	
Sc (IS)	45	2	HMI He	914459	1.64	1028528	88.91	60	120	
Sc (IS)	45	3	No Gas	37124080	0.64	44911069	82.66	60	120	
Ge Internal Standard	72	1	HMI H2	8824340	2.91	10990003	80.29	60	120	
Ge Internal Standard	72	2	HMI He	991360	1.38	1134301	87.40	60	120	
In Internal Standard	115	2	HMI He	3220161	2.26	3548151	90.76	60	120	
Ho-165	165	2	HMI He	15932169	1.02	17324298	91.96	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-7-A
Data File Name	092SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:10:10-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.807	ppb	-0.807	-751.15	106961	500000	
Li	7	2	45	-32.644	ppb	-32.644	-47.70	5081	500000	
Li	7	3	45	-20.860	ppb	-20.860	-10.59	3090278	50000	
Be	9	1	6	-0.015	ppb	-0.015	-128.19	7	2000	
B	11	1	6	21.556	ppb	21.556	4.37	7639	2000	
Na	23	1	45	59847.411	ppb	59847.411	0.95	177700551	2000	>LDR
Na	23	2	45	57370.019	ppb	57370.019	0.31	12683073	400000	
Mg	24	2	45	12226.911	ppb	12226.911	1.49	1242349	400000	
Al	27	2	45	5.768	ppb	5.768	52.96	273	400000	
K	39	1	45	22114.690	ppb	22114.690	0.42	70873516	400000	
K	39	2	45	23714.597	ppb	23714.597	1.27	1192761	400000	
Ca	40	1	45	40894.316	ppb	40894.316	0.67	175658931	400000	
Ca	44	2	45	39827.003	ppb	39827.003	0.91	111085	400000	
Ti	47	2	45	1.117	ppb	1.117	21.22	27	4000	
V	51	2	72	17.891	ppb	17.891	3.49	19204	2000	
Cr	52	2	72	2.710	ppb	2.710	11.19	3644	5000	
Mn	55	2	72	0.323	ppb	0.323	49.18	203	10000	
Fe	57	2	72	11.053	ppb	11.053	19.27	370	400000	
Co	59	2	72	0.100	ppb	0.100	2.62	237	2000	
Ni	60	2	72	0.095	ppb	0.095	161.98	203	5000	
Cu	63	2	72	-0.098	ppb	-0.098	-73.25	1197	5000	
Zn	66	2	72	8.325	ppb	8.325	5.67	2350	5000	
As	75	2	72	11.208	ppb	11.208	5.08	1722	2000	
Se	78	1	72	2.892	ppb	2.892	4.91	641	2000	
Sr	88	2	72	200.107	ppb	200.107	0.94	101269	4000	
Zr	90	2	72	9.056	ppb	9.056	63.55	167	1000	
Nb	93	2	72	-0.523	ppb	-0.523	-4.55	2997	200	
Mo	95	2	115	4.676	ppb	4.676	6.16	3864	2000	
Pd	105	2	115	-0.017	ppb	-0.017	-89.00	20	100	
Ag	107	2	115	-0.016	ppb	-0.016	-12.57	27	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.085	ppb	0.085	80.23	250	2000	
Sb	121	2	115	0.490	ppb	0.490	17.06	463	1000	
Ba	137	2	115	45.206	ppb	45.206	2.47	12983	5000	
W	182	2	165	0.396	ppb	0.396	7.92	2624	100	
Pt	195	2	165	-0.001	ppb	-0.001	-154.60	27	100	
Tl	205	2	165	0.012	ppb	0.012	84.28	223	2000	
Pb	208	2	165	-0.017	ppb	-0.017	-16.06	1007	5000	
Th	232	2	165	0.025	ppb	0.025	8.82	753	2000	
U	238	2	165	28.560	ppb	28.560	1.40	363017	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	679682	0.46	821388	82.75	60	120	
Sc (IS)	45	1	HMI H2	23348633	0.60	28135324	82.99	60	120	
Sc (IS)	45	2	HMI He	910274	0.56	1028528	88.50	60	120	
Sc (IS)	45	3	No Gas	36811964	0.76	44911069	81.97	60	120	
Ge Internal Standard	72	1	HMI H2	8934056	0.46	10990003	81.29	60	120	
Ge Internal Standard	72	2	HMI He	992451	0.90	1134301	87.49	60	120	
In Internal Standard	115	2	HMI He	3200368	0.15	3548151	90.20	60	120	
Ho-165	165	2	HMI He	15866378	0.40	17324298	91.58	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-8-A
Data File Name	093SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:13:57-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-3.740	ppb	-3.740	-52.73	106404	500000	
Li	7	2	45	-28.338	ppb	-28.338	-73.49	5148	500000	
Li	7	3	45	-17.342	ppb	-17.342	-13.06	3102810	50000	
Be	9	1	6	-0.004	ppb	-0.004	-1516.76	10	2000	
B	11	1	6	21.387	ppb	21.387	6.74	7512	2000	
Na	23	1	45	58831.122	ppb	58831.122	1.26	175140917	2000	>LDR
Na	23	2	45	56872.048	ppb	56872.048	0.32	12582606	400000	
Mg	24	2	45	12267.859	ppb	12267.859	1.24	1247536	400000	
Al	27	2	45	4.528	ppb	4.528	35.52	240	400000	
K	39	1	45	21963.500	ppb	21963.500	1.58	70625081	400000	
K	39	2	45	23388.982	ppb	23388.982	1.20	1177441	400000	
Ca	40	1	45	40010.843	ppb	40010.843	0.31	172306344	400000	
Ca	44	2	45	39795.740	ppb	39795.740	2.01	111085	400000	
Ti	47	2	45	1.537	ppb	1.537	41.68	37	4000	
V	51	2	72	16.756	ppb	16.756	1.50	18135	2000	
Cr	52	2	72	2.711	ppb	2.711	6.81	3644	5000	
Mn	55	2	72	0.419	ppb	0.419	25.83	250	10000	
Fe	57	2	72	13.046	ppb	13.046	29.43	417	400000	
Co	59	2	72	0.019	ppb	0.019	103.98	63	2000	
Ni	60	2	72	0.177	ppb	0.177	61.82	253	5000	
Cu	63	2	72	0.065	ppb	0.065	124.02	1473	5000	
Zn	66	2	72	10.804	ppb	10.804	9.53	2957	5000	
As	75	2	72	10.762	ppb	10.762	3.24	1654	2000	
Se	78	1	72	2.784	ppb	2.784	24.77	613	2000	
Sr	88	2	72	193.913	ppb	193.913	1.24	98147	4000	
Zr	90	2	72	4.076	ppb	4.076	78.46	117	1000	
Nb	93	2	72	-0.658	ppb	-0.658	-17.85	2614	200	
Mo	95	2	115	4.339	ppb	4.339	5.40	3591	2000	
Pd	105	2	115	-0.020	ppb	-0.020	-59.79	17	100	
Ag	107	2	115	-0.010	ppb	-0.010	-21.45	43	100	
Cd	111	2	115	0.045	ppb	0.045	125.77	17	2000	
Sn	120	2	115	0.054	ppb	0.054	132.97	220	2000	
Sb	121	2	115	0.352	ppb	0.352	5.10	347	1000	
Ba	137	2	115	47.682	ppb	47.682	3.30	13697	5000	
W	182	2	165	0.385	ppb	0.385	16.00	2587	100	
Pt	195	2	165	0.003	ppb	0.003	454.48	40	100	
Tl	205	2	165	0.012	ppb	0.012	61.91	220	2000	
Pb	208	2	165	-0.018	ppb	-0.018	-37.26	1000	5000	
Th	232	2	165	0.018	ppb	0.018	78.61	680	2000	
U	238	2	165	28.187	ppb	28.187	1.32	358970	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	673598	0.48	821388	82.01	60	120	
Sc (IS)	45	1	HMI H2	23408588	0.70	28135324	83.20	60	120	
Sc (IS)	45	2	HMI He	910954	0.52	1028528	88.57	60	120	
Sc (IS)	45	3	No Gas	36601519	0.60	44911069	81.50	60	120	
Ge Internal Standard	72	1	HMI H2	8869967	0.14	10990003	80.71	60	120	
Ge Internal Standard	72	2	HMI He	992615	0.21	1134301	87.51	60	120	
In Internal Standard	115	2	HMI He	3202121	1.30	3548151	90.25	60	120	
Ho-165	165	2	HMI He	15897262	0.74	17324298	91.76	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-9-A
Data File Name	094SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:17:43-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.989	ppb	-1.989	-303.57	107251	500000	
Li	7	2	45	-27.189	ppb	-27.189	-82.77	5148	500000	
Li	7	3	45	-15.834	ppb	-15.834	-43.78	3134300	50000	
Be	9	1	6	-0.025	ppb	-0.025	-73.03	3	2000	
B	11	1	6	19.761	ppb	19.761	5.87	7062	2000	
Na	23	1	45	22215.557	ppb	22215.557	0.77	66459374	2000	>LDR
Na	23	2	45	21621.870	ppb	21621.870	0.96	4775270	400000	
Mg	24	2	45	12833.953	ppb	12833.953	1.03	1300472	400000	
Al	27	2	45	34.722	ppb	34.722	4.36	1047	400000	
K	39	1	45	3503.204	ppb	3503.204	0.15	18614128	400000	
K	39	2	45	4856.645	ppb	4856.645	1.28	255352	400000	
Ca	40	1	45	51167.718	ppb	51167.718	0.39	221063777	400000	
Ca	44	2	45	51090.329	ppb	51090.329	1.34	142103	400000	
Ti	47	2	45	1.403	ppb	1.403	75.75	33	4000	
V	51	2	72	6.305	ppb	6.305	5.44	8276	2000	
Cr	52	2	72	3.574	ppb	3.574	4.07	4738	5000	
Mn	55	2	72	1.332	ppb	1.332	5.69	697	10000	
Fe	57	2	72	45.079	ppb	45.079	7.43	1173	400000	
Co	59	2	72	0.033	ppb	0.033	36.57	93	2000	
Ni	60	2	72	0.577	ppb	0.577	22.22	500	5000	
Cu	63	2	72	0.038	ppb	0.038	243.72	1433	5000	
Zn	66	2	72	34.921	ppb	34.921	2.53	8890	5000	
As	75	2	72	2.434	ppb	2.434	6.45	397	2000	
Se	78	1	72	2.820	ppb	2.820	15.65	628	2000	
Sr	88	2	72	245.592	ppb	245.592	0.36	124904	4000	
Zr	90	2	72	15.646	ppb	15.646	14.15	233	1000	
Nb	93	2	72	-0.853	ppb	-0.853	-8.63	2070	200	
Mo	95	2	115	4.167	ppb	4.167	5.54	3504	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-314.44	40	100	
Ag	107	2	115	0.039	ppb	0.039	59.91	183	100	
Cd	111	2	115	0.009	ppb	0.009	173.21	3	2000	
Sn	120	2	115	0.078	ppb	0.078	106.53	247	2000	
Sb	121	2	115	0.164	ppb	0.164	37.38	190	1000	
Ba	137	2	115	76.865	ppb	76.865	1.76	22422	5000	
W	182	2	165	0.340	ppb	0.340	29.78	2417	100	
Pt	195	2	165	0.003	ppb	0.003	183.67	40	100	
Tl	205	2	165	0.004	ppb	0.004	181.58	167	2000	
Pb	208	2	165	0.017	ppb	0.017	82.27	1353	5000	
Th	232	2	165	0.021	ppb	0.021	34.67	713	2000	
U	238	2	165	52.418	ppb	52.418	0.79	668564	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	683003	0.22	821388	83.15	60	120	
Sc (IS)	45	1	HMI H2	23485095	0.52	28135324	83.47	60	120	
Sc (IS)	45	2	HMI He	907787	0.36	1028528	88.26	60	120	
Sc (IS)	45	3	No Gas	36818708	0.93	44911069	81.98	60	120	
Ge Internal Standard	72	1	HMI H2	8972712	0.57	10990003	81.64	60	120	
Ge Internal Standard	72	2	HMI He	997463	0.71	1134301	87.94	60	120	
In Internal Standard	115	2	HMI He	3252569	0.62	3548151	91.67	60	120	
Ho-165	165	2	HMI He	15924547	0.90	17324298	91.92	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-10-A
Data File Name	095SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:21:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-3.588	ppb	-3.588	-192.86	106454	500000	
Li	7	2	45	-33.276	ppb	-33.276	-82.25	5091	500000	
Li	7	3	45	-18.831	ppb	-18.831	-8.99	3115258	50000	
Be	9	1	6	-0.025	ppb	-0.025	-73.42	3	2000	
B	11	1	6	19.645	ppb	19.645	3.66	6959	2000	
Na	23	1	45	22405.052	ppb	22405.052	0.74	66815089	2000	>LDR
Na	23	2	45	21478.384	ppb	21478.384	0.71	4776317	400000	
Mg	24	2	45	12790.262	ppb	12790.262	0.34	1304955	400000	
Al	27	2	45	9.695	ppb	9.695	42.35	380	400000	
K	39	1	45	3539.146	ppb	3539.146	1.31	18657457	400000	
K	39	2	45	4810.844	ppb	4810.844	0.34	254816	400000	
Ca	40	1	45	51930.036	ppb	51930.036	0.58	223661150	400000	
Ca	44	2	45	51274.942	ppb	51274.942	1.31	143584	400000	
Ti	47	2	45	0.140	ppb	0.140	173.21	3	4000	
V	51	2	72	6.150	ppb	6.150	9.33	8116	2000	
Cr	52	2	72	3.105	ppb	3.105	3.09	4147	5000	
Mn	55	2	72	0.766	ppb	0.766	14.78	420	10000	
Fe	57	2	72	22.622	ppb	22.622	4.73	643	400000	
Co	59	2	72	0.092	ppb	0.092	26.77	220	2000	
Ni	60	2	72	0.688	ppb	0.688	35.87	567	5000	
Cu	63	2	72	0.178	ppb	0.178	42.31	1670	5000	
Zn	66	2	72	36.591	ppb	36.591	9.05	9290	5000	
As	75	2	72	2.468	ppb	2.468	9.23	402	2000	
Se	78	1	72	2.919	ppb	2.919	3.05	651	2000	
Sr	88	2	72	246.253	ppb	246.253	0.37	125085	4000	
Zr	90	2	72	6.695	ppb	6.695	67.15	143	1000	
Nb	93	2	72	-0.987	ppb	-0.987	-3.36	1684	200	
Mo	95	2	115	4.611	ppb	4.611	7.08	3821	2000	
Pd	105	2	115	-0.018	ppb	-0.018	-87.98	20	100	
Ag	107	2	115	0.005	ppb	0.005	469.68	87	100	
Cd	111	2	115	0.036	ppb	0.036	86.61	13	2000	
Sn	120	2	115	0.112	ppb	0.112	24.99	277	2000	
Sb	121	2	115	0.249	ppb	0.249	21.14	260	1000	
Ba	137	2	115	80.033	ppb	80.033	2.04	23033	5000	
W	182	2	165	0.359	ppb	0.359	12.11	2487	100	
Pt	195	2	165	0.004	ppb	0.004	237.75	43	100	
Tl	205	2	165	0.013	ppb	0.013	40.09	233	2000	
Pb	208	2	165	0.017	ppb	0.017	15.57	1347	5000	
Th	232	2	165	0.014	ppb	0.014	8.06	630	2000	
U	238	2	165	51.688	ppb	51.688	0.21	658834	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	676717	0.75	821388	82.39	60	120	
Sc (IS)	45	1	HMI H2	23412766	1.23	28135324	83.21	60	120	
Sc (IS)	45	2	HMI He	914017	0.60	1028528	88.87	60	120	
Sc (IS)	45	3	No Gas	36900647	0.23	44911069	82.16	60	120	
Ge Internal Standard	72	1	HMI H2	8982484	0.50	10990003	81.73	60	120	
Ge Internal Standard	72	2	HMI He	996238	0.19	1134301	87.83	60	120	
In Internal Standard	115	2	HMI He	3209110	0.83	3548151	90.44	60	120	
Ho-165	165	2	HMI He	15914129	0.61	17324298	91.86	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	096_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:25:16-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	492.222	ppb	1.030	252371	500	98.4	90	110	
Li	7	2	45	478.685	ppb	1.639	12499	500	95.7	90	110	
Li	7	3	45	453.309	ppb	2.731	7341008	500	90.7	90	110	
Be	9	1	6	50.076	ppb	4.397	16269	50	100.2	90	110	
B	11	1	6	51.401	ppb	3.225	18639	50	102.8	90	110	
Na	23	1	45	5123.852	ppb	0.111	15691159	5000	102.5	90	110	
Na	23	2	45	5242.435	ppb	3.633	1159583	5000	104.8	90	110	
Mg	24	2	45	5017.422	ppb	0.482	504865	5000	100.3	90	110	
Al	27	2	45	5236.901	ppb	1.465	139197	5000	104.7	90	110	
K	39	1	45	5091.455	ppb	1.235	23453511	5000	101.8	90	110	
K	39	2	45	5132.010	ppb	1.469	267055	5000	102.6	90	110	
Ca	40	1	45	5048.015	ppb	0.714	22169728	5000	101.0	90	110	
Ca	44	2	45	5039.224	ppb	2.035	13944	5000	100.8	90	110	
Ti	47	2	45	49.980	ppb	2.279	1180	50	100.0	90	110	
V	51	2	72	49.597	ppb	0.807	49144	50	99.2	90	110	
Cr	52	2	72	48.906	ppb	1.805	60794	50	97.8	90	110	
Mn	55	2	72	50.177	ppb	1.610	24358	50	100.4	90	110	
Fe	57	2	72	4748.546	ppb	0.571	111167	5000	95.0	90	110	
Co	59	2	72	48.648	ppb	1.472	103867	50	97.3	90	110	
Ni	60	2	72	48.484	ppb	1.773	29598	50	97.0	90	110	
Cu	63	2	72	47.234	ppb	3.092	81323	50	94.5	90	110	
Zn	66	2	72	45.174	ppb	0.875	11328	50	90.3	90	110	
As	75	2	72	48.923	ppb	0.938	7408	50	97.8	90	110	
Se	78	1	72	50.066	ppb	3.079	11158	50	100.1	90	110	
Sr	88	2	72	51.007	ppb	2.173	25784	50	102.0	90	110	
Zr	90	2	72	64.255	ppb	7.291	717	50	128.5	90	110	>+\-10%
Nb	93	2	72	75.168	ppb	1.007	218088	100	75.2	90	110	>+\-10%
Mo	95	2	115	45.411	ppb	1.121	36973	50	90.8	90	110	
Pd	105	2	115	47.091	ppb	2.886	60032	50	94.2	90	110	
Ag	107	2	115	47.567	ppb	1.323	131321	50	95.1	90	110	
Cd	111	2	115	48.475	ppb	3.821	17775	50	96.9	90	110	
Sn	120	2	115	47.792	ppb	1.431	45887	50	95.6	90	110	
Sb	121	2	115	49.077	ppb	3.324	41433	50	98.2	90	110	
Ba	137	2	115	49.810	ppb	1.767	14211	50	99.6	90	110	
W	182	2	165	47.559	ppb	2.152	187146	50	95.1	90	110	
Pt	195	2	165	46.114	ppb	1.524	152318	50	92.2	90	110	
Tl	205	2	165	49.887	ppb	0.229	365665	50	99.8	90	110	
Pb	208	2	165	49.569	ppb	0.187	485013	50	99.1	90	110	
Th	232	2	165	49.488	ppb	0.068	571235	50	99.0	90	110	
U	238	2	165	49.299	ppb	0.377	622240	50	98.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	712013	0.89	821388	86.68	60	120	
Sc (IS)	45	1	HMI H2	23835155	0.34	28135324	84.72	60	120	
Sc (IS)	45	2	HMI He	901266	0.07	1028528	87.63	60	120	
Sc (IS)	45	3	No Gas	37554065	0.72	44911069	83.62	60	120	
Ge Internal Standard	72	1	HMI H2	9109488	0.65	10990003	82.89	60	120	
Ge Internal Standard	72	2	HMI He	990530	0.57	1134301	87.33	60	120	
In Internal Standard	115	2	HMI He	3179650	1.13	3548151	89.61	60	120	
Ho-165	165	2	HMI He	15758426	0.35	17324298	90.96	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	097_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:29:03-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-7.077	ppb	-51.9	3271228	10	
Be	9	1	6	0.005	ppb	982.1	13	0.5	
B	11	1	6	1.915	ppb	10.5	1023	0.5	>RL
Na	23	1	45	31.387	ppb	9.8	270585	25	>RL
Na	23	2	45	27.389	ppb	10.3	19333	25	>RL
Mg	24	2	45	3.302	ppb	23.3	473	25	
Al	27	2	45	7.737	ppb	17.7	323	15	
K	39	1	45	22.100	ppb	347.1	8922709	50	
K	39	2	45	2.670	ppb	112.0	14838	50	
Ca	40	1	45	14.848	ppb	7.4	104627	50	
Ca	44	2	45	16.107	ppb	14.9	77	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	2.089	ppb	9.7	4214	1	>RL
Cr	52	2	72	-0.085	ppb	-72.4	177	1	
Mn	55	2	72	0.097	ppb	53.9	93	0.5	
Fe	57	2	72	2.136	ppb	68.3	160	25	
Co	59	2	72	0.002	ppb	444.4	27	0.5	
Ni	60	2	72	0.168	ppb	70.2	247	1	
Cu	63	2	72	-0.103	ppb	-14.3	1180	1	
Zn	66	2	72	0.346	ppb	43.6	400	5	
As	75	2	72	-0.025	ppb	-184.3	24	1	
Se	78	1	72	0.026	ppb	63.0	16	1	
Sr	88	2	72	0.016	ppb	247.2	40	0.5	
Zr	90	2	72	1.112	ppb	924.5	87	1	>RL
Nb	93	2	72	3.703	ppb	14.0	14945	2	>RL
Mo	95	2	115	0.290	ppb	10.5	273	0.5	
Pd	105	2	115	0.052	ppb	35.6	110	1	
Ag	107	2	115	-0.007	ppb	-76.6	53	1	
Cd	111	2	115	0.019	ppb	173.2	7	0.5	
Sn	120	2	115	0.053	ppb	90.2	220	1	
Sb	121	2	115	0.286	ppb	20.0	290	0.6	
Ba	137	2	115	-0.040	ppb	-98.0	7	0.5	
W	182	2	165	0.105	ppb	13.3	1463	1	
Pt	195	2	165	0.011	ppb	134.9	67	1	
Tl	205	2	165	0.018	ppb	65.5	263	0.1	
Pb	208	2	165	-0.002	ppb	-818.6	1147	0.5	
Th	232	2	165	0.031	ppb	20.7	823	1	
U	238	2	165	0.053	ppb	4.4	853	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	726382	2.07	821388	88.43	60	120	
Sc (IS)	45	1	HMI H2	23926128	2.62	28135324	85.04	60	120	
Sc (IS)	45	2	HMI He	903523	1.18	1028528	87.85	60	120	
Sc (IS)	45	3	No Gas	37520071	0.51	44911069	83.54	60	120	
Ge Internal Standard	72	1	HMI H2	9245741	2.00	10990003	84.13	60	120	
Ge Internal Standard	72	2	HMI He	986670	0.43	1134301	86.98	60	120	
In Internal Standard	115	2	HMI He	3198615	2.99	3548151	90.15	60	120	
Ho-165	165	2	HMI He	15726687	0.18	17324298	90.78	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436988/1-A
Data File Name	098_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:32:51-07:00
Sample Type	Blank
Dilution	1
Comment	436988 6020
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-4.908	ppb	-115.4295066	107619	0.5
Li	7	2	45	-34.724	ppb	-49.27901645	5054	0.5
Li	7	3	45	0.535	ppb	4202.303148	2935956	10
Be	9	1	6	-0.026	ppb	-70.83645355	3	0.5
B	11	1	6	1.511	ppb	11.56860933	847	0.5
Na	23	1	45	10.606	ppb	8.984203575	206048	25
Na	23	2	45	10.777	ppb	11.9159757	15826	25
Mg	24	2	45	2.667	ppb	47.14084668	413	25
Al	27	2	45	7.628	ppb	19.09695329	323	15
K	39	1	45	-1328.828	ppb	-1.320333491	4995038	50
K	39	2	45	2.975	ppb	287.4029125	14978	50
Ca	40	1	45	14.402	ppb	2.11761743	101998	50
Ca	44	2	45	8.611	ppb	189.7312736	57	25
Ti	47	2	45	0.140	ppb	173.2050808	3	0.5
V	51	2	72	0.280	ppb	32.83603276	2544	1
Cr	52	2	72	0.103	ppb	106.8935975	413	1
Mn	55	2	72	0.272	ppb	59.65125731	180	0.5
Fe	57	2	72	10.810	ppb	12.01055341	367	25
Co	59	2	72	0.000	ppb	-8245.270855	23	0.5
Ni	60	2	72	0.070	ppb	120.1301597	190	1
Cu	63	2	72	0.801	ppb	12.97765415	2740	1
Zn	66	2	72	4.121	ppb	8.832868267	1333	5
As	75	2	72	-0.031	ppb	-44.71691437	23	1
Se	78	1	72	0.070	ppb	54.0528621	25	1
Sr	88	2	72	0.009	ppb	351.0245818	37	0.5
Zr	90	2	72	2.019	ppb	173.1922355	97	1
Nb	93	2	72	1.996	ppb	15.04147905	10248	2
Mo	95	2	115	0.021	ppb	92.75979649	53	0.5
Pd	105	2	115	-0.015	ppb	-82.27217838	23	1
Ag	107	2	115	-0.018	ppb	-50.22714811	23	1
Cd	111	2	115	0.009	ppb	173.2050808	3	0.5
Sn	120	2	115	0.112	ppb	35.04117987	277	1
Sb	121	2	115	0.073	ppb	87.96690972	110	0.6
Ba	137	2	115	0.240	ppb	48.11605596	87	0.5
W	182	2	165	0.015	ppb	321.2222495	1127	1
Pt	195	2	165	-0.007	ppb	-24.30964274	7	1
Tl	205	2	165	-0.003	ppb	-70.22967232	113	0.1
Pb	208	2	165	-0.017	ppb	-84.37298399	1010	0.5
Th	232	2	165	0.040	ppb	5.436155242	933	1
U	238	2	165	0.008	ppb	52.88374103	297	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	702120	0.50	821388	85.48	60	120	
Sc (IS)	45	1	HMI H2	23752328	0.91	28135324	84.42	60	120	
Sc (IS)	45	2	HMI He	911197	0.76	1028528	88.59	60	120	
Sc (IS)	45	3	No Gas	33337252	26.07	44911069	74.23	60	120	
Ge Internal Standard	72	1	HMI H2	9034958	0.82	10990003	82.21	60	120	
Ge Internal Standard	72	2	HMI He	999490	0.78	1134301	88.12	60	120	
In Internal Standard	115	2	HMI He	3204307	1.45	3548151	90.31	60	120	
Ho-165	165	2	HMI He	15890618	0.40	17324298	91.72	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436988/2-A
Data File Name	099_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:36:39-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436988 6020
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	66.710	66.710	ppb	4.865	130090	400	16.7	80	120	>+/-20%
Li	7	2	45	42.095	42.095	ppb	33.200	6215	400	10.5	80	120	>+/-20%
Li	7	3	45	59.349	59.349	ppb	9.052	3865425	400	14.8	80	120	>+/-20%
Be	9	1	6	38.681	38.681	ppb	3.115	12522	40	96.7	80	120	
Na	23	2	45	615.813	615.813	ppb	0.854	150179	40	1539.5	80	120	>+/-20%
Mg	24	2	45	82.077	82.077	ppb	4.142	8523	40	205.2	80	120	>+/-20%
Al	27	2	45	437.646	437.646	ppb	4.749	11919	40	1094.1	80	120	>+/-20%
K	39	2	45	28.255	28.255	ppb	40.361	16303	40	70.6	80	120	>+/-20%
Ca	44	2	45	260.882	260.882	ppb	9.832	763	40	652.2	80	120	>+/-20%
V	51	2	72	39.040	39.040	ppb	0.974	39575	40	97.6	80	120	
Cr	52	2	72	39.675	39.675	ppb	4.210	49890	40	99.2	80	120	
Mn	55	2	72	40.435	40.435	ppb	3.134	19844	40	101.1	80	120	
Fe	57	2	72	384.277	384.277	ppb	1.494	9193	40	960.7	80	120	>+/-20%
Co	59	2	72	38.486	38.486	ppb	1.930	83041	40	96.2	80	120	
Ni	60	2	72	37.954	37.954	ppb	1.902	23443	40	94.9	80	120	
Cu	63	2	72	37.026	37.026	ppb	1.585	64715	40	92.6	80	120	
Zn	66	2	72	37.936	37.936	ppb	4.551	9664	40	94.8	80	120	
As	75	2	72	35.754	35.754	ppb	3.012	5478	40	89.4	80	120	
Se	78	1	72	35.555	35.555	ppb	3.773	7996	40	88.9	80	120	
Nb	93	2	72	1.053	1.053	ppb	19.911	7549	40	2.6	80	120	>+/-20%
Mo	95	2	115	36.881	36.881	ppb	1.297	30567	40	92.2	80	120	
Pd	105	2	115	-0.013	-0.013	ppb	-70.663	27	40	0.0	80	120	>+/-20%
Ag	107	2	115	38.361	38.361	ppb	1.794	107795	40	95.9	80	120	
Cd	111	2	115	37.186	37.186	ppb	4.384	13881	40	93.0	80	120	
Sn	120	2	115	37.779	37.779	ppb	1.160	36950	40	94.4	80	120	
Sb	121	2	115	37.436	37.436	ppb	3.325	32182	40	93.6	80	120	
Ba	137	2	115	39.974	39.974	ppb	5.976	11609	40	99.9	80	120	
W	182	2	165	37.298	37.298	ppb	1.310	147700	40	93.2	80	120	
Pt	195	2	165	-0.005	-0.005	ppb	-68.386	13	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.534	39.534	ppb	0.639	291187	40	98.8	80	120	
Pb	208	2	165	39.350	39.350	ppb	0.723	387100	40	98.4	80	120	
Th	232	2	165	38.428	38.428	ppb	1.418	445766	40	96.1	80	120	
U	238	2	165	38.297	38.297	ppb	0.331	485737	40	95.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	709261	0.48	821388	86.35	60	120	
Sc (IS)	45	1	HMI H2	24074406	0.80	28135324	85.57	60	120	
Sc (IS)	45	2	HMI He	914855	0.48	1028528	88.95	60	120	
Sc (IS)	45	3	No Gas	37595419	0.29	44911069	83.71	60	120	
Ge Internal Standard	72	1	HMI H2	9190132	0.88	10990003	83.62	60	120	
Ge Internal Standard	72	2	HMI He	1000927	0.22	1134301	88.24	60	120	
In Internal Standard	115	2	HMI He	3235818	0.26	3548151	91.20	60	120	
Ho-165	165	2	HMI He	15833779	0.77	17324298	91.40	60	120	

Sample Report

Sample Table

Sample Name	280-116415-B-2-B
Data File Name	100SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:40:25-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.685	ppb	1.685	58.22	103833	500000	
Li	7	2	45	-23.861	ppb	-23.861	-147.88	4974	500000	
Li	7	3	45	-15.553	ppb	-15.553	-3.91	3126950	50000	
Be	9	1	6	-0.013	ppb	-0.013	-290.56	7	2000	
B	11	1	6	29.611	ppb	29.611	5.93	9920	2000	
Na	23	1	45	71277.231	ppb	71277.231	0.60	204063597	2000	>LDR
Na	23	2	45	69073.647	ppb	69073.647	1.16	14573280	400000	
Mg	24	2	45	27879.953	ppb	27879.953	1.16	2703853	400000	
Al	27	2	45	4.044	ppb	4.044	77.09	217	400000	
K	39	1	45	2678.803	ppb	2678.803	0.23	15608924	400000	
K	39	2	45	3886.183	ppb	3886.183	1.92	198377	400000	
Ca	40	1	45	205625.374	ppb	205625.374	0.75	851611321	400000	
Ca	44	2	45	213465.995	ppb	213465.995	0.92	568144	400000	
Ti	47	2	45	0.442	ppb	0.442	173.21	10	4000	
V	51	2	72	-0.154	ppb	-0.154	-152.04	2024	2000	
Cr	52	2	72	0.002	ppb	0.002	2318.03	273	5000	
Mn	55	2	72	128.587	ppb	128.587	2.18	59787	10000	
Fe	57	2	72	1199.027	ppb	1199.027	2.67	27000	400000	
Co	59	2	72	0.051	ppb	0.051	32.94	127	2000	
Ni	60	2	72	0.196	ppb	0.196	51.19	253	5000	
Cu	63	2	72	-0.105	ppb	-0.105	-42.35	1133	5000	
Zn	66	2	72	2.022	ppb	2.022	35.36	777	5000	
As	75	2	72	0.279	ppb	0.279	17.05	67	2000	
Se	78	1	72	0.019	ppb	0.019	208.67	13	2000	
Sr	88	2	72	3577.184	ppb	3577.184	1.25	1732143	4000	
Zr	90	2	72	220.255	ppb	220.255	5.27	2180	1000	
Nb	93	2	72	0.491	ppb	0.491	38.13	5635	200	
Mo	95	2	115	0.844	ppb	0.844	16.06	693	2000	
Pd	105	2	115	0.019	ppb	0.019	65.68	63	100	
Ag	107	2	115	-0.011	ppb	-0.011	-34.80	40	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.421	ppb	0.421	24.08	547	2000	
Sb	121	2	115	0.492	ppb	0.492	12.35	443	1000	
Ba	137	2	115	25.555	ppb	25.555	5.86	7002	5000	
W	182	2	165	0.271	ppb	0.271	19.94	2044	100	
Pt	195	2	165	0.000	ppb	0.000	3544.73	30	100	
Tl	205	2	165	0.001	ppb	0.001	1391.21	133	2000	
Pb	208	2	165	-0.012	ppb	-0.012	-192.57	1013	5000	
Th	232	2	165	0.197	ppb	0.197	5.95	2634	2000	
U	238	2	165	0.935	ppb	0.935	1.76	11562	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	649898	0.74	821388	79.12	60	120	
Sc (IS)	45	1	HMI H2	22515729	0.18	28135324	80.03	60	120	
Sc (IS)	45	2	HMI He	868839	0.48	1028528	84.47	60	120	
Sc (IS)	45	3	No Gas	36703623	0.14	44911069	81.73	60	120	
Ge Internal Standard	72	1	HMI H2	8556852	0.84	10990003	77.86	60	120	
Ge Internal Standard	72	2	HMI He	949863	0.67	1134301	83.74	60	120	
In Internal Standard	115	2	HMI He	3049590	0.46	3548151	85.95	60	120	
Ho-165	165	2	HMI He	15201878	0.67	17324298	87.75	60	120	

Sample Report

Sample Table

Sample Name	280-116415-B-3-B
Data File Name	101SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:44:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-5.187	ppb	-5.187	-139.01	103266	500000	
Li	7	2	45	-19.305	ppb	-19.305	-62.10	5061	500000	
Li	7	3	45	-18.960	ppb	-18.960	-21.32	3114972	50000	
Be	9	1	6	-0.014	ppb	-0.014	-140.32	7	2000	
B	11	1	6	27.723	ppb	27.723	6.10	9420	2000	
Na	23	1	45	66762.710	ppb	66762.710	0.83	193628764	2000	>LDR
Na	23	2	45	64722.176	ppb	64722.176	0.30	13720666	400000	
Mg	24	2	45	25914.339	ppb	25914.339	1.28	2525103	400000	
Al	27	2	45	31.102	ppb	31.102	28.55	913	400000	
K	39	1	45	2454.948	ppb	2454.948	1.16	15196104	400000	
K	39	2	45	3649.443	ppb	3649.443	1.79	188048	400000	
Ca	40	1	45	191971.981	ppb	191971.981	0.56	805373508	400000	
Ca	44	2	45	199544.953	ppb	199544.953	1.35	533618	400000	
Ti	47	2	45	0.437	ppb	0.437	173.21	10	4000	
V	51	2	72	-0.654	ppb	-0.654	-16.13	1567	2000	
Cr	52	2	72	0.025	ppb	0.025	205.94	300	5000	
Mn	55	2	72	120.514	ppb	120.514	0.29	55895	10000	
Fe	57	2	72	1132.374	ppb	1132.374	3.07	25437	400000	
Co	59	2	72	0.040	ppb	0.040	18.28	103	2000	
Ni	60	2	72	0.088	ppb	0.088	52.92	190	5000	
Cu	63	2	72	-0.103	ppb	-0.103	-12.64	1133	5000	
Zn	66	2	72	1.829	ppb	1.829	13.70	730	5000	
As	75	2	72	0.194	ppb	0.194	100.19	54	2000	
Se	78	1	72	0.061	ppb	0.061	122.63	23	2000	
Sr	88	2	72	3313.285	ppb	3313.285	1.97	1600154	4000	
Zr	90	2	72	58.465	ppb	58.465	16.14	630	1000	
Nb	93	2	72	-0.184	ppb	-0.184	-46.56	3784	200	
Mo	95	2	115	0.865	ppb	0.865	28.51	710	2000	
Pd	105	2	115	0.032	ppb	0.032	67.83	80	100	
Ag	107	2	115	-0.016	ppb	-0.016	-27.27	27	100	
Cd	111	2	115	0.028	ppb	0.028	100.20	10	2000	
Sn	120	2	115	0.276	ppb	0.276	38.09	413	2000	
Sb	121	2	115	0.141	ppb	0.141	42.92	160	1000	
Ba	137	2	115	22.443	ppb	22.443	2.53	6155	5000	
W	182	2	165	0.086	ppb	0.086	39.07	1353	100	
Pt	195	2	165	0.011	ppb	0.011	89.64	63	100	
Tl	205	2	165	-0.006	ppb	-0.006	-99.53	90	2000	
Pb	208	2	165	0.015	ppb	0.015	24.16	1277	5000	
Th	232	2	165	0.048	ppb	0.048	4.23	990	2000	
U	238	2	165	0.811	ppb	0.811	1.81	10118	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	657807	0.66	821388	80.08	60	120	
Sc (IS)	45	1	HMI H2	22808044	0.39	28135324	81.07	60	120	
Sc (IS)	45	2	HMI He	872978	0.21	1028528	84.88	60	120	
Sc (IS)	45	3	No Gas	36910335	0.76	44911069	82.19	60	120	
Ge Internal Standard	72	1	HMI H2	8730776	0.70	10990003	79.44	60	120	
Ge Internal Standard	72	2	HMI He	947408	0.51	1134301	83.52	60	120	
In Internal Standard	115	2	HMI He	3051349	0.58	3548151	86.00	60	120	
Ho-165	165	2	HMI He	15304312	0.39	17324298	88.34	60	120	

Sample Report

Sample Table

Sample Name	280-116415-B-4-B
Data File Name	102SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:47:59-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-7.712	ppb	-7.712	-53.36	100397	500000	
Li	7	2	45	-21.217	ppb	-21.217	-80.97	4901	500000	
Li	7	3	45	-24.807	ppb	-24.807	-12.11	2977920	50000	
Be	9	1	6	-0.013	ppb	-0.013	-303.26	7	2000	
B	11	1	6	44.520	ppb	44.520	3.19	14421	2000	
Na	23	1	45	178936.482	ppb	178936.482	0.30	507700099	2000	>LDR
Na	23	2	45	173456.753	ppb	173456.753	0.31	35788078	400000	
Mg	24	2	45	15407.587	ppb	15407.587	0.99	1462043	400000	
Al	27	2	45	6.647	ppb	6.647	39.67	277	400000	
K	39	1	45	5431.704	ppb	5431.704	0.99	22882912	400000	
K	39	2	45	6700.528	ppb	6700.528	0.46	324682	400000	
Ca	40	1	45	213710.208	ppb	213710.208	0.86	877587720	400000	
Ca	44	2	45	228371.096	ppb	228371.096	0.55	594754	400000	
Ti	47	2	45	0.451	ppb	0.451	99.76	10	4000	
V	51	2	72	-0.869	ppb	-0.869	-10.83	1347	2000	
Cr	52	2	72	0.067	ppb	0.067	12.29	343	5000	
Mn	55	2	72	357.287	ppb	357.287	0.73	162496	10000	
Fe	57	2	72	543.651	ppb	543.651	2.86	12036	400000	
Co	59	2	72	0.026	ppb	0.026	9.72	73	2000	
Ni	60	2	72	0.041	ppb	0.041	91.20	160	5000	
Cu	63	2	72	1.098	ppb	1.098	1.26	3020	5000	
Zn	66	2	72	2.734	ppb	2.734	19.13	923	5000	
As	75	2	72	0.012	ppb	0.012	111.73	27	2000	
Se	78	1	72	0.065	ppb	0.065	96.16	23	2000	
Sr	88	2	72	4659.452	ppb	4659.452	0.35	2207776	4000	
Zr	90	2	72	17.693	ppb	17.693	15.48	237	1000	
Nb	93	2	72	-0.413	ppb	-0.413	-11.52	3101	200	
Mo	95	2	115	0.732	ppb	0.732	14.81	593	2000	
Pd	105	2	115	0.048	ppb	0.048	26.61	97	100	
Ag	107	2	115	-0.004	ppb	-0.004	-266.97	57	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.334	ppb	0.334	4.10	457	2000	
Sb	121	2	115	0.062	ppb	0.062	24.34	93	1000	
Ba	137	2	115	14.726	ppb	14.726	4.77	3961	5000	
W	182	2	165	0.113	ppb	0.113	30.86	1433	100	
Pt	195	2	165	0.006	ppb	0.006	282.42	47	100	
Tl	205	2	165	0.003	ppb	0.003	115.16	150	2000	
Pb	208	2	165	0.075	ppb	0.075	24.79	1813	5000	
Th	232	2	165	0.027	ppb	0.027	56.37	733	2000	
U	238	2	165	0.067	ppb	0.067	13.17	987	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	634443	0.34	821388	77.24	60	120	
Sc (IS)	45	1	HMI H2	22324869	0.03	28135324	79.35	60	120	
Sc (IS)	45	2	HMI He	850147	1.06	1028528	82.66	60	120	
Sc (IS)	45	3	No Gas	35872614	0.83	44911069	79.87	60	120	
Ge Internal Standard	72	1	HMI H2	8479453	0.64	10990003	77.16	60	120	
Ge Internal Standard	72	2	HMI He	929553	1.04	1134301	81.95	60	120	
In Internal Standard	115	2	HMI He	2988071	0.40	3548151	84.21	60	120	
Ho-165	165	2	HMI He	15053115	0.64	17324298	86.89	60	120	

Sample Report

Sample Table

Sample Name	280-116415-B-5-B
Data File Name	103SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:51:45-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-6.471	ppb	-6.471	-8.14	98921	500000	
Li	7	2	45	-19.280	ppb	-19.280	-34.97	4941	500000	
Li	7	3	45	-19.407	ppb	-19.407	-6.24	2957962	50000	
Be	9	1	6	-0.036	ppb	-0.036	0.00	0	2000	
B	11	1	6	35.603	ppb	35.603	2.03	11241	2000	
Na	23	1	45	220070.375	ppb	220070.375	0.48	613127378	2000	>LDR
Na	23	2	45	211120.879	ppb	211120.879	0.75	43660173	400000	
Mg	24	2	45	23297.282	ppb	23297.282	0.83	2215921	400000	
Al	27	2	45	36.085	ppb	36.085	23.41	1017	400000	
K	39	1	45	12502.491	ppb	12502.491	0.14	41151343	400000	
K	39	2	45	13608.138	ppb	13608.138	0.47	646636	400000	
Ca	40	1	45	301661.223	ppb	301661.223	0.65	1216426942	400000	
Ca	44	2	45	318314.133	ppb	318314.133	0.23	830905	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.788	ppb	-0.788	-20.26	1420	2000	
Cr	52	2	72	0.047	ppb	0.047	194.75	320	5000	
Mn	55	2	72	470.050	ppb	470.050	1.09	214114	10000	
Fe	57	2	72	71.860	ppb	71.860	3.02	1684	400000	
Co	59	2	72	0.149	ppb	0.149	26.54	320	2000	
Ni	60	2	72	0.239	ppb	0.239	73.69	273	5000	
Cu	63	2	72	-0.007	ppb	-0.007	-781.59	1267	5000	
Zn	66	2	72	1.738	ppb	1.738	16.41	697	5000	
As	75	2	72	0.030	ppb	0.030	129.93	30	2000	
Se	78	1	72	0.139	ppb	0.139	43.57	37	2000	
Sr	88	2	72	6537.880	ppb	6537.880	0.12	3102763	4000	
Zr	90	2	72	14.446	ppb	14.446	23.52	207	1000	
Nb	93	2	72	-0.569	ppb	-0.569	-23.42	2690	200	
Mo	95	2	115	24.944	ppb	24.944	1.50	19020	2000	
Pd	105	2	115	0.101	ppb	0.101	21.25	160	100	
Ag	107	2	115	-0.009	ppb	-0.009	-25.67	43	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	-0.030	ppb	-0.030	-255.40	130	2000	
Sb	121	2	115	0.024	ppb	0.024	199.99	63	1000	
Ba	137	2	115	44.067	ppb	44.067	0.58	11766	5000	
W	182	2	165	0.587	ppb	0.587	4.50	3204	100	
Pt	195	2	165	-0.002	ppb	-0.002	-454.48	23	100	
Tl	205	2	165	0.007	ppb	0.007	49.65	177	2000	
Pb	208	2	165	-0.026	ppb	-0.026	-68.57	870	5000	
Th	232	2	165	0.024	ppb	0.024	7.48	710	2000	
U	238	2	165	0.094	ppb	0.094	16.45	1310	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	615437	0.78	821388	74.93	60	120	
Sc (IS)	45	1	HMI H2	21922955	0.26	28135324	77.92	60	120	
Sc (IS)	45	2	HMI He	852145	0.56	1028528	82.85	60	120	
Sc (IS)	45	3	No Gas	35093345	0.47	44911069	78.14	60	120	
Ge Internal Standard	72	1	HMI H2	8332245	0.80	10990003	75.82	60	120	
Ge Internal Standard	72	2	HMI He	931022	0.73	1134301	82.08	60	120	
In Internal Standard	115	2	HMI He	2975097	1.01	3548151	83.85	60	120	
Ho-165	165	2	HMI He	15053886	0.59	17324298	86.89	60	120	

Sample Report

Sample Table

Sample Name	280-116415-B-6-B
Data File Name	104SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:55:36-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-11.311	ppb	-11.311	-54.91	99247	500000	
Li	7	2	45	-23.866	ppb	-23.866	-88.40	4858	500000	
Li	7	3	45	-30.153	ppb	-30.153	-10.49	2883419	50000	
Be	9	1	6	-0.036	ppb	-0.036	0.00	0	2000	
B	11	1	6	32.416	ppb	32.416	2.22	10167	2000	
Na	23	1	45	200508.681	ppb	200508.681	0.32	567898765	2000	>LDR
Na	23	2	45	195183.912	ppb	195183.912	1.27	40219145	400000	
Mg	24	2	45	10190.613	ppb	10190.613	0.95	965909	400000	
Al	27	2	45	35.023	ppb	35.023	4.29	987	400000	
K	39	1	45	6820.837	ppb	6820.837	0.32	26574296	400000	
K	39	2	45	7982.505	ppb	7982.505	1.21	383686	400000	
Ca	40	1	45	209456.737	ppb	209456.737	0.58	858638441	400000	
Ca	44	2	45	227736.880	ppb	227736.880	0.31	592395	400000	
Ti	47	2	45	0.305	ppb	0.305	173.21	7	4000	
V	51	2	72	0.595	ppb	0.595	24.70	2640	2000	
Cr	52	2	72	0.083	ppb	0.083	37.12	360	5000	
Mn	55	2	72	49.751	ppb	49.751	3.12	22618	10000	
Fe	57	2	72	21.123	ppb	21.123	15.32	567	400000	
Co	59	2	72	0.012	ppb	0.012	62.86	47	2000	
Ni	60	2	72	0.171	ppb	0.171	61.69	233	5000	
Cu	63	2	72	0.284	ppb	0.284	41.29	1724	5000	
Zn	66	2	72	2.672	ppb	2.672	13.26	907	5000	
As	75	2	72	0.211	ppb	0.211	36.53	56	2000	
Se	78	1	72	0.235	ppb	0.235	34.81	57	2000	
Sr	88	2	72	5663.806	ppb	5663.806	0.42	2678480	4000	
Zr	90	2	72	9.155	ppb	9.155	39.45	157	1000	
Nb	93	2	72	-0.859	ppb	-0.859	-2.99	1907	200	
Mo	95	2	115	1.156	ppb	1.156	5.53	917	2000	
Pd	105	2	115	0.064	ppb	0.064	45.04	117	100	
Ag	107	2	115	-0.004	ppb	-0.004	-355.73	57	100	
Cd	111	2	115	0.049	ppb	0.049	173.21	17	2000	
Sn	120	2	115	0.093	ppb	0.093	40.34	240	2000	
Sb	121	2	115	0.024	ppb	0.024	132.97	63	1000	
Ba	137	2	115	14.322	ppb	14.322	12.45	3847	5000	
W	182	2	165	0.104	ppb	0.104	6.95	1390	100	
Pt	195	2	165	0.003	ppb	0.003	190.07	37	100	
Tl	205	2	165	0.002	ppb	0.002	154.80	140	2000	
Pb	208	2	165	-0.020	ppb	-0.020	-46.32	923	5000	
Th	232	2	165	0.008	ppb	0.008	73.18	530	2000	
U	238	2	165	0.032	ppb	0.032	21.70	567	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	609783	0.49	821388	74.24	60	120	
Sc (IS)	45	1	HMI H2	22286260	0.41	28135324	79.21	60	120	
Sc (IS)	45	2	HMI He	849176	1.50	1028528	82.56	60	120	
Sc (IS)	45	3	No Gas	35267424	0.45	44911069	78.53	60	120	
Ge Internal Standard	72	1	HMI H2	8395417	0.18	10990003	76.39	60	120	
Ge Internal Standard	72	2	HMI He	927714	0.92	1134301	81.79	60	120	
In Internal Standard	115	2	HMI He	2985289	0.47	3548151	84.14	60	120	
Ho-165	165	2	HMI He	14969179	0.50	17324298	86.41	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	105_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T18:59:23-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	477.448	ppb	3.923	238613	500	95.5	90	110	
Li	7	2	45	474.792	ppb	0.732	11865	500	95.0	90	110	
Li	7	3	45	963.380	ppb	37.899	7291936	500	192.7	90	110	>+\-10%
Be	9	1	6	50.382	ppb	5.481	15549	50	100.8	90	110	
B	11	1	6	52.881	ppb	3.256	18202	50	105.8	90	110	
Na	23	1	45	5177.120	ppb	0.845	15248243	5000	103.5	90	110	
Na	23	2	45	5091.358	ppb	1.989	1074334	5000	101.8	90	110	
Mg	24	2	45	5009.747	ppb	0.074	480713	5000	100.2	90	110	
Al	27	2	45	5212.368	ppb	1.084	132122	5000	104.2	90	110	
K	39	1	45	5073.968	ppb	0.902	22511662	5000	101.5	90	110	
K	39	2	45	5160.346	ppb	0.326	256001	5000	103.2	90	110	
Ca	40	1	45	5095.732	ppb	0.975	21525998	5000	101.9	90	110	
Ca	44	2	45	5041.371	ppb	1.848	13303	5000	100.8	90	110	
Ti	47	2	45	50.918	ppb	12.602	1147	50	101.8	90	110	
V	51	2	72	48.891	ppb	1.958	46586	50	97.8	90	110	
Cr	52	2	72	48.386	ppb	2.751	57812	50	96.8	90	110	
Mn	55	2	72	50.592	ppb	0.635	23604	50	101.2	90	110	
Fe	57	2	72	4786.749	ppb	1.377	107693	5000	95.7	90	110	
Co	59	2	72	48.765	ppb	1.393	100071	50	97.5	90	110	
Ni	60	2	72	49.044	ppb	2.093	28773	50	98.1	90	110	
Cu	63	2	72	46.293	ppb	1.508	76623	50	92.6	90	110	
Zn	66	2	72	45.677	ppb	4.320	11005	50	91.4	90	110	
As	75	2	72	47.321	ppb	1.368	6887	50	94.6	90	110	
Se	78	1	72	47.969	ppb	2.391	10363	50	95.9	90	110	
Sr	88	2	72	53.554	ppb	3.459	26015	50	107.1	90	110	
Zr	90	2	72	124.493	ppb	8.260	1267	50	249.0	90	110	>+\-10%
Nb	93	2	72	76.066	ppb	1.056	212044	100	76.1	90	110	>+\-10%
Mo	95	2	115	46.576	ppb	4.051	36512	50	93.2	90	110	
Pd	105	2	115	47.551	ppb	1.956	58395	50	95.1	90	110	
Ag	107	2	115	47.115	ppb	3.330	125253	50	94.2	90	110	
Cd	111	2	115	48.386	ppb	3.804	17088	50	96.8	90	110	
Sn	120	2	115	47.416	ppb	2.328	43847	50	94.8	90	110	
Sb	121	2	115	50.207	ppb	1.604	40834	50	100.4	90	110	
Ba	137	2	115	48.870	ppb	3.357	13427	50	97.7	90	110	
W	182	2	165	47.395	ppb	0.875	180688	50	94.8	90	110	
Pt	195	2	165	46.579	ppb	0.976	149054	50	93.2	90	110	
Tl	205	2	165	50.130	ppb	0.463	355971	50	100.3	90	110	
Pb	208	2	165	49.806	ppb	1.468	472114	50	99.6	90	110	
Th	232	2	165	49.204	ppb	0.293	550236	50	98.4	90	110	
U	238	2	165	48.746	ppb	0.103	596061	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	676265	0.18	821388	82.33	60	120	
Sc (IS)	45	1	HMI H2	22927677	0.84	28135324	81.49	60	120	
Sc (IS)	45	2	HMI He	859468	0.28	1028528	83.56	60	120	
Sc (IS)	45	3	No Gas	24214453	25.23	44911069	53.92	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	8828813	0.55	10990003	80.33	60	120	
Ge Internal Standard	72	2	HMI He	951963	0.64	1134301	83.93	60	120	
In Internal Standard	115	2	HMI He	3063351	2.59	3548151	86.34	60	120	
Ho-165	165	2	HMI He	15266507	0.13	17324298	88.12	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	106_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:03:10-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-17.860	ppb	-8.8	3173665	10	
Be	9	1	6	-0.036	ppb	0.0	0	0.5	
B	11	1	6	2.389	ppb	33.4	1147	0.5	>RL
Na	23	1	45	97.259	ppb	0.9	455483	25	>RL
Na	23	2	45	86.829	ppb	12.1	31274	25	>RL
Mg	24	2	45	3.448	ppb	27.7	470	25	
Al	27	2	45	3.057	ppb	43.6	193	15	
K	39	1	45	66.614	ppb	38.9	8756834	50	>RL
K	39	2	45	10.958	ppb	120.6	14748	50	
Ca	40	1	45	41.304	ppb	1.4	213859	50	
Ca	44	2	45	29.333	ppb	30.1	110	25	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.867	ppb	18.1	2990	1	
Cr	52	2	72	-0.057	ppb	-69.3	207	1	
Mn	55	2	72	0.122	ppb	85.0	103	0.5	
Fe	57	2	72	-0.068	ppb	-2179.0	107	25	
Co	59	2	72	0.005	ppb	297.0	33	0.5	
Ni	60	2	72	0.238	ppb	40.4	280	1	
Cu	63	2	72	-0.057	ppb	-111.5	1230	1	
Zn	66	2	72	0.411	ppb	70.8	407	5	
As	75	2	72	0.064	ppb	77.7	36	1	
Se	78	1	72	0.034	ppb	81.9	17	1	
Sr	88	2	72	0.650	ppb	38.6	347	0.5	>RL
Zr	90	2	72	0.259	ppb	887.1	77	1	
Nb	93	2	72	3.609	ppb	7.1	14301	2	>RL
Mo	95	2	115	0.268	ppb	39.0	250	0.5	
Pd	105	2	115	0.030	ppb	115.0	80	1	
Ag	107	2	115	-0.006	ppb	-196.1	57	1	
Cd	111	2	115	0.018	ppb	173.2	7	0.5	
Sn	120	2	115	0.095	ppb	77.7	257	1	
Sb	121	2	115	0.428	ppb	28.8	403	0.6	
Ba	137	2	115	0.033	ppb	253.1	27	0.5	
W	182	2	165	0.116	ppb	28.7	1470	1	
Pt	195	2	165	0.012	ppb	43.2	70	1	
Tl	205	2	165	0.010	ppb	111.1	200	0.1	
Pb	208	2	165	-0.014	ppb	-95.9	1007	0.5	
Th	232	2	165	0.041	ppb	6.2	907	1	
U	238	2	165	0.040	ppb	19.1	667	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	697333	0.48	821388	84.90	60	120	
Sc (IS)	45	1	HMI H2	23138621	0.17	28135324	82.24	60	120	
Sc (IS)	45	2	HMI He	874972	4.48	1028528	85.07	60	120	
Sc (IS)	45	3	No Gas	37491489	0.61	44911069	83.48	60	120	
Ge Internal Standard	72	1	HMI H2	8966396	0.57	10990003	81.59	60	120	
Ge Internal Standard	72	2	HMI He	962231	4.04	1134301	84.83	60	120	
In Internal Standard	115	2	HMI He	3163445	4.35	3548151	89.16	60	120	
Ho-165	165	2	HMI He	15355624	4.17	17324298	88.64	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-1-B
Data File Name	107SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:06:58-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-17.201	ppb	-17.201	-36.94	94378	500000	
Li	7	2	45	-16.380	ppb	-16.380	-133.49	4891	500000	
Li	7	3	45	-42.232	ppb	-42.232	-4.15	2703478	50000	
Be	9	1	6	-0.036	ppb	-0.036	0.00	0	2000	
B	11	1	6	189.371	ppb	189.371	2.49	56735	2000	
Na	23	1	45	500276.070	ppb	500276.070	0.50	1369317740	2000	>LDR
Na	23	2	45	481213.052	ppb	481213.052	0.20	97712802	400000	
Mg	24	2	45	62304.988	ppb	62304.988	0.33	5819726	400000	
Al	27	2	45	12.360	ppb	12.360	33.35	413	400000	
K	39	1	45	24380.817	ppb	24380.817	0.46	71268157	400000	
K	39	2	45	25642.158	ppb	25642.158	2.92	1184626	400000	
Ca	40	1	45	25969.803	ppb	25969.803	0.58	102927758	400000	
Ca	44	2	45	26875.624	ppb	26875.624	0.10	68922	400000	
Ti	47	2	45	0.152	ppb	0.152	173.21	3	4000	
V	51	2	72	148.009	ppb	148.009	2.19	130654	2000	
Cr	52	2	72	3.834	ppb	3.834	5.97	4618	5000	
Mn	55	2	72	0.353	ppb	0.353	4.84	200	10000	
Fe	57	2	72	15.455	ppb	15.455	18.25	433	400000	
Co	59	2	72	0.003	ppb	0.003	555.69	27	2000	
Ni	60	2	72	0.268	ppb	0.268	18.89	283	5000	
Cu	63	2	72	0.432	ppb	0.432	37.44	1920	5000	
Zn	66	2	72	2.987	ppb	2.987	19.70	960	5000	
As	75	2	72	1.242	ppb	1.242	3.28	197	2000	
Se	78	1	72	1.569	ppb	1.569	17.97	320	2000	
Sr	88	2	72	357.995	ppb	357.995	1.68	166138	4000	
Zr	90	2	72	9.947	ppb	9.947	107.51	160	1000	
Nb	93	2	72	2.794	ppb	2.794	15.90	11422	200	
Mo	95	2	115	6.108	ppb	6.108	8.14	4651	2000	
Pd	105	2	115	0.003	ppb	0.003	897.16	43	100	
Ag	107	2	115	-0.011	ppb	-0.011	-160.69	40	100	
Cd	111	2	115	0.029	ppb	0.029	173.21	10	2000	
Sn	120	2	115	0.103	ppb	0.103	60.55	247	2000	
Sb	121	2	115	0.173	ppb	0.173	13.77	180	1000	
Ba	137	2	115	7.732	ppb	7.732	8.25	2064	5000	
W	182	2	165	1.217	ppb	1.217	0.76	5445	100	
Pt	195	2	165	0.004	ppb	0.004	224.64	40	100	
Tl	205	2	165	0.009	ppb	0.009	70.33	190	2000	
Pb	208	2	165	-0.013	ppb	-0.013	-62.54	977	5000	
Th	232	2	165	0.057	ppb	0.057	17.52	1050	2000	
U	238	2	165	0.229	ppb	0.229	13.33	2884	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	595809	0.23	821388	72.54	60	120	
Sc (IS)	45	1	HMI H2	21540829	0.33	28135324	76.56	60	120	
Sc (IS)	45	2	HMI He	836849	0.40	1028528	81.36	60	120	
Sc (IS)	45	3	No Gas	34256868	0.25	44911069	76.28	60	120	
Ge Internal Standard	72	1	HMI H2	8117644	0.59	10990003	73.86	60	120	
Ge Internal Standard	72	2	HMI He	910386	1.27	1134301	80.26	60	120	
In Internal Standard	115	2	HMI He	2956985	2.07	3548151	83.34	60	120	
Ho-165	165	2	HMI He	14746454	0.42	17324298	85.12	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-1-Bsd@5
Data File Name	108SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:10:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.582	ppb	-10.582	-59.73	101236	500000	
Li	7	2	45	-37.144	ppb	-37.144	-35.17	4744	500000	
Li	7	3	45	-27.211	ppb	-27.211	-16.04	2906782	50000	
Be	9	1	6	0.009	ppb	0.009	580.57	13	2000	
B	11	1	6	40.731	ppb	40.731	4.28	13507	2000	
Na	23	1	45	101420.876	ppb	101420.876	0.39	292518482	2000	>LDR
Na	23	2	45	98051.759	ppb	98051.759	0.76	20499627	400000	
Mg	24	2	45	13270.872	ppb	13270.872	1.09	1275747	400000	
Al	27	2	45	52.604	ppb	52.604	10.06	1447	400000	
K	39	1	45	5068.835	ppb	5068.835	1.37	22262827	400000	
K	39	2	45	5095.063	ppb	5095.063	1.66	253441	400000	
Ca	40	1	45	5233.822	ppb	5233.822	0.85	21879055	400000	
Ca	44	2	45	5279.071	ppb	5279.071	2.99	13957	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	29.659	ppb	29.659	3.43	29147	2000	
Cr	52	2	72	0.678	ppb	0.678	28.07	1080	5000	
Mn	55	2	72	0.133	ppb	0.133	25.15	107	10000	
Fe	57	2	72	5.185	ppb	5.185	48.10	223	400000	
Co	59	2	72	0.005	ppb	0.005	53.15	33	2000	
Ni	60	2	72	0.034	ppb	0.034	135.50	160	5000	
Cu	63	2	72	0.009	ppb	0.009	445.19	1323	5000	
Zn	66	2	72	1.598	ppb	1.598	27.84	680	5000	
As	75	2	72	0.264	ppb	0.264	21.14	65	2000	
Se	78	1	72	0.256	ppb	0.256	25.78	64	2000	
Sr	88	2	72	70.531	ppb	70.531	2.11	34296	4000	
Zr	90	2	72	3.188	ppb	3.188	96.14	103	1000	
Nb	93	2	72	0.366	ppb	0.366	34.32	5311	200	
Mo	95	2	115	1.255	ppb	1.255	1.55	1027	2000	
Pd	105	2	115	-0.006	ppb	-0.006	-192.33	33	100	
Ag	107	2	115	0.006	ppb	0.006	90.87	87	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.044	ppb	0.044	44.69	203	2000	
Sb	121	2	115	0.045	ppb	0.045	136.72	83	1000	
Ba	137	2	115	1.855	ppb	1.855	22.66	530	5000	
W	182	2	165	0.240	ppb	0.240	20.14	1924	100	
Pt	195	2	165	0.013	ppb	0.013	48.02	70	100	
Tl	205	2	165	-0.008	ppb	-0.008	-77.92	70	2000	
Pb	208	2	165	-0.017	ppb	-0.017	-19.84	970	5000	
Th	232	2	165	0.003	ppb	0.003	410.70	480	2000	
U	238	2	165	0.039	ppb	0.039	14.28	653	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	648379	0.51	821388	78.94	60	120	
Sc (IS)	45	1	HMI H2	22688463	0.50	28135324	80.64	60	120	
Sc (IS)	45	2	HMI He	861209	0.39	1028528	83.73	60	120	
Sc (IS)	45	3	No Gas	35254566	0.13	44911069	78.50	60	120	
Ge Internal Standard	72	1	HMI H2	8707451	0.69	10990003	79.23	60	120	
Ge Internal Standard	72	2	HMI He	953124	0.71	1134301	84.03	60	120	
In Internal Standard	115	2	HMI He	3089877	1.42	3548151	87.08	60	120	
Ho-165	165	2	HMI He	15183111	0.68	17324298	87.64	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-1-C MS
Data File Name	109SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:14:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	57.333	ppb	57.333	16.06	111655	500000	
Li	7	2	45	37.182	ppb	37.182	18.32	5555	500000	
Li	7	3	45	30.698	ppb	30.698	11.47	3120722	50000	
Be	9	1	6	42.303	ppb	42.303	3.41	11061	2000	
B	11	1	6	228.757	ppb	228.757	0.95	65845	2000	
Na	23	1	45	502952.584	ppb	502952.584	0.47	1349045580	2000	>LDR
Na	23	2	45	479473.865	ppb	479473.865	0.21	96266702	400000	
Mg	24	2	45	61747.182	ppb	61747.182	1.04	5702396	400000	
Al	27	2	45	443.010	ppb	443.010	5.02	10911	400000	
K	39	1	45	24600.444	ppb	24600.444	0.64	70398337	400000	
K	39	2	45	25171.438	ppb	25171.438	0.86	1149923	400000	
Ca	40	1	45	26004.074	ppb	26004.074	0.58	100998565	400000	
Ca	44	2	45	27088.138	ppb	27088.138	2.43	68675	400000	
Ti	47	2	45	0.924	ppb	0.924	50.58	20	4000	
V	51	2	72	188.076	ppb	188.076	0.52	163421	2000	
Cr	52	2	72	41.997	ppb	41.997	2.55	47412	5000	
Mn	55	2	72	39.529	ppb	39.529	1.52	17425	10000	
Fe	57	2	72	386.142	ppb	386.142	3.01	8296	400000	
Co	59	2	72	37.506	ppb	37.506	1.26	72690	2000	
Ni	60	2	72	35.816	ppb	35.816	0.20	19878	5000	
Cu	63	2	72	35.981	ppb	35.981	1.57	56514	5000	
Zn	66	2	72	39.458	ppb	39.458	4.10	9017	5000	
As	75	2	72	38.785	ppb	38.785	2.94	5334	2000	
Se	78	1	72	37.725	ppb	37.725	3.87	7314	2000	
Sr	88	2	72	400.258	ppb	400.258	0.40	183457	4000	
Zr	90	2	72	5157.654	ppb	5157.654	1.58	46775	1000	>LDR
Nb	93	2	72	0.573	ppb	0.573	38.27	5545	200	
Mo	95	2	115	42.865	ppb	42.865	3.96	31904	2000	
Pd	105	2	115	0.013	ppb	0.013	320.66	53	100	
Ag	107	2	115	36.312	ppb	36.312	0.47	91672	100	
Cd	111	2	115	35.582	ppb	35.582	9.21	11926	2000	
Sn	120	2	115	38.882	ppb	38.882	2.02	34156	2000	
Sb	121	2	115	41.966	ppb	41.966	2.15	32402	1000	
Ba	137	2	115	48.119	ppb	48.119	2.40	12553	5000	
W	182	2	165	38.614	ppb	38.614	0.53	139830	100	
Pt	195	2	165	0.004	ppb	0.004	243.43	40	100	
Tl	205	2	165	37.279	ppb	37.279	1.78	251124	2000	
Pb	208	2	165	37.687	ppb	37.687	0.89	339124	5000	
Th	232	2	165	39.059	ppb	39.059	1.43	414431	2000	
U	238	2	165	38.884	ppb	38.884	1.28	451037	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	572954	1.39	821388	69.75	60	120	
Sc (IS)	45	1	HMI H2	21109099	0.29	28135324	75.03	60	120	
Sc (IS)	45	2	HMI He	827456	1.17	1028528	80.45	60	120	
Sc (IS)	45	3	No Gas	32483764	0.92	44911069	72.33	60	120	
Ge Internal Standard	72	1	HMI H2	7920799	0.65	10990003	72.07	60	120	
Ge Internal Standard	72	2	HMI He	899015	0.81	1134301	79.26	60	120	
In Internal Standard	115	2	HMI He	2906962	0.86	3548151	81.93	60	120	
Ho-165	165	2	HMI He	14481859	0.80	17324298	83.59	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-1-D MSD
Data File Name	110SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:18:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	54.977	ppb	54.977	14.89	109063	500000	
Li	7	2	45	33.828	ppb	33.828	15.93	5488	500000	
Li	7	3	45	22.377	ppb	22.377	8.89	2985242	50000	
Be	9	1	6	42.165	ppb	42.165	1.74	10808	2000	
B	11	1	6	230.051	ppb	230.051	2.60	64911	2000	
Na	23	1	45	492327.895	ppb	492327.895	0.50	1296922354	2000	>LDR
Na	23	2	45	466189.163	ppb	466189.163	1.22	93220662	400000	
Mg	24	2	45	60854.589	ppb	60854.589	0.68	5597789	400000	
Al	27	2	45	415.118	ppb	415.118	2.37	10187	400000	
K	39	1	45	24058.389	ppb	24058.389	0.20	67784856	400000	
K	39	2	45	24652.108	ppb	24652.108	0.45	1122039	400000	
Ca	40	1	45	25684.440	ppb	25684.440	0.75	97973682	400000	
Ca	44	2	45	26430.756	ppb	26430.756	0.60	66753	400000	
Ti	47	2	45	1.544	ppb	1.544	17.58	33	4000	
V	51	2	72	182.036	ppb	182.036	0.66	158420	2000	
Cr	52	2	72	41.260	ppb	41.260	1.17	46642	5000	
Mn	55	2	72	40.063	ppb	40.063	1.05	17682	10000	
Fe	57	2	72	374.834	ppb	374.834	1.59	8066	400000	
Co	59	2	72	36.950	ppb	36.950	1.26	71695	2000	
Ni	60	2	72	35.772	ppb	35.772	2.11	19878	5000	
Cu	63	2	72	36.252	ppb	36.252	1.05	57000	5000	
Zn	66	2	72	38.464	ppb	38.464	2.17	8806	5000	
As	75	2	72	36.928	ppb	36.928	2.77	5087	2000	
Se	78	1	72	37.149	ppb	37.149	3.26	7103	2000	
Sr	88	2	72	390.435	ppb	390.435	0.79	179156	4000	
Zr	90	2	72	5263.574	ppb	5263.574	3.72	47781	1000	>LDR
Nb	93	2	72	0.045	ppb	0.045	528.57	4188	200	
Mo	95	2	115	42.844	ppb	42.844	1.25	32345	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-1.10	30	100	
Ag	107	2	115	36.210	ppb	36.210	2.32	92712	100	
Cd	111	2	115	34.684	ppb	34.684	3.63	11796	2000	
Sn	120	2	115	39.348	ppb	39.348	1.57	35055	2000	
Sb	121	2	115	40.678	ppb	40.678	2.06	31854	1000	
Ba	137	2	115	47.442	ppb	47.442	3.37	12550	5000	
W	182	2	165	38.284	ppb	38.284	0.47	139075	100	
Pt	195	2	165	0.006	ppb	0.006	111.36	47	100	
Tl	205	2	165	37.268	ppb	37.268	0.73	251855	2000	
Pb	208	2	165	37.285	ppb	37.285	1.20	336579	5000	
Th	232	2	165	38.977	ppb	38.977	0.59	414863	2000	
U	238	2	165	38.532	ppb	38.532	0.78	448383	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	561573	0.47	821388	68.37	60	120	
Sc (IS)	45	1	HMI H2	20731287	0.21	28135324	73.68	60	120	
Sc (IS)	45	2	HMI He	824160	0.95	1028528	80.13	60	120	
Sc (IS)	45	3	No Gas	31718537	0.25	44911069	70.63	60	120	
Ge Internal Standard	72	1	HMI H2	7812687	0.40	10990003	71.09	60	120	
Ge Internal Standard	72	2	HMI He	900054	0.58	1134301	79.35	60	120	
In Internal Standard	115	2	HMI He	2947973	0.33	3548151	83.08	60	120	
Ho-165	165	2	HMI He	14527405	0.53	17324298	83.86	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-1-Bpds
Data File Name	111SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:22:22-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	176.671	ppb	176.671	0.95	138107	500000	
Li	7	2	45	138.841	ppb	138.841	29.87	6808	500000	
Li	7	3	45	127.953	ppb	127.953	0.35	3696772	50000	
Be	9	1	6	221.501	ppb	221.501	1.41	55688	2000	
B	11	1	6	195.285	ppb	195.285	1.47	54116	2000	
Na	23	1	45	489377.143	ppb	489377.143	0.45	1273499074	2000	>LDR
Na	23	2	45	458035.988	ppb	458035.988	0.66	90474942	400000	
Mg	24	2	45	60064.236	ppb	60064.236	0.65	5457680	400000	
Al	27	2	45	2209.496	ppb	2209.496	0.08	53110	400000	
K	39	1	45	23857.096	ppb	23857.096	0.33	66465866	400000	
K	39	2	45	24432.959	ppb	24432.959	0.80	1098588	400000	
Ca	40	1	45	25277.069	ppb	25277.069	1.17	95247965	400000	
Ca	44	2	45	26919.332	ppb	26919.332	2.21	67165	400000	
Ti	47	2	45	6.410	ppb	6.410	18.56	137	4000	
V	51	2	72	342.424	ppb	342.424	0.52	293534	2000	
Cr	52	2	72	199.760	ppb	199.760	0.68	222816	5000	
Mn	55	2	72	205.855	ppb	205.855	1.07	89856	10000	
Fe	57	2	72	2023.652	ppb	2023.652	1.24	42721	400000	
Co	59	2	72	192.054	ppb	192.054	0.98	369186	2000	
Ni	60	2	72	187.610	ppb	187.610	0.64	102749	5000	
Cu	63	2	72	184.638	ppb	184.638	1.82	282673	5000	
Zn	66	2	72	194.467	ppb	194.467	1.52	42965	5000	
As	75	2	72	194.575	ppb	194.575	1.44	26456	2000	
Se	78	1	72	189.397	ppb	189.397	1.09	35583	2000	
Sr	88	2	72	570.497	ppb	570.497	2.17	259432	4000	
Zr	90	2	72	28033.044	ppb	28033.044	1.01	251937	1000	>LDR
Nb	93	2	72	11.081	ppb	11.081	4.50	32381	200	
Mo	95	2	115	194.722	ppb	194.722	0.71	144543	2000	
Pd	105	2	115	0.021	ppb	0.021	23.02	63	100	
Ag	107	2	115	39.649	ppb	39.649	1.31	99891	100	
Cd	111	2	115	187.745	ppb	187.745	2.76	62825	2000	
Sn	120	2	115	203.452	ppb	203.452	0.43	177732	2000	
Sb	121	2	115	209.599	ppb	209.599	1.03	161333	1000	
Ba	137	2	115	213.839	ppb	213.839	0.71	55613	5000	
W	182	2	165	197.803	ppb	197.803	0.81	713706	100	
Pt	195	2	165	0.051	ppb	0.051	9.98	183	100	
Tl	205	2	165	195.137	ppb	195.137	1.32	1316768	2000	
Pb	208	2	165	192.082	ppb	192.082	0.78	1727634	5000	
Th	232	2	165	253.383	ppb	253.383	1.24	2691583	2000	
U	238	2	165	227.151	ppb	227.151	1.22	2639579	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	551178	0.73	821388	67.10	60	120	
Sc (IS)	45	1	HMI H2	20479901	0.32	28135324	72.79	60	120	
Sc (IS)	45	2	HMI He	814100	0.92	1028528	79.15	60	120	
Sc (IS)	45	3	No Gas	31077575	0.99	44911069	69.20	60	120	
Ge Internal Standard	72	1	HMI H2	7684111	0.19	10990003	69.92	60	120	
Ge Internal Standard	72	2	HMI He	891976	0.79	1134301	78.64	60	120	
In Internal Standard	115	2	HMI He	2901048	0.69	3548151	81.76	60	120	
Ho-165	165	2	HMI He	14511506	0.27	17324298	83.76	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-2-B
Data File Name	112SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:26:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-19.197	ppb	-19.197	-12.81	87887	500000	
Li	7	2	45	-39.358	ppb	-39.358	-13.71	4411	500000	
Li	7	3	45	-48.214	ppb	-48.214	-1.13	2353463	50000	
Be	9	1	6	0.127	ppb	0.127	31.46	40	2000	
B	11	1	6	213.301	ppb	213.301	0.96	57498	2000	
Na	23	1	45	561837.172	ppb	561837.172	0.70	1439962272	2000	>LDR
Na	23	2	45	534134.645	ppb	534134.645	1.08	104445328	400000	
Mg	24	2	45	72987.801	ppb	72987.801	1.89	6565232	400000	
Al	27	2	45	17.369	ppb	17.369	16.36	517	400000	
K	39	1	45	28691.530	ppb	28691.530	0.83	77212872	400000	
K	39	2	45	30420.201	ppb	30420.201	0.82	1350877	400000	
Ca	40	1	45	32813.994	ppb	32813.994	0.68	121773052	400000	
Ca	44	2	45	33725.609	ppb	33725.609	0.80	83286	400000	
Ti	47	2	45	0.317	ppb	0.317	173.21	7	4000	
V	51	2	72	143.597	ppb	143.597	1.44	122937	2000	
Cr	52	2	72	4.861	ppb	4.861	3.68	5608	5000	
Mn	55	2	72	0.197	ppb	0.197	24.58	127	10000	
Fe	57	2	72	13.053	ppb	13.053	32.35	370	400000	
Co	59	2	72	0.021	ppb	0.021	93.23	60	2000	
Ni	60	2	72	0.100	ppb	0.100	32.53	183	5000	
Cu	63	2	72	0.414	ppb	0.414	23.89	1837	5000	
Zn	66	2	72	3.299	ppb	3.299	16.28	1000	5000	
As	75	2	72	1.048	ppb	1.048	15.32	165	2000	
Se	78	1	72	2.684	ppb	2.684	8.75	504	2000	
Sr	88	2	72	424.058	ppb	424.058	1.21	190776	4000	
Zr	90	2	72	23.624	ppb	23.624	42.12	277	1000	
Nb	93	2	72	-1.269	ppb	-1.269	-1.62	777	200	
Mo	95	2	115	9.359	ppb	9.359	6.86	6972	2000	
Pd	105	2	115	-0.024	ppb	-0.024	-60.86	10	100	
Ag	107	2	115	-0.001	ppb	-0.001	-655.43	63	100	
Cd	111	2	115	0.070	ppb	0.070	66.04	23	2000	
Sn	120	2	115	0.318	ppb	0.318	32.11	430	2000	
Sb	121	2	115	0.698	ppb	0.698	20.67	580	1000	
Ba	137	2	115	12.529	ppb	12.529	4.47	3271	5000	
W	182	2	165	1.563	ppb	1.563	5.49	6535	100	
Pt	195	2	165	-0.002	ppb	-0.002	-270.68	20	100	
Tl	205	2	165	0.038	ppb	0.038	34.16	373	2000	
Pb	208	2	165	0.013	ppb	0.013	119.82	1183	5000	
Th	232	2	165	0.123	ppb	0.123	15.33	1717	2000	
U	238	2	165	0.441	ppb	0.441	2.16	5245	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	536396	0.78	821388	65.30	60	120	
Sc (IS)	45	1	HMI H2	20170996	0.57	28135324	71.69	60	120	
Sc (IS)	45	2	HMI He	805966	1.29	1028528	78.36	60	120	
Sc (IS)	45	3	No Gas	30362977	0.50	44911069	67.61	60	120	
Ge Internal Standard	72	1	HMI H2	7556007	0.31	10990003	68.75	60	120	
Ge Internal Standard	72	2	HMI He	882459	1.31	1134301	77.80	60	120	
In Internal Standard	115	2	HMI He	2897663	0.62	3548151	81.67	60	120	
Ho-165	165	2	HMI He	14358111	0.52	17324298	82.88	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-3-B
Data File Name	113SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:30:03-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-15.966	ppb	-15.966	-34.35	86167	500000	
Li	7	2	45	-48.429	ppb	-48.429	-35.86	4184	500000	
Li	7	3	45	-47.082	ppb	-47.082	-9.55	2290756	50000	
Be	9	1	6	0.006	ppb	0.006	719.68	10	2000	
B	11	1	6	235.813	ppb	235.813	0.88	61918	2000	
Na	23	1	45	628774.438	ppb	628774.438	0.97	1565744723	2000	>LDR
Na	23	2	45	591850.542	ppb	591850.542	0.27	112828152	400000	
Mg	24	2	45	80019.056	ppb	80019.056	0.73	7017462	400000	
Al	27	2	45	19.050	ppb	19.050	17.96	543	400000	
K	39	1	45	31425.762	ppb	31425.762	0.68	81479435	400000	
K	39	2	45	33000.750	ppb	33000.750	1.03	1427633	400000	
Ca	40	1	45	35281.709	ppb	35281.709	0.97	127211008	400000	
Ca	44	2	45	36379.539	ppb	36379.539	0.99	87584	400000	
Ti	47	2	45	0.162	ppb	0.162	173.21	3	4000	
V	51	2	72	148.887	ppb	148.887	1.30	124517	2000	
Cr	52	2	72	4.853	ppb	4.853	2.64	5475	5000	
Mn	55	2	72	0.663	ppb	0.663	22.48	320	10000	
Fe	57	2	72	19.468	ppb	19.468	27.91	493	400000	
Co	59	2	72	0.043	ppb	0.043	46.04	100	2000	
Ni	60	2	72	1.210	ppb	1.210	0.61	767	5000	
Cu	63	2	72	0.552	ppb	0.552	15.54	1997	5000	
Zn	66	2	72	3.721	ppb	3.721	19.27	1067	5000	
As	75	2	72	1.147	ppb	1.147	8.02	175	2000	
Se	78	1	72	1.929	ppb	1.929	17.08	355	2000	
Sr	88	2	72	473.088	ppb	473.088	0.76	208030	4000	
Zr	90	2	72	6.615	ppb	6.615	62.00	123	1000	
Nb	93	2	72	-1.318	ppb	-1.318	-2.84	637	200	
Mo	95	2	115	7.965	ppb	7.965	6.75	5775	2000	
Pd	105	2	115	0.002	ppb	0.002	734.20	40	100	
Ag	107	2	115	-0.018	ppb	-0.018	-45.38	20	100	
Cd	111	2	115	0.041	ppb	0.041	115.47	13	2000	
Sn	120	2	115	0.148	ppb	0.148	54.50	273	2000	
Sb	121	2	115	0.359	ppb	0.359	21.73	310	1000	
Ba	137	2	115	12.575	ppb	12.575	5.89	3194	5000	
W	182	2	165	1.184	ppb	1.184	0.96	5105	100	
Pt	195	2	165	-0.001	ppb	-0.001	-829.14	23	100	
Tl	205	2	165	0.015	ppb	0.015	108.52	217	2000	
Pb	208	2	165	0.044	ppb	0.044	32.42	1437	5000	
Th	232	2	165	0.043	ppb	0.043	29.40	863	2000	
U	238	2	165	0.330	ppb	0.330	7.58	3904	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	522691	0.38	821388	63.64	60	120	
Sc (IS)	45	1	HMI H2	19598471	0.55	28135324	69.66	60	120	
Sc (IS)	45	2	HMI He	785695	0.50	1028528	76.39	60	120	
Sc (IS)	45	3	No Gas	29454779	0.87	44911069	65.58	60	120	
Ge Internal Standard	72	1	HMI H2	7355614	0.71	10990003	66.93	60	120	
Ge Internal Standard	72	2	HMI He	862513	1.02	1134301	76.04	60	120	
In Internal Standard	115	2	HMI He	2820036	1.27	3548151	79.48	60	120	
Ho-165	165	2	HMI He	14132409	0.65	17324298	81.58	60	120	

Sample Table

Sample Name	280-116419-F-4-B
Data File Name	114SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:33:53-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-17.006	ppb	-17.006	-21.36	84219	500000	
Li	7	2	45	-48.336	ppb	-48.336	-37.77	4151	500000	
Li	7	3	45	-50.786	ppb	-50.786	-6.68	2209997	50000	
Be	9	1	6	-0.022	ppb	-0.022	-113.68	3	2000	
B	11	1	6	230.259	ppb	230.259	1.26	59284	2000	
Na	23	1	45	616668.466	ppb	616668.466	0.31	1505327231	2000	>LDR
Na	23	2	45	568115.865	ppb	568115.865	0.55	107441662	400000	
Mg	24	2	45	78359.616	ppb	78359.616	0.78	6816968	400000	
Al	27	2	45	45.398	ppb	45.398	7.39	1143	400000	
K	39	1	45	30881.110	ppb	30881.110	0.26	78610925	400000	
K	39	2	45	32305.336	ppb	32305.336	0.93	1386708	400000	
Ca	40	1	45	34940.285	ppb	34940.285	0.67	123496395	400000	
Ca	44	2	45	35644.102	ppb	35644.102	0.94	85137	400000	
Ti	47	2	45	0.653	ppb	0.653	43.51	13	4000	
V	51	2	72	66.484	ppb	66.484	0.35	56149	2000	
Cr	52	2	72	1318.274	ppb	1318.274	1.37	1406784	5000	
Mn	55	2	72	120.060	ppb	120.060	0.67	50208	10000	
Fe	57	2	72	4971.756	ppb	4971.756	1.15	100376	400000	
Co	59	2	72	12.345	ppb	12.345	1.85	22745	2000	
Ni	60	2	72	481.098	ppb	481.098	0.50	252143	5000	
Cu	63	2	72	19.685	ppb	19.685	1.57	29912	5000	
Zn	66	2	72	2.902	ppb	2.902	11.56	883	5000	
As	75	2	72	0.613	ppb	0.613	23.51	103	2000	
Se	78	1	72	2.401	ppb	2.401	6.79	432	2000	
Sr	88	2	72	462.545	ppb	462.545	0.84	201429	4000	
Zr	90	2	72	5.580	ppb	5.580	42.87	113	1000	
Nb	93	2	72	-1.112	ppb	-1.112	-3.09	1137	200	
Mo	95	2	115	16.324	ppb	16.324	4.73	11849	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-228.86	30	100	
Ag	107	2	115	-0.008	ppb	-0.008	-195.67	43	100	
Cd	111	2	115	0.041	ppb	0.041	114.82	13	2000	
Sn	120	2	115	0.616	ppb	0.616	18.37	673	2000	
Sb	121	2	115	0.304	ppb	0.304	30.90	270	1000	
Ba	137	2	115	11.900	ppb	11.900	9.31	3034	5000	
W	182	2	165	1.521	ppb	1.521	4.85	6252	100	
Pt	195	2	165	0.004	ppb	0.004	132.24	40	100	
Tl	205	2	165	0.024	ppb	0.024	30.55	273	2000	
Pb	208	2	165	0.048	ppb	0.048	38.93	1463	5000	
Th	232	2	165	0.029	ppb	0.029	29.43	707	2000	
U	238	2	165	0.071	ppb	0.071	8.75	967	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	512472	0.18	821388	62.39	60	120	
Sc (IS)	45	1	HMI H2	19211461	0.18	28135324	68.28	60	120	
Sc (IS)	45	2	HMI He	779462	1.17	1028528	75.78	60	120	
Sc (IS)	45	3	No Gas	28737096	0.47	44911069	63.99	60	120	
Ge Internal Standard	72	1	HMI H2	7226809	0.19	10990003	65.76	60	120	
Ge Internal Standard	72	2	HMI He	854213	0.58	1134301	75.31	60	120	
In Internal Standard	115	2	HMI He	2829388	0.37	3548151	79.74	60	120	
Ho-165	165	2	HMI He	14056211	0.51	17324298	81.14	60	120	

Sample Report

Sample Table

Sample Name	280-116419-F-6-B
Data File Name	115SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:37:43-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436988 6020
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-17.733	ppb	-17.733	-32.41	83773	500000	
Li	7	2	45	-40.263	ppb	-40.263	-24.69	4261	500000	
Li	7	3	45	-50.054	ppb	-50.054	-6.49	2178641	50000	
Be	9	1	6	-0.007	ppb	-0.007	-331.75	7	2000	
B	11	1	6	235.328	ppb	235.328	2.06	60155	2000	
Na	23	1	45	619518.392	ppb	619518.392	0.95	1507364991	2000	>LDR
Na	23	2	45	574574.404	ppb	574574.404	0.05	108838712	400000	
Mg	24	2	45	78073.690	ppb	78073.690	0.43	6803160	400000	
Al	27	2	45	55.877	ppb	55.877	6.51	1387	400000	
K	39	1	45	31263.708	ppb	31263.708	1.18	79237662	400000	
K	39	2	45	32834.262	ppb	32834.262	1.46	1411398	400000	
Ca	40	1	45	35577.263	ppb	35577.263	0.43	125342341	400000	
Ca	44	2	45	35931.970	ppb	35931.970	0.18	85955	400000	
Ti	47	2	45	0.817	ppb	0.817	91.77	17	4000	
V	51	2	72	39.413	ppb	39.413	0.82	34228	2000	
Cr	52	2	72	806.809	ppb	806.809	0.88	864865	5000	
Mn	55	2	72	232.222	ppb	232.222	0.45	97502	10000	
Fe	57	2	72	6275.788	ppb	6275.788	1.71	127230	400000	
Co	59	2	72	24.663	ppb	24.663	0.80	45623	2000	
Ni	60	2	72	968.892	ppb	968.892	0.72	509892	5000	
Cu	63	2	72	32.077	ppb	32.077	2.61	48212	5000	
Zn	66	2	72	6.087	ppb	6.087	9.75	1560	5000	
As	75	2	72	0.324	ppb	0.324	36.28	66	2000	
Se	78	1	72	2.396	ppb	2.396	13.10	429	2000	
Sr	88	2	72	475.010	ppb	475.010	0.39	207772	4000	
Zr	90	2	72	4.738	ppb	4.738	156.01	107	1000	
Nb	93	2	72	-1.193	ppb	-1.193	-2.44	943	200	
Mo	95	2	115	11.408	ppb	11.408	2.96	8276	2000	
Pd	105	2	115	-0.003	ppb	-0.003	-775.46	33	100	
Ag	107	2	115	-0.008	ppb	-0.008	-100.07	43	100	
Cd	111	2	115	0.051	ppb	0.051	91.98	17	2000	
Sn	120	2	115	0.426	ppb	0.426	17.52	510	2000	
Sb	121	2	115	0.131	ppb	0.131	54.29	140	1000	
Ba	137	2	115	14.747	ppb	14.747	4.61	3751	5000	
W	182	2	165	1.035	ppb	1.035	10.18	4534	100	
Pt	195	2	165	0.001	ppb	0.001	936.11	30	100	
Tl	205	2	165	0.014	ppb	0.014	71.51	207	2000	
Pb	208	2	165	0.043	ppb	0.043	46.88	1407	5000	
Th	232	2	165	0.015	ppb	0.015	66.00	567	2000	
U	238	2	165	0.034	ppb	0.034	26.30	543	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	508887	0.79	821388	61.95	60	120	
Sc (IS)	45	1	HMI H2	19149996	0.95	28135324	68.06	60	120	
Sc (IS)	45	2	HMI He	780695	0.41	1028528	75.90	60	120	
Sc (IS)	45	3	No Gas	28265775	0.40	44911069	62.94	60	120	
Ge Internal Standard	72	1	HMI H2	7194606	1.13	10990003	65.47	60	120	
Ge Internal Standard	72	2	HMI He	857974	0.37	1134301	75.64	60	120	
In Internal Standard	115	2	HMI He	2825258	0.72	3548151	79.63	60	120	
Ho-165	165	2	HMI He	13992713	0.26	17324298	80.77	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	116_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:41:35-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	447.533	ppb	1.178	209718	500	89.5	90	110	>+\-10%
Li	7	2	45	408.397	ppb	9.280	10541	500	81.7	90	110	>+\-10%
Li	7	3	45	390.613	ppb	1.603	5518117	500	78.1	90	110	>+\-10%
Be	9	1	6	52.153	ppb	3.920	13944	50	104.3	90	110	
B	11	1	6	59.324	ppb	1.045	17658	50	118.6	90	110	>+\-10%
Na	23	1	45	5641.791	ppb	0.318	15120151	5000	112.8	90	110	>+\-10%
Na	23	2	45	5323.520	ppb	3.381	1081793	5000	106.5	90	110	
Mg	24	2	45	4926.968	ppb	0.513	455573	5000	98.5	90	110	
Al	27	2	45	5338.950	ppb	1.112	130399	5000	106.8	90	110	
K	39	1	45	5340.817	ppb	0.887	21173581	5000	106.8	90	110	
K	39	2	45	5102.301	ppb	0.937	244067	5000	102.0	90	110	
Ca	40	1	45	5054.225	ppb	1.160	19445087	5000	101.1	90	110	
Ca	44	2	45	5011.608	ppb	4.299	12743	5000	100.2	90	110	
Ti	47	2	45	49.634	ppb	8.678	1077	50	99.3	90	110	
V	51	2	72	48.581	ppb	1.072	44777	50	97.2	90	110	
Cr	52	2	72	47.324	ppb	1.236	54677	50	94.6	90	110	
Mn	55	2	72	50.796	ppb	0.537	22916	50	101.6	90	110	
Fe	57	2	72	4667.369	ppb	1.689	101546	5000	93.3	90	110	
Co	59	2	72	46.754	ppb	1.852	92779	50	93.5	90	110	
Ni	60	2	72	46.979	ppb	4.729	26652	50	94.0	90	110	
Cu	63	2	72	45.754	ppb	1.102	73249	50	91.5	90	110	
Zn	66	2	72	44.947	ppb	4.605	10474	50	89.9	90	110	>+\-10%
As	75	2	72	48.501	ppb	3.320	6825	50	97.0	90	110	
Se	78	1	72	47.931	ppb	2.117	9283	50	95.9	90	110	
Sr	88	2	72	51.823	ppb	1.492	24345	50	103.6	90	110	
Zr	90	2	72	65.382	ppb	12.575	677	50	130.8	90	110	>+\-10%
Nb	93	2	72	74.971	ppb	0.970	202151	100	75.0	90	110	>+\-10%
Mo	95	2	115	43.509	ppb	3.210	33968	50	87.0	90	110	>+\-10%
Pd	105	2	115	46.164	ppb	3.854	56438	50	92.3	90	110	
Ag	107	2	115	44.522	ppb	1.071	117894	50	89.0	90	110	>+\-10%
Cd	111	2	115	46.562	ppb	7.316	16370	50	93.1	90	110	
Sn	120	2	115	47.899	ppb	3.139	44098	50	95.8	90	110	
Sb	121	2	115	48.721	ppb	1.729	39454	50	97.4	90	110	
Ba	137	2	115	49.518	ppb	1.398	13551	50	99.0	90	110	
W	182	2	165	46.030	ppb	0.651	171723	50	92.1	90	110	
Pt	195	2	165	44.380	ppb	1.401	138947	50	88.8	90	110	>+\-10%
Tl	205	2	165	48.641	ppb	0.542	337949	50	97.3	90	110	
Pb	208	2	165	49.266	ppb	1.216	456916	50	98.5	90	110	
Th	232	2	165	49.545	ppb	1.215	542077	50	99.1	90	110	
U	238	2	165	48.451	ppb	0.699	579668	50	96.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	585899	0.84	821388	71.33	60	120	
Sc (IS)	45	1	HMI H2	20880677	0.45	28135324	74.22	60	120	
Sc (IS)	45	2	HMI He	828192	0.43	1028528	80.52	60	120	
Sc (IS)	45	3	No Gas	30531480	0.74	44911069	67.98	60	120	
Ge Internal Standard	72	1	HMI H2	7915125	0.71	10990003	72.02	60	120	
Ge Internal Standard	72	2	HMI He	920523	0.51	1134301	81.15	60	120	
In Internal Standard	115	2	HMI He	3049458	1.20	3548151	85.94	60	120	
Ho-165	165	2	HMI He	14937342	0.59	17324298	86.22	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	117_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:45:21-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-35.399	ppb	-8.1	2497047	10	
Be	9	1	6	0.024	ppb	437.2	17	0.5	
B	11	1	6	5.043	ppb	7.6	1820	0.5	>RL
Na	23	1	45	452.715	ppb	0.4	1357388	25	>RL
Na	23	2	45	406.972	ppb	0.8	95204	25	>RL
Mg	24	2	45	13.597	ppb	25.4	1403	25	
Al	27	2	45	7.996	ppb	17.8	307	15	
K	39	1	45	287.143	ppb	7.3	8478310	50	>RL
K	39	2	45	21.968	ppb	6.9	14661	50	
Ca	40	1	45	16.729	ppb	1.4	98848	50	
Ca	44	2	45	26.020	ppb	52.5	97	25	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.362	ppb	16.2	3317	1	>RL
Cr	52	2	72	-0.030	ppb	-61.0	230	1	
Mn	55	2	72	0.065	ppb	96.3	73	0.5	
Fe	57	2	72	3.331	ppb	46.1	177	25	
Co	59	2	72	-0.001	ppb	-9.7	20	0.5	
Ni	60	2	72	0.195	ppb	62.6	247	1	
Cu	63	2	72	-0.056	ppb	-244.9	1183	1	
Zn	66	2	72	0.393	ppb	24.2	387	5	
As	75	2	72	0.087	ppb	122.8	38	1	
Se	78	1	72	0.126	ppb	26.0	33	1	
Sr	88	2	72	0.077	ppb	122.4	67	0.5	
Zr	90	2	72	0.626	ppb	437.1	77	1	
Nb	93	2	72	3.498	ppb	5.4	13500	2	>RL
Mo	95	2	115	0.245	ppb	23.8	233	0.5	
Pd	105	2	115	0.030	ppb	54.8	80	1	
Ag	107	2	115	-0.006	ppb	-144.7	53	1	
Cd	111	2	115	0.009	ppb	173.2	3	0.5	
Sn	120	2	115	0.117	ppb	45.4	277	1	
Sb	121	2	115	0.313	ppb	47.4	310	0.6	
Ba	137	2	115	0.056	ppb	259.7	33	0.5	
W	182	2	165	0.199	ppb	36.0	1760	1	
Pt	195	2	165	0.014	ppb	93.3	73	1	
Tl	205	2	165	0.024	ppb	25.4	300	0.1	
Pb	208	2	165	-0.015	ppb	-82.4	977	0.5	
Th	232	2	165	0.046	ppb	4.6	950	1	
U	238	2	165	0.055	ppb	18.2	843	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	611974	1.09	821388	74.50	60	120	
Sc (IS)	45	1	HMI H2	20932429	0.30	28135324	74.40	60	120	
Sc (IS)	45	2	HMI He	838894	0.91	1028528	81.56	60	120	
Sc (IS)	45	3	No Gas	31009991	0.96	44911069	69.05	60	120	
Ge Internal Standard	72	1	HMI H2	8008992	0.97	10990003	72.88	60	120	
Ge Internal Standard	72	2	HMI He	927367	0.89	1134301	81.76	60	120	
In Internal Standard	115	2	HMI He	3151482	1.57	3548151	88.82	60	120	
Ho-165	165	2	HMI He	15115984	0.39	17324298	87.25	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	118LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:49:08-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-22.502	ppb	-21.409	2576852	50	-45.0	70	130	>+/-30%
Be	9	1	6	0.976	ppb	22.033	283	1	97.6	70	130	
Na	23	2	45	416.343	ppb	1.191	97555	50	832.7	70	130	>+/-30%
Mg	24	2	45	61.877	ppb	6.781	5952	50	123.8	70	130	
Al	27	2	45	33.972	ppb	9.602	953	30	113.2	70	130	
K	39	2	45	117.695	ppb	3.889	19130	100	117.7	70	130	
Ca	44	2	45	74.872	ppb	22.856	223	50	149.7	70	130	>+/-30%
V	51	2	72	5.604	ppb	9.731	7115	5	112.1	70	130	
Cr	52	2	72	1.985	ppb	0.224	2580	2	99.3	70	130	
Mn	55	2	72	1.159	ppb	16.943	573	1	115.9	70	130	
Fe	57	2	72	50.177	ppb	6.968	1210	50	100.4	70	130	
Co	59	2	72	0.938	ppb	15.413	1907	1	93.8	70	130	
Ni	60	2	72	1.891	ppb	18.745	1220	2	94.5	70	130	
Cu	63	2	72	1.585	ppb	12.747	3811	2	79.3	70	130	
Zn	66	2	72	9.731	ppb	2.854	2534	10	97.3	70	130	
As	75	2	72	4.904	ppb	1.139	723	5	98.1	70	130	
Se	78	1	72	4.805	ppb	6.953	956	5	96.1	70	130	
Sr	88	2	72	1.142	ppb	3.059	573	1	114.2	70	130	
Zr	90	2	72	18.293	ppb	24.058	243	0.5	3658.7	70	130	>+/-30%
Nb	93	2	72	7.813	ppb	2.330	25140	2	390.7	70	130	>+/-30%
Mo	95	2	115	1.932	ppb	8.267	1590	2	96.6	70	130	
Pd	105	2	115	-0.001	ppb	-1897.013	40	1	-0.1	70	130	>+/-30%
Ag	107	2	115	4.534	ppb	5.215	12449	5	90.7	70	130	
Cd	111	2	115	1.027	ppb	20.464	373	1	102.7	70	130	
Sn	120	2	115	9.574	ppb	4.638	9230	10	95.7	70	130	
Sb	121	2	115	2.124	ppb	1.716	1820	2	106.2	70	130	
Ba	137	2	115	0.918	ppb	29.490	277	1	91.8	70	130	
W	182	2	165	4.781	ppb	2.142	19028	1	478.1	70	130	>+/-30%
Pt	195	2	165	0.018	ppb	65.686	87	1	1.8	70	130	>+/-30%
Tl	205	2	165	0.994	ppb	6.632	7142	1	99.4	70	130	
Pb	208	2	165	0.928	ppb	1.258	9849	1	92.8	70	130	
Th	232	2	165	2.076	ppb	1.352	23496	2	103.8	70	130	
U	238	2	165	0.982	ppb	1.703	12110	1	98.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	613914	0.27	821388	74.74	60	120	
Sc (IS)	45	1	HMI H2	20950709	0.19	28135324	74.46	60	120	
Sc (IS)	45	2	HMI He	842681	0.58	1028528	81.93	60	120	
Sc (IS)	45	3	No Gas	30838498	0.29	44911069	68.67	60	120	
Ge Internal Standard	72	1	HMI H2	8066976	0.46	10990003	73.40	60	120	
Ge Internal Standard	72	2	HMI He	933289	0.59	1134301	82.28	60	120	
In Internal Standard	115	2	HMI He	3147038	1.08	3548151	88.70	60	120	
Ho-165	165	2	HMI He	15170920	0.68	17324298	87.57	60	120	

Blank Report

Sample Table

Sample Name	MB 280-435473/1-A
Data File Name	119_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:52:53-07:00
Sample Type	Blank
Dilution	1
Comment	435473 6020a
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-12.166	ppb	-41.14296874	91353	0.5
Li	7	2	45	-36.066	ppb	-56.51077661	4648	0.5
Li	7	3	45	-39.799	ppb	-11.38290773	2409023	10
Be	9	1	6	0.001	ppb	2694.899701	10	0.5
B	11	1	6	2.429	ppb	18.51284082	980	0.5
Na	23	1	45	376.927	ppb	0.670459713	1135374	25
Na	23	2	45	333.803	ppb	1.925816381	80501	25
Mg	24	2	45	4.789	ppb	18.68465168	580	25
Al	27	2	45	3.784	ppb	78.69505591	203	15
K	39	1	45	-1147.230	ppb	-1.839038846	4773970	50
K	39	2	45	8.251	ppb	108.5324868	14064	50
Ca	40	1	45	6.288	ppb	2.632717195	57614	50
Ca	44	2	45	1.307	ppb	447.2489711	33	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	-0.268	ppb	-131.4772442	1877	1
Cr	52	2	72	0.056	ppb	110.5247639	330	1
Mn	55	2	72	0.271	ppb	16.25677392	167	0.5
Fe	57	2	72	8.781	ppb	77.68652282	297	25
Co	59	2	72	-0.008	ppb	-38.15912496	7	0.5
Ni	60	2	72	0.170	ppb	65.58898814	233	1
Cu	63	2	72	-0.217	ppb	-14.80184353	930	1
Zn	66	2	72	0.593	ppb	65.23327577	433	5
As	75	2	72	-0.066	ppb	-80.32233141	16	1
Se	78	1	72	0.080	ppb	103.4334623	24	1
Sr	88	2	72	-0.028	ppb	-87.06912983	17	0.5
Zr	90	2	72	-1.168	ppb	-160.8551981	60	1
Nb	93	2	72	-0.286	ppb	-63.7326459	3437	2
Mo	95	2	115	-0.011	ppb	-65.10313315	27	0.5
Pd	105	2	115	-0.033	ppb	0	0	1
Ag	107	2	115	-0.009	ppb	-164.1636343	47	1
Cd	111	2	115	0.027	ppb	100.3017105	10	0.5
Sn	120	2	115	0.002	ppb	2890.428338	167	1
Sb	121	2	115	0.020	ppb	253.7115738	63	0.6
Ba	137	2	115	1.153	ppb	12.08961205	343	0.5
W	182	2	165	0.025	ppb	40.56748744	1110	1
Pt	195	2	165	0.002	ppb	272.4159591	37	1
Tl	205	2	165	0.004	ppb	85.39930665	153	0.1
Pb	208	2	165	-0.014	ppb	-109.3511318	990	0.5
Th	232	2	165	0.004	ppb	77.11241566	487	1
U	238	2	165	0.006	ppb	113.1363679	250	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	588364	0.78	821388	71.63	60	120	
Sc (IS)	45	1	HMI H2	20561862	0.56	28135324	73.08	60	120	
Sc (IS)	45	2	HMI He	840839	0.61	1028528	81.75	60	120	
Sc (IS)	45	3	No Gas	30306320	0.61	44911069	67.48	60	120	
Ge Internal Standard	72	1	HMI H2	7845449	0.49	10990003	71.39	60	120	
Ge Internal Standard	72	2	HMI He	928561	0.51	1134301	81.86	60	120	
In Internal Standard	115	2	HMI He	3149426	0.74	3548151	88.76	60	120	
Ho-165	165	2	HMI He	15146522	0.51	17324298	87.43	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-435473/2-A
Data File Name	120_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T19:56:41-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	435473 6020a
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	60.118	60.118	ppb	9.825	109697	400	15.0	80	120	>+/-20%
Li	7	2	45	26.338	26.338	ppb	66.632	5658	400	6.6	80	120	>+/-20%
Li	7	3	45	37.652	37.652	ppb	58.037	2876805	400	9.4	80	120	>+/-20%
Be	9	1	6	39.540	39.540	ppb	6.042	10641	40	98.8	80	120	
Na	23	2	45	237.704	237.704	ppb	7.181	62623	40	594.3	80	120	>+/-20%
Mg	24	2	45	2.735	2.735	ppb	14.999	400	40	6.8	80	120	>+/-20%
Al	27	2	45	413.341	413.341	ppb	5.722	10644	40	1033.4	80	120	>+/-20%
K	39	2	45	0.888	0.888	ppb	1306.571	14124	40	2.2	80	120	>+/-20%
Ca	44	2	45	135.822	135.822	ppb	17.425	390	40	339.6	80	120	>+/-20%
V	51	2	72	35.504	35.504	ppb	5.892	34295	40	88.8	80	120	
Cr	52	2	72	35.382	35.382	ppb	7.896	42162	40	88.5	80	120	
Mn	55	2	72	37.864	37.864	ppb	7.878	17602	40	94.7	80	120	
Fe	57	2	72	360.106	360.106	ppb	8.264	8169	40	900.3	80	120	>+/-20%
Co	59	2	72	35.283	35.283	ppb	6.800	72114	40	88.2	80	120	
Ni	60	2	72	34.576	34.576	ppb	3.887	20265	40	86.4	80	120	
Cu	63	2	72	33.172	33.172	ppb	4.817	55076	40	82.9	80	120	
Zn	66	2	72	32.809	32.809	ppb	5.205	7963	40	82.0	80	120	
As	75	2	72	33.793	33.793	ppb	6.499	4906	40	84.5	80	120	
Se	78	1	72	35.920	35.920	ppb	1.163	6923	40	89.8	80	120	
Nb	93	2	72	-0.623	-0.623	ppb	-40.275	2584	40	-1.6	80	120	>+/-20%
Mo	95	2	115	31.416	31.416	ppb	3.968	25815	40	78.5	80	120	>+/-20%
Pd	105	2	115	-0.018	-0.018	ppb	-43.808	20	40	0.0	80	120	>+/-20%
Ag	107	2	115	34.647	34.647	ppb	4.768	96487	40	86.6	80	120	
Cd	111	2	115	33.083	33.083	ppb	1.817	12243	40	82.7	80	120	
Sn	120	2	115	36.169	36.169	ppb	4.849	35069	40	90.4	80	120	
Sb	121	2	115	35.215	35.215	ppb	4.298	30007	40	88.0	80	120	
Ba	137	2	115	38.134	38.134	ppb	5.209	10978	40	95.3	80	120	
W	182	2	165	12.925	12.925	ppb	7.708	50841	40	32.3	80	120	>+/-20%
Pt	195	2	165	-0.007	-0.007	ppb	-51.132	7	40	0.0	80	120	>+/-20%
Tl	205	2	165	37.095	37.095	ppb	6.699	267840	40	92.7	80	120	
Pb	208	2	165	37.041	37.041	ppb	6.652	357260	40	92.6	80	120	
Th	232	2	165	36.248	36.248	ppb	7.205	412175	40	90.6	80	120	
U	238	2	165	36.008	36.008	ppb	7.719	447583	40	90.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	589610	0.23	821388	71.78	60	120	
Sc (IS)	45	1	HMI H2	20605666	0.47	28135324	73.24	60	120	
Sc (IS)	45	2	HMI He	866009	4.04	1028528	84.20	60	120	
Sc (IS)	45	3	No Gas	29536763	9.14	44911069	65.77	60	120	
Ge Internal Standard	72	1	HMI H2	7875122	0.37	10990003	71.66	60	120	
Ge Internal Standard	72	2	HMI He	949332	2.86	1134301	83.69	60	120	
In Internal Standard	115	2	HMI He	3208912	2.43	3548151	90.44	60	120	
Ho-165	165	2	HMI He	15544915	3.49	17324298	89.73	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-D@5
Data File Name	121SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:00:31-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.317	ppb	2.317	115.68	88447	500000	
Li	7	2	45	-41.170	ppb	-41.170	-33.43	4281	500000	
Li	7	3	45	-31.178	ppb	-31.178	-0.96	2296447	50000	
Be	9	1	6	0.019	ppb	0.019	253.04	13	2000	
B	11	1	6	211.915	ppb	211.915	1.26	56595	2000	
Na	23	1	45	567326.045	ppb	567326.045	1.03	1380219339	2000	>LDR
Na	23	2	45	523121.249	ppb	523121.249	0.52	99837889	400000	
Mg	24	2	45	1385.618	ppb	1385.618	1.25	121779	400000	
Al	27	2	45	149.640	ppb	149.640	0.85	3571	400000	
K	39	1	45	51160.398	ppb	51160.398	1.24	125135601	400000	
K	39	2	45	51983.214	ppb	51983.214	1.23	2243791	400000	
Ca	40	1	45	3056.755	ppb	3056.755	0.83	10796541	400000	
Ca	44	2	45	3088.049	ppb	3088.049	1.61	7469	400000	
Ti	47	2	45	1.624	ppb	1.624	62.88	33	4000	
V	51	2	72	204.481	ppb	204.481	0.80	171050	2000	
Cr	52	2	72	6.735	ppb	6.735	6.69	7536	5000	
Mn	55	2	72	7.615	ppb	7.615	7.98	3267	10000	
Fe	57	2	72	339.584	ppb	339.584	4.13	7042	400000	
Co	59	2	72	4.527	ppb	4.527	8.04	8470	2000	
Ni	60	2	72	149.809	ppb	149.809	2.24	79712	5000	
Cu	63	2	72	49.817	ppb	49.817	2.78	74955	5000	
Zn	66	2	72	35.221	ppb	35.221	3.12	7786	5000	
As	75	2	72	4.091	ppb	4.091	15.92	563	2000	
Se	78	1	72	2.786	ppb	2.786	10.19	505	2000	
Sr	88	2	72	61.312	ppb	61.312	1.22	27107	4000	
Zr	90	2	72	452.742	ppb	452.742	1.32	4017	1000	
Nb	93	2	72	-0.170	ppb	-0.170	-104.89	3497	200	
Mo	95	2	115	842.805	ppb	842.805	0.72	616175	2000	
Pd	105	2	115	0.014	ppb	0.014	74.96	53	100	
Ag	107	2	115	0.069	ppb	0.069	67.68	237	100	
Cd	111	2	115	0.222	ppb	0.222	20.75	73	2000	
Sn	120	2	115	0.710	ppb	0.710	6.14	760	2000	
Sb	121	2	115	1.928	ppb	1.928	15.36	1504	1000	
Ba	137	2	115	2.098	ppb	2.098	10.66	553	5000	
W	182	2	165	50.845	ppb	50.845	1.69	180942	100	
Pt	195	2	165	0.073	ppb	0.073	15.30	247	100	
Tl	205	2	165	0.045	ppb	0.045	50.54	420	2000	
Pb	208	2	165	0.986	ppb	0.986	1.46	9769	5000	
Th	232	2	165	0.109	ppb	0.109	22.71	1550	2000	
U	238	2	165	0.311	ppb	0.311	10.17	3717	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	531409	0.57	821388	64.70	60	120	
Sc (IS)	45	1	HMI H2	19147910	1.02	28135324	68.06	60	120	
Sc (IS)	45	2	HMI He	786577	0.89	1028528	76.48	60	120	
Sc (IS)	45	3	No Gas	28170676	0.60	44911069	62.73	60	120	
Ge Internal Standard	72	1	HMI H2	7302466	0.14	10990003	66.45	60	120	
Ge Internal Standard	72	2	HMI He	866380	0.76	1134301	76.38	60	120	
In Internal Standard	115	2	HMI He	2857710	0.24	3548151	80.54	60	120	
Ho-165	165	2	HMI He	14256463	0.65	17324298	82.29	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-Dsd@25
Data File Name	122SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:04:22-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-12.498	ppb	-12.498	-18.25	90304	500000	
Li	7	2	45	-24.042	ppb	-24.042	-83.85	4688	500000	
Li	7	3	45	-36.303	ppb	-36.303	-6.12	2377601	50000	
Be	9	1	6	0.014	ppb	0.014	304.51	13	2000	
B	11	1	6	47.654	ppb	47.654	5.25	14074	2000	
Na	23	1	45	119815.934	ppb	119815.934	0.97	309834622	2000	>LDR
Na	23	2	45	111368.630	ppb	111368.630	0.96	22159642	400000	
Mg	24	2	45	301.388	ppb	301.388	1.80	27707	400000	
Al	27	2	45	26.366	ppb	26.366	6.48	743	400000	
K	39	1	45	11075.467	ppb	11075.467	1.53	34687283	400000	
K	39	2	45	10512.605	ppb	10512.605	1.21	483538	400000	
Ca	40	1	45	662.733	ppb	662.733	0.98	2513289	400000	
Ca	44	2	45	683.417	ppb	683.417	16.74	1744	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	42.448	ppb	42.448	0.68	38773	2000	
Cr	52	2	72	1.300	ppb	1.300	10.02	1730	5000	
Mn	55	2	72	0.505	ppb	0.505	10.00	267	10000	
Fe	57	2	72	50.582	ppb	50.582	2.90	1183	400000	
Co	59	2	72	0.873	ppb	0.873	10.05	1727	2000	
Ni	60	2	72	32.989	ppb	32.989	4.09	18463	5000	
Cu	63	2	72	10.325	ppb	10.325	3.47	17234	5000	
Zn	66	2	72	7.073	ppb	7.073	12.84	1867	5000	
As	75	2	72	0.794	ppb	0.794	13.97	135	2000	
Se	78	1	72	0.523	ppb	0.523	38.10	108	2000	
Sr	88	2	72	12.085	ppb	12.085	4.36	5611	4000	
Zr	90	2	72	51.584	ppb	51.584	9.87	540	1000	
Nb	93	2	72	-1.130	ppb	-1.130	-2.85	1160	200	
Mo	95	2	115	174.208	ppb	174.208	0.98	134105	2000	
Pd	105	2	115	-0.011	ppb	-0.011	-156.05	27	100	
Ag	107	2	115	0.000	ppb	0.000	-3334.35	67	100	
Cd	111	2	115	0.048	ppb	0.048	69.89	17	2000	
Sn	120	2	115	0.171	ppb	0.171	69.91	313	2000	
Sb	121	2	115	0.432	ppb	0.432	32.35	390	1000	
Ba	137	2	115	0.431	ppb	0.431	21.01	133	5000	
W	182	2	165	10.571	ppb	10.571	1.45	39854	100	
Pt	195	2	165	0.016	ppb	0.016	23.84	77	100	
Tl	205	2	165	0.004	ppb	0.004	147.91	150	2000	
Pb	208	2	165	0.174	ppb	0.174	2.85	2697	5000	
Th	232	2	165	0.004	ppb	0.004	192.28	473	2000	
U	238	2	165	0.060	ppb	0.060	23.79	890	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	579310	0.58	821388	70.53	60	120	
Sc (IS)	45	1	HMI H2	20345013	1.28	28135324	72.31	60	120	
Sc (IS)	45	2	HMI He	819752	1.15	1028528	79.70	60	120	
Sc (IS)	45	3	No Gas	29604806	1.03	44911069	65.92	60	120	
Ge Internal Standard	72	1	HMI H2	7765956	0.56	10990003	70.66	60	120	
Ge Internal Standard	72	2	HMI He	906123	0.31	1134301	79.88	60	120	
In Internal Standard	115	2	HMI He	3008234	0.59	3548151	84.78	60	120	
Ho-165	165	2	HMI He	14805438	0.17	17324298	85.46	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-E MS@5
Data File Name	123SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:08:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	17.590	ppb	17.590	40.11	91293	500000	
Li	7	2	45	-25.589	ppb	-25.589	-29.30	4418	500000	
Li	7	3	45	-21.072	ppb	-21.072	-13.17	2303829	50000	
Be	9	1	6	8.629	ppb	8.629	6.01	2064	2000	
B	11	1	6	213.696	ppb	213.696	1.13	56106	2000	
Na	23	1	45	561830.639	ppb	561830.639	0.28	1356279340	2000	>LDR
Na	23	2	45	518197.749	ppb	518197.749	1.91	97511985	400000	
Mg	24	2	45	1383.832	ppb	1383.832	2.26	119906	400000	
Al	27	2	45	212.558	ppb	212.558	9.03	4958	400000	
K	39	1	45	50799.148	ppb	50799.148	0.86	123339478	400000	
K	39	2	45	51517.214	ppb	51517.214	0.89	2192881	400000	
Ca	40	1	45	3025.887	ppb	3025.887	1.00	10604736	400000	
Ca	44	2	45	3191.723	ppb	3191.723	3.80	7609	400000	
Ti	47	2	45	3.777	ppb	3.777	40.08	77	4000	
V	51	2	72	206.867	ppb	206.867	2.48	171330	2000	
Cr	52	2	72	13.336	ppb	13.336	2.12	14535	5000	
Mn	55	2	72	9.715	ppb	9.715	8.47	4117	10000	
Fe	57	2	72	328.126	ppb	328.126	6.98	6742	400000	
Co	59	2	72	11.497	ppb	11.497	3.31	21277	2000	
Ni	60	2	72	156.890	ppb	156.890	1.99	82663	5000	
Cu	63	2	72	65.674	ppb	65.674	1.30	97470	5000	
Zn	66	2	72	38.155	ppb	38.155	3.32	8329	5000	
As	75	2	72	11.265	ppb	11.265	6.73	1496	2000	
Se	78	1	72	8.970	ppb	8.970	2.99	1591	2000	
Sr	88	2	72	67.477	ppb	67.477	2.63	29535	4000	
Zr	90	2	72	1254.346	ppb	1254.346	0.76	10905	1000	
Nb	93	2	72	-0.642	ppb	-0.642	-16.29	2297	200	
Mo	95	2	115	874.231	ppb	874.231	1.13	635578	2000	
Pd	105	2	115	-0.021	ppb	-0.021	-62.72	13	100	
Ag	107	2	115	6.636	ppb	6.636	4.33	16434	100	
Cd	111	2	115	7.292	ppb	7.292	9.51	2390	2000	
Sn	120	2	115	7.875	ppb	7.875	3.81	6882	2000	
Sb	121	2	115	9.430	ppb	9.430	4.17	7152	1000	
Ba	137	2	115	9.711	ppb	9.711	6.17	2490	5000	
W	182	2	165	51.439	ppb	51.439	0.59	181663	100	
Pt	195	2	165	0.058	ppb	0.058	25.70	200	100	
Tl	205	2	165	7.177	ppb	7.177	3.00	47329	2000	
Pb	208	2	165	8.359	ppb	8.359	1.55	74308	5000	
Th	232	2	165	6.087	ppb	6.087	1.30	63446	2000	
U	238	2	165	7.486	ppb	7.486	1.78	84972	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	522411	1.34	821388	63.60	60	120	
Sc (IS)	45	1	HMI H2	18998701	0.58	28135324	67.53	60	120	
Sc (IS)	45	2	HMI He	775630	0.98	1028528	75.41	60	120	
Sc (IS)	45	3	No Gas	27460602	0.72	44911069	61.14	60	120	
Ge Internal Standard	72	1	HMI H2	7218641	0.77	10990003	65.68	60	120	
Ge Internal Standard	72	2	HMI He	857907	0.26	1134301	75.63	60	120	
In Internal Standard	115	2	HMI He	2841891	0.98	3548151	80.09	60	120	
Ho-165	165	2	HMI He	14148782	0.78	17324298	81.67	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-F MSD@5
Data File Name	124SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:12:01-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.195	ppb	10.195	42.59	90756	500000	
Li	7	2	45	-18.672	ppb	-18.672	-74.24	4458	500000	
Li	7	3	45	-23.570	ppb	-23.570	-8.55	2240863	50000	
Be	9	1	6	8.626	ppb	8.626	17.27	2077	2000	
B	11	1	6	220.845	ppb	220.845	7.20	58418	2000	
Na	23	1	45	561074.564	ppb	561074.564	6.64	1370105260	2000	>LDR
Na	23	2	45	544931.964	ppb	544931.964	0.59	101485295	400000	
Mg	24	2	45	1458.694	ppb	1458.694	0.27	125082	400000	
Al	27	2	45	219.628	ppb	219.628	4.87	5068	400000	
K	39	1	45	51176.447	ppb	51176.447	5.44	125688991	400000	
K	39	2	45	54188.160	ppb	54188.160	0.61	2282014	400000	
Ca	40	1	45	3024.995	ppb	3024.995	7.09	10723276	400000	
Ca	44	2	45	3301.276	ppb	3301.276	1.80	7789	400000	
Ti	47	2	45	3.152	ppb	3.152	33.17	63	4000	
V	51	2	72	220.860	ppb	220.860	1.26	180646	2000	
Cr	52	2	72	14.061	ppb	14.061	3.91	15132	5000	
Mn	55	2	72	9.446	ppb	9.446	4.50	3957	10000	
Fe	57	2	72	344.545	ppb	344.545	5.00	6992	400000	
Co	59	2	72	12.381	ppb	12.381	1.69	22642	2000	
Ni	60	2	72	168.588	ppb	168.588	1.77	87779	5000	
Cu	63	2	72	69.521	ppb	69.521	1.03	101904	5000	
Zn	66	2	72	40.460	ppb	40.460	5.95	8713	5000	
As	75	2	72	11.988	ppb	11.988	1.45	1571	2000	
Se	78	1	72	8.665	ppb	8.665	7.46	1531	2000	
Sr	88	2	72	70.878	ppb	70.878	3.38	30661	4000	
Zr	90	2	72	1276.752	ppb	1276.752	8.33	10968	1000	
Nb	93	2	72	-0.923	ppb	-0.923	-6.96	1587	200	
Mo	95	2	115	962.169	ppb	962.169	0.58	696078	2000	
Pd	105	2	115	0.002	ppb	0.002	691.53	40	100	
Ag	107	2	115	6.745	ppb	6.745	5.78	16617	100	
Cd	111	2	115	7.410	ppb	7.410	6.65	2417	2000	
Sn	120	2	115	8.617	ppb	8.617	3.60	7479	2000	
Sb	121	2	115	9.817	ppb	9.817	1.50	7406	1000	
Ba	137	2	115	9.370	ppb	9.370	2.00	2390	5000	
W	182	2	165	55.251	ppb	55.251	1.05	193716	100	
Pt	195	2	165	0.067	ppb	0.067	25.98	223	100	
Tl	205	2	165	7.374	ppb	7.374	1.30	48296	2000	
Pb	208	2	165	8.610	ppb	8.610	1.96	75979	5000	
Th	232	2	165	6.483	ppb	6.483	0.86	67084	2000	
U	238	2	165	7.942	ppb	7.942	1.26	89525	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	527206	3.14	821388	64.18	60	120	
Sc (IS)	45	1	HMI H2	19250556	3.83	28135324	68.42	60	120	
Sc (IS)	45	2	HMI He	767535	0.43	1028528	74.62	60	120	
Sc (IS)	45	3	No Gas	26898311	0.55	44911069	59.89	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	7201761	3.33	10990003	65.53	60	120	
Ge Internal Standard	72	2	HMI He	847839	0.17	1134301	74.75	60	120	
In Internal Standard	115	2	HMI He	2827727	0.53	3548151	79.70	60	120	
Ho-165	165	2	HMI He	14051296	0.35	17324298	81.11	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-D pds@5
Data File Name	125SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:15:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	194.691	ppb	194.691	2.56	128942	500000	
Li	7	2	45	116.457	ppb	116.457	12.02	6185	500000	
Li	7	3	45	143.887	ppb	143.887	7.14	3241233	50000	
Be	9	1	6	209.708	ppb	209.708	1.57	48753	2000	
B	11	1	6	214.078	ppb	214.078	2.56	54834	2000	
Na	23	1	45	551549.589	ppb	551549.589	0.45	1297743047	2000	>LDR
Na	23	2	45	504308.519	ppb	504308.519	0.82	94603552	400000	
Mg	24	2	45	1361.527	ppb	1361.527	0.72	117619	400000	
Al	27	2	45	2214.443	ppb	2214.443	3.44	50564	400000	
K	39	1	45	49902.810	ppb	49902.810	0.73	118217325	400000	
K	39	2	45	49319.385	ppb	49319.385	1.13	2093410	400000	
Ca	40	1	45	3007.106	ppb	3007.106	0.72	10272394	400000	
Ca	44	2	45	4024.318	ppb	4024.318	7.06	9554	400000	
Ti	47	2	45	6.589	ppb	6.589	30.87	133	4000	
V	51	2	72	387.342	ppb	387.342	1.55	314030	2000	
Cr	52	2	72	191.969	ppb	191.969	0.93	202680	5000	
Mn	55	2	72	202.348	ppb	202.348	1.65	83627	10000	
Fe	57	2	72	2141.751	ppb	2141.751	1.28	42787	400000	
Co	59	2	72	188.781	ppb	188.781	0.73	343512	2000	
Ni	60	2	72	325.457	ppb	325.457	0.24	168642	5000	
Cu	63	2	72	225.120	ppb	225.120	0.82	326007	5000	
Zn	66	2	72	219.445	ppb	219.445	0.57	45860	5000	
As	75	2	72	193.745	ppb	193.745	0.84	24935	2000	
Se	78	1	72	184.859	ppb	184.859	0.99	31745	2000	
Sr	88	2	72	278.790	ppb	278.790	0.31	120013	4000	
Zr	90	2	72	27287.459	ppb	27287.459	0.74	232123	1000	>LDR
Nb	93	2	72	4.718	ppb	4.718	4.74	15249	200	
Mo	95	2	115	1028.454	ppb	1028.454	0.35	729991	2000	
Pd	105	2	115	0.015	ppb	0.015	93.69	53	100	
Ag	107	2	115	36.312	ppb	36.312	1.74	87492	100	
Cd	111	2	115	181.795	ppb	181.795	0.53	58185	2000	
Sn	120	2	115	197.296	ppb	197.296	1.15	164846	2000	
Sb	121	2	115	195.488	ppb	195.488	0.68	143913	1000	
Ba	137	2	115	210.603	ppb	210.603	1.84	52384	5000	
W	182	2	165	236.639	ppb	236.639	0.31	822873	100	
Pt	195	2	165	0.099	ppb	0.099	18.92	317	100	
Tl	205	2	165	189.557	ppb	189.557	0.23	1233016	2000	
Pb	208	2	165	189.844	ppb	189.844	0.50	1645996	5000	
Th	232	2	165	247.750	ppb	247.750	0.79	2536912	2000	
U	238	2	165	222.413	ppb	222.413	0.58	2491328	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	509664	0.59	821388	62.05	60	120	
Sc (IS)	45	1	HMI H2	18517568	0.40	28135324	65.82	60	120	
Sc (IS)	45	2	HMI He	773167	1.08	1028528	75.17	60	120	
Sc (IS)	45	3	No Gas	26423175	2.55	44911069	58.83	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	7023666	0.62	10990003	63.91	60	120	
Ge Internal Standard	72	2	HMI He	844336	1.46	1134301	74.44	60	120	
In Internal Standard	115	2	HMI He	2774468	0.62	3548151	78.19	60	120	
Ho-165	165	2	HMI He	13988441	0.65	17324298	80.74	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	126_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:19:44-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	467.296	ppb	0.477	206508	500	93.5	90	110	
Li	7	2	45	425.469	ppb	11.072	10778	500	85.1	90	110	>+\-10%
Li	7	3	45	398.775	ppb	0.829	5344090	500	79.8	90	110	>+\-10%
Be	9	1	6	51.093	ppb	2.220	13473	50	102.2	90	110	
B	11	1	6	59.089	ppb	1.217	17347	50	118.2	90	110	>+\-10%
Na	23	1	45	5846.745	ppb	0.817	15062499	5000	116.9	90	110	>+\-10%
Na	23	2	45	5378.313	ppb	6.522	1093112	5000	107.6	90	110	
Mg	24	2	45	4743.874	ppb	8.371	438397	5000	94.9	90	110	
Al	27	2	45	5118.608	ppb	9.813	124893	5000	102.4	90	110	
K	39	1	45	5503.404	ppb	1.267	20754298	5000	110.1	90	110	>+\-10%
K	39	2	45	5055.409	ppb	7.236	241931	5000	101.1	90	110	
Ca	40	1	45	5081.532	ppb	1.154	18799873	5000	101.6	90	110	
Ca	44	2	45	4857.238	ppb	9.886	12339	5000	97.1	90	110	
Ti	47	2	45	45.767	ppb	8.331	993	50	91.5	90	110	
V	51	2	72	46.713	ppb	9.281	42938	50	93.4	90	110	
Cr	52	2	72	45.984	ppb	10.436	52864	50	92.0	90	110	
Mn	55	2	72	50.556	ppb	8.292	22709	50	101.1	90	110	
Fe	57	2	72	4576.458	ppb	7.102	99168	5000	91.5	90	110	
Co	59	2	72	46.466	ppb	9.170	91768	50	92.9	90	110	
Ni	60	2	72	44.972	ppb	10.297	25397	50	89.9	90	110	>+\-10%
Cu	63	2	72	44.255	ppb	9.652	70547	50	88.5	90	110	>+\-10%
Zn	66	2	72	42.458	ppb	7.821	9871	50	84.9	90	110	>+\-10%
As	75	2	72	47.770	ppb	8.935	6692	50	95.5	90	110	
Se	78	1	72	45.801	ppb	3.086	8685	50	91.6	90	110	
Sr	88	2	72	53.623	ppb	8.632	25077	50	107.2	90	110	
Zr	90	2	72	71.100	ppb	28.174	723	50	142.2	90	110	>+\-10%
Nb	93	2	72	72.916	ppb	9.205	195801	100	72.9	90	110	>+\-10%
Mo	95	2	115	44.076	ppb	9.240	35018	50	88.2	90	110	>+\-10%
Pd	105	2	115	42.843	ppb	6.566	53356	50	85.7	90	110	>+\-10%
Ag	107	2	115	43.083	ppb	7.602	116134	50	86.2	90	110	>+\-10%
Cd	111	2	115	44.347	ppb	9.698	15870	50	88.7	90	110	>+\-10%
Sn	120	2	115	45.388	ppb	9.377	42530	50	90.8	90	110	
Sb	121	2	115	48.161	ppb	9.207	39681	50	96.3	90	110	
Ba	137	2	115	48.470	ppb	13.650	13474	50	96.9	90	110	
W	182	2	165	45.494	ppb	9.883	170991	50	91.0	90	110	
Pt	195	2	165	43.050	ppb	8.309	135855	50	86.1	90	110	>+\-10%
Tl	205	2	165	47.960	ppb	6.808	336014	50	95.9	90	110	
Pb	208	2	165	48.202	ppb	7.986	450665	50	96.4	90	110	
Th	232	2	165	48.481	ppb	9.083	534497	50	97.0	90	110	
U	238	2	165	47.810	ppb	9.116	576357	50	95.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	577831	0.40	821388	70.35	60	120	
Sc (IS)	45	1	HMI H2	20079286	0.36	28135324	71.37	60	120	
Sc (IS)	45	2	HMI He	830044	5.01	1028528	80.70	60	120	
Sc (IS)	45	3	No Gas	29256666	0.39	44911069	65.14	60	120	
Ge Internal Standard	72	1	HMI H2	7750262	0.61	10990003	70.52	60	120	
Ge Internal Standard	72	2	HMI He	918875	4.80	1134301	81.01	60	120	
In Internal Standard	115	2	HMI He	3112193	5.08	3548151	87.71	60	120	
Ho-165	165	2	HMI He	15096100	4.95	17324298	87.14	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	127_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:23:30-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-30.671	ppb	-5.6	2408663	10	
Be	9	1	6	0.061	ppb	91.7	27	0.5	
B	11	1	6	5.340	ppb	8.9	1884	0.5	>RL
Na	23	1	45	578.340	ppb	1.5	1653446	25	>RL
Na	23	2	45	530.231	ppb	1.9	118884	25	>RL
Mg	24	2	45	2.929	ppb	9.3	400	25	
Al	27	2	45	8.166	ppb	44.7	307	15	
K	39	1	45	350.848	ppb	7.9	8444853	50	>RL
K	39	2	45	3.585	ppb	614.8	13650	50	
Ca	40	1	45	12.425	ppb	3.0	80426	50	
Ca	44	2	45	8.074	ppb	49.1	50	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.602	ppb	47.2	2624	1	
Cr	52	2	72	0.025	ppb	350.1	290	1	
Mn	55	2	72	0.015	ppb	395.8	50	0.5	
Fe	57	2	72	3.675	ppb	79.5	183	25	
Co	59	2	72	0.026	ppb	56.1	73	0.5	
Ni	60	2	72	0.209	ppb	19.9	253	1	
Cu	63	2	72	-0.094	ppb	-130.1	1117	1	
Zn	66	2	72	0.503	ppb	93.2	410	5	
As	75	2	72	-0.038	ppb	-110.3	20	1	
Se	78	1	72	0.107	ppb	76.4	29	1	
Sr	88	2	72	0.100	ppb	24.5	77	0.5	
Zr	90	2	72	3.908	ppb	41.0	107	1	>RL
Nb	93	2	72	3.545	ppb	8.8	13534	2	>RL
Mo	95	2	115	0.753	ppb	27.8	633	0.5	>RL
Pd	105	2	115	0.037	ppb	13.3	87	1	
Ag	107	2	115	0.007	ppb	54.2	90	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.150	ppb	29.7	303	1	
Sb	121	2	115	0.588	ppb	15.0	530	0.6	
Ba	137	2	115	0.081	ppb	118.3	40	0.5	
W	182	2	165	0.196	ppb	1.8	1754	1	
Pt	195	2	165	0.014	ppb	63.7	73	1	
Tl	205	2	165	0.028	ppb	23.6	327	0.1	
Pb	208	2	165	-0.003	ppb	-385.3	1097	0.5	
Th	232	2	165	0.045	ppb	18.6	940	1	
U	238	2	165	0.076	ppb	15.7	1103	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	603302	0.62	821388	73.45	60	120	
Sc (IS)	45	1	HMI H2	20463151	0.90	28135324	72.73	60	120	
Sc (IS)	45	2	HMI He	829100	1.36	1028528	80.61	60	120	
Sc (IS)	45	3	No Gas	29503893	0.50	44911069	65.69	60	120	
Ge Internal Standard	72	1	HMI H2	7898355	1.19	10990003	71.87	60	120	
Ge Internal Standard	72	2	HMI He	920935	1.66	1134301	81.19	60	120	
In Internal Standard	115	2	HMI He	3101762	1.16	3548151	87.42	60	120	
Ho-165	165	2	HMI He	15143344	1.49	17324298	87.41	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	128LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:27:17-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-20.797	ppb	-10.932	2510690	50	-41.6	70	130	>+/-30%
Be	9	1	6	1.209	ppb	6.770	323	1	120.9	70	130	
Na	23	2	45	498.596	ppb	0.437	111757	50	997.2	70	130	>+/-30%
Mg	24	2	45	53.522	ppb	5.240	5048	50	107.0	70	130	
Al	27	2	45	40.670	ppb	15.515	1093	30	135.6	70	130	>+/-30%
K	39	2	45	122.247	ppb	9.189	18900	100	122.2	70	130	
Ca	44	2	45	56.998	ppb	41.575	173	50	114.0	70	130	
V	51	2	72	5.584	ppb	8.326	7002	5	111.7	70	130	
Cr	52	2	72	1.881	ppb	11.476	2427	2	94.0	70	130	
Mn	55	2	72	1.006	ppb	13.174	497	1	100.6	70	130	
Fe	57	2	72	58.866	ppb	13.990	1383	50	117.7	70	130	
Co	59	2	72	0.950	ppb	3.873	1907	1	95.0	70	130	
Ni	60	2	72	2.139	ppb	7.812	1343	2	106.9	70	130	
Cu	63	2	72	1.981	ppb	7.026	4381	2	99.1	70	130	
Zn	66	2	72	9.643	ppb	8.299	2480	10	96.4	70	130	
As	75	2	72	4.507	ppb	7.212	658	5	90.1	70	130	
Se	78	1	72	5.482	ppb	18.872	989	5	109.6	70	130	
Sr	88	2	72	0.910	ppb	6.040	457	1	91.0	70	130	
Zr	90	2	72	18.331	ppb	37.319	240	0.5	3666.2	70	130	>+/-30%
Nb	93	2	72	8.005	ppb	3.395	25307	2	400.2	70	130	>+/-30%
Mo	95	2	115	2.134	ppb	6.779	1760	2	106.7	70	130	
Pd	105	2	115	0.007	ppb	322.421	50	1	0.7	70	130	>+/-30%
Ag	107	2	115	4.576	ppb	0.973	12620	5	91.5	70	130	
Cd	111	2	115	0.858	ppb	24.710	313	1	85.8	70	130	
Sn	120	2	115	9.725	ppb	4.746	9407	10	97.2	70	130	
Sb	121	2	115	2.209	ppb	7.646	1900	2	110.5	70	130	
Ba	137	2	115	1.163	ppb	18.793	347	1	116.3	70	130	
W	182	2	165	4.831	ppb	1.707	19041	1	483.1	70	130	>+/-30%
Pt	195	2	165	0.012	ppb	92.828	67	1	1.2	70	130	>+/-30%
Tl	205	2	165	0.999	ppb	6.016	7106	1	99.9	70	130	
Pb	208	2	165	0.992	ppb	6.445	10349	1	99.2	70	130	
Th	232	2	165	2.098	ppb	2.457	23523	2	104.9	70	130	
U	238	2	165	1.014	ppb	1.414	12383	1	101.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	567584	10.27	821388	69.10	60	120	
Sc (IS)	45	1	HMI H2	18868357	13.14	28135324	67.06	60	120	
Sc (IS)	45	2	HMI He	823465	0.70	1028528	80.06	60	120	
Sc (IS)	45	3	No Gas	29904184	0.96	44911069	66.59	60	120	
Ge Internal Standard	72	1	HMI H2	7425647	11.13	10990003	67.57	60	120	
Ge Internal Standard	72	2	HMI He	920804	1.10	1134301	81.18	60	120	
In Internal Standard	115	2	HMI He	3159773	1.50	3548151	89.05	60	120	
Ho-165	165	2	HMI He	15031006	0.45	17324298	86.76	60	120	

Sample Table

Sample Name	280-116317-e-4-a@50
Data File Name	129SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:31:04-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435646 6020A Zn
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-8.256	ppb	-8.256	-68.23	92614	500000	
Li	7	2	45	-29.339	ppb	-29.339	-23.18	4691	500000	
Li	7	3	45	-29.755	ppb	-29.755	-6.29	2446890	50000	
Be	9	1	6	0.013	ppb	0.013	330.80	13	2000	
B	11	1	6	2.387	ppb	2.387	8.20	983	2000	
Na	23	1	45	1262.143	ppb	1262.143	1.67	3458262	2000	
Na	23	2	45	1162.836	ppb	1162.836	0.80	247120	400000	
Mg	24	2	45	52.112	ppb	52.112	2.43	4971	400000	
Al	27	2	45	122.945	ppb	122.945	6.84	3124	400000	
K	39	1	45	575.194	ppb	575.194	6.42	9069278	400000	
K	39	2	45	312.631	ppb	312.631	11.84	27761	400000	
Ca	40	1	45	646.813	ppb	646.813	0.98	2487625	400000	
Ca	44	2	45	657.540	ppb	657.540	10.19	1707	400000	
Ti	47	2	45	2.908	ppb	2.908	92.95	63	4000	
V	51	2	72	0.747	ppb	0.747	31.65	2744	2000	
Cr	52	2	72	0.365	ppb	0.365	25.93	680	5000	
Mn	55	2	72	21.365	ppb	21.365	6.01	9637	10000	
Fe	57	2	72	308.310	ppb	308.310	6.51	6785	400000	
Co	59	2	72	0.201	ppb	0.201	28.61	420	2000	
Ni	60	2	72	0.383	ppb	0.383	66.45	350	5000	
Cu	63	2	72	2.028	ppb	2.028	6.54	4441	5000	
Zn	66	2	72	197.973	ppb	197.973	1.12	45005	5000	
As	75	2	72	-0.023	ppb	-0.023	-182.60	22	2000	
Se	78	1	72	0.038	ppb	0.038	142.83	16	2000	
Sr	88	2	72	3.778	ppb	3.778	8.56	1797	4000	
Zr	90	2	72	5.049	ppb	5.049	90.55	117	1000	
Nb	93	2	72	-0.443	ppb	-0.443	-24.68	2984	200	
Mo	95	2	115	0.410	ppb	0.410	31.95	363	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-280.28	33	100	
Ag	107	2	115	0.006	ppb	0.006	146.24	87	100	
Cd	111	2	115	0.269	ppb	0.269	34.12	97	2000	
Sn	120	2	115	0.113	ppb	0.113	44.54	270	2000	
Sb	121	2	115	0.105	ppb	0.105	11.24	133	1000	
Ba	137	2	115	1.342	ppb	1.342	6.50	393	5000	
W	182	2	165	0.067	ppb	0.067	54.61	1270	100	
Pt	195	2	165	0.008	ppb	0.008	119.17	53	100	
Tl	205	2	165	0.019	ppb	0.019	95.38	267	2000	
Pb	208	2	165	35.360	ppb	35.360	0.85	333605	5000	
Th	232	2	165	0.028	ppb	0.028	29.53	753	2000	
U	238	2	165	0.032	ppb	0.032	26.01	573	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	598021	0.10	821388	72.81	60	120	
Sc (IS)	45	1	HMI H2	20624968	0.69	28135324	73.31	60	120	
Sc (IS)	45	2	HMI He	832453	0.89	1028528	80.94	60	120	
Sc (IS)	45	3	No Gas	29893428	0.97	44911069	66.56	60	120	
Ge Internal Standard	72	1	HMI H2	7882286	0.45	10990003	71.72	60	120	
Ge Internal Standard	72	2	HMI He	917776	0.66	1134301	80.91	60	120	
In Internal Standard	115	2	HMI He	3123017	1.42	3548151	88.02	60	120	
Ho-165	165	2	HMI He	15180081	0.77	17324298	87.62	60	120	

Sample Report

Sample Table

Sample Name	280-116306-B-13-C@50
Data File Name	130SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:34:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 6020a dod5
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	3.127	ppb	3.127	143.88	95828	500000	
Li	7	2	45	-37.245	ppb	-37.245	-39.95	4561	500000	
Li	7	3	45	-29.774	ppb	-29.774	-12.64	2732355	50000	
Be	9	1	6	0.243	ppb	0.243	60.05	77	2000	
B	11	1	6	10.540	ppb	10.540	10.43	3437	2000	
Na	23	1	45	620.841	ppb	620.841	1.66	1784557	2000	
Na	23	2	45	568.902	ppb	568.902	1.04	126500	400000	
Mg	24	2	45	4769.633	ppb	4769.633	1.06	440929	400000	
Al	27	2	45	7028.124	ppb	7028.124	1.32	171592	400000	
K	39	1	45	2346.494	ppb	2346.494	1.20	13521293	400000	
K	39	2	45	1791.700	ppb	1791.700	1.10	94436	400000	
Ca	40	1	45	5534.713	ppb	5534.713	0.28	21107063	400000	
Ca	44	2	45	5527.091	ppb	5527.091	2.79	14047	400000	
Ti	47	2	45	300.480	ppb	300.480	1.44	6518	4000	
V	51	2	72	28.680	ppb	28.680	1.74	27400	2000	
Cr	52	2	72	68.682	ppb	68.682	2.02	79535	5000	
Mn	55	2	72	242.769	ppb	242.769	1.95	109776	10000	
Fe	57	2	72	27127.847	ppb	27127.847	0.39	592001	400000	
Co	59	2	72	10.209	ppb	10.209	2.20	20355	2000	
Ni	60	2	72	64.892	ppb	64.892	0.77	36908	5000	
Cu	63	2	72	195.391	ppb	195.391	0.13	309859	5000	
Zn	66	2	72	114.279	ppb	114.279	0.98	26282	5000	
As	75	2	72	237.121	ppb	237.121	1.35	33398	2000	
Se	78	1	72	0.223	ppb	0.223	18.13	52	2000	
Sr	88	2	72	29.311	ppb	29.311	1.76	13837	4000	
Zr	90	2	72	122.458	ppb	122.458	15.58	1210	1000	
Nb	93	2	72	-0.431	ppb	-0.431	-32.98	3037	200	
Mo	95	2	115	1.540	ppb	1.540	13.58	1240	2000	
Pd	105	2	115	-0.003	ppb	-0.003	-550.00	37	100	
Ag	107	2	115	64.457	ppb	64.457	0.55	171195	100	
Cd	111	2	115	7.425	ppb	7.425	1.95	2620	2000	
Sn	120	2	115	4.270	ppb	4.270	6.40	4091	2000	
Sb	121	2	115	79.688	ppb	79.688	1.12	64707	1000	
Ba	137	2	115	88.343	ppb	88.343	2.28	24236	5000	
W	182	2	165	7.543	ppb	7.543	1.57	29380	100	
Pt	195	2	165	0.016	ppb	0.016	85.26	80	100	
Tl	205	2	165	0.213	ppb	0.213	8.02	1630	2000	
Pb	208	2	165	981.214	ppb	981.214	0.44	9205603	5000	
Th	232	2	165	1.903	ppb	1.903	1.84	21535	2000	
U	238	2	165	0.275	ppb	0.275	0.91	3514	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	600632	0.58	821388	73.12	60	120	
Sc (IS)	45	1	HMI H2	20700328	0.41	28135324	73.57	60	120	
Sc (IS)	45	2	HMI He	828049	0.72	1028528	80.51	60	120	
Sc (IS)	45	3	No Gas	33381634	1.72	44911069	74.33	60	120	
Ge Internal Standard	72	1	HMI H2	7947520	0.42	10990003	72.32	60	120	
Ge Internal Standard	72	2	HMI He	924086	0.48	1134301	81.47	60	120	
In Internal Standard	115	2	HMI He	3059132	0.40	3548151	86.22	60	120	
Ho-165	165	2	HMI He	15144406	0.40	17324298	87.42	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-3-B@5
Data File Name	131SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:38:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.168	ppb	0.168	755.32	86427	500000	
Li	7	2	45	-47.050	ppb	-47.050	-20.44	4131	500000	
Li	7	3	45	-27.543	ppb	-27.543	-9.69	2228311	50000	
Be	9	1	6	0.076	ppb	0.076	139.66	27	2000	
B	11	1	6	212.158	ppb	212.158	1.55	55721	2000	
Na	23	1	45	574681.431	ppb	574681.431	0.24	1374023073	2000	>LDR
Na	23	2	45	530183.749	ppb	530183.749	0.85	99370105	400000	
Mg	24	2	45	1413.948	ppb	1413.948	0.71	122027	400000	
Al	27	2	45	132.883	ppb	132.883	9.30	3124	400000	
K	39	1	45	52238.478	ppb	52238.478	0.80	125425228	400000	
K	39	2	45	52556.641	ppb	52556.641	0.38	2227916	400000	
Ca	40	1	45	2948.042	ppb	2948.042	0.49	10234107	400000	
Ca	44	2	45	3074.975	ppb	3074.975	7.49	7306	400000	
Ti	47	2	45	1.649	ppb	1.649	46.36	33	4000	
V	51	2	72	204.031	ppb	204.031	1.62	167495	2000	
Cr	52	2	72	6.619	ppb	6.619	2.68	7272	5000	
Mn	55	2	72	1.075	ppb	1.075	23.23	487	10000	
Fe	57	2	72	162.999	ppb	162.999	5.01	3367	400000	
Co	59	2	72	5.015	ppb	5.015	2.11	9210	2000	
Ni	60	2	72	159.017	ppb	159.017	1.04	83038	5000	
Cu	63	2	72	34.312	ppb	34.312	1.04	51027	5000	
Zn	66	2	72	9.069	ppb	9.069	7.62	2170	5000	
As	75	2	72	4.175	ppb	4.175	4.68	564	2000	
Se	78	1	72	2.797	ppb	2.797	12.97	497	2000	
Sr	88	2	72	58.871	ppb	58.871	4.54	25544	4000	
Zr	90	2	72	197.131	ppb	197.131	9.25	1754	1000	
Nb	93	2	72	0.045	ppb	0.045	193.47	3954	200	
Mo	95	2	115	981.374	ppb	981.374	1.09	709436	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-231.13	30	100	
Ag	107	2	115	0.130	ppb	0.130	22.11	383	100	
Cd	111	2	115	0.388	ppb	0.388	36.64	127	2000	
Sn	120	2	115	0.684	ppb	0.684	20.27	730	2000	
Sb	121	2	115	1.985	ppb	1.985	6.73	1530	1000	
Ba	137	2	115	1.635	ppb	1.635	6.76	430	5000	
W	182	2	165	52.855	ppb	52.855	0.60	185585	100	
Pt	195	2	165	0.051	ppb	0.051	12.90	177	100	
Tl	205	2	165	0.003	ppb	0.003	92.29	137	2000	
Pb	208	2	165	1.169	ppb	1.169	4.40	11226	5000	
Th	232	2	165	0.030	ppb	0.030	26.49	720	2000	
U	238	2	165	0.263	ppb	0.263	4.28	3134	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	522593	0.56	821388	63.62	60	120	
Sc (IS)	45	1	HMI H2	18816736	0.10	28135324	66.88	60	120	
Sc (IS)	45	2	HMI He	772485	0.86	1028528	75.11	60	120	
Sc (IS)	45	3	No Gas	27050503	0.48	44911069	60.23	60	120	
Ge Internal Standard	72	1	HMI H2	7157852	0.45	10990003	65.13	60	120	
Ge Internal Standard	72	2	HMI He	850247	0.64	1134301	74.96	60	120	
In Internal Standard	115	2	HMI He	2825781	0.61	3548151	79.64	60	120	
Ho-165	165	2	HMI He	14069109	0.98	17324298	81.21	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-4-D@5
Data File Name	132SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:42:32-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	6.110	ppb	6.110	73.34	86203	500000	
Li	7	2	45	-36.381	ppb	-36.381	-134.15	4191	500000	
Li	7	3	45	-28.595	ppb	-28.595	-13.74	2171946	50000	
Be	9	1	6	0.063	ppb	0.063	101.97	23	2000	
B	11	1	6	253.358	ppb	253.358	0.58	65212	2000	
Na	23	1	45	668477.801	ppb	668477.801	1.24	1569314643	2000	>LDR
Na	23	2	45	618761.813	ppb	618761.813	0.61	114014558	400000	
Mg	24	2	45	1736.044	ppb	1736.044	0.40	147268	400000	
Al	27	2	45	85.005	ppb	85.005	16.37	2000	400000	
K	39	1	45	57300.534	ppb	57300.534	0.93	134426485	400000	
K	39	2	45	57477.627	ppb	57477.627	0.49	2394160	400000	
Ca	40	1	45	1598.851	ppb	1598.851	1.58	5463712	400000	
Ca	44	2	45	1655.679	ppb	1655.679	7.42	3877	400000	
Ti	47	2	45	1.513	ppb	1.513	100.07	30	4000	
V	51	2	72	192.738	ppb	192.738	1.17	155659	2000	
Cr	52	2	72	6.832	ppb	6.832	9.71	7369	5000	
Mn	55	2	72	1.216	ppb	1.216	20.15	537	10000	
Fe	57	2	72	161.312	ppb	161.312	8.07	3277	400000	
Co	59	2	72	2.998	ppb	2.998	5.82	5421	2000	
Ni	60	2	72	132.237	ppb	132.237	1.56	67903	5000	
Cu	63	2	72	12.701	ppb	12.701	3.44	19290	5000	
Zn	66	2	72	8.719	ppb	8.719	60.16	2064	5000	
As	75	2	72	3.243	ppb	3.243	7.23	436	2000	
Se	78	1	72	2.502	ppb	2.502	16.20	432	2000	
Sr	88	2	72	43.009	ppb	43.009	2.22	18353	4000	
Zr	90	2	72	247.072	ppb	247.072	8.59	2144	1000	
Nb	93	2	72	-0.632	ppb	-0.632	-22.17	2264	200	
Mo	95	2	115	481.935	ppb	481.935	1.21	344683	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-356.38	27	100	
Ag	107	2	115	0.007	ppb	0.007	55.68	80	100	
Cd	111	2	115	0.134	ppb	0.134	34.83	43	2000	
Sn	120	2	115	0.202	ppb	0.202	44.18	317	2000	
Sb	121	2	115	0.631	ppb	0.631	2.62	510	1000	
Ba	137	2	115	1.320	ppb	1.320	21.79	347	5000	
W	182	2	165	53.361	ppb	53.361	1.55	184962	100	
Pt	195	2	165	0.079	ppb	0.079	3.11	257	100	
Tl	205	2	165	-0.001	ppb	-0.001	-889.58	110	2000	
Pb	208	2	165	0.372	ppb	0.372	4.77	4230	5000	
Th	232	2	165	0.000	ppb	0.000	-31166.75	407	2000	
U	238	2	165	0.246	ppb	0.246	3.06	2902	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	512518	0.90	821388	62.40	60	120	
Sc (IS)	45	1	HMI H2	18476953	0.74	28135324	65.67	60	120	
Sc (IS)	45	2	HMI He	759406	0.55	1028528	73.83	60	120	
Sc (IS)	45	3	No Gas	26447485	0.56	44911069	58.89	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	6944539	1.01	10990003	63.19	60	120	
Ge Internal Standard	72	2	HMI He	835866	0.41	1134301	73.69	60	120	
In Internal Standard	115	2	HMI He	2795674	1.01	3548151	78.79	60	120	
Ho-165	165	2	HMI He	13889556	0.73	17324298	80.17	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-4-E MS@5
Data File Name	133SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:46:24-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	19.031	ppb	19.031	25.79	88359	500000	
Li	7	2	45	-3.513	ppb	-3.513	-581.19	4558	500000	
Li	7	3	45	-14.960	ppb	-14.960	-14.24	2212649	50000	
Be	9	1	6	8.937	ppb	8.937	5.29	2060	2000	
B	11	1	6	270.453	ppb	270.453	2.68	68380	2000	
Na	23	1	45	677308.695	ppb	677308.695	0.73	1576639657	2000	>LDR
Na	23	2	45	627754.625	ppb	627754.625	0.36	114676825	400000	
Mg	24	2	45	1765.905	ppb	1765.905	0.68	148513	400000	
Al	27	2	45	169.306	ppb	169.306	2.28	3854	400000	
K	39	1	45	58284.583	ppb	58284.583	0.37	135464741	400000	
K	39	2	45	58675.227	ppb	58675.227	0.63	2422791	400000	
Ca	40	1	45	1629.544	ppb	1629.544	0.17	5521226	400000	
Ca	44	2	45	1838.837	ppb	1838.837	2.72	4267	400000	
Ti	47	2	45	3.380	ppb	3.380	31.30	67	4000	
V	51	2	72	202.659	ppb	202.659	1.38	163170	2000	
Cr	52	2	72	14.156	ppb	14.156	2.05	14982	5000	
Mn	55	2	72	9.395	ppb	9.395	3.37	3871	10000	
Fe	57	2	72	244.665	ppb	244.665	6.34	4911	400000	
Co	59	2	72	11.133	ppb	11.133	2.25	20025	2000	
Ni	60	2	72	160.554	ppb	160.554	2.05	82217	5000	
Cu	63	2	72	28.713	ppb	28.713	3.22	42062	5000	
Zn	66	2	72	13.064	ppb	13.064	4.78	2947	5000	
As	75	2	72	12.301	ppb	12.301	1.54	1585	2000	
Se	78	1	72	8.604	ppb	8.604	6.96	1475	2000	
Sr	88	2	72	52.689	ppb	52.689	1.46	22422	4000	
Zr	90	2	72	1245.409	ppb	1245.409	2.82	10524	1000	
Nb	93	2	72	-0.757	ppb	-0.757	-12.63	1960	200	
Mo	95	2	115	807.080	ppb	807.080	0.09	570469	2000	
Pd	105	2	115	-0.021	ppb	-0.021	-65.33	13	100	
Ag	107	2	115	6.679	ppb	6.679	4.12	16077	100	
Cd	111	2	115	7.532	ppb	7.532	4.57	2400	2000	
Sn	120	2	115	8.028	ppb	8.028	0.75	6819	2000	
Sb	121	2	115	9.185	ppb	9.185	6.22	6772	1000	
Ba	137	2	115	8.622	ppb	8.622	5.14	2150	5000	
W	182	2	165	58.330	ppb	58.330	0.78	200651	100	
Pt	195	2	165	0.091	ppb	0.091	10.35	290	100	
Tl	205	2	165	7.439	ppb	7.439	1.67	47814	2000	
Pb	208	2	165	8.124	ppb	8.124	1.16	70410	5000	
Th	232	2	165	6.434	ppb	6.434	1.01	65335	2000	
U	238	2	165	7.976	ppb	7.976	1.57	88228	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	503531	0.39	821388	61.30	60	120	
Sc (IS)	45	1	HMI H2	18320343	0.22	28135324	65.12	60	120	
Sc (IS)	45	2	HMI He	752892	0.10	1028528	73.20	60	120	
Sc (IS)	45	3	No Gas	25929931	0.68	44911069	57.74	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	6976806	0.60	10990003	63.48	60	120	
Ge Internal Standard	72	2	HMI He	833793	0.62	1134301	73.51	60	120	
In Internal Standard	115	2	HMI He	2762815	0.25	3548151	77.87	60	120	
Ho-165	165	2	HMI He	13789870	0.72	17324298	79.60	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-4-F MSD@5
Data File Name	134SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:50:16-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	18.190	ppb	18.190	31.90	86783	500000	
Li	7	2	45	-19.810	ppb	-19.810	-111.44	4251	500000	
Li	7	3	45	-11.515	ppb	-11.515	-41.11	2144927	50000	
Be	9	1	6	8.453	ppb	8.453	2.92	1920	2000	
B	11	1	6	263.754	ppb	263.754	2.44	65654	2000	
Na	23	1	45	661718.067	ppb	661718.067	1.07	1515955604	2000	>LDR
Na	23	2	45	615794.587	ppb	615794.587	0.62	109697852	400000	
Mg	24	2	45	1730.075	ppb	1730.075	0.27	141890	400000	
Al	27	2	45	168.028	ppb	168.028	3.72	3731	400000	
K	39	1	45	56954.659	ppb	56954.659	1.44	130426581	400000	
K	39	2	45	58190.671	ppb	58190.671	1.21	2343177	400000	
Ca	40	1	45	1580.512	ppb	1580.512	1.85	5270890	400000	
Ca	44	2	45	1668.142	ppb	1668.142	9.32	3777	400000	
Ti	47	2	45	2.944	ppb	2.944	50.74	57	4000	
V	51	2	72	194.956	ppb	194.956	0.41	152612	2000	
Cr	52	2	72	14.078	ppb	14.078	4.93	14481	5000	
Mn	55	2	72	8.256	ppb	8.256	3.86	3311	10000	
Fe	57	2	72	237.819	ppb	237.819	3.54	4641	400000	
Co	59	2	72	11.275	ppb	11.275	5.38	19708	2000	
Ni	60	2	72	169.637	ppb	169.637	2.03	84406	5000	
Cu	63	2	72	31.453	ppb	31.453	2.98	44667	5000	
Zn	66	2	72	12.831	ppb	12.831	9.71	2817	5000	
As	75	2	72	12.118	ppb	12.118	2.66	1518	2000	
Se	78	1	72	8.760	ppb	8.760	3.88	1479	2000	
Sr	88	2	72	51.654	ppb	51.654	3.75	21360	4000	
Zr	90	2	72	1193.966	ppb	1193.966	5.37	9807	1000	
Nb	93	2	72	-0.946	ppb	-0.946	-2.84	1463	200	
Mo	95	2	115	927.339	ppb	927.339	1.37	636538	2000	
Pd	105	2	115	-0.024	ppb	-0.024	-38.59	10	100	
Ag	107	2	115	6.369	ppb	6.369	4.15	14888	100	
Cd	111	2	115	6.953	ppb	6.953	8.87	2154	2000	
Sn	120	2	115	7.995	ppb	7.995	1.15	6595	2000	
Sb	121	2	115	8.712	ppb	8.712	2.86	6242	1000	
Ba	137	2	115	9.463	ppb	9.463	4.19	2290	5000	
W	182	2	165	58.202	ppb	58.202	0.41	195729	100	
Pt	195	2	165	0.063	ppb	0.063	50.83	203	100	
Tl	205	2	165	7.133	ppb	7.133	2.25	44824	2000	
Pb	208	2	165	7.882	ppb	7.882	1.77	66819	5000	
Th	232	2	165	5.987	ppb	5.987	1.14	59467	2000	
U	238	2	165	7.601	ppb	7.601	0.88	82204	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	495826	1.56	821388	60.36	60	120	
Sc (IS)	45	1	HMI H2	18030920	0.76	28135324	64.09	60	120	
Sc (IS)	45	2	HMI He	734201	0.33	1028528	71.38	60	120	
Sc (IS)	45	3	No Gas	24900935	0.81	44911069	55.44	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	6869734	1.20	10990003	62.51	60	120	
Ge Internal Standard	72	2	HMI He	810282	0.52	1134301	71.43	60	120	
In Internal Standard	115	2	HMI He	2683279	1.04	3548151	75.62	60	120	
Ho-165	165	2	HMI He	13480781	0.07	17324298	77.81	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-5-B@2
Data File Name	135SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:54:07-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	23.487	ppb	23.487	13.83	78525	500000	
Li	7	2	45	-14.033	ppb	-14.033	-81.36	3954	500000	
Li	7	3	45	-14.401	ppb	-14.401	-17.43	1970667	50000	
Be	9	1	6	0.204	ppb	0.204	53.00	47	2000	
B	11	1	6	646.316	ppb	646.316	3.11	138433	2000	
Na	23	1	45	1648428.579	ppb	1648428.579	0.76	3372095096	2000	>LDR
Na	23	2	45	1508816.152	ppb	1508816.152	1.04	246063630	400000	
Mg	24	2	45	4327.364	ppb	4327.364	1.10	324763	400000	
Al	27	2	45	236.909	ppb	236.909	9.98	4778	400000	
K	39	1	45	141706.298	ppb	141706.298	0.69	280908456	400000	
K	39	2	45	139671.381	ppb	139671.381	1.52	5134099	400000	
Ca	40	1	45	4070.793	ppb	4070.793	0.43	12081573	400000	
Ca	44	2	45	4360.138	ppb	4360.138	2.75	9003	400000	
Ti	47	2	45	8.140	ppb	8.140	24.64	143	4000	
V	51	2	72	474.655	ppb	474.655	0.82	335846	2000	
Cr	52	2	72	18.020	ppb	18.020	2.91	16814	5000	
Mn	55	2	72	3.350	ppb	3.350	8.35	1243	10000	
Fe	57	2	72	479.261	ppb	479.261	4.97	8429	400000	
Co	59	2	72	11.735	ppb	11.735	0.27	18673	2000	
Ni	60	2	72	423.041	ppb	423.041	1.06	191470	5000	
Cu	63	2	72	78.055	ppb	78.055	1.52	99420	5000	
Zn	66	2	72	24.232	ppb	24.232	6.97	4634	5000	
As	75	2	72	12.141	ppb	12.141	3.03	1384	2000	
Se	78	1	72	7.258	ppb	7.258	9.60	1075	2000	
Sr	88	2	72	109.991	ppb	109.991	1.43	41381	4000	
Zr	90	2	72	631.406	ppb	631.406	4.96	4748	1000	
Nb	93	2	72	-0.613	ppb	-0.613	-22.61	2037	200	
Mo	95	2	115	2593.949	ppb	2593.949	1.98	1644540	2000	
Pd	105	2	115	0.010	ppb	0.010	306.21	43	100	
Ag	107	2	115	0.163	ppb	0.163	13.59	407	100	
Cd	111	2	115	0.687	ppb	0.687	47.55	197	2000	
Sn	120	2	115	1.235	ppb	1.235	12.64	1050	2000	
Sb	121	2	115	2.723	ppb	2.723	2.99	1827	1000	
Ba	137	2	115	3.102	ppb	3.102	8.24	703	5000	
W	182	2	165	140.127	ppb	140.127	1.56	429829	100	
Pt	195	2	165	0.116	ppb	0.116	1.30	323	100	
Tl	205	2	165	0.007	ppb	0.007	103.12	143	2000	
Pb	208	2	165	1.660	ppb	1.660	1.47	13593	5000	
Th	232	2	165	0.099	ppb	0.099	15.74	1257	2000	
U	238	2	165	0.696	ppb	0.696	1.87	7016	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	427536	1.63	821388	52.05	60	120	IS Failed
Sc (IS)	45	1	HMI H2	16100161	0.29	28135324	57.22	60	120	IS Failed
Sc (IS)	45	2	HMI He	672215	0.88	1028528	65.36	60	120	
Sc (IS)	45	3	No Gas	23058405	0.40	44911069	51.34	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	6023728	0.90	10990003	54.81	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	737650	0.22	1134301	65.03	60	120	
In Internal Standard	115	2	HMI He	2478653	1.40	3548151	69.86	60	120	
Ho-165	165	2	HMI He	12330546	0.79	17324298	71.17	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	136_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T20:57:56-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	469.238	ppb	1.165	185164	500	93.8	90	110	
Li	7	2	45	414.205	ppb	7.963	9357	500	82.8	90	110	>+\-10%
Li	7	3	45	403.243	ppb	3.224	4813814	500	80.6	90	110	>+\-10%
Be	9	1	6	51.199	ppb	3.906	12009	50	102.4	90	110	
B	11	1	6	66.768	ppb	2.223	17407	50	133.5	90	110	>+\-10%
Na	23	1	45	7529.339	ppb	0.974	17314841	5000	150.6	90	110	>+\-10%
Na	23	2	45	7170.920	ppb	2.715	1280101	5000	143.4	90	110	>+\-10%
Mg	24	2	45	4887.987	ppb	1.570	398180	5000	97.8	90	110	
Al	27	2	45	5305.779	ppb	2.338	114179	5000	106.1	90	110	
K	39	1	45	5559.441	ppb	0.859	18688128	5000	111.2	90	110	>+\-10%
K	39	2	45	5215.529	ppb	1.103	219527	5000	104.3	90	110	
Ca	40	1	45	5077.036	ppb	0.605	16803580	5000	101.5	90	110	
Ca	44	2	45	5281.998	ppb	0.653	11832	5000	105.6	90	110	
Ti	47	2	45	49.329	ppb	12.256	943	50	98.7	90	110	
V	51	2	72	46.268	ppb	1.491	38081	50	92.5	90	110	
Cr	52	2	72	46.989	ppb	0.490	48368	50	94.0	90	110	
Mn	55	2	72	49.331	ppb	2.429	19828	50	98.7	90	110	
Fe	57	2	72	4634.983	ppb	1.850	89839	5000	92.7	90	110	
Co	59	2	72	46.816	ppb	0.488	82764	50	93.6	90	110	
Ni	60	2	72	46.331	ppb	1.845	23420	50	92.7	90	110	
Cu	63	2	72	45.492	ppb	1.476	64893	50	91.0	90	110	
Zn	66	2	72	44.182	ppb	5.700	9177	50	88.4	90	110	>+\-10%
As	75	2	72	48.500	ppb	2.569	6080	50	97.0	90	110	
Se	78	1	72	47.973	ppb	2.082	8160	50	95.9	90	110	
Sr	88	2	72	54.898	ppb	2.279	22976	50	109.8	90	110	
Zr	90	2	72	52.507	ppb	19.610	497	50	105.0	90	110	
Nb	93	2	72	75.278	ppb	0.652	180817	100	75.3	90	110	>+\-10%
Mo	95	2	115	48.108	ppb	1.388	34457	50	96.2	90	110	
Pd	105	2	115	43.394	ppb	0.268	48682	50	86.8	90	110	>+\-10%
Ag	107	2	115	43.206	ppb	1.356	104947	50	86.4	90	110	>+\-10%
Cd	111	2	115	46.927	ppb	2.262	15142	50	93.9	90	110	
Sn	120	2	115	47.179	ppb	2.169	39858	50	94.4	90	110	
Sb	121	2	115	48.502	ppb	2.962	36028	50	97.0	90	110	
Ba	137	2	115	50.632	ppb	3.224	12710	50	101.3	90	110	
W	182	2	165	46.111	ppb	1.480	158122	50	92.2	90	110	
Pt	195	2	165	43.555	ppb	1.426	125349	50	87.1	90	110	>+\-10%
Tl	205	2	165	49.282	ppb	0.864	314736	50	98.6	90	110	
Pb	208	2	165	49.069	ppb	1.400	418329	50	98.1	90	110	
Th	232	2	165	49.497	ppb	1.544	497792	50	99.0	90	110	
U	238	2	165	49.056	ppb	2.065	539457	50	98.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	514005	0.50	821388	62.58	60	120	
Sc (IS)	45	1	HMI H2	17962647	0.11	28135324	63.84	60	120	
Sc (IS)	45	2	HMI He	729670	0.55	1028528	70.94	60	120	
Sc (IS)	45	3	No Gas	26204112	0.65	44911069	58.35	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	6951845	0.25	10990003	63.26	60	120	
Ge Internal Standard	72	2	HMI He	820121	0.66	1134301	72.30	60	120	
In Internal Standard	115	2	HMI He	2797324	0.59	3548151	78.84	60	120	
Ho-165	165	2	HMI He	13730881	0.88	17324298	79.26	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	137_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T21:01:43-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-33.944	ppb	-7.3	2183133	10	
Be	9	1	6	0.018	ppb	129.9	13	0.5	
B	11	1	6	8.038	ppb	7.2	2410	0.5	>RL
Na	23	1	45	879.593	ppb	1.8	2205750	25	>RL
Na	23	2	45	794.086	ppb	0.4	152773	25	>RL
Mg	24	2	45	2.744	ppb	27.5	340	25	
Al	27	2	45	5.569	ppb	16.6	217	15	
K	39	1	45	320.728	ppb	11.3	7576432	50	>RL
K	39	2	45	29.449	ppb	25.2	13173	50	
Ca	40	1	45	12.873	ppb	3.0	74325	50	
Ca	44	2	45	7.614	ppb	121.9	43	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.123	ppb	-178.9	1794	1	
Cr	52	2	72	0.016	ppb	229.3	253	1	
Mn	55	2	72	0.093	ppb	119.9	77	0.5	
Fe	57	2	72	4.288	ppb	81.5	177	25	
Co	59	2	72	0.002	ppb	611.8	23	0.5	
Ni	60	2	72	0.434	ppb	45.7	343	1	
Cu	63	2	72	-0.044	ppb	-165.1	1077	1	
Zn	66	2	72	0.705	ppb	50.0	410	5	
As	75	2	72	0.056	ppb	141.5	30	1	
Se	78	1	72	0.178	ppb	26.0	39	1	
Sr	88	2	72	0.000	ppb	-13607.3	27	0.5	
Zr	90	2	72	-0.811	ppb	-227.4	57	1	
Nb	93	2	72	3.652	ppb	14.2	12453	2	>RL
Mo	95	2	115	1.128	ppb	7.1	843	0.5	>RL
Pd	105	2	115	0.023	ppb	44.3	63	1	
Ag	107	2	115	0.015	ppb	153.0	100	1	
Cd	111	2	115	0.031	ppb	173.2	10	0.5	
Sn	120	2	115	0.078	ppb	34.8	213	1	
Sb	121	2	115	0.292	ppb	40.0	260	0.6	
Ba	137	2	115	0.043	ppb	267.9	27	0.5	
W	182	2	165	0.179	ppb	34.7	1540	1	
Pt	195	2	165	0.027	ppb	27.7	103	1	
Tl	205	2	165	0.014	ppb	51.5	207	0.1	
Pb	208	2	165	0.000	ppb	-14270.4	1023	0.5	
Th	232	2	165	0.050	ppb	3.5	910	1	
U	238	2	165	0.045	ppb	7.3	667	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	539033	0.40	821388	65.62	60	120	
Sc (IS)	45	1	HMI H2	18521676	0.71	28135324	65.83	60	120	
Sc (IS)	45	2	HMI He	736585	0.37	1028528	71.62	60	120	
Sc (IS)	45	3	No Gas	26996972	1.71	44911069	60.11	60	120	
Ge Internal Standard	72	1	HMI H2	7100588	0.75	10990003	64.61	60	120	
Ge Internal Standard	72	2	HMI He	830430	0.32	1134301	73.21	60	120	
In Internal Standard	115	2	HMI He	2811955	0.08	3548151	79.25	60	120	
Ho-165	165	2	HMI He	13801799	0.52	17324298	79.67	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	138LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T21:05:31-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-20.284	ppb	-14.527	2211160	50	-40.6	70	130	>+/-30%
Be	9	1	6	1.100	ppb	10.298	280	1	110.0	70	130	
Na	23	2	45	622.022	ppb	0.956	124084	50	1244.0	70	130	>+/-30%
Mg	24	2	45	54.791	ppb	4.373	4698	50	109.6	70	130	
Al	27	2	45	38.169	ppb	12.844	940	30	127.2	70	130	
K	39	2	45	132.103	ppb	10.573	17591	100	132.1	70	130	>+/-30%
Ca	44	2	45	59.497	ppb	83.849	163	50	119.0	70	130	
V	51	2	72	4.404	ppb	5.651	5418	5	88.1	70	130	
Cr	52	2	72	1.924	ppb	13.652	2247	2	96.2	70	130	
Mn	55	2	72	0.899	ppb	21.058	407	1	89.9	70	130	
Fe	57	2	72	51.516	ppb	5.196	1110	50	103.0	70	130	
Co	59	2	72	1.027	ppb	7.452	1870	1	102.7	70	130	
Ni	60	2	72	1.816	ppb	11.988	1053	2	90.8	70	130	
Cu	63	2	72	1.909	ppb	12.345	3874	2	95.5	70	130	
Zn	66	2	72	9.660	ppb	14.550	2254	10	96.6	70	130	
As	75	2	72	4.680	ppb	3.607	619	5	93.6	70	130	
Se	78	1	72	4.616	ppb	3.395	811	5	92.3	70	130	
Sr	88	2	72	1.054	ppb	24.072	477	1	105.4	70	130	
Zr	90	2	72	8.640	ppb	34.174	137	0.5	1727.9	70	130	>+/-30%
Nb	93	2	72	8.355	ppb	1.699	23814	2	417.7	70	130	>+/-30%
Mo	95	2	115	2.248	ppb	6.191	1677	2	112.4	70	130	
Pd	105	2	115	-0.007	ppb	-3.907	30	1	-0.7	70	130	>+/-30%
Ag	107	2	115	4.516	ppb	4.025	11275	5	90.3	70	130	
Cd	111	2	115	0.939	ppb	16.198	310	1	93.9	70	130	
Sn	120	2	115	9.614	ppb	4.950	8420	10	96.1	70	130	
Sb	121	2	115	2.294	ppb	6.392	1784	2	114.7	70	130	
Ba	137	2	115	0.821	ppb	28.834	227	1	82.1	70	130	
W	182	2	165	4.771	ppb	0.881	17369	1	477.1	70	130	>+/-30%
Pt	195	2	165	0.010	ppb	19.489	57	1	1.0	70	130	>+/-30%
Tl	205	2	165	1.038	ppb	3.670	6815	1	103.8	70	130	
Pb	208	2	165	0.957	ppb	1.888	9255	1	95.7	70	130	
Th	232	2	165	2.067	ppb	0.954	21395	2	103.3	70	130	
U	238	2	165	1.049	ppb	4.993	11816	1	104.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	540465	0.54	821388	65.80	60	120	
Sc (IS)	45	1	HMI H2	18504657	0.49	28135324	65.77	60	120	
Sc (IS)	45	2	HMI He	749032	0.36	1028528	72.83	60	120	
Sc (IS)	45	3	No Gas	26298206	0.56	44911069	58.56	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	7115172	0.17	10990003	64.74	60	120	
Ge Internal Standard	72	2	HMI He	835925	0.58	1134301	73.70	60	120	
In Internal Standard	115	2	HMI He	2859782	1.02	3548151	80.60	60	120	
Ho-165	165	2	HMI He	13875456	0.51	17324298	80.09	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	139WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T21:09:18-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.036	ppb	0	0	0.5
Na	23	2	45	464.766	ppb	1.839355096	97719	25
Mg	24	2	45	7.564	ppb	21.35881218	767	25
Al	27	2	45	6.381	ppb	53.91460594	243	15
K	39	2	45	12.620	ppb	83.43111729	13000	50
Ca	44	2	45	1.164	ppb	633.6126738	30	25
V	51	2	72	-0.166	ppb	-196.6242502	1807	1
Cr	52	2	72	0.003	ppb	2030.58947	247	1
Mn	55	2	72	0.207	ppb	63.28411843	127	0.5
Fe	57	2	72	8.835	ppb	33.27845247	273	25
Co	59	2	72	0.011	ppb	86.43697477	40	0.5
Ni	60	2	72	0.035	ppb	160.9846892	143	1
Cu	63	2	72	-0.138	ppb	-42.32653919	970	1
Zn	66	2	72	0.017	ppb	2229.846038	277	5
As	75	2	72	-0.016	ppb	-426.4712107	22	1
Se	78	1	72	0.053	ppb	176.8812796	17	1
Nb	93	2	72	-0.431	ppb	-24.29635398	2800	2
Mo	95	2	115	0.290	ppb	27.39040168	250	0.5
Pd	105	2	115	-0.002	ppb	-1666.857033	37	1
Ag	107	2	115	-0.005	ppb	-241.6542671	53	1
Cd	111	2	115	0.020	ppb	173.2050808	7	0.5
Sn	120	2	115	0.026	ppb	180.1614283	177	1
Sb	121	2	115	0.081	ppb	51.21206207	107	0.6
Ba	137	2	115	0.090	ppb	112.6095511	40	0.5
W	182	2	165	0.042	ppb	112.7264685	1093	1
Pt	195	2	165	-0.001	ppb	-547.6969892	23	1
Tl	205	2	165	-0.007	ppb	-120.7769256	73	0.1
Pb	208	2	165	0.045	ppb	34.13019239	1437	0.5
Th	232	2	165	0.000	ppb	1296.774379	417	1
U	238	2	165	0.008	ppb	63.84776636	257	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	544006	0.71	821388	66.23	60	120	
Sc (IS)	45	1	HMI H2	18701248	0.28	28135324	66.47	60	120	
Sc (IS)	45	2	HMI He	766306	0.79	1028528	74.51	60	120	
Sc (IS)	45	3	No Gas	26833727	0.58	44911069	59.75	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	7237272	0.29	10990003	65.85	60	120	
Ge Internal Standard	72	2	HMI He	852960	0.51	1134301	75.20	60	120	
In Internal Standard	115	2	HMI He	2926246	0.68	3548151	82.47	60	120	
Ho-165	165	2	HMI He	14119234	0.95	17324298	81.50	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	140WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T21:13:06-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.036	ppb	0	0	0.5
Na	23	2	45	395.393	ppb	4.755764483	84788	25
Mg	24	2	45	9.094	ppb	9.598552668	897	25
Al	27	2	45	6.378	ppb	54.64768151	243	15
K	39	2	45	13.479	ppb	30.90564632	13033	50
Ca	44	2	45	3.991	ppb	161.1475267	37	25
V	51	2	72	-0.120	ppb	-382.1826606	1847	1
Cr	52	2	72	-0.019	ppb	-248.4248405	223	1
Mn	55	2	72	0.199	ppb	56.79568264	123	0.5
Fe	57	2	72	6.329	ppb	38.91998707	223	25
Co	59	2	72	0.011	ppb	50.52347423	40	0.5
Ni	60	2	72	0.072	ppb	16.92294501	163	1
Cu	63	2	72	0.007	ppb	1307.829407	1183	1
Zn	66	2	72	0.203	ppb	89.63723635	317	5
As	75	2	72	-0.016	ppb	-339.1757518	22	1
Se	78	1	72	0.037	ppb	92.35079274	15	1
Nb	93	2	72	-0.732	ppb	-8.358068827	2070	2
Mo	95	2	115	0.230	ppb	33.94002513	203	0.5
Pd	105	2	115	-0.007	ppb	-362.7755189	30	1
Ag	107	2	115	-0.014	ppb	-103.3444359	30	1
Cd	111	2	115	0.070	ppb	23.52230249	23	0.5
Sn	120	2	115	-0.014	ppb	-175.1961499	140	1
Sb	121	2	115	-0.009	ppb	-304.2033388	37	0.6
Ba	137	2	115	-0.011	ppb	-529.5438808	13	0.5
W	182	2	165	-0.021	ppb	-201.6575545	877	1
Pt	195	2	165	-0.002	ppb	-288.8351149	20	1
Tl	205	2	165	0.002	ppb	375.8016742	133	0.1
Pb	208	2	165	0.057	ppb	28.22405191	1547	0.5
Th	232	2	165	0.000	ppb	1772.229145	417	1
U	238	2	165	0.006	ppb	34.582058	240	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	549911	0.58	821388	66.95	60	120	
Sc (IS)	45	1	HMI H2	18992109	0.78	28135324	67.50	60	120	
Sc (IS)	45	2	HMI He	766083	0.69	1028528	74.48	60	120	
Sc (IS)	45	3	No Gas	27063457	0.04	44911069	60.26	60	120	
Ge Internal Standard	72	1	HMI H2	7314112	0.51	10990003	66.55	60	120	
Ge Internal Standard	72	2	HMI He	854586	0.68	1134301	75.34	60	120	
In Internal Standard	115	2	HMI He	2898801	1.25	3548151	81.70	60	120	
Ho-165	165	2	HMI He	14153815	1.01	17324298	81.70	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	141WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-13T21:16:53-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	012CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.023	ppb	-101.1656214	3	0.5
Na	23	2	45	339.784	ppb	1.040757554	75337	25
Mg	24	2	45	9.764	ppb	17.58243534	967	25
Al	27	2	45	3.326	ppb	28.7851635	177	15
K	39	2	45	20.131	ppb	85.01498942	13467	50
Ca	44	2	45	9.539	ppb	161.1361928	50	25
V	51	2	72	-0.063	ppb	-176.7195322	1907	1
Cr	52	2	72	-0.042	ppb	-122.0199943	200	1
Mn	55	2	72	0.165	ppb	152.0043061	110	0.5
Fe	57	2	72	6.931	ppb	18.30424809	237	25
Co	59	2	72	-0.007	ppb	-42.35475247	7	0.5
Ni	60	2	72	0.083	ppb	92.66813798	170	1
Cu	63	2	72	-0.007	ppb	-860.1797758	1170	1
Zn	66	2	72	0.147	ppb	297.106689	307	5
As	75	2	72	0.023	ppb	333.7746037	27	1
Se	78	1	72	0.119	ppb	38.3882368	29	1
Nb	93	2	72	-0.836	ppb	-15.72323754	1824	2
Mo	95	2	115	0.164	ppb	34.71139865	157	0.5
Pd	105	2	115	0.006	ppb	190.8973356	47	1
Ag	107	2	115	-0.013	ppb	-72.83998361	33	1
Cd	111	2	115	0.010	ppb	173.2050808	3	0.5
Sn	120	2	115	-0.013	ppb	-262.4002899	143	1
Sb	121	2	115	0.033	ppb	98.02928285	70	0.6
Ba	137	2	115	0.051	ppb	130.1641411	30	0.5
W	182	2	165	0.007	ppb	590.4719744	980	1
Pt	195	2	165	0.002	ppb	417.3440921	33	1
Tl	205	2	165	0.001	ppb	1142.260039	127	0.1
Pb	208	2	165	0.035	ppb	43.42799515	1363	0.5
Th	232	2	165	-0.008	ppb	-105.3717342	333	1
U	238	2	165	0.006	ppb	146.1031685	233	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	548807	0.57	821388	66.81	60	120	
Sc (IS)	45	1	HMI H2	18995797	0.83	28135324	67.52	60	120	
Sc (IS)	45	2	HMI He	775207	1.37	1028528	75.37	60	120	
Sc (IS)	45	3	No Gas	27623950	0.65	44911069	61.51	60	120	
Ge Internal Standard	72	1	HMI H2	7308878	0.57	10990003	66.50	60	120	
Ge Internal Standard	72	2	HMI He	859818	0.57	1134301	75.80	60	120	
In Internal Standard	115	2	HMI He	2936989	2.07	3548151	82.78	60	120	
Ho-165	165	2	HMI He	14238096	0.44	17324298	82.19	60	120	

Calibration Standard Report

Sample Table

Sample Name	ic-5425623
Data File Name	143CALS.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T21:24:59-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	142CALB.d
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	170733	0.00
Li	7	2	HMI He	8236	0.03
Li	7	3	No Gas	4796729	0.00
Be	9	1	HMI H2	3388	2.63
B	11	1	HMI H2	3941	1.70
Na	23	1	HMI H2	4016428	0.00
Na	23	2	HMI He	111286	0.06
Mg	24	2	HMI He	22809	0.63
Al	27	2	HMI He	6247	2.31
K	39	1	HMI H2	8983235	0.00
K	39	2	HMI He	22179	0.31
Ca	40	1	HMI H2	4520967	0.00
Ca	44	2	HMI He	640	22.89
Ti	47	2	HMI He	40	272.43
V	51	2	HMI He	3418	2.61
Cr	52	2	HMI He	2642	5.21
Mn	55	2	HMI He	1037	12.86
Fe	57	2	HMI He	4753	2.96
Co	59	2	HMI He	4409	3.35
Ni	60	2	HMI He	1634	7.71
Cu	63	2	HMI He	4550	2.32
Zn	66	2	HMI He	720	13.14
As	75	2	HMI He	307	44.88
Se	78	1	HMI H2	2004	4.46
Sr	88	2	HMI He	1177	11.73
Zr	90	2	HMI He	177	45.35
Nb	93	2	HMI He	2968	3.67
Mo	95	2	HMI He	1220	11.34
Pd	105	2	HMI He	2188	6.84
Ag	107	2	HMI He	5521	2.64
Cd	111	2	HMI He	714	21.27
Sn	120	2	HMI He	1948	6.98
Sb	121	2	HMI He	1047	13.99
Ba	137	2	HMI He	647	19.76
Nd	146	2	HMI He	2262	6.54
Sm	147	2	HMI He	1894	7.89
Sm	150	2	HMI He	2088	6.92
Gd	156	1	HMI H2	39363	0.23
Gd	157	1	HMI H2	30658	0.31
W	182	2	HMI He	7211	1.67
Pt	195	2	HMI He	6416	2.23
Tl	205	2	HMI He	15051	0.96
Pb	208	2	HMI He	21369	0.66
Th	232	2	HMI He	24736	0.57
U	238	2	HMI He	23150	0.62

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	878410	11.83	556660	157.80	60	120	IS Failed
Sc (IS)	45	1	HMI H2	28270099	13.67	19340799	146.17	60	120	IS Failed
Sc (IS)	45	2	HMI He	1292110	5.07	769603	167.89	60	120	IS Failed
Sc (IS)	45	3	No Gas	53758076	0.89	27975403	192.16	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	10717927	13.48	7481294	143.26	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	1444398	4.34	860820	167.79	60	120	IS Failed
In Internal Standard	115	2	HMI He	4392296	3.90	2924576	150.19	60	120	IS Failed
Ho-165	165	2	HMI He	21979555	4.47	14099474	155.89	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	144_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T21:28:46-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	142CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	3300.043	ppb	3.388	196597	500	660.0	90	110	>+\-10%
Li	7	2	45	6134.030	ppb	10.086	9777	500	1226.8	90	110	>+\-10%
Li	7	3	45	12271.956	ppb	1.883	5267617	500	2454.4	90	110	>+\-10%
Be	9	1	6	589.117	ppb	2.205	13527	50	1178.2	90	110	>+\-10%
B	11	1	6	778.878	ppb	0.980	15042	50	1557.8	90	110	>+\-10%
Na	23	1	45	57756.743	ppb	0.789	13301768	5000	1155.1	90	110	>+\-10%
Na	23	2	45	7645304.243	ppb	0.896	963777	5000	152906.1	90	110	>+\-10%
Mg	24	2	45	298686.266	ppb	0.576	432863	5000	5973.7	90	110	>+\-10%
Al	27	2	45	322281.078	ppb	1.064	123295	5000	6445.6	90	110	>+\-10%
K	39	1	45	-81649.459	ppb	-1.432	20218527	5000	-1633.0	90	110	>+\-10%
K	39	2	45	3384684.248	ppb	0.804	232690	5000	67693.7	90	110	>+\-10%
Ca	40	1	45	54065.338	ppb	1.695	18392215	5000	1081.3	90	110	>+\-10%
Ca	44	2	45	350604.110	ppb	4.083	12339	5000	7012.1	90	110	>+\-10%
Ti	47	2	45	3656.249	ppb	18.392	937	50	7312.5	90	110	>+\-10%
V	51	2	72	19594.017	ppb	1.683	42580	50	39188.0	90	110	>+\-10%
Cr	52	2	72	3485.792	ppb	1.866	52620	50	6971.6	90	110	>+\-10%
Mn	55	2	72	3788.652	ppb	2.390	22128	50	7577.3	90	110	>+\-10%
Fe	57	2	72	348626.037	ppb	1.003	99741	5000	6972.5	90	110	>+\-10%
Co	59	2	72	3244.872	ppb	1.097	90368	50	6489.7	90	110	>+\-10%
Ni	60	2	72	3724.532	ppb	2.633	25777	50	7449.1	90	110	>+\-10%
Cu	63	2	72	3914.281	ppb	1.055	70978	50	7828.6	90	110	>+\-10%
Zn	66	2	72	-26838.509	ppb	-4.799	10174	50	-53677.0	90	110	>+\-10%
As	75	2	72	3768.116	ppb	1.123	6535	50	7536.2	90	110	>+\-10%
Se	78	1	72	589.981	ppb	2.679	9016	50	1180.0	90	110	>+\-10%
Sr	88	2	72	3312.955	ppb	2.564	23524	50	6625.9	90	110	>+\-10%
Zr	90	2	72	968.205	ppb	22.864	447	50	1936.4	90	110	>+\-10%
Nb	93	2	72	91727.306	ppb	0.785	210783	100	91727.3	90	110	>+\-10%
Mo	95	2	115	5627.914	ppb	2.696	33845	50	11255.8	90	110	>+\-10%
Pd	105	2	115	3583.359	ppb	1.310	54055	50	7166.7	90	110	>+\-10%
Ag	107	2	115	2971.628	ppb	2.949	114447	50	5943.3	90	110	>+\-10%
Cd	111	2	115	3107.587	ppb	4.478	15493	50	6215.2	90	110	>+\-10%
Sn	120	2	115	3491.052	ppb	1.523	42453	50	6982.1	90	110	>+\-10%
Sb	121	2	115	5589.053	ppb	3.464	38699	50	11178.1	90	110	>+\-10%
Ba	137	2	115	3064.721	ppb	1.849	13260	50	6129.4	90	110	>+\-10%
W	182	2	165	4194.692	ppb	0.335	167518	50	8389.4	90	110	>+\-10%
Pt	195	2	165	3096.350	ppb	1.431	134871	50	6192.7	90	110	>+\-10%
Tl	205	2	165	3238.634	ppb	0.172	332380	50	6477.3	90	110	>+\-10%
Pb	208	2	165	3156.777	ppb	0.260	442430	50	6313.6	90	110	>+\-10%
Th	232	2	165	3138.382	ppb	0.488	524861	50	6276.8	90	110	>+\-10%
U	238	2	165	3582.077	ppb	0.308	565902	50	7164.2	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	551526	0.12	556660	99.08	60	120	
Sc (IS)	45	1	HMI H2	19742231	0.50	19340799	102.08	60	120	
Sc (IS)	45	2	HMI He	795796	0.86	769603	103.40	60	120	
Sc (IS)	45	3	No Gas	28811545	0.53	27975403	102.99	60	120	
Ge Internal Standard	72	1	HMI H2	7574876	0.20	7481294	101.25	60	120	
Ge Internal Standard	72	2	HMI He	879559	0.81	860820	102.18	60	120	
In Internal Standard	115	2	HMI He	2966520	0.46	2924576	101.43	60	120	
Ho-165	165	2	HMI He	14501811	0.23	14099474	102.85	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	145_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T21:32:33-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	142CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-54.806	ppb	-286.0	2383749	10	
Be	9	1	6	0.000	ppb	#DIV/0!	0	0.5	
B	11	1	6	23.567	ppb	52.2	1280	0.5	>RL
Na	23	1	45	-1092.980	ppb	-1.0	648683	25	
Na	23	2	45	-182787.603	ppb	-6.5	48076	25	
Mg	24	2	45	-3.762	ppb	-476.4	280	25	
Al	27	2	45	258.680	ppb	17.2	330	15	>RL
K	39	1	45	1125.041	ppb	12.9	7966895	50	>RL
K	39	2	45	629.950	ppb	718.1	13517	50	>RL
Ca	40	1	45	23.720	ppb	13.9	76784	50	
Ca	44	2	45	313.083	ppb	275.7	77	25	>RL
Ti	47	2	45	12.893	ppb	173.2	3	0.5	>RL
V	51	2	72	190.549	ppb	74.1	2354	1	>RL
Cr	52	2	72	-0.216	ppb	-1856.7	170	1	
Mn	55	2	72	-2.059	ppb	-47.3	63	0.5	
Fe	57	2	72	-56.315	ppb	-96.2	147	25	
Co	59	2	72	-0.260	ppb	-78.6	13	0.5	
Ni	60	2	72	-13.704	ppb	-134.2	260	1	
Cu	63	2	72	-4.637	ppb	-171.2	1003	1	
Zn	66	2	72	218.186	ppb	100.3	413	5	>RL
As	75	2	72	-0.773	ppb	-301.7	21	1	
Se	78	1	72	0.820	ppb	78.9	33	1	
Sr	88	2	72	-2.515	ppb	-96.5	20	0.5	
Zr	90	2	72	2.523	ppb	2123.9	73	1	>RL
Nb	93	2	72	5928.116	ppb	8.1	15115	2	>RL
Mo	95	2	115	-1.719	ppb	-548.8	253	0.5	
Pd	105	2	115	3.818	ppb	76.7	90	1	>RL
Ag	107	2	115	0.824	ppb	104.9	60	1	
Cd	111	2	115	1.229	ppb	268.3	10	0.5	>RL
Sn	120	2	115	12.302	ppb	9.6	307	1	>RL
Sb	121	2	115	43.167	ppb	19.6	347	0.6	>RL
Ba	137	2	115	25.148	ppb	189.1	130	0.5	>RL
W	182	2	165	10.653	ppb	19.8	1390	1	>RL
Pt	195	2	165	0.107	ppb	568.7	70	1	
Tl	205	2	165	0.996	ppb	34.0	213	0.1	>RL
Pb	208	2	165	1.366	ppb	39.6	907	0.5	>RL
Th	232	2	165	2.927	ppb	20.4	810	1	>RL
U	238	2	165	4.430	ppb	13.5	860	0.5	>RL

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	574213	0.58	556660	103.15	60	120	
Sc (IS)	45	1	HMI H2	20081145	0.55	19340799	103.83	60	120	
Sc (IS)	45	2	HMI He	802802	0.18	769603	104.31	60	120	
Sc (IS)	45	3	No Gas	29620918	0.93	27975403	105.88	60	120	
Ge Internal Standard	72	1	HMI H2	7707678	0.37	7481294	103.03	60	120	
Ge Internal Standard	72	2	HMI He	889628	0.28	860820	103.35	60	120	
In Internal Standard	115	2	HMI He	3013323	3.62	2924576	103.03	60	120	
Ho-165	165	2	HMI He	14542197	0.65	14099474	103.14	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	146LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T21:36:21-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	142CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	168.429	ppb	20.149	2432753	50	336.9	70	130	>+/-30%
Be	9	1	6	13.755	ppb	21.499	330	1	1375.5	70	130	>+/-30%
Na	23	2	45	-130641.927	ppb	-3.984	54659	50	-261283.9	70	130	>+/-30%
Mg	24	2	45	3265.539	ppb	11.096	5095	50	6531.1	70	130	>+/-30%
Al	27	2	45	1891.699	ppb	9.426	967	30	6305.7	70	130	>+/-30%
K	39	2	45	74041.926	ppb	18.292	18456	100	74041.9	70	130	>+/-30%
Ca	44	2	45	3205.178	ppb	41.082	180	50	6410.4	70	130	>+/-30%
V	51	2	72	1991.967	ppb	4.544	6165	5	39839.3	70	130	>+/-30%
Cr	52	2	72	152.264	ppb	3.135	2504	2	7613.2	70	130	>+/-30%
Mn	55	2	72	77.240	ppb	19.843	533	1	7724.0	70	130	>+/-30%
Fe	57	2	72	3384.142	ppb	1.981	1147	50	6768.3	70	130	>+/-30%
Co	59	2	72	64.517	ppb	9.792	1847	1	6451.7	70	130	>+/-30%
Ni	60	2	72	107.088	ppb	17.870	1100	2	5354.4	70	130	>+/-30%
Cu	63	2	72	157.957	ppb	4.065	3961	2	7897.9	70	130	>+/-30%
Zn	66	2	72	-5051.678	ppb	-9.846	2350	10	-50516.8	70	130	>+/-30%
As	75	2	72	368.829	ppb	2.741	671	5	7376.6	70	130	>+/-30%
Se	78	1	72	60.488	ppb	3.995	972	5	1209.8	70	130	>+/-30%
Sr	88	2	72	76.107	ppb	18.488	587	1	7610.7	70	130	>+/-30%
Zr	90	2	72	170.664	ppb	78.455	140	0.5	34132.9	70	130	>+/-30%
Nb	93	2	72	12968.421	ppb	5.547	31530	2	648421.1	70	130	>+/-30%
Mo	95	2	115	194.355	ppb	0.832	1444	2	9717.8	70	130	>+/-30%
Pd	105	2	115	1.239	ppb	52.527	50	1	123.9	70	130	
Ag	107	2	115	305.466	ppb	1.880	11999	5	6109.3	70	130	>+/-30%
Cd	111	2	115	52.537	ppb	9.612	270	1	5253.7	70	130	>+/-30%
Sn	120	2	115	708.684	ppb	7.487	8893	10	7086.8	70	130	>+/-30%
Sb	121	2	115	228.562	ppb	2.615	1654	2	11428.1	70	130	>+/-30%
Ba	137	2	115	49.950	ppb	16.417	240	1	4995.0	70	130	>+/-30%
W	182	2	165	420.446	ppb	3.149	17876	1	42044.6	70	130	>+/-30%
Pt	195	2	165	1.072	ppb	94.618	113	1	107.2	70	130	
Tl	205	2	165	65.573	ppb	1.556	6922	1	6557.3	70	130	>+/-30%
Pb	208	2	165	62.104	ppb	2.887	9519	1	6210.4	70	130	>+/-30%
Th	232	2	165	133.379	ppb	3.325	22888	2	6668.9	70	130	>+/-30%
U	238	2	165	73.304	ppb	1.755	11879	1	7330.4	70	130	>+/-30%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	576557	0.38	556660	103.57	60	120	
Sc (IS)	45	1	HMI H2	20073908	0.60	19340799	103.79	60	120	
Sc (IS)	45	2	HMI He	809124	0.80	769603	105.14	60	120	
Sc (IS)	45	3	No Gas	29546201	0.75	27975403	105.61	60	120	
Ge Internal Standard	72	1	HMI H2	7811963	0.14	7481294	104.42	60	120	
Ge Internal Standard	72	2	HMI He	894417	0.65	860820	103.90	60	120	
In Internal Standard	115	2	HMI He	3019105	0.43	2924576	103.23	60	120	
Ho-165	165	2	HMI He	14680311	0.32	14099474	104.12	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	147WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T21:40:09-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	142CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.280	ppb	173.2050808	7	0.5
Na	23	2	45	-198881.984	ppb	-0.611539511	45892	25
Mg	24	2	45	612.669	ppb	30.82984114	1173	25
Al	27	2	45	-93.018	ppb	-70.37474266	193	15
K	39	2	45	10175.518	ppb	51.6808936	14054	50
Ca	44	2	45	-338.096	ppb	-48.54870863	53	25
V	51	2	72	97.713	ppb	82.76231929	2154	1
Cr	52	2	72	3.988	ppb	78.88265695	233	1
Mn	55	2	72	9.283	ppb	46.4494241	130	0.5
Fe	57	2	72	221.763	ppb	54.48976264	227	25
Co	59	2	72	-0.140	ppb	-297.4372537	17	0.5
Ni	60	2	72	-32.476	ppb	-19.43102115	130	1
Cu	63	2	72	-0.981	ppb	-798.2279054	1067	1
Zn	66	2	72	453.715	ppb	8.36264307	327	5
As	75	2	72	2.259	ppb	204.9386741	26	1
Se	78	1	72	-0.212	ppb	-139.8399162	17	1
Nb	93	2	72	1030.893	ppb	8.646071316	3801	2
Mo	95	2	115	-21.498	ppb	-40.64279752	130	0.5
Pd	105	2	115	1.299	ppb	133.2844787	50	1
Ag	107	2	115	0.260	ppb	152.8185676	37	1
Cd	111	2	115	-0.010	ppb	-11453.33672	3	0.5
Sn	120	2	115	0.686	ppb	701.5788798	160	1
Sb	121	2	115	8.257	ppb	110.124873	100	0.6
Ba	137	2	115	-3.870	ppb	-34.30698777	3	0.5
W	182	2	165	0.463	ppb	445.9858717	973	1
Pt	195	2	165	-0.185	ppb	-187.728371	57	1
Tl	205	2	165	0.364	ppb	39.16586208	147	0.1
Pb	208	2	165	5.435	ppb	24.8368205	1460	0.5
Th	232	2	165	0.871	ppb	34.07934209	460	1
U	238	2	165	0.769	ppb	49.4048574	277	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	568779	0.43	556660	102.18	60	120	
Sc (IS)	45	1	HMI H2	19996542	0.74	19340799	103.39	60	120	
Sc (IS)	45	2	HMI He	797855	0.08	769603	103.67	60	120	
Sc (IS)	45	3	No Gas	29662075	1.17	27975403	106.03	60	120	
Ge Internal Standard	72	1	HMI H2	7715745	0.52	7481294	103.13	60	120	
Ge Internal Standard	72	2	HMI He	888050	0.78	860820	103.16	60	120	
In Internal Standard	115	2	HMI He	2960524	1.42	2924576	101.23	60	120	
Ho-165	165	2	HMI He	14373264	0.66	14099474	101.94	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	148WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T21:43:57-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	142CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.000	ppb	#DIV/0!	0	0.5
Na	23	2	45	-215665.497	ppb	-0.290485385	43829	25
Mg	24	2	45	499.397	ppb	9.692542458	1007	25
Al	27	2	45	-144.311	ppb	-45.37626856	173	15
K	39	2	45	709.160	ppb	646.3818101	13410	50
Ca	44	2	45	-1095.988	ppb	-65.62525642	27	25
V	51	2	72	14.547	ppb	101.9716645	1974	1
Cr	52	2	72	-0.390	ppb	-401.2476279	167	1
Mn	55	2	72	1.937	ppb	408.9685242	87	0.5
Fe	57	2	72	258.961	ppb	52.47049291	237	25
Co	59	2	72	1.167	ppb	45.20760106	53	0.5
Ni	60	2	72	-31.426	ppb	-15.07287239	137	1
Cu	63	2	72	-3.213	ppb	-63.67804201	1023	1
Zn	66	2	72	569.048	ppb	30.65329637	283	5
As	75	2	72	1.167	ppb	556.8383015	24	1
Se	78	1	72	-0.046	ppb	-557.8314101	20	1
Nb	93	2	72	484.072	ppb	25.91689834	2534	2
Mo	95	2	115	-29.287	ppb	-6.401515645	83	0.5
Pd	105	2	115	-1.355	ppb	-48.82484715	10	1
Ag	107	2	115	0.350	ppb	131.0913294	40	1
Cd	111	2	115	1.326	ppb	261.385324	10	0.5
Sn	120	2	115	0.953	ppb	430.9423827	163	1
Sb	121	2	115	-0.525	ppb	-722.519369	40	0.6
Ba	137	2	115	3.900	ppb	182.3304614	37	0.5
W	182	2	165	-2.439	ppb	-169.9771657	860	1
Pt	195	2	165	-0.263	ppb	-132.9922629	53	1
Tl	205	2	165	0.591	ppb	71.11410856	170	0.1
Pb	208	2	165	4.646	ppb	23.60357359	1353	0.5
Th	232	2	165	0.851	ppb	67.89546563	457	1
U	238	2	165	0.365	ppb	224.8774935	213	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	572697	0.79	556660	102.88	60	120	
Sc (IS)	45	1	HMI H2	20026145	0.77	19340799	103.54	60	120	
Sc (IS)	45	2	HMI He	796155	0.10	769603	103.45	60	120	
Sc (IS)	45	3	No Gas	29587572	0.67	27975403	105.76	60	120	
Ge Internal Standard	72	1	HMI H2	7750234	0.40	7481294	103.59	60	120	
Ge Internal Standard	72	2	HMI He	885006	0.93	860820	102.81	60	120	
In Internal Standard	115	2	HMI He	2953996	0.67	2924576	101.01	60	120	
Ho-165	165	2	HMI He	14389989	0.59	14099474	102.06	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	149WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T21:47:44-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	142CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.000	ppb	#DIV/0!	0	0.5
Na	23	2	45	-238752.473	ppb	-4.952563738	41071	25
Mg	24	2	45	634.143	ppb	5.569836862	1200	25
Al	27	2	45	-12.929	ppb	-493.4088946	223	15
K	39	2	45	4558.816	ppb	132.2112248	13647	50
Ca	44	2	45	-1198.592	ppb	-58.37844751	23	25
V	51	2	72	74.807	ppb	238.2058158	2107	1
Cr	52	2	72	3.347	ppb	134.0261145	223	1
Mn	55	2	72	13.836	ppb	27.99857528	157	0.5
Fe	57	2	72	118.383	ppb	215.5785247	197	25
Co	59	2	72	-0.136	ppb	-310.0175935	17	0.5
Ni	60	2	72	-33.391	ppb	-25.09439069	123	1
Cu	63	2	72	-2.030	ppb	-87.34778095	1047	1
Zn	66	2	72	536.073	ppb	20.71298936	297	5
As	75	2	72	4.816	ppb	171.7836339	31	1
Se	78	1	72	0.716	ppb	104.759379	32	1
Nb	93	2	72	260.349	ppb	26.03020493	2024	2
Mo	95	2	115	-27.624	ppb	-14.97546892	93	0.5
Pd	105	2	115	0.845	ppb	247.9971065	43	1
Ag	107	2	115	0.598	ppb	153.8688469	50	1
Cd	111	2	115	-0.675	ppb	-1.56129E-06	0	0.5
Sn	120	2	115	0.080	ppb	1821.943104	153	1
Sb	121	2	115	4.792	ppb	61.26385798	77	0.6
Ba	137	2	115	0.744	ppb	709.0139275	23	0.5
W	182	2	165	-1.062	ppb	-261.9930142	917	1
Pt	195	2	165	-0.722	ppb	-104.0927398	33	1
Tl	205	2	165	-0.028	ppb	-1458.662428	107	0.1
Pb	208	2	165	5.587	ppb	13.83579873	1487	0.5
Th	232	2	165	0.303	ppb	62.532874	367	1
U	238	2	165	0.403	ppb	44.6049104	220	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	570443	0.48	556660	102.48	60	120	
Sc (IS)	45	1	HMI H2	20146783	0.72	19340799	104.17	60	120	
Sc (IS)	45	2	HMI He	795414	2.42	769603	103.35	60	120	
Sc (IS)	45	3	No Gas	29935621	0.81	27975403	107.01	60	120	
Ge Internal Standard	72	1	HMI H2	7756161	1.21	7481294	103.67	60	120	
Ge Internal Standard	72	2	HMI He	886922	1.61	860820	103.03	60	120	
In Internal Standard	115	2	HMI He	2958294	2.21	2924576	101.15	60	120	
Ho-165	165	2	HMI He	14415153	1.34	14099474	102.24	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5425622
Data File Name	150CALB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T21:51:31-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	89092	0.00
Li	7	2	HMI He	4274	0.02
Li	7	3	No Gas	2434204	0.00
Be	9	1	HMI H2	0	#VALUE!
B	11	1	HMI H2	697	2.18
Na	23	1	HMI H2	468975	0.00
Na	23	2	HMI He	34574	0.01
Mg	24	2	HMI He	450	5.13
Al	27	2	HMI He	143	14.05
K	39	2	HMI He	14825	0.01
Ca	44	2	HMI He	43	81.35
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	1950	0.65
Cr	52	2	HMI He	157	16.96
Mn	55	2	HMI He	87	33.51
Fe	57	2	HMI He	107	48.41
Co	59	2	HMI He	10	1000.00
Ni	60	2	HMI He	310	6.50
Cu	63	2	HMI He	980	0.99
Zn	66	2	HMI He	443	1.79
As	75	2	HMI He	19	191.76
Se	78	1	HMI H2	12	481.13
Sr	88	2	HMI He	33	289.31
Zr	90	2	HMI He	43	110.86
Nb	93	2	HMI He	1717	0.64
Mo	95	2	HMI He	150	11.76
Pd	105	2	HMI He	37	239.10
Ag	107	2	HMI He	40	62.50
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	153	10.70
Sb	121	2	HMI He	27	214.81
Ba	137	2	HMI He	10	1000.00
W	182	2	HMI He	873	0.65
Pt	195	2	HMI He	43	122.99
Tl	205	2	HMI He	133	18.08
Pb	208	2	HMI He	713	0.63
Th	232	2	HMI He	343	2.73
U	238	2	HMI He	153	21.82

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	578827	1.20
Sc (IS)	45	1	HMI H2	20189926	0.52
Sc (IS)	45	2	HMI He	800581	0.70
Sc (IS)	45	3	No Gas	29939617	0.50
Ge Internal Standard	72	1	HMI H2	7861060	0.61
Ge Internal Standard	72	2	HMI He	893702	0.71
In Internal Standard	115	2	HMI He	2972458	2.09
Ho-165	165	2	HMI He	14419082	0.54

Calibration Standard Report

Sample Table

Sample Name	ic-5425623
Data File Name	151CALS.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T21:55:20-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	150CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	320210	0.00
Li	7	2	HMI He	15882	0.02
Li	7	3	No Gas	8611666	0.00
Be	9	1	HMI H2	26782	0.02
B	11	1	HMI H2	30075	0.01
Na	23	1	HMI H2	27163747	0.00
Na	23	2	HMI He	1963880	0.00
Mg	24	2	HMI He	881100	0.00
Al	27	2	HMI He	249476	0.00
K	39	1	HMI H2	33586345	0.00
K	39	2	HMI He	465933	0.00
Ca	40	1	HMI H2	39383566	0.00
Ca	44	2	HMI He	25593	0.01
Ti	47	2	HMI He	2214	0.21
V	51	2	HMI He	84081	0.00
Cr	52	2	HMI He	106763	0.00
Mn	55	2	HMI He	44359	0.00
Fe	57	2	HMI He	200740	0.00
Co	59	2	HMI He	182072	0.00
Ni	60	2	HMI He	51285	0.00
Cu	63	2	HMI He	140644	0.00
Zn	66	2	HMI He	19671	0.00
As	75	2	HMI He	13309	0.01
Se	78	1	HMI H2	18754	0.02
Sr	88	2	HMI He	47447	0.00
Zr	90	2	HMI He	593	3.17
Nb	93	2	HMI He	468989	0.00
Mo	95	2	HMI He	67247	0.00
Pd	105	2	HMI He	107988	0.00
Ag	107	2	HMI He	227803	0.00
Cd	111	2	HMI He	31787	0.01
Sn	120	2	HMI He	85589	0.00
Sb	121	2	HMI He	76836	0.00
Ba	137	2	HMI He	26256	0.01
Nd	146	2	HMI He	96602	0.00
Sm	147	2	HMI He	83257	0.00
Sm	150	2	HMI He	79572	0.00
Gd	156	1	HMI H2	350497	0.00
Gd	157	1	HMI H2	265687	0.00
W	182	2	HMI He	337305	0.00
Pt	195	2	HMI He	272964	0.00
Tl	205	2	HMI He	660031	0.00
Pb	208	2	HMI He	868337	0.00
Th	232	2	HMI He	1033069	0.00
U	238	2	HMI He	1112696	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	534108	5.50	578827	92.27	60	120	
Sc (IS)	45	1	HMI H2	19164581	8.61	20189926	94.92	60	120	
Sc (IS)	45	2	HMI He	806740	0.53	800581	100.77	60	120	
Sc (IS)	45	3	No Gas	30214852	0.35	29939617	100.92	60	120	
Ge Internal Standard	72	1	HMI H2	7510082	6.20	7861060	95.54	60	120	
Ge Internal Standard	72	2	HMI He	890710	0.44	893702	99.67	60	120	
In Internal Standard	115	2	HMI He	2924938	1.10	2972458	98.40	60	120	
Ho-165	165	2	HMI He	14412502	0.95	14419082	99.95	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	152_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T21:59:08-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	150CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	459.931	ppb	2.913	205696	500	92.0	90	110	
Li	7	2	45	554.831	ppb	3.966	10728	500	111.0	90	110	>+\-10%
Li	7	3	45	492.703	ppb	4.186	5598537	500	98.5	90	110	
Be	9	1	6	47.345	ppb	3.289	13497	50	94.7	90	110	
B	11	1	6	48.361	ppb	2.993	15826	50	96.7	90	110	
Na	23	1	45	4602.117	ppb	1.590	13621055	5000	92.0	90	110	
Na	23	2	45	4897.318	ppb	0.703	979357	5000	97.9	90	110	
Mg	24	2	45	5073.373	ppb	0.150	447175	5000	101.5	90	110	
Al	27	2	45	5025.331	ppb	1.911	125413	5000	100.5	90	110	
K	39	1	45	4607.633	ppb	0.783	20927553	5000	92.2	90	110	
K	39	2	45	5126.855	ppb	0.132	246113	5000	102.5	90	110	
Ca	40	1	45	4552.259	ppb	1.042	19232654	5000	91.0	90	110	
Ca	44	2	45	4950.288	ppb	6.036	12693	5000	99.0	90	110	
Ti	47	2	45	44.733	ppb	1.695	990	50	89.5	90	110	>+\-10%
V	51	2	72	50.643	ppb	1.563	43834	50	101.3	90	110	
Cr	52	2	72	51.319	ppb	0.434	55235	50	102.6	90	110	
Mn	55	2	72	49.915	ppb	0.582	22335	50	99.8	90	110	
Fe	57	2	72	5089.295	ppb	0.939	102907	5000	101.8	90	110	
Co	59	2	72	50.953	ppb	0.819	93404	50	101.9	90	110	
Ni	60	2	72	50.214	ppb	0.629	26081	50	100.4	90	110	
Cu	63	2	72	50.435	ppb	1.086	71902	50	100.9	90	110	
Zn	66	2	72	49.144	ppb	3.782	9957	50	98.3	90	110	
As	75	2	72	51.114	ppb	1.956	6858	50	102.2	90	110	
Se	78	1	72	46.490	ppb	3.835	9195	50	93.0	90	110	
Sr	88	2	72	51.299	ppb	5.010	24515	50	102.6	90	110	
Zr	90	2	72	52.854	ppb	35.503	337	50	105.7	90	110	
Nb	93	2	72	105.247	ppb	2.300	249257	100	105.2	90	110	
Mo	95	2	115	49.478	ppb	1.479	33691	50	99.0	90	110	
Pd	105	2	115	50.903	ppb	1.486	55550	50	101.8	90	110	
Ag	107	2	115	50.500	ppb	0.606	116242	50	101.0	90	110	
Cd	111	2	115	49.597	ppb	4.954	15926	50	99.2	90	110	
Sn	120	2	115	50.128	ppb	2.150	43419	50	100.3	90	110	
Sb	121	2	115	50.557	ppb	0.394	39260	50	101.1	90	110	
Ba	137	2	115	51.452	ppb	4.295	13651	50	102.9	90	110	
W	182	2	165	50.206	ppb	1.230	170277	50	100.4	90	110	
Pt	195	2	165	49.704	ppb	1.704	136090	50	99.4	90	110	
Tl	205	2	165	50.266	ppb	0.566	332796	50	100.5	90	110	
Pb	208	2	165	50.962	ppb	0.854	444165	50	101.9	90	110	
Th	232	2	165	50.789	ppb	0.145	526399	50	101.6	90	110	
U	238	2	165	50.402	ppb	0.934	562508	50	100.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	566209	1.21	578827	97.82	60	120	
Sc (IS)	45	1	HMI H2	20331996	1.03	20189926	100.70	60	120	
Sc (IS)	45	2	HMI He	806605	0.56	800581	100.75	60	120	
Sc (IS)	45	3	No Gas	30822035	1.48	29939617	102.95	60	120	
Ge Internal Standard	72	1	HMI H2	7879238	0.87	7861060	100.23	60	120	
Ge Internal Standard	72	2	HMI He	896721	0.55	893702	100.34	60	120	
In Internal Standard	115	2	HMI He	2954820	0.30	2972458	99.41	60	120	
Ho-165	165	2	HMI He	14453798	0.45	14419082	100.24	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	153_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:02:53-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	150CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	0.764	ppb	596.9	2497847	10	
Be	9	1	6	0.091	ppb	78.2	27	0.5	
B	11	1	6	2.127	ppb	19.8	1390	0.5	>RL
Na	23	1	45	-33.016	ppb	-0.9	380780	25	
Na	23	2	45	-34.661	ppb	-7.5	28251	25	
Mg	24	2	45	-0.616	ppb	-105.8	400	25	
Al	27	2	45	4.069	ppb	40.4	247	15	
K	39	1	45	-12.775	ppb	-287.5	8208101	50	
K	39	2	45	-21.176	ppb	-33.7	14034	50	
Ca	40	1	45	1.281	ppb	25.0	71424	50	
Ca	44	2	45	-4.100	ppb	-303.5	33	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.415	ppb	55.6	2294	1	
Cr	52	2	72	0.115	ppb	60.0	280	1	
Mn	55	2	72	-0.135	ppb	-50.4	27	0.5	
Fe	57	2	72	4.636	ppb	60.1	200	25	
Co	59	2	72	0.024	ppb	35.7	53	0.5	
Ni	60	2	72	-0.280	ppb	-10.3	167	1	
Cu	63	2	72	-0.081	ppb	-120.2	867	1	
Zn	66	2	72	-0.623	ppb	-38.4	323	5	
As	75	2	72	-0.005	ppb	-1833.2	18	1	
Se	78	1	72	0.209	ppb	83.3	53	1	
Sr	88	2	72	-0.043	ppb	-74.8	13	0.5	
Zr	90	2	72	2.417	ppb	239.4	57	1	>RL
Nb	93	2	72	7.528	ppb	5.1	19374	2	>RL
Mo	95	2	115	0.025	ppb	514.1	170	0.5	
Pd	105	2	115	0.086	ppb	107.8	133	1	
Ag	107	2	115	0.021	ppb	95.2	90	1	
Cd	111	2	115	0.020	ppb	86.6	7	0.5	
Sn	120	2	115	0.172	ppb	33.1	307	1	
Sb	121	2	115	0.560	ppb	12.6	470	0.6	
Ba	137	2	115	0.072	ppb	152.5	30	0.5	
W	182	2	165	0.211	ppb	22.0	1590	1	
Pt	195	2	165	0.005	ppb	307.9	57	1	
Tl	205	2	165	0.036	ppb	3.7	370	0.1	
Pb	208	2	165	0.046	ppb	31.7	1117	0.5	
Th	232	2	165	0.056	ppb	12.4	923	1	
U	238	2	165	0.078	ppb	7.4	1030	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	584032	0.12	578827	100.90	60	120	
Sc (IS)	45	1	HMI H2	20484386	0.63	20189926	101.46	60	120	
Sc (IS)	45	2	HMI He	809607	0.51	800581	101.13	60	120	
Sc (IS)	45	3	No Gas	30663289	0.48	29939617	102.42	60	120	
Ge Internal Standard	72	1	HMI H2	7897772	0.70	7861060	100.47	60	120	
Ge Internal Standard	72	2	HMI He	893996	0.77	893702	100.03	60	120	
In Internal Standard	115	2	HMI He	3012469	1.44	2972458	101.35	60	120	
Ho-165	165	2	HMI He	14484651	0.89	14419082	100.45	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	154LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:06:40-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	150CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	11.629	ppb	55.812	2586148	50	23.3	70	130	>+/-30%
Be	9	1	6	0.677	ppb	36.169	200	1	67.7	70	130	>+/-30%
Na	23	2	45	6.878	ppb	21.327	36289	50	13.8	70	130	>+/-30%
Mg	24	2	45	54.546	ppb	3.235	5275	50	109.1	70	130	
Al	27	2	45	31.645	ppb	16.870	937	30	105.5	70	130	
K	39	2	45	83.818	ppb	2.794	18783	100	83.8	70	130	
Ca	44	2	45	47.912	ppb	28.067	167	50	95.8	70	130	
V	51	2	72	5.556	ppb	12.167	6548	5	111.1	70	130	
Cr	52	2	72	1.933	ppb	5.819	2230	2	96.6	70	130	
Mn	55	2	72	0.853	ppb	15.818	467	1	85.3	70	130	
Fe	57	2	72	59.106	ppb	8.879	1300	50	118.2	70	130	
Co	59	2	72	1.148	ppb	16.002	2114	1	114.8	70	130	
Ni	60	2	72	1.552	ppb	19.501	1107	2	77.6	70	130	
Cu	63	2	72	1.950	ppb	9.753	3724	2	97.5	70	130	
Zn	66	2	72	10.590	ppb	2.255	2494	10	105.9	70	130	
As	75	2	72	4.804	ppb	3.478	661	5	96.1	70	130	
Se	78	1	72	4.501	ppb	2.624	908	5	90.0	70	130	
Sr	88	2	72	0.971	ppb	4.597	497	1	97.1	70	130	
Zr	90	2	72	10.223	ppb	46.629	100	0.5	2044.5	70	130	>+/-30%
Nb	93	2	72	16.559	ppb	2.333	40649	2	827.9	70	130	>+/-30%
Mo	95	2	115	1.825	ppb	1.002	1407	2	91.3	70	130	
Pd	105	2	115	0.011	ppb	156.009	50	1	1.1	70	130	>+/-30%
Ag	107	2	115	5.401	ppb	2.562	12650	5	108.0	70	130	
Cd	111	2	115	1.033	ppb	17.798	337	1	103.3	70	130	
Sn	120	2	115	9.973	ppb	2.316	8890	10	99.7	70	130	
Sb	121	2	115	2.116	ppb	11.222	1694	2	105.8	70	130	
Ba	137	2	115	0.755	ppb	2.244	213	1	75.5	70	130	
W	182	2	165	5.099	ppb	2.249	18030	1	509.9	70	130	>+/-30%
Pt	195	2	165	0.026	ppb	56.659	113	1	2.6	70	130	>+/-30%
Tl	205	2	165	1.026	ppb	7.393	6909	1	102.6	70	130	
Pb	208	2	165	1.041	ppb	3.970	9749	1	104.1	70	130	
Th	232	2	165	2.091	ppb	0.613	21946	2	104.6	70	130	
U	238	2	165	1.051	ppb	1.014	11853	1	105.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	587309	0.15	578827	101.47	60	120	
Sc (IS)	45	1	HMI H2	20528627	0.81	20189926	101.68	60	120	
Sc (IS)	45	2	HMI He	809501	0.40	800581	101.11	60	120	
Sc (IS)	45	3	No Gas	30906588	0.20	29939617	103.23	60	120	
Ge Internal Standard	72	1	HMI H2	7939655	0.56	7861060	101.00	60	120	
Ge Internal Standard	72	2	HMI He	896255	0.29	893702	100.29	60	120	
In Internal Standard	115	2	HMI He	2998492	0.58	2972458	100.88	60	120	
Ho-165	165	2	HMI He	14414875	1.01	14419082	99.97	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	155LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:11:10-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	150CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	16.062	ppb	24.406	2605871	50	32.1	70	130	>+/-30%
Be	9	1	6	1.312	ppb	53.487	360	1	131.2	70	130	>+/-30%
Na	23	2	45	7.660	ppb	17.764	36930	50	15.3	70	130	>+/-30%
Mg	24	2	45	52.073	ppb	1.081	5124	50	104.1	70	130	
Al	27	2	45	35.239	ppb	7.500	1040	30	117.5	70	130	
K	39	2	45	77.758	ppb	14.444	18756	100	77.8	70	130	
Ca	44	2	45	54.887	ppb	60.045	187	50	109.8	70	130	
V	51	2	72	5.089	ppb	8.141	6242	5	101.8	70	130	
Cr	52	2	72	2.048	ppb	5.444	2384	2	102.4	70	130	
Mn	55	2	72	1.076	ppb	8.502	573	1	107.6	70	130	
Fe	57	2	72	57.195	ppb	15.548	1277	50	114.4	70	130	
Co	59	2	72	0.959	ppb	2.151	1790	1	95.9	70	130	
Ni	60	2	72	1.761	ppb	9.854	1230	2	88.1	70	130	
Cu	63	2	72	1.807	ppb	7.918	3567	2	90.4	70	130	
Zn	66	2	72	10.552	ppb	8.137	2517	10	105.5	70	130	
As	75	2	72	4.462	ppb	5.614	624	5	89.2	70	130	
Se	78	1	72	5.059	ppb	34.202	964	5	101.2	70	130	
Sr	88	2	72	0.882	ppb	7.877	460	1	88.2	70	130	
Zr	90	2	72	19.525	ppb	32.512	153	0.5	3905.0	70	130	>+/-30%
Nb	93	2	72	6.803	ppb	4.313	17942	2	340.2	70	130	>+/-30%
Mo	95	2	115	1.746	ppb	8.919	1370	2	87.3	70	130	
Pd	105	2	115	0.008	ppb	132.383	47	1	0.8	70	130	>+/-30%
Ag	107	2	115	5.057	ppb	0.576	12016	5	101.1	70	130	
Cd	111	2	115	1.040	ppb	15.826	343	1	104.0	70	130	
Sn	120	2	115	9.418	ppb	2.693	8520	10	94.2	70	130	
Sb	121	2	115	2.110	ppb	11.563	1710	2	105.5	70	130	
Ba	137	2	115	1.306	ppb	5.541	367	1	130.6	70	130	>+/-30%
W	182	2	165	5.102	ppb	2.553	18223	1	510.2	70	130	>+/-30%
Pt	195	2	165	0.034	ppb	68.670	137	1	3.4	70	130	>+/-30%
Tl	205	2	165	1.082	ppb	3.931	7346	1	108.2	70	130	
Pb	208	2	165	0.987	ppb	1.472	9369	1	98.7	70	130	
Th	232	2	165	2.042	ppb	4.002	21652	2	102.1	70	130	
U	238	2	165	1.020	ppb	0.078	11616	1	102.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	574271	15.56	578827	99.21	60	120	
Sc (IS)	45	1	HMI H2	19751225	20.66	20189926	97.83	60	120	
Sc (IS)	45	2	HMI He	820407	0.70	800581	102.48	60	120	
Sc (IS)	45	3	No Gas	30810358	0.44	29939617	102.91	60	120	
Ge Internal Standard	72	1	HMI H2	7789258	16.32	7861060	99.09	60	120	
Ge Internal Standard	72	2	HMI He	907578	0.66	893702	101.55	60	120	
In Internal Standard	115	2	HMI He	3040789	1.48	2972458	102.30	60	120	
Ho-165	165	2	HMI He	14559218	0.38	14419082	100.97	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	156WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:15:10-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	150CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.055	ppb	73.63303116	17	0.5
Na	23	2	45	-29.533	ppb	-22.6599339	29677	25
Mg	24	2	45	7.414	ppb	32.93669204	1127	25
Al	27	2	45	4.843	ppb	48.67319781	270	15
K	39	2	45	-14.602	ppb	-57.65719016	14541	50
Ca	44	2	45	-2.975	ppb	-148.0247124	37	25
V	51	2	72	0.200	ppb	81.21535664	2134	1
Cr	52	2	72	0.014	ppb	170.3740731	173	1
Mn	55	2	72	0.103	ppb	32.41913898	133	0.5
Fe	57	2	72	9.641	ppb	20.67739523	303	25
Co	59	2	72	0.002	ppb	358.6200751	13	0.5
Ni	60	2	72	-0.231	ppb	-4.765436964	193	1
Cu	63	2	72	0.006	ppb	1589.815718	997	1
Zn	66	2	72	-0.430	ppb	-89.15398817	363	5
As	75	2	72	0.096	ppb	32.26496919	32	1
Se	78	1	72	0.028	ppb	174.919499	19	1
Nb	93	2	72	0.400	ppb	28.32351869	2677	2
Mo	95	2	115	-0.104	ppb	-49.79962285	80	0.5
Pd	105	2	115	0.008	ppb	65.08420257	47	1
Ag	107	2	115	-0.003	ppb	-207.2668478	33	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.058	ppb	36.95694308	207	1
Sb	121	2	115	0.033	ppb	114.0846523	53	0.6
Ba	137	2	115	0.072	ppb	183.3344465	30	0.5
W	182	2	165	0.070	ppb	25.47837452	1117	1
Pt	195	2	165	0.006	ppb	324.446739	60	1
Tl	205	2	165	-0.004	ppb	-135.1695474	107	0.1
Pb	208	2	165	0.094	ppb	29.44760276	1543	0.5
Th	232	2	165	0.004	ppb	212.909943	387	1
U	238	2	165	0.009	ppb	38.47264337	250	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	616494	6.07	578827	106.51	60	120	
Sc (IS)	45	1	HMI H2	22018226	6.74	20189926	109.06	60	120	
Sc (IS)	45	2	HMI He	821487	0.38	800581	102.61	60	120	
Sc (IS)	45	3	No Gas	31038451	0.88	29939617	103.67	60	120	
Ge Internal Standard	72	1	HMI H2	8391164	6.40	7861060	106.74	60	120	
Ge Internal Standard	72	2	HMI He	901136	0.59	893702	100.83	60	120	
In Internal Standard	115	2	HMI He	3015028	1.62	2972458	101.43	60	120	
Ho-165	165	2	HMI He	14521161	0.52	14419082	100.71	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5425622
Data File Name	157CALB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:18:58-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	91642	0.00
Li	7	2	HMI He	4468	0.22
Li	7	3	No Gas	2546019	0.00
Be	9	1	HMI H2	20	866.03
B	11	1	HMI H2	627	0.89
Na	23	1	HMI H2	340458	0.00
Na	23	2	HMI He	25206	0.01
Mg	24	2	HMI He	420	2.60
Al	27	2	HMI He	153	39.52
K	39	2	HMI He	14424	0.02
Ca	44	2	HMI He	70	35.36
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	2030	0.29
Cr	52	2	HMI He	147	32.98
Mn	55	2	HMI He	70	107.99
Fe	57	2	HMI He	173	33.34
Co	59	2	HMI He	17	749.40
Ni	60	2	HMI He	243	10.18
Cu	63	2	HMI He	903	0.37
Zn	66	2	HMI He	427	6.55
As	75	2	HMI He	25	313.62
Se	78	1	HMI H2	41	35.76
Sr	88	2	HMI He	33	103.92
Zr	90	2	HMI He	90	24.69
Nb	93	2	HMI He	2154	0.34
Mo	95	2	HMI He	153	17.19
Pd	105	2	HMI He	27	214.81
Ag	107	2	HMI He	63	14.39
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	223	4.17
Sb	121	2	HMI He	57	78.37
Ba	137	2	HMI He	0	#VALUE!
W	182	2	HMI He	973	1.00
Pt	195	2	HMI He	67	68.74
Tl	205	2	HMI He	127	15.69
Pb	208	2	HMI He	600	1.47
Th	232	2	HMI He	330	4.21
U	238	2	HMI He	160	21.75

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	596260	0.86
Sc (IS)	45	1	HMI H2	20835883	0.85
Sc (IS)	45	2	HMI He	823951	0.63
Sc (IS)	45	3	No Gas	31260218	0.31
Ge Internal Standard	72	1	HMI H2	8011210	0.70
Ge Internal Standard	72	2	HMI He	907478	0.41
In Internal Standard	115	2	HMI He	3014874	0.47
Ho-165	165	2	HMI He	14587244	1.49

Calibration Standard Report

Sample Table

Sample Name	ic-5425623
Data File Name	158CALS.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:22:45-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	321759	0.00
Li	7	2	HMI He	16073	0.03
Li	7	3	No Gas	8966593	0.00
Be	9	1	HMI H2	26551	0.01
B	11	1	HMI H2	29624	0.00
Na	23	1	HMI H2	26662639	0.00
Na	23	2	HMI He	2015689	0.00
Mg	24	2	HMI He	897516	0.00
Al	27	2	HMI He	248668	0.00
K	39	1	HMI H2	34108334	0.00
K	39	2	HMI He	475203	0.00
Ca	40	1	HMI H2	38602380	0.00
Ca	44	2	HMI He	25904	0.01
Ti	47	2	HMI He	2007	0.89
V	51	2	HMI He	86760	0.00
Cr	52	2	HMI He	108435	0.00
Mn	55	2	HMI He	44452	0.01
Fe	57	2	HMI He	204945	0.00
Co	59	2	HMI He	184474	0.00
Ni	60	2	HMI He	52299	0.00
Cu	63	2	HMI He	140965	0.00
Zn	66	2	HMI He	19451	0.01
As	75	2	HMI He	13341	0.01
Se	78	1	HMI H2	18142	0.00
Sr	88	2	HMI He	48531	0.00
Zr	90	2	HMI He	597	4.46
Nb	93	2	HMI He	478831	0.00
Mo	95	2	HMI He	69180	0.00
Pd	105	2	HMI He	108436	0.00
Ag	107	2	HMI He	229739	0.00
Cd	111	2	HMI He	30955	0.00
Sn	120	2	HMI He	85261	0.00
Sb	121	2	HMI He	76866	0.00
Ba	137	2	HMI He	26643	0.01
Nd	146	2	HMI He	96395	0.00
Sm	147	2	HMI He	82264	0.00
Sm	150	2	HMI He	79227	0.00
Gd	156	1	HMI H2	343880	0.00
Gd	157	1	HMI H2	259121	0.00
W	182	2	HMI He	338655	0.00
Pt	195	2	HMI He	272434	0.00
Tl	205	2	HMI He	653274	0.00
Pb	208	2	HMI He	871822	0.00
Th	232	2	HMI He	1033735	0.00
U	238	2	HMI He	1112531	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	568810	0.65	596260	95.40	60	120	
Sc (IS)	45	1	HMI H2	20619246	0.50	20835883	98.96	60	120	
Sc (IS)	45	2	HMI He	823177	0.72	823951	99.91	60	120	
Sc (IS)	45	3	No Gas	31371819	0.20	31260218	100.36	60	120	
Ge Internal Standard	72	1	HMI H2	7963438	0.10	8011210	99.40	60	120	
Ge Internal Standard	72	2	HMI He	907595	0.89	907478	100.01	60	120	
In Internal Standard	115	2	HMI He	2949241	1.47	3014874	97.82	60	120	
Ho-165	165	2	HMI He	14602249	0.63	14587244	100.10	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	159_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:26:32-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	515.415	ppb	0.767	211174	500	103.1	90	110	
Li	7	2	45	531.890	ppb	2.245	10648	500	106.4	90	110	
Li	7	3	45	503.303	ppb	1.431	5804587	500	100.7	90	110	
Be	9	1	6	52.076	ppb	3.171	14004	50	104.2	90	110	
B	11	1	6	53.062	ppb	6.029	16193	50	106.1	90	110	
Na	23	1	45	5085.562	ppb	1.114	13815279	5000	101.7	90	110	
Na	23	2	45	4841.613	ppb	0.284	989736	5000	96.8	90	110	
Mg	24	2	45	5091.642	ppb	0.358	457596	5000	101.8	90	110	
Al	27	2	45	5099.054	ppb	1.645	126985	5000	102.0	90	110	
K	39	1	45	5021.236	ppb	0.853	21357784	5000	100.4	90	110	
K	39	2	45	5024.485	ppb	0.890	246152	5000	100.5	90	110	
Ca	40	1	45	5023.441	ppb	0.561	19552548	5000	100.5	90	110	
Ca	44	2	45	4970.882	ppb	2.156	12923	5000	99.4	90	110	
Ti	47	2	45	50.901	ppb	12.421	1023	50	101.8	90	110	
V	51	2	72	50.595	ppb	0.427	44760	50	101.2	90	110	
Cr	52	2	72	50.820	ppb	0.487	55015	50	101.6	90	110	
Mn	55	2	72	52.065	ppb	1.384	23106	50	104.1	90	110	
Fe	57	2	72	5014.472	ppb	0.724	102533	5000	100.3	90	110	
Co	59	2	72	51.679	ppb	0.677	95050	50	103.4	90	110	
Ni	60	2	72	50.090	ppb	2.900	26241	50	100.2	90	110	
Cu	63	2	72	52.525	ppb	1.286	74241	50	105.1	90	110	
Zn	66	2	72	51.297	ppb	5.095	10154	50	102.6	90	110	
As	75	2	72	51.852	ppb	1.383	6908	50	103.7	90	110	
Se	78	1	72	51.983	ppb	5.640	9519	50	104.0	90	110	
Sr	88	2	72	50.559	ppb	6.124	24479	50	101.1	90	110	
Zr	90	2	72	60.906	ppb	32.853	397	50	121.8	90	110	>+\-10%
Nb	93	2	72	104.489	ppb	0.377	250414	100	104.5	90	110	
Mo	95	2	115	48.981	ppb	3.783	34881	50	98.0	90	110	
Pd	105	2	115	51.083	ppb	0.897	56910	50	102.2	90	110	
Ag	107	2	115	49.985	ppb	0.464	117995	50	100.0	90	110	
Cd	111	2	115	49.467	ppb	2.933	15726	50	98.9	90	110	
Sn	120	2	115	49.947	ppb	0.640	43850	50	99.9	90	110	
Sb	121	2	115	50.045	ppb	2.070	39541	50	100.1	90	110	
Ba	137	2	115	50.183	ppb	5.860	13728	50	100.4	90	110	
W	182	2	165	51.059	ppb	0.621	172776	50	102.1	90	110	
Pt	195	2	165	50.674	ppb	3.124	137579	50	101.3	90	110	
Tl	205	2	165	51.219	ppb	0.871	333484	50	102.4	90	110	
Pb	208	2	165	51.332	ppb	0.954	446226	50	102.7	90	110	
Th	232	2	165	50.950	ppb	1.149	524972	50	101.9	90	110	
U	238	2	165	50.492	ppb	1.728	559803	50	101.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	575641	0.81	596260	96.54	60	120	
Sc (IS)	45	1	HMI H2	20755185	0.65	20835883	99.61	60	120	
Sc (IS)	45	2	HMI He	823867	0.38	823951	99.99	60	120	
Sc (IS)	45	3	No Gas	31494576	0.45	31260218	100.75	60	120	
Ge Internal Standard	72	1	HMI H2	8022338	0.80	8011210	100.14	60	120	
Ge Internal Standard	72	2	HMI He	904739	0.29	907478	99.70	60	120	
In Internal Standard	115	2	HMI He	3029121	0.72	3014874	100.47	60	120	
Ho-165	165	2	HMI He	14550943	0.92	14587244	99.75	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	160_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:30:19-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	2.766	ppb	192.2	2604403	10	
Be	9	1	6	0.024	ppb	87.4	27	0.5	
B	11	1	6	2.012	ppb	25.7	1233	0.5	>RL
Na	23	1	45	-16.395	ppb	-9.1	299192	25	
Na	23	2	45	-17.957	ppb	-11.6	21770	25	
Mg	24	2	45	-1.103	ppb	-33.7	323	25	
Al	27	2	45	1.695	ppb	235.1	197	15	
K	39	1	45	-6.993	ppb	-424.4	8350837	50	
K	39	2	45	-2.652	ppb	-337.0	14394	50	
Ca	40	1	45	-0.692	ppb	-48.9	63726	50	
Ca	44	2	45	-12.984	ppb	-44.8	37	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.558	ppb	42.6	2520	1	
Cr	52	2	72	0.060	ppb	142.5	213	1	
Mn	55	2	72	0.021	ppb	104.2	80	0.5	
Fe	57	2	72	-1.183	ppb	-83.7	150	25	
Co	59	2	72	0.002	ppb	530.9	20	0.5	
Ni	60	2	72	-0.118	ppb	-82.8	183	1	
Cu	63	2	72	-0.037	ppb	-270.8	857	1	
Zn	66	2	72	-0.712	ppb	-18.5	293	5	
As	75	2	72	-0.016	ppb	-227.9	23	1	
Se	78	1	72	-0.046	ppb	-233.7	33	1	
Sr	88	2	72	0.027	ppb	232.9	47	0.5	
Zr	90	2	72	-2.065	ppb	-254.1	80	1	
Nb	93	2	72	7.323	ppb	8.5	19741	2	>RL
Mo	95	2	115	0.091	ppb	108.2	220	0.5	
Pd	105	2	115	0.113	ppb	30.1	153	1	
Ag	107	2	115	-0.003	ppb	-278.8	57	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.216	ppb	62.6	417	1	
Sb	121	2	115	0.485	ppb	1.2	443	0.6	
Ba	137	2	115	0.097	ppb	57.3	27	0.5	
W	182	2	165	0.193	ppb	35.2	1624	1	
Pt	195	2	165	-0.001	ppb	-501.0	63	1	
Tl	205	2	165	0.013	ppb	33.6	210	0.1	
Pb	208	2	165	0.018	ppb	116.2	760	0.5	
Th	232	2	165	0.059	ppb	15.8	940	1	
U	238	2	165	0.043	ppb	13.1	640	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	593350	0.29	596260	99.51	60	120	
Sc (IS)	45	1	HMI H2	21000709	0.33	20835883	100.79	60	120	
Sc (IS)	45	2	HMI He	829376	0.52	823951	100.66	60	120	
Sc (IS)	45	3	No Gas	31755847	0.45	31260218	101.59	60	120	
Ge Internal Standard	72	1	HMI H2	8105035	0.60	8011210	101.17	60	120	
Ge Internal Standard	72	2	HMI He	913657	0.27	907478	100.68	60	120	
In Internal Standard	115	2	HMI He	3053500	0.32	3014874	101.28	60	120	
Ho-165	165	2	HMI He	14561250	0.74	14587244	99.82	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	161LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:34:06-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	9.515	ppb	19.099	2667960	50	19.0	70	130	>+/-30%
Be	9	1	6	0.900	ppb	10.564	270	1	90.0	70	130	
Na	23	2	45	34.832	ppb	6.251	32506	50	69.7	70	130	>+/-30%
Mg	24	2	45	50.652	ppb	6.241	5024	50	101.3	70	130	
Al	27	2	45	35.865	ppb	21.907	1057	30	119.6	70	130	
K	39	2	45	104.830	ppb	14.754	19477	100	104.8	70	130	
Ca	44	2	45	32.845	ppb	33.260	157	50	65.7	70	130	>+/-30%
V	51	2	72	5.171	ppb	3.475	6478	5	103.4	70	130	
Cr	52	2	72	2.186	ppb	1.057	2540	2	109.3	70	130	
Mn	55	2	72	0.920	ppb	8.454	483	1	92.0	70	130	
Fe	57	2	72	50.841	ppb	9.855	1227	50	101.7	70	130	
Co	59	2	72	1.012	ppb	10.056	1904	1	101.2	70	130	
Ni	60	2	72	1.802	ppb	12.997	1193	2	90.1	70	130	
Cu	63	2	72	2.255	ppb	9.809	4104	2	112.8	70	130	
Zn	66	2	72	11.701	ppb	9.846	2680	10	117.0	70	130	
As	75	2	72	4.974	ppb	9.454	694	5	99.5	70	130	
Se	78	1	72	4.916	ppb	9.189	945	5	98.3	70	130	
Sr	88	2	72	0.877	ppb	8.948	463	1	87.7	70	130	
Zr	90	2	72	-3.450	ppb	-198.054	73	0.5	-689.9	70	130	>+/-30%
Nb	93	2	72	16.300	ppb	1.885	41428	2	815.0	70	130	>+/-30%
Mo	95	2	115	1.552	ppb	9.161	1263	2	77.6	70	130	
Pd	105	2	115	0.029	ppb	59.242	60	1	2.9	70	130	>+/-30%
Ag	107	2	115	5.035	ppb	3.675	12026	5	100.7	70	130	
Cd	111	2	115	1.039	ppb	17.876	333	1	103.9	70	130	
Sn	120	2	115	10.110	ppb	1.466	9120	10	101.1	70	130	
Sb	121	2	115	2.303	ppb	3.195	1887	2	115.1	70	130	
Ba	137	2	115	1.185	ppb	33.309	327	1	118.5	70	130	
W	182	2	165	4.944	ppb	4.842	17723	1	494.4	70	130	>+/-30%
Pt	195	2	165	0.013	ppb	56.749	103	1	1.3	70	130	>+/-30%
Tl	205	2	165	1.012	ppb	3.552	6755	1	101.2	70	130	
Pb	208	2	165	1.011	ppb	4.260	9442	1	101.1	70	130	
Th	232	2	165	2.087	ppb	3.713	21970	2	104.4	70	130	
U	238	2	165	1.022	ppb	4.929	11569	1	102.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	595415	0.78	596260	99.86	60	120	
Sc (IS)	45	1	HMI H2	20848593	1.93	20835883	100.06	60	120	
Sc (IS)	45	2	HMI He	833257	0.30	823951	101.13	60	120	
Sc (IS)	45	3	No Gas	31994211	0.54	31260218	102.35	60	120	
Ge Internal Standard	72	1	HMI H2	8089833	0.87	8011210	100.98	60	120	
Ge Internal Standard	72	2	HMI He	916966	0.37	907478	101.05	60	120	
In Internal Standard	115	2	HMI He	3051464	1.80	3014874	101.21	60	120	
Ho-165	165	2	HMI He	14646758	0.06	14587244	100.41	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5425629
Data File Name	162ICSA.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:39:13-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-12.289	ppb	-27.3	2372556	1	
Be	9	1	6	-0.073	ppb	0.0	0	1	
B	11	1	6	0.761	ppb	19.8	803	1	
Na	23	1	45	99143.958	ppb	1.3	257551603	100000	
K	39	1	45	99338.260	ppb	0.9	261569643	100000	
Ca	40	1	45	98953.284	ppb	0.8	375888568	100000	
Ti	47	2	45	2173.197	ppb	4.5	42138	1	>RL or LOD
V	51	2	72	0.309	ppb	73.6	2187	1	
Cr	52	2	72	0.333	ppb	27.1	483	1	
Mn	55	2	72	1.138	ppb	13.2	550	1	>RL or LOD
Co	59	2	72	0.017	ppb	91.8	47	1	
Ni	60	2	72	0.139	ppb	232.4	300	1	
Cu	63	2	72	0.549	ppb	36.5	1597	1	
Zn	66	2	72	0.343	ppb	51.3	470	1	
As	75	2	72	0.110	ppb	60.1	38	1	
Se	78	1	72	0.048	ppb	143.3	48	1	
Sr	88	2	72	0.990	ppb	7.8	490	1	
Zr	90	2	72	5.053	ppb	115.1	110	1	>RL or LOD
Nb	93	2	72	3.347	ppb	10.0	9680	1	>RL or LOD
Mo	95	2	115	2110.722	ppb	5.3	1409033	2000	>RL or LOD
Pd	105	2	115	0.024	ppb	85.2	50	1	
Ag	107	2	115	0.001	ppb	948.2	63	1	
Cd	111	2	115	0.347	ppb	41.0	103	1	
Sn	120	2	115	1.849	ppb	1.4	1734	1	>RL or LOD
Sb	121	2	115	0.098	ppb	80.0	127	1	
Ba	137	2	115	0.230	ppb	56.5	60	1	
W	182	2	165	0.234	ppb	35.0	1707	1	
Pt	195	2	165	-0.012	ppb	-68.3	33	1	
Tl	205	2	165	0.002	ppb	236.9	137	1	
Pb	208	2	165	0.109	ppb	17.5	1503	1	
Th	232	2	165	0.023	ppb	80.8	550	1	
U	238	2	165	0.004	ppb	101.0	197	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	558041	0.50	596260	93.59	60	120	
Sc (IS)	45	1	HMI H2	20321388	0.94	20835883	97.53	60	120	
Sc (IS)	45	2	HMI He	795324	2.90	823951	96.53	60	120	
Sc (IS)	45	3	No Gas	30059010	0.92	31260218	96.16	60	120	
Ge Internal Standard	72	1	HMI H2	7688621	0.34	8011210	95.97	60	120	
Ge Internal Standard	72	2	HMI He	866583	1.91	907478	95.49	60	120	
In Internal Standard	115	2	HMI He	2853809	2.81	3014874	94.66	60	120	
Ho-165	165	2	HMI He	14104328	2.58	14587244	96.69	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5425630
Data File Name	163ICSB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:42:58-07:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	897.732	ppb	0.864	283381	100	897.7	80	120	
Li	7	2	45	942.915	ppb	4.294	14484	100	942.9	80	120	
Li	7	3	45	866.070	ppb	1.273	7507651	100	866.1	80	120	
Be	9	1	6	97.731	ppb	2.057	23333	100	97.7	80	120	
B	11	1	6	78.429	ppb	2.017	21009	100	78.4	80	120	>+\-20%
Na	23	1	45	100402.780	ppb	0.339	251560970	100	100402.8	80	120	>+\-20%
K	39	1	45	100858.287	ppb	0.766	256020470	100	100858.3	80	120	>+\-20%
Ca	40	1	45	101426.498	ppb	0.508	371594208	100	101426.5	80	120	>+\-20%
V	51	2	72	90.421	ppb	1.493	73630	100	90.4	80	120	
Cr	52	2	72	91.373	ppb	1.195	92784	100	91.4	80	120	
Mn	55	2	72	93.237	ppb	1.035	38806	100	93.2	80	120	
Co	59	2	72	90.570	ppb	0.985	156431	100	90.6	80	120	
Ni	60	2	72	90.835	ppb	1.360	44503	100	90.8	80	120	
Cu	63	2	72	91.983	ppb	1.316	121465	100	92.0	80	120	
Zn	66	2	72	95.786	ppb	3.035	17458	100	95.8	80	120	
As	75	2	72	91.499	ppb	1.705	11429	100	91.5	80	120	
Se	78	1	72	92.478	ppb	1.985	15746	100	92.5	80	120	
Sr	88	2	72	97.357	ppb	1.020	44237	100	97.4	80	120	
Zr	90	2	72	8.946	ppb	70.662	127	100	8.9	80	120	>+\-20%
Nb	93	2	72	197.120	ppb	1.629	441855	100	197.1	80	120	
Mo	95	2	115	2013.246	ppb	1.956	1318600	100	2013.2	80	120	>+\-20%
Pd	105	2	115	90.448	ppb	2.477	93041	100	90.4	80	120	
Ag	107	2	115	87.505	ppb	1.384	190738	100	87.5	80	120	
Cd	111	2	115	90.906	ppb	1.984	26693	100	90.9	80	120	
Sn	120	2	115	97.169	ppb	1.007	78595	100	97.2	80	120	
Sb	121	2	115	100.000	ppb	1.268	72924	100	100.0	80	120	
Ba	137	2	115	92.860	ppb	1.534	23468	100	92.9	80	120	
W	182	2	165	94.795	ppb	0.700	310355	100	94.8	80	120	
Pt	195	2	165	91.117	ppb	1.308	239953	100	91.1	80	120	
Tl	205	2	165	87.215	ppb	1.038	550753	100	87.2	80	120	
Pb	208	2	165	88.130	ppb	0.944	742752	100	88.1	80	120	
Th	232	2	165	91.013	ppb	0.479	909467	100	91.0	80	120	
U	238	2	165	89.715	ppb	0.732	964823	100	89.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	511511	0.71	596260	85.79	60	120	
Sc (IS)	45	1	HMI H2	19598659	0.19	20835883	94.06	60	120	
Sc (IS)	45	2	HMI He	773682	0.23	823951	93.90	60	120	
Sc (IS)	45	3	No Gas	29050598	0.79	31260218	92.93	60	120	
Ge Internal Standard	72	1	HMI H2	7472558	0.26	8011210	93.28	60	120	
Ge Internal Standard	72	2	HMI He	849680	0.57	907478	93.63	60	120	
In Internal Standard	115	2	HMI He	2798058	1.59	3014874	92.81	60	120	
Ho-165	165	2	HMI He	14114849	0.45	14587244	96.76	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	164SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:46:43-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-8.339	ppb	-8.339	-49.61	86508	500000	
Li	7	2	45	-4.002	ppb	-4.002	-495.74	4281	500000	
Li	7	3	45	-17.008	ppb	-17.008	-46.05	2677435	50000	
Be	9	1	6	-0.060	ppb	-0.060	-36.85	3	2000	
B	11	1	6	1.153	ppb	1.153	49.31	920	2000	
Na	23	1	45	6.543	ppb	6.543	33.77	345178	2000	
Na	23	2	45	-5.485	ppb	-5.485	-87.32	23346	400000	
Mg	24	2	45	13.728	ppb	13.728	17.49	1600	400000	
Al	27	2	45	18.096	ppb	18.096	33.35	583	400000	
K	39	1	45	67.036	ppb	67.036	37.02	8178383	400000	
K	39	2	45	20.513	ppb	20.513	41.38	14885	400000	
Ca	40	1	45	17.286	ppb	17.286	12.05	128502	400000	
Ca	44	2	45	8.882	ppb	8.882	206.44	90	400000	
Ti	47	2	45	1.368	ppb	1.368	57.26	27	4000	
V	51	2	72	0.120	ppb	0.120	68.75	2100	2000	
Cr	52	2	72	0.136	ppb	0.136	35.80	290	5000	
Mn	55	2	72	-0.013	ppb	-0.013	-641.08	63	10000	
Fe	57	2	72	23.595	ppb	23.595	18.79	647	400000	
Co	59	2	72	0.029	ppb	0.029	81.01	70	2000	
Ni	60	2	72	-0.240	ppb	-0.240	-33.19	117	5000	
Cu	63	2	72	-0.058	ppb	-0.058	-82.02	810	5000	
Zn	66	2	72	10.707	ppb	10.707	8.91	2427	5000	
As	75	2	72	-0.018	ppb	-0.018	-339.02	22	2000	
Se	78	1	72	-0.063	ppb	-0.063	-134.37	29	2000	
Sr	88	2	72	-0.020	ppb	-0.020	-159.31	23	4000	
Zr	90	2	72	-3.719	ppb	-3.719	-110.34	70	1000	
Nb	93	2	72	5.708	ppb	5.708	11.08	15529	200	
Mo	95	2	115	2.551	ppb	2.551	5.39	1957	2000	
Pd	105	2	115	0.072	ppb	0.072	59.92	107	100	
Ag	107	2	115	0.004	ppb	0.004	306.36	73	100	
Cd	111	2	115	0.021	ppb	0.021	173.21	7	2000	
Sn	120	2	115	0.037	ppb	0.037	210.84	257	2000	
Sb	121	2	115	0.101	ppb	0.101	83.16	137	1000	
Ba	137	2	115	0.172	ppb	0.172	45.32	47	5000	
W	182	2	165	0.079	ppb	0.079	51.08	1230	100	
Pt	195	2	165	-0.003	ppb	-0.003	-323.56	57	100	
Tl	205	2	165	0.030	ppb	0.030	35.08	323	2000	
Pb	208	2	165	0.021	ppb	0.021	27.81	780	5000	
Th	232	2	165	0.060	ppb	0.060	19.22	940	2000	
U	238	2	165	0.071	ppb	0.071	12.21	940	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	561490	0.60	596260	94.17	60	120	
Sc (IS)	45	1	HMI H2	20097420	0.34	20835883	96.46	60	120	
Sc (IS)	45	2	HMI He	797850	0.64	823951	96.83	60	120	
Sc (IS)	45	3	No Gas	34361553	6.98	31260218	109.92	60	120	
Ge Internal Standard	72	1	HMI H2	7872559	0.35	8011210	98.27	60	120	
Ge Internal Standard	72	2	HMI He	894041	0.65	907478	98.52	60	120	
In Internal Standard	115	2	HMI He	3018987	1.14	3014874	100.14	60	120	
Ho-165	165	2	HMI He	14481571	0.87	14587244	99.28	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5425629
Data File Name	165ICSA.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:51:28-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-23.998	ppb	-19.3	2241086	1	
Be	9	1	6	-0.073	ppb	0.0	0	1	
B	11	1	6	0.809	ppb	29.3	783	1	
Na	23	1	45	97964.825	ppb	0.8	246314096	100000	
K	39	1	45	98650.872	ppb	0.8	251460443	100000	
Ca	40	1	45	98734.662	ppb	1.0	362988488	100000	
Ti	47	2	45	2137.472	ppb	2.0	40888	1	>RL or LOD
V	51	2	72	0.188	ppb	135.6	2074	1	
Cr	52	2	72	0.212	ppb	42.0	357	1	
Mn	55	2	72	1.547	ppb	16.2	717	1	>RL or LOD
Co	59	2	72	0.002	ppb	1.8	20	1	
Ni	60	2	72	-0.082	ppb	-107.9	190	1	
Cu	63	2	72	0.559	ppb	18.1	1597	1	
Zn	66	2	72	0.069	ppb	83.0	417	1	
As	75	2	72	0.041	ppb	58.6	29	1	
Se	78	1	72	0.023	ppb	555.3	43	1	
Sr	88	2	72	0.991	ppb	6.3	487	1	
Zr	90	2	72	1.015	ppb	550.1	90	1	>RL or LOD
Nb	93	2	72	6.136	ppb	16.1	15886	1	>RL or LOD
Mo	95	2	115	2047.364	ppb	1.2	1358282	2000	>RL or LOD
Pd	105	2	115	0.011	ppb	322.7	37	1	
Ag	107	2	115	0.006	ppb	77.9	73	1	
Cd	111	2	115	0.359	ppb	14.3	107	1	
Sn	120	2	115	-0.102	ppb	-42.4	127	1	
Sb	121	2	115	0.059	ppb	25.7	97	1	
Ba	137	2	115	0.143	ppb	68.1	37	1	
W	182	2	165	0.211	ppb	10.7	1624	1	
Pt	195	2	165	-0.014	ppb	-67.1	27	1	
Tl	205	2	165	0.004	ppb	164.3	147	1	
Pb	208	2	165	0.115	ppb	14.5	1543	1	
Th	232	2	165	0.058	ppb	42.5	890	1	
U	238	2	165	0.015	ppb	13.9	310	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	535000	0.39	596260	89.73	60	120	
Sc (IS)	45	1	HMI H2	19667566	0.81	20835883	94.39	60	120	
Sc (IS)	45	2	HMI He	783979	0.61	823951	95.15	60	120	
Sc (IS)	45	3	No Gas	29279273	0.31	31260218	93.66	60	120	
Ge Internal Standard	72	1	HMI H2	7499256	0.70	8011210	93.61	60	120	
Ge Internal Standard	72	2	HMI He	859585	0.38	907478	94.72	60	120	
In Internal Standard	115	2	HMI He	2833873	1.30	3014874	94.00	60	120	
Ho-165	165	2	HMI He	14058687	0.51	14587244	96.38	60	120	

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Sample Table

Sample Name	rinse-5425028
Data File Name	166WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T22:57:01-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.038	ppb	-158.3245647	10	0.5
Na	23	2	45	21.175	ppb	7.583242058	30162	25
Mg	24	2	45	17.288	ppb	24.337565	2024	25
Al	27	2	45	21.419	ppb	19.46321638	703	15
K	39	2	45	33.526	ppb	37.78847058	16373	50
Ca	44	2	45	5.632	ppb	138.7983485	87	25
V	51	2	72	7.688	ppb	8.000396062	8603	1
Cr	52	2	72	0.265	ppb	15.57344871	437	1
Mn	55	2	72	0.215	ppb	41.12405427	167	0.5
Fe	57	2	72	62.981	ppb	12.6982564	1473	25
Co	59	2	72	0.009	ppb	250.2618929	33	0.5
Ni	60	2	72	-0.238	ppb	-35.32818713	120	1
Cu	63	2	72	0.745	ppb	24.23852505	1960	1
Zn	66	2	72	0.593	ppb	76.87671562	543	5
As	75	2	72	0.028	ppb	77.40844588	29	1
Se	78	1	72	-0.018	ppb	-194.9498811	39	1
Nb	93	2	72	2.077	ppb	11.76366206	7155	2
Mo	95	2	115	1.853	ppb	16.92771753	1500	0.5
Pd	105	2	115	0.225	ppb	26.82363557	283	1
Ag	107	2	115	0.020	ppb	25.27111473	113	1
Cd	111	2	115	0.010	ppb	173.2050808	3	0.5
Sn	120	2	115	0.700	ppb	8.371085858	853	1
Sb	121	2	115	0.590	ppb	26.83762801	533	0.6
Ba	137	2	115	0.132	ppb	83.94833393	37	0.5
W	182	2	165	0.205	ppb	10.99339025	1687	1
Pt	195	2	165	-0.020	ppb	-28.2379777	13	1
Tl	205	2	165	0.012	ppb	116.4419831	210	0.1
Pb	208	2	165	0.140	ppb	34.36380289	1844	0.5
Th	232	2	165	0.188	ppb	5.10072323	2294	1
U	238	2	165	0.012	ppb	88.5835813	300	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	619561	1.31	596260	103.91	60	120	
Sc (IS)	45	1	HMI H2	21130424	0.61	20835883	101.41	60	120	
Sc (IS)	45	2	HMI He	844646	0.55	823951	102.51	60	120	
Sc (IS)	45	3	No Gas	35639432	1.61	31260218	114.01	60	120	
Ge Internal Standard	72	1	HMI H2	8143998	1.78	8011210	101.66	60	120	
Ge Internal Standard	72	2	HMI He	913878	0.62	907478	100.71	60	120	
In Internal Standard	115	2	HMI He	3093266	0.75	3014874	102.60	60	120	
Ho-165	165	2	HMI He	14759772	0.54	14587244	101.18	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	167WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:00:49-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.060	ppb	-34.43320135	3	0.5
Na	23	2	45	95797.351	ppb	1.204091112	18903552	25
Mg	24	2	45	98308.654	ppb	0.697570701	8732435	25
Al	27	2	45	101459.115	ppb	0.381042274	2496607	15
K	39	2	45	98944.916	ppb	0.446960163	4528510	50
Ca	44	2	45	93552.186	ppb	0.31560747	239352	25
V	51	2	72	0.449	ppb	50.29197576	2360	1
Cr	52	2	72	0.330	ppb	33.20387254	493	1
Mn	55	2	72	1.262	ppb	11.70856913	617	0.5
Fe	57	2	72	106440.204	ppb	0.45475141	2133462	25
Co	59	2	72	0.022	ppb	86.91186999	57	0.5
Ni	60	2	72	0.023	ppb	223.3780989	250	1
Cu	63	2	72	0.631	ppb	12.0505673	1750	1
Zn	66	2	72	0.781	ppb	52.99672503	563	5
As	75	2	72	0.059	ppb	77.75152584	32	1
Se	78	1	72	0.001	ppb	5172.160312	43	1
Nb	93	2	72	2.092	ppb	16.6024589	6989	2
Mo	95	2	115	2144.189	ppb	0.796090427	1423663	0.5
Pd	105	2	115	-0.008	ppb	-246.9789194	17	1
Ag	107	2	115	0.026	ppb	42.24093074	117	1
Cd	111	2	115	0.526	ppb	25.06286254	157	0.5
Sn	120	2	115	-0.033	ppb	-152.7612394	183	1
Sb	121	2	115	0.009	ppb	266.9469753	60	0.6
Ba	137	2	115	0.118	ppb	145.5767047	30	0.5
W	182	2	165	0.216	ppb	4.62125264	1684	1
Pt	195	2	165	-0.014	ppb	-53.57395928	27	1
Tl	205	2	165	0.008	ppb	67.21276348	177	0.1
Pb	208	2	165	0.106	ppb	35.37625346	1510	0.5
Th	232	2	165	0.011	ppb	69.28103704	437	1
U	238	2	165	0.000	ppb	-415.8315275	153	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	595329	0.17	596260	99.84	60	120	
Sc (IS)	45	1	HMI H2	21554728	0.57	20835883	103.45	60	120	
Sc (IS)	45	2	HMI He	815005	0.38	823951	98.91	60	120	
Sc (IS)	45	3	No Gas	32639793	0.36	31260218	104.41	60	120	
Ge Internal Standard	72	1	HMI H2	8225994	0.41	8011210	102.68	60	120	
Ge Internal Standard	72	2	HMI He	888317	0.15	907478	97.89	60	120	
In Internal Standard	115	2	HMI He	2836104	0.99	3014874	94.07	60	120	
Ho-165	165	2	HMI He	14423665	0.75	14587244	98.88	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	168WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:04:35-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.049	ppb	-41.82659146	7	0.5
Na	23	2	45	16.929	ppb	24.40366749	28932	25
Mg	24	2	45	30.050	ppb	8.471735409	3157	25
Al	27	2	45	28.012	ppb	9.977843553	860	15
K	39	2	45	37.549	ppb	25.44756735	16363	50
Ca	44	2	45	12.395	ppb	14.27003434	103	25
V	51	2	72	0.661	ppb	6.853400527	2667	1
Cr	52	2	72	0.101	ppb	53.25534654	263	1
Mn	55	2	72	0.185	ppb	18.03954453	157	0.5
Fe	57	2	72	33.609	ppb	2.635535491	887	25
Co	59	2	72	0.017	ppb	161.0306673	50	0.5
Ni	60	2	72	-0.256	ppb	-10.94616607	113	1
Cu	63	2	72	0.167	ppb	36.97914097	1170	1
Zn	66	2	72	-0.388	ppb	-132.8849513	363	5
As	75	2	72	-0.044	ppb	-98.18305203	20	1
Se	78	1	72	-0.130	ppb	-40.09478322	19	1
Nb	93	2	72	-0.105	ppb	-107.6944526	1960	2
Mo	95	2	115	2.727	ppb	7.211017332	2120	0.5
Pd	105	2	115	-0.003	ppb	-144.5152559	23	1
Ag	107	2	115	0.001	ppb	2495.375558	67	1
Cd	111	2	115	0.031	ppb	173.2050808	10	0.5
Sn	120	2	115	-0.084	ppb	-59.65933045	153	1
Sb	121	2	115	-0.018	ppb	-44.19426736	43	0.6
Ba	137	2	115	0.132	ppb	41.64678526	37	0.5
W	182	2	165	-0.011	ppb	-213.5367492	953	1
Pt	195	2	165	-0.017	ppb	-55.65236072	20	1
Tl	205	2	165	-0.007	ppb	-174.8843184	83	0.1
Pb	208	2	165	0.085	ppb	22.812642	1363	0.5
Th	232	2	165	0.003	ppb	54.70557956	363	1
U	238	2	165	0.010	ppb	64.05434312	273	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	603569	0.63	596260	101.23	60	120	
Sc (IS)	45	1	HMI H2	21629199	0.54	20835883	103.81	60	120	
Sc (IS)	45	2	HMI He	834399	1.28	823951	101.27	60	120	
Sc (IS)	45	3	No Gas	34170902	0.88	31260218	109.31	60	120	
Ge Internal Standard	72	1	HMI H2	8469195	0.59	8011210	105.72	60	120	
Ge Internal Standard	72	2	HMI He	934171	0.25	907478	102.94	60	120	
In Internal Standard	115	2	HMI He	3077228	1.37	3014874	102.07	60	120	
Ho-165	165	2	HMI He	14863882	0.18	14587244	101.90	60	120	

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Sample Table

Sample Name	rinse-5425028
Data File Name	169WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:08:25-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.026	ppb	-76.28559201	13	0.5
Na	23	2	45	-10.519	ppb	-13.91123377	23843	25
Mg	24	2	45	19.678	ppb	1.290199564	2257	25
Al	27	2	45	13.705	ppb	36.58296692	510	15
K	39	2	45	21.864	ppb	43.91276871	15923	50
Ca	44	2	45	-4.560	ppb	-84.08376268	60	25
V	51	2	72	0.524	ppb	73.85449439	2574	1
Cr	52	2	72	0.063	ppb	107.2485198	223	1
Mn	55	2	72	0.174	ppb	51.76367186	153	0.5
Fe	57	2	72	16.555	ppb	39.62771651	533	25
Co	59	2	72	0.017	ppb	122.1152671	50	0.5
Ni	60	2	72	-0.215	ppb	-27.14205519	137	1
Cu	63	2	72	0.020	ppb	421.4221138	970	1
Zn	66	2	72	-0.357	ppb	-109.0632406	373	5
As	75	2	72	-0.045	ppb	-84.26439443	20	1
Se	78	1	72	-0.117	ppb	-40.64653334	21	1
Nb	93	2	72	-0.174	ppb	-18.96717086	1810	2
Mo	95	2	115	0.603	ppb	13.89747048	590	0.5
Pd	105	2	115	0.017	ppb	147.3985087	47	1
Ag	107	2	115	-0.016	ppb	-31.34799114	27	1
Cd	111	2	115	0.010	ppb	173.2050808	3	0.5
Sn	120	2	115	-0.137	ppb	-10.39865232	107	1
Sb	121	2	115	-0.001	ppb	-2296.044411	57	0.6
Ba	137	2	115	0.119	ppb	120.7401107	33	0.5
W	182	2	165	-0.044	ppb	-61.73176559	843	1
Pt	195	2	165	-0.020	ppb	-21.22479494	13	1
Tl	205	2	165	0.001	ppb	407.600087	137	0.1
Pb	208	2	165	0.110	ppb	8.482771659	1593	0.5
Th	232	2	165	-0.002	ppb	-587.0940562	320	1
U	238	2	165	0.004	ppb	94.23878464	213	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	612972	0.67	596260	102.80	60	120	
Sc (IS)	45	1	HMI H2	21976770	0.47	20835883	105.48	60	120	
Sc (IS)	45	2	HMI He	850164	0.52	823951	103.18	60	120	
Sc (IS)	45	3	No Gas	33815229	0.36	31260218	108.17	60	120	
Ge Internal Standard	72	1	HMI H2	8537409	0.26	8011210	106.57	60	120	
Ge Internal Standard	72	2	HMI He	944323	0.44	907478	104.06	60	120	
In Internal Standard	115	2	HMI He	3072720	0.94	3014874	101.92	60	120	
Ho-165	165	2	HMI He	14887657	0.24	14587244	102.06	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	170WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:12:13-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.049	ppb	-81.68001009	7	0.5
Na	23	2	45	-22.753	ppb	-8.365147547	21186	25
Mg	24	2	45	11.442	ppb	10.37562038	1483	25
Al	27	2	45	5.216	ppb	60.16236356	290	15
K	39	2	45	4.521	ppb	352.4985495	14998	50
Ca	44	2	45	-11.973	ppb	-30.88424235	40	25
V	51	2	72	0.306	ppb	3.409005801	2364	1
Cr	52	2	72	0.037	ppb	115.483316	193	1
Mn	55	2	72	0.061	ppb	64.37757963	100	0.5
Fe	57	2	72	9.373	ppb	59.12226496	377	25
Co	59	2	72	0.012	ppb	116.324565	40	0.5
Ni	60	2	72	-0.151	ppb	-44.4548328	170	1
Cu	63	2	72	0.114	ppb	99.04349274	1097	1
Zn	66	2	72	-0.629	ppb	-87.64240678	317	5
As	75	2	72	-0.011	ppb	-625.2720127	24	1
Se	78	1	72	-0.129	ppb	-51.87359183	19	1
Nb	93	2	72	-0.283	ppb	-37.47867	1527	2
Mo	95	2	115	0.213	ppb	13.02986806	310	0.5
Pd	105	2	115	-0.004	ppb	-619.0597435	23	1
Ag	107	2	115	-0.017	ppb	-13.96205062	23	1
Cd	111	2	115	0.021	ppb	86.61401667	7	0.5
Sn	120	2	115	-0.084	ppb	-13.83459607	153	1
Sb	121	2	115	-0.022	ppb	-98.18471266	40	0.6
Ba	137	2	115	0.048	ppb	43.30357494	13	0.5
W	182	2	165	-0.029	ppb	-74.91739196	883	1
Pt	195	2	165	-0.016	ppb	-73.52429633	23	1
Tl	205	2	165	-0.001	ppb	-447.1448994	123	0.1
Pb	208	2	165	0.079	ppb	28.76177036	1297	0.5
Th	232	2	165	-0.004	ppb	-163.091965	297	1
U	238	2	165	0.007	ppb	77.16241433	237	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	615501	0.61	596260	103.23	60	120	
Sc (IS)	45	1	HMI H2	21929592	0.90	20835883	105.25	60	120	
Sc (IS)	45	2	HMI He	844419	0.70	823951	102.48	60	120	
Sc (IS)	45	3	No Gas	34104457	1.34	31260218	109.10	60	120	
Ge Internal Standard	72	1	HMI H2	8446526	0.30	8011210	105.43	60	120	
Ge Internal Standard	72	2	HMI He	936882	0.60	907478	103.24	60	120	
In Internal Standard	115	2	HMI He	3080874	0.94	3014874	102.19	60	120	
Ho-165	165	2	HMI He	14733857	0.56	14587244	101.01	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	171WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:16:01-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.026	ppb	-150.6829171	13	0.5
Na	23	2	45	-25.177	ppb	-15.93228361	20678	25
Mg	24	2	45	9.023	ppb	20.31708171	1260	25
Al	27	2	45	6.156	ppb	26.98320362	313	15
K	39	2	45	10.699	ppb	105.739456	15279	50
Ca	44	2	45	5.678	ppb	167.6324359	87	25
V	51	2	72	0.361	ppb	70.08570173	2397	1
Cr	52	2	72	0.063	ppb	152.653124	220	1
Mn	55	2	72	0.105	ppb	108.9239021	120	0.5
Fe	57	2	72	8.850	ppb	32.88198916	363	25
Co	59	2	72	0.009	ppb	71.75613887	33	0.5
Ni	60	2	72	-0.230	ppb	-26.19652713	127	1
Cu	63	2	72	0.048	ppb	113.3657228	997	1
Zn	66	2	72	-0.637	ppb	-54.21248197	313	5
As	75	2	72	-0.024	ppb	-87.306779	22	1
Se	78	1	72	-0.068	ppb	-138.0172285	31	1
Nb	93	2	72	-0.215	ppb	-11.22044112	1684	2
Mo	95	2	115	0.090	ppb	133.3702878	220	0.5
Pd	105	2	115	0.003	ppb	1186.328811	30	1
Ag	107	2	115	-0.005	ppb	-106.1833635	53	1
Cd	111	2	115	0.021	ppb	173.2050808	7	0.5
Sn	120	2	115	-0.081	ppb	-129.1546116	153	1
Sb	121	2	115	0.021	ppb	310.087058	73	0.6
Ba	137	2	115	0.073	ppb	99.69931274	20	0.5
W	182	2	165	-0.034	ppb	-91.33392838	870	1
Pt	195	2	165	-0.013	ppb	-98.9410922	30	1
Tl	205	2	165	-0.002	ppb	-326.2645265	117	0.1
Pb	208	2	165	0.081	ppb	34.5858532	1317	0.5
Th	232	2	165	-0.010	ppb	-49.51683793	227	1
U	238	2	165	0.000	ppb	-5514.213822	160	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	621367	0.19	596260	104.21	60	120	
Sc (IS)	45	1	HMI H2	21891135	0.62	20835883	105.06	60	120	
Sc (IS)	45	2	HMI He	843919	0.57	823951	102.42	60	120	
Sc (IS)	45	3	No Gas	34122464	0.30	31260218	109.16	60	120	
Ge Internal Standard	72	1	HMI H2	8488904	0.20	8011210	105.96	60	120	
Ge Internal Standard	72	2	HMI He	931177	0.88	907478	102.61	60	120	
In Internal Standard	115	2	HMI He	3049981	1.65	3014874	101.16	60	120	
Ho-165	165	2	HMI He	14749909	1.13	14587244	101.12	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	172_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:19:48-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	498.094	ppb	1.171	218928	500	99.6	90	110	
Li	7	2	45	538.176	ppb	19.383	10758	500	107.6	90	110	
Li	7	3	45	506.313	ppb	1.096	6189378	500	101.3	90	110	
Be	9	1	6	52.061	ppb	1.783	14758	50	104.1	90	110	
B	11	1	6	49.252	ppb	2.895	15889	50	98.5	90	110	
Na	23	1	45	4945.198	ppb	0.884	14208411	5000	98.9	90	110	
Na	23	2	45	5025.774	ppb	15.353	1027722	5000	100.5	90	110	
Mg	24	2	45	5202.690	ppb	15.608	467983	5000	104.1	90	110	
Al	27	2	45	5153.603	ppb	15.943	128421	5000	103.1	90	110	
K	39	1	45	4946.218	ppb	0.789	22366091	5000	98.9	90	110	
K	39	2	45	5178.702	ppb	12.791	253995	5000	103.6	90	110	
Ca	40	1	45	5017.835	ppb	1.707	20641240	5000	100.4	90	110	
Ca	44	2	45	5268.709	ppb	14.612	13714	5000	105.4	90	110	
Ti	47	2	45	51.567	ppb	23.935	1033	50	103.1	90	110	
V	51	2	72	52.670	ppb	16.857	46867	50	105.3	90	110	
Cr	52	2	72	52.667	ppb	16.433	57435	50	105.3	90	110	
Mn	55	2	72	52.904	ppb	14.361	23677	50	105.8	90	110	
Fe	57	2	72	5248.206	ppb	15.773	108141	5000	105.0	90	110	
Co	59	2	72	52.608	ppb	15.242	97543	50	105.2	90	110	
Ni	60	2	72	52.428	ppb	15.351	27675	50	104.9	90	110	
Cu	63	2	72	53.285	ppb	13.419	75984	50	106.6	90	110	
Zn	66	2	72	52.035	ppb	19.249	10361	50	104.1	90	110	
As	75	2	72	52.450	ppb	17.321	7036	50	104.9	90	110	
Se	78	1	72	51.827	ppb	3.103	9954	50	103.7	90	110	
Sr	88	2	72	49.871	ppb	13.681	24359	50	99.7	90	110	
Zr	90	2	72	62.426	ppb	20.950	413	50	124.9	90	110	>+\-10%
Nb	93	2	72	88.748	ppb	15.347	214736	100	88.7	90	110	>+\-10%
Mo	95	2	115	50.711	ppb	14.970	35867	50	101.4	90	110	
Pd	105	2	115	52.490	ppb	13.940	58105	50	105.0	90	110	
Ag	107	2	115	51.966	ppb	12.405	121995	50	103.9	90	110	
Cd	111	2	115	52.025	ppb	16.105	16420	50	104.1	90	110	
Sn	120	2	115	50.489	ppb	18.345	43939	50	101.0	90	110	
Sb	121	2	115	50.567	ppb	15.765	39671	50	101.1	90	110	
Ba	137	2	115	51.035	ppb	13.693	13878	50	102.1	90	110	
W	182	2	165	52.264	ppb	15.647	176763	50	104.5	90	110	
Pt	195	2	165	52.036	ppb	15.340	141259	50	104.1	90	110	
Tl	205	2	165	51.769	ppb	12.568	337502	50	103.5	90	110	
Pb	208	2	165	51.678	ppb	14.689	449286	50	103.4	90	110	
Th	232	2	165	51.489	ppb	15.204	530449	50	103.0	90	110	
U	238	2	165	51.253	ppb	16.298	567827	50	102.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	606848	0.84	596260	101.78	60	120	
Sc (IS)	45	1	HMI H2	21936057	0.48	20835883	105.28	60	120	
Sc (IS)	45	2	HMI He	831744	8.32	823951	100.95	60	120	
Sc (IS)	45	3	No Gas	33470704	0.52	31260218	107.07	60	120	
Ge Internal Standard	72	1	HMI H2	8412504	0.32	8011210	105.01	60	120	
Ge Internal Standard	72	2	HMI He	918895	7.37	907478	101.26	60	120	
In Internal Standard	115	2	HMI He	3032858	8.16	3014874	100.60	60	120	
Ho-165	165	2	HMI He	14671956	8.36	14587244	100.58	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	173_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:23:35-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-2.439	ppb	-160.7	2760352	10	
Be	9	1	6	-0.050	ppb	-79.4	7	0.5	
B	11	1	6	0.884	ppb	19.3	933	0.5	>RL
Na	23	1	45	-50.522	ppb	-0.5	215932	25	
Na	23	2	45	-46.979	ppb	-7.4	16193	25	
Mg	24	2	45	1.713	ppb	43.5	587	25	
Al	27	2	45	2.382	ppb	69.9	217	15	
K	39	1	45	-5.617	ppb	-466.6	8685701	50	
K	39	2	45	12.698	ppb	66.9	15349	50	
Ca	40	1	45	-0.510	ppb	-51.2	66996	50	
Ca	44	2	45	-13.132	ppb	-84.3	37	25	
Ti	47	2	45	0.483	ppb	99.2	10	0.5	
V	51	2	72	0.708	ppb	12.2	2687	1	
Cr	52	2	72	0.090	ppb	10.0	250	1	
Mn	55	2	72	0.011	ppb	109.8	77	0.5	
Fe	57	2	72	2.856	ppb	11.4	237	25	
Co	59	2	72	0.010	ppb	29.0	37	0.5	
Ni	60	2	72	-0.197	ppb	-44.5	143	1	
Cu	63	2	72	0.010	ppb	943.9	937	1	
Zn	66	2	72	-1.094	ppb	-32.4	223	5	
As	75	2	72	0.034	ppb	316.7	30	1	
Se	78	1	72	-0.109	ppb	-79.2	23	1	
Sr	88	2	72	0.019	ppb	63.0	43	0.5	
Zr	90	2	72	-11.345	ppb	-42.6	33	1	
Nb	93	2	72	5.298	ppb	6.1	15099	2	>RL
Mo	95	2	115	0.085	ppb	152.0	217	0.5	
Pd	105	2	115	0.064	ppb	46.2	100	1	
Ag	107	2	115	-0.007	ppb	-202.2	47	1	
Cd	111	2	115	0.072	ppb	98.1	23	0.5	
Sn	120	2	115	0.017	ppb	302.4	243	1	
Sb	121	2	115	0.291	ppb	28.2	290	0.6	
Ba	137	2	115	0.084	ppb	24.4	23	0.5	
W	182	2	165	0.113	ppb	14.1	1370	1	
Pt	195	2	165	-0.005	ppb	-364.3	53	1	
Tl	205	2	165	0.005	ppb	146.7	160	0.1	
Pb	208	2	165	0.006	ppb	308.7	660	0.5	
Th	232	2	165	0.039	ppb	27.9	737	1	
U	238	2	165	0.047	ppb	6.3	687	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	621452	0.81	596260	104.22	60	120	
Sc (IS)	45	1	HMI H2	21833676	0.35	20835883	104.79	60	120	
Sc (IS)	45	2	HMI He	842380	1.26	823951	102.24	60	120	
Sc (IS)	45	3	No Gas	34100883	0.12	31260218	109.09	60	120	
Ge Internal Standard	72	1	HMI H2	8494023	0.36	8011210	106.03	60	120	
Ge Internal Standard	72	2	HMI He	926959	0.45	907478	102.15	60	120	
In Internal Standard	115	2	HMI He	3071256	1.28	3014874	101.87	60	120	
Ho-165	165	2	HMI He	14756637	0.76	14587244	101.16	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5425629
Data File Name	174ICSA.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:27:23-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-17.127	ppb	-21.1	2470484	1	
Be	9	1	6	-0.009	ppb	-835.3	17	1	
B	11	1	6	0.222	ppb	105.6	660	1	
Na	23	1	45	96973.058	ppb	0.8	257955856	100000	
K	39	1	45	97107.027	ppb	0.5	262006183	100000	
Ca	40	1	45	97617.469	ppb	0.6	379692034	100000	
Ti	47	2	45	2129.975	ppb	1.7	41329	1	>RL or LOD
V	51	2	72	0.488	ppb	24.3	2327	1	
Cr	52	2	72	0.256	ppb	7.5	403	1	
Mn	55	2	72	1.490	ppb	11.7	697	1	>RL or LOD
Co	59	2	72	0.020	ppb	127.9	50	1	
Ni	60	2	72	-0.030	ppb	-498.7	217	1	
Cu	63	2	72	0.710	ppb	17.8	1807	1	
Zn	66	2	72	0.388	ppb	104.8	477	1	
As	75	2	72	0.081	ppb	181.6	34	1	
Se	78	1	72	0.050	ppb	65.8	49	1	
Sr	88	2	72	0.870	ppb	7.6	433	1	
Zr	90	2	72	-1.180	ppb	-300.8	80	1	
Nb	93	2	72	7.091	ppb	10.7	18143	1	>RL or LOD
Mo	95	2	115	2086.159	ppb	1.0	1382135	2000	>RL or LOD
Pd	105	2	115	0.002	ppb	681.2	27	1	
Ag	107	2	115	0.014	ppb	1.7	90	1	
Cd	111	2	115	0.416	ppb	34.4	123	1	
Sn	120	2	115	-0.003	ppb	-2332.1	207	1	
Sb	121	2	115	0.095	ppb	53.3	123	1	
Ba	137	2	115	0.339	ppb	76.4	87	1	
W	182	2	165	0.231	ppb	17.1	1700	1	
Pt	195	2	165	-0.011	ppb	-41.2	37	1	
Tl	205	2	165	0.012	ppb	34.0	197	1	
Pb	208	2	165	0.097	ppb	28.6	1400	1	
Th	232	2	165	0.062	ppb	25.2	943	1	
U	238	2	165	0.012	ppb	56.9	287	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	566648	0.21	596260	95.03	60	120	
Sc (IS)	45	1	HMI H2	20807643	0.85	20835883	99.86	60	120	
Sc (IS)	45	2	HMI He	795154	0.55	823951	96.51	60	120	
Sc (IS)	45	3	No Gas	31694815	0.46	31260218	101.39	60	120	
Ge Internal Standard	72	1	HMI H2	7832290	0.52	8011210	97.77	60	120	
Ge Internal Standard	72	2	HMI He	864088	0.41	907478	95.22	60	120	
In Internal Standard	115	2	HMI He	2829867	0.57	3014874	93.86	60	120	
Ho-165	165	2	HMI He	14151215	0.36	14587244	97.01	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5425630
Data File Name	175ICSB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:31:09-07:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	867.745	ppb	1.610	285172	100	867.7	80	120	
Li	7	2	45	936.003	ppb	5.355	14357	100	936.0	80	120	
Li	7	3	45	881.518	ppb	1.579	8049086	100	881.5	80	120	
Be	9	1	6	94.478	ppb	2.379	23102	100	94.5	80	120	
B	11	1	6	77.322	ppb	2.596	21219	100	77.3	80	120	>+\-20%
Na	23	1	45	98549.462	ppb	1.085	254382816	100	98549.5	80	120	>+\-20%
K	39	1	45	99395.909	ppb	1.189	260046663	100	99395.9	80	120	>+\-20%
Ca	40	1	45	99601.286	ppb	1.290	375932874	100	99601.3	80	120	>+\-20%
V	51	2	72	92.006	ppb	1.561	74649	100	92.0	80	120	
Cr	52	2	72	92.051	ppb	1.939	93179	100	92.1	80	120	
Mn	55	2	72	90.343	ppb	3.775	37486	100	90.3	80	120	
Co	59	2	72	92.253	ppb	2.316	158831	100	92.3	80	120	
Ni	60	2	72	90.760	ppb	2.386	44326	100	90.8	80	120	
Cu	63	2	72	93.428	ppb	0.601	122973	100	93.4	80	120	
Zn	66	2	72	96.057	ppb	2.401	17451	100	96.1	80	120	
As	75	2	72	91.067	ppb	3.382	11340	100	91.1	80	120	
Se	78	1	72	92.172	ppb	1.896	16117	100	92.2	80	120	
Sr	88	2	72	96.036	ppb	2.591	43498	100	96.0	80	120	
Zr	90	2	72	11.876	ppb	94.596	140	100	11.9	80	120	>+\-20%
Nb	93	2	72	196.556	ppb	2.814	439216	100	196.6	80	120	
Mo	95	2	115	2068.431	ppb	2.037	1323916	100	2068.4	80	120	>+\-20%
Pd	105	2	115	93.925	ppb	1.119	94427	100	93.9	80	120	
Ag	107	2	115	89.226	ppb	1.492	190059	100	89.2	80	120	
Cd	111	2	115	94.092	ppb	5.598	26997	100	94.1	80	120	
Sn	120	2	115	96.013	ppb	2.652	75887	100	96.0	80	120	
Sb	121	2	115	100.455	ppb	1.923	71584	100	100.5	80	120	
Ba	137	2	115	93.442	ppb	4.588	23074	100	93.4	80	120	
W	182	2	165	96.187	ppb	4.128	309045	100	96.2	80	120	
Pt	195	2	165	93.731	ppb	1.963	242314	100	93.7	80	120	
Tl	205	2	165	88.382	ppb	2.221	547886	100	88.4	80	120	
Pb	208	2	165	88.605	ppb	2.443	733019	100	88.6	80	120	
Th	232	2	165	92.329	ppb	3.282	905548	100	92.3	80	120	
U	238	2	165	90.912	ppb	2.731	959678	100	90.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	523829	0.21	596260	87.85	60	120	
Sc (IS)	45	1	HMI H2	20192173	1.03	20835883	96.91	60	120	
Sc (IS)	45	2	HMI He	771018	0.99	823951	93.58	60	120	
Sc (IS)	45	3	No Gas	30769520	0.52	31260218	98.43	60	120	
Ge Internal Standard	72	1	HMI H2	7674440	0.58	8011210	95.80	60	120	
Ge Internal Standard	72	2	HMI He	847006	0.28	907478	93.34	60	120	
In Internal Standard	115	2	HMI He	2734081	0.64	3014874	90.69	60	120	
Ho-165	165	2	HMI He	13859009	1.84	14587244	95.01	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	176SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:34:55-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-11.420	ppb	-11.420	-61.59	90689	500000	
Li	7	2	45	-0.534	ppb	-0.534	-3279.95	4478	500000	
Li	7	3	45	-14.310	ppb	-14.310	-41.13	2626858	50000	
Be	9	1	6	-0.024	ppb	-0.024	-359.39	13	2000	
B	11	1	6	0.353	ppb	0.353	86.18	717	2000	
Na	23	1	45	-14.176	ppb	-14.176	-26.56	308609	2000	
Na	23	2	45	-26.629	ppb	-26.629	-22.10	19971	400000	
Mg	24	2	45	12.189	ppb	12.189	20.03	1520	400000	
Al	27	2	45	11.064	ppb	11.064	42.14	430	400000	
K	39	1	45	6.278	ppb	6.278	624.80	8481165	400000	
K	39	2	45	14.779	ppb	14.779	55.53	15162	400000	
Ca	40	1	45	12.736	ppb	12.736	15.99	117763	400000	
Ca	44	2	45	1.257	ppb	1.257	1249.32	73	400000	
Ti	47	2	45	0.494	ppb	0.494	99.65	10	4000	
V	51	2	72	0.531	ppb	0.531	39.58	2514	2000	
Cr	52	2	72	-0.008	ppb	-0.008	-1150.12	140	5000	
Mn	55	2	72	-0.039	ppb	-0.039	-85.28	53	10000	
Fe	57	2	72	23.021	ppb	23.021	10.36	653	400000	
Co	59	2	72	0.003	ppb	0.003	234.95	23	2000	
Ni	60	2	72	-0.234	ppb	-0.234	-23.03	123	5000	
Cu	63	2	72	-0.046	ppb	-0.046	-102.85	850	5000	
Zn	66	2	72	0.469	ppb	0.469	138.53	523	5000	
As	75	2	72	-0.008	ppb	-0.008	-562.27	24	2000	
Se	78	1	72	-0.064	ppb	-0.064	-94.98	31	2000	
Sr	88	2	72	-0.001	ppb	-0.001	-4935.85	33	4000	
Zr	90	2	72	-4.770	ppb	-4.770	-86.41	67	1000	
Nb	93	2	72	5.810	ppb	5.810	9.28	16220	200	
Mo	95	2	115	2.626	ppb	2.626	0.83	2024	2000	
Pd	105	2	115	0.041	ppb	0.041	87.80	73	100	
Ag	107	2	115	-0.002	ppb	-0.002	-533.12	60	100	
Cd	111	2	115	0.021	ppb	0.021	173.21	7	2000	
Sn	120	2	115	-0.045	ppb	-0.045	-173.70	187	2000	
Sb	121	2	115	0.050	ppb	0.050	56.72	97	1000	
Ba	137	2	115	0.170	ppb	0.170	33.16	47	5000	
W	182	2	165	0.066	ppb	0.066	49.39	1203	100	
Pt	195	2	165	-0.009	ppb	-0.009	-63.90	43	100	
Tl	205	2	165	0.043	ppb	0.043	5.91	413	2000	
Pb	208	2	165	0.018	ppb	0.018	44.98	760	5000	
Th	232	2	165	0.036	ppb	0.036	21.12	710	2000	
U	238	2	165	0.074	ppb	0.074	10.04	990	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	582444	1.26	596260	97.68	60	120	
Sc (IS)	45	1	HMI H2	21240334	0.70	20835883	101.94	60	120	
Sc (IS)	45	2	HMI He	827009	0.55	823951	100.37	60	120	
Sc (IS)	45	3	No Gas	33455180	0.40	31260218	107.02	60	120	
Ge Internal Standard	72	1	HMI H2	8292563	0.22	8011210	103.51	60	120	
Ge Internal Standard	72	2	HMI He	919821	0.48	907478	101.36	60	120	
In Internal Standard	115	2	HMI He	3040112	1.59	3014874	100.84	60	120	
Ho-165	165	2	HMI He	14680954	0.61	14587244	100.64	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	177_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:38:42-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	464.257	ppb	0.985	209414	500	92.9	90	110	
Li	7	2	45	522.795	ppb	10.318	10608	500	104.6	90	110	
Li	7	3	45	486.046	ppb	0.774	5996132	500	97.2	90	110	
Be	9	1	6	52.269	ppb	3.422	14254	50	104.5	90	110	
B	11	1	6	50.853	ppb	1.772	15766	50	101.7	90	110	
Na	23	1	45	4905.526	ppb	0.349	14017637	5000	98.1	90	110	
Na	23	2	45	4908.637	ppb	8.011	1008581	5000	98.2	90	110	
Mg	24	2	45	5082.926	ppb	7.671	459324	5000	101.7	90	110	
Al	27	2	45	5090.803	ppb	7.461	127481	5000	101.8	90	110	
K	39	1	45	4948.518	ppb	0.757	22245501	5000	99.0	90	110	
K	39	2	45	5112.423	ppb	4.550	251836	5000	102.2	90	110	
Ca	40	1	45	4999.999	ppb	0.814	20452278	5000	100.0	90	110	
Ca	44	2	45	5083.721	ppb	10.197	13277	5000	101.7	90	110	
Ti	47	2	45	56.169	ppb	16.338	1133	50	112.3	90	110	>+\-10%
V	51	2	72	50.373	ppb	7.351	45443	50	100.7	90	110	
Cr	52	2	72	51.269	ppb	7.677	56575	50	102.5	90	110	
Mn	55	2	72	49.559	ppb	7.420	22425	50	99.1	90	110	
Fe	57	2	72	5037.298	ppb	8.579	104974	5000	100.7	90	110	
Co	59	2	72	51.448	ppb	7.088	96472	50	102.9	90	110	
Ni	60	2	72	51.223	ppb	6.749	27354	50	102.4	90	110	
Cu	63	2	72	52.776	ppb	7.113	76052	50	105.6	90	110	
Zn	66	2	72	50.492	ppb	8.179	10194	50	101.0	90	110	
As	75	2	72	52.336	ppb	5.699	7110	50	104.7	90	110	
Se	78	1	72	51.578	ppb	2.337	9925	50	103.2	90	110	
Sr	88	2	72	51.166	ppb	6.460	25257	50	102.3	90	110	
Zr	90	2	72	44.791	ppb	44.597	320	50	89.6	90	110	>+\-10%
Nb	93	2	72	97.125	ppb	6.268	237504	100	97.1	90	110	
Mo	95	2	115	50.700	ppb	8.787	36001	50	101.4	90	110	
Pd	105	2	115	52.114	ppb	4.502	57951	50	104.2	90	110	
Ag	107	2	115	51.486	ppb	4.818	121301	50	103.0	90	110	
Cd	111	2	115	51.318	ppb	7.673	16274	50	102.6	90	110	
Sn	120	2	115	49.632	ppb	6.715	43469	50	99.3	90	110	
Sb	121	2	115	50.853	ppb	6.196	40096	50	101.7	90	110	
Ba	137	2	115	47.634	ppb	4.409	13010	50	95.3	90	110	
W	182	2	165	51.124	ppb	7.689	172355	50	102.2	90	110	
Pt	195	2	165	51.546	ppb	5.823	139507	50	103.1	90	110	
Tl	205	2	165	51.696	ppb	5.180	335526	50	103.4	90	110	
Pb	208	2	165	51.712	ppb	6.718	447932	50	103.4	90	110	
Th	232	2	165	51.234	ppb	7.078	525979	50	102.5	90	110	
U	238	2	165	50.921	ppb	7.597	562454	50	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	583923	0.61	596260	97.93	60	120	
Sc (IS)	45	1	HMI H2	21811424	0.18	20835883	104.68	60	120	
Sc (IS)	45	2	HMI He	830325	4.57	823951	100.77	60	120	
Sc (IS)	45	3	No Gas	33168129	0.59	31260218	106.10	60	120	
Ge Internal Standard	72	1	HMI H2	8428046	0.30	8011210	105.20	60	120	
Ge Internal Standard	72	2	HMI He	923773	3.17	907478	101.80	60	120	
In Internal Standard	115	2	HMI He	3026955	3.82	3014874	100.40	60	120	
Ho-165	165	2	HMI He	14524730	4.07	14587244	99.57	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	178_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:42:29-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-5.901	ppb	-34.4	2699334	10	
Be	9	1	6	-0.037	ppb	-162.8	10	0.5	
B	11	1	6	0.838	ppb	30.5	893	0.5	>RL
Na	23	1	45	-48.712	ppb	-2.8	220077	25	
Na	23	2	45	-49.477	ppb	-3.2	15672	25	
Mg	24	2	45	6.660	ppb	6.8	1040	25	
Al	27	2	45	11.033	ppb	30.6	437	15	
K	39	1	45	-10.873	ppb	-55.6	8636126	50	
K	39	2	45	8.206	ppb	105.4	15118	50	
Ca	40	1	45	3.944	ppb	5.2	84828	50	
Ca	44	2	45	-9.374	ppb	-84.5	47	25	
Ti	47	2	45	0.163	ppb	173.2	3	0.5	
V	51	2	72	0.928	ppb	34.3	2884	1	
Cr	52	2	72	0.045	ppb	58.4	200	1	
Mn	55	2	72	-0.041	ppb	-29.3	53	0.5	
Fe	57	2	72	3.941	ppb	92.4	260	25	
Co	59	2	72	0.010	ppb	106.3	37	0.5	
Ni	60	2	72	-0.023	ppb	-507.7	237	1	
Cu	63	2	72	0.045	ppb	353.8	990	1	
Zn	66	2	72	-0.978	ppb	-12.6	247	5	
As	75	2	72	0.072	ppb	100.0	35	1	
Se	78	1	72	-0.101	ppb	-82.7	24	1	
Sr	88	2	72	-0.028	ppb	-123.8	20	0.5	
Zr	90	2	72	4.065	ppb	148.6	113	1	>RL
Nb	93	2	72	6.157	ppb	5.0	17238	2	>RL
Mo	95	2	115	0.276	ppb	60.2	350	0.5	
Pd	105	2	115	0.063	ppb	47.0	97	1	
Ag	107	2	115	-0.006	ppb	-128.4	50	1	
Cd	111	2	115	0.052	ppb	91.9	17	0.5	
Sn	120	2	115	-0.006	ppb	-1193.9	220	1	
Sb	121	2	115	0.393	ppb	6.9	367	0.6	
Ba	137	2	115	0.061	ppb	35.6	17	0.5	
W	182	2	165	0.074	ppb	30.3	1230	1	
Pt	195	2	165	0.004	ppb	291.3	77	1	
Tl	205	2	165	0.023	ppb	24.1	277	0.1	
Pb	208	2	165	0.022	ppb	42.0	793	0.5	
Th	232	2	165	0.036	ppb	22.6	710	1	
U	238	2	165	0.046	ppb	30.7	680	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	603901	0.91	596260	101.28	60	120	
Sc (IS)	45	1	HMI H2	21744738	0.22	20835883	104.36	60	120	
Sc (IS)	45	2	HMI He	841487	0.41	823951	102.13	60	120	
Sc (IS)	45	3	No Gas	33641539	0.45	31260218	107.62	60	120	
Ge Internal Standard	72	1	HMI H2	8426588	0.45	8011210	105.18	60	120	
Ge Internal Standard	72	2	HMI He	929602	0.68	907478	102.44	60	120	
In Internal Standard	115	2	HMI He	3031122	1.77	3014874	100.54	60	120	
Ho-165	165	2	HMI He	14671931	0.29	14587244	100.58	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	179LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:46:17-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	4.215	ppb	61.872	2779742	50	8.4	70	130	>+/-30%
Be	9	1	6	1.021	ppb	21.339	310	1	102.1	70	130	
Na	23	2	45	1.123	ppb	99.169	26044	50	2.2	70	130	>+/-30%
Mg	24	2	45	55.720	ppb	4.062	5555	50	111.4	70	130	
Al	27	2	45	41.491	ppb	14.276	1213	30	138.3	70	130	>+/-30%
K	39	2	45	120.544	ppb	8.144	20468	100	120.5	70	130	
Ca	44	2	45	49.724	ppb	8.812	203	50	99.4	70	130	
V	51	2	72	5.758	ppb	5.459	7105	5	115.2	70	130	
Cr	52	2	72	2.070	ppb	4.156	2457	2	103.5	70	130	
Mn	55	2	72	0.777	ppb	33.395	427	1	77.7	70	130	
Fe	57	2	72	65.625	ppb	12.427	1560	50	131.3	70	130	>+/-30%
Co	59	2	72	0.960	ppb	15.553	1837	1	96.0	70	130	
Ni	60	2	72	1.955	ppb	12.232	1297	2	97.8	70	130	
Cu	63	2	72	2.112	ppb	12.934	3971	2	105.6	70	130	
Zn	66	2	72	10.318	ppb	5.641	2457	10	103.2	70	130	
As	75	2	72	4.935	ppb	1.585	701	5	98.7	70	130	
Se	78	1	72	5.254	ppb	17.727	1055	5	105.1	70	130	
Sr	88	2	72	1.095	ppb	17.211	580	1	109.5	70	130	
Zr	90	2	72	-2.415	ppb	-208.810	80	0.5	-483.1	70	130	>+/-30%
Nb	93	2	72	14.928	ppb	4.077	38801	2	746.4	70	130	>+/-30%
Mo	95	2	115	2.161	ppb	13.268	1724	2	108.0	70	130	
Pd	105	2	115	0.029	ppb	51.401	60	1	2.9	70	130	>+/-30%
Ag	107	2	115	5.045	ppb	2.321	12236	5	100.9	70	130	
Cd	111	2	115	1.192	ppb	18.723	387	1	119.2	70	130	
Sn	120	2	115	10.186	ppb	6.829	9320	10	101.9	70	130	
Sb	121	2	115	2.155	ppb	2.798	1797	2	107.8	70	130	
Ba	137	2	115	1.002	ppb	26.876	280	1	100.2	70	130	
W	182	2	165	5.039	ppb	4.271	18213	1	503.9	70	130	>+/-30%
Pt	195	2	165	0.005	ppb	357.791	80	1	0.5	70	130	>+/-30%
Tl	205	2	165	0.979	ppb	6.159	6599	1	97.9	70	130	
Pb	208	2	165	1.051	ppb	7.684	9882	1	105.1	70	130	
Th	232	2	165	2.062	ppb	1.231	21906	2	103.1	70	130	
U	238	2	165	1.020	ppb	1.877	11642	1	102.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	607764	0.36	596260	101.93	60	120	
Sc (IS)	45	1	HMI H2	21849338	0.27	20835883	104.86	60	120	
Sc (IS)	45	2	HMI He	843917	0.53	823951	102.42	60	120	
Sc (IS)	45	3	No Gas	33772743	0.53	31260218	108.04	60	120	
Ge Internal Standard	72	1	HMI H2	8463727	0.28	8011210	105.65	60	120	
Ge Internal Standard	72	2	HMI He	933249	0.38	907478	102.84	60	120	
In Internal Standard	115	2	HMI He	3098316	2.31	3014874	102.77	60	120	
Ho-165	165	2	HMI He	14781084	0.54	14587244	101.33	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436990/1-A
Data File Name	180_BLK.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:50:06-07:00
Sample Type	Blank
Dilution	1
Comment	436990 6020a dod4
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-17.313	ppb	-4.846721803	89787	0.5
Li	7	2	45	1.795	ppb	1036.133573	4591	0.5
Li	7	3	45	-14.124	ppb	-40.8367287	2535988	10
Be	9	1	6	-0.060	ppb	-35.7346098	3	0.5
B	11	1	6	-0.181	ppb	-237.935591	560	0.5
Na	23	1	45	-57.528	ppb	-0.371325196	192122	25
Na	23	2	45	-55.903	ppb	-5.763648438	14398	25
Mg	24	2	45	1.154	ppb	125.4262692	537	25
Al	27	2	45	7.089	ppb	29.28437762	337	15
K	39	1	45	-1337.097	ppb	-2.051950523	4925503	50
K	39	2	45	-8.165	ppb	-173.335818	14378	50
Ca	40	1	45	2.914	ppb	13.02341078	79207	50
Ca	44	2	45	-11.938	ppb	-1.34123371	40	25
Ti	47	2	45	0.489	ppb	99.91434612	10	0.5
V	51	2	72	-0.463	ppb	-67.5922686	1670	1
Cr	52	2	72	0.286	ppb	57.25382893	467	1
Mn	55	2	72	1.440	ppb	12.56489641	723	0.5
Fe	57	2	72	39.459	ppb	10.70034297	1000	25
Co	59	2	72	0.007	ppb	75.35831882	30	0.5
Ni	60	2	72	-0.178	ppb	-59.59344702	153	1
Cu	63	2	72	0.138	ppb	70.85964905	1120	1
Zn	66	2	72	5.585	ppb	20.62906378	1520	5
As	75	2	72	0.001	ppb	1675.391242	25	1
Se	78	1	72	-0.135	ppb	-65.8800653	17	1
Sr	88	2	72	0.066	ppb	19.33109342	67	0.5
Zr	90	2	72	0.236	ppb	6127.944867	93	1
Nb	93	2	72	1.947	ppb	5.969285124	6929	2
Mo	95	2	115	0.052	ppb	125.8492637	193	0.5
Pd	105	2	115	0.018	ppb	177.3696296	47	1
Ag	107	2	115	-0.017	ppb	-38.56781931	23	1
Cd	111	2	115	0.011	ppb	173.2050808	3	0.5
Sn	120	2	115	-0.016	ppb	-401.8423614	213	1
Sb	121	2	115	0.049	ppb	72.87390163	97	0.6
Ba	137	2	115	4.545	ppb	9.330793575	1253	0.5
W	182	2	165	0.054	ppb	93.2796097	1173	1
Pt	195	2	165	-0.005	ppb	-224.6401218	53	1
Tl	205	2	165	0.004	ppb	91.93233764	157	0.1
Pb	208	2	165	0.067	ppb	8.535766615	1203	0.5
Th	232	2	165	0.052	ppb	4.362620218	880	1
U	238	2	165	0.007	ppb	64.51230198	247	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	583792	1.19	596260	97.91	60	120	
Sc (IS)	45	1	HMI H2	21358056	0.64	20835883	102.51	60	120	
Sc (IS)	45	2	HMI He	843136	1.07	823951	102.33	60	120	
Sc (IS)	45	3	No Gas	32283159	0.63	31260218	103.27	60	120	
Ge Internal Standard	72	1	HMI H2	8256098	0.12	8011210	103.06	60	120	
Ge Internal Standard	72	2	HMI He	925443	1.02	907478	101.98	60	120	
In Internal Standard	115	2	HMI He	3057584	2.31	3014874	101.42	60	120	
Ho-165	165	2	HMI He	14823274	0.43	14587244	101.62	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436990/2-A
Data File Name	181_LCS.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:53:54-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436990 6020a dod4
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	62.305	62.305	ppb	10.159	109244	400	15.6	80	120	>+/-20%
Li	7	2	45	94.595	94.595	ppb	24.742	5711	400	23.6	80	120	>+/-20%
Li	7	3	45	70.624	70.624	ppb	3.753	3146219	400	17.7	80	120	>+/-20%
Be	9	1	6	39.319	39.319	ppb	3.931	10824	40	98.3	80	120	
Na	23	2	45	-61.226	-61.226	ppb	-3.286	13350	40	-153.1	80	120	>+/-20%
Mg	24	2	45	1.555	1.555	ppb	117.387	577	40	3.9	80	120	>+/-20%
Al	27	2	45	425.843	425.843	ppb	1.813	11035	40	1064.6	80	120	>+/-20%
K	39	2	45	-9.514	-9.514	ppb	-102.235	14358	40	-23.8	80	120	>+/-20%
Ca	44	2	45	203.664	203.664	ppb	28.599	613	40	509.2	80	120	>+/-20%
V	51	2	72	39.019	39.019	ppb	0.494	36029	40	97.5	80	120	
Cr	52	2	72	40.572	40.572	ppb	0.950	45265	40	101.4	80	120	
Mn	55	2	72	40.569	40.569	ppb	3.002	18559	40	101.4	80	120	
Fe	57	2	72	389.214	389.214	ppb	4.086	8359	40	973.0	80	120	>+/-20%
Co	59	2	72	40.660	40.660	ppb	0.863	77025	40	101.6	80	120	
Ni	60	2	72	40.425	40.425	ppb	2.888	21861	40	101.1	80	120	
Cu	63	2	72	42.191	42.191	ppb	0.833	61602	40	105.5	80	120	
Zn	66	2	72	42.435	42.435	ppb	0.853	8726	40	106.1	80	120	
As	75	2	72	39.270	39.270	ppb	2.772	5394	40	98.2	80	120	
Se	78	1	72	37.837	37.837	ppb	6.062	7167	40	94.6	80	120	
Nb	93	2	72	1.167	1.167	ppb	6.588	5068	40	2.9	80	120	>+/-20%
Mo	95	2	115	40.862	40.862	ppb	1.747	29268	40	102.2	80	120	
Pd	105	2	115	-0.006	-0.006	ppb	-281.812	20	40	0.0	80	120	>+/-20%
Ag	107	2	115	43.588	43.588	ppb	2.107	103385	40	109.0	80	120	
Cd	111	2	115	42.062	42.062	ppb	2.351	13437	40	105.2	80	120	
Sn	120	2	115	39.726	39.726	ppb	3.047	35082	40	99.3	80	120	
Sb	121	2	115	39.670	39.670	ppb	2.108	31504	40	99.2	80	120	
Ba	137	2	115	40.216	40.216	ppb	3.405	11058	40	100.5	80	120	
W	182	2	165	41.136	41.136	ppb	1.263	142370	40	102.8	80	120	
Pt	195	2	165	-0.005	-0.005	ppb	-112.702	53	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.614	40.614	ppb	1.008	270119	40	101.5	80	120	
Pb	208	2	165	40.960	40.960	ppb	0.467	363846	40	102.4	80	120	
Th	232	2	165	39.835	39.835	ppb	2.045	419278	40	99.6	80	120	
U	238	2	165	39.954	39.954	ppb	1.031	452517	40	99.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	589123	0.82	596260	98.80	60	120	
Sc (IS)	45	1	HMI H2	21435972	0.11	20835883	102.88	60	120	
Sc (IS)	45	2	HMI He	845966	1.74	823951	102.67	60	120	
Sc (IS)	45	3	No Gas	32815110	0.51	31260218	104.97	60	120	
Ge Internal Standard	72	1	HMI H2	8281989	0.67	8011210	103.38	60	120	
Ge Internal Standard	72	2	HMI He	931818	0.53	907478	102.68	60	120	
In Internal Standard	115	2	HMI He	3044079	1.82	3014874	100.97	60	120	
Ho-165	165	2	HMI He	14862631	1.21	14587244	101.89	60	120	

Sample Table

Sample Name	LCSD 280-436990/3-A
Data File Name	182SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-13T23:57:41-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	62.584	ppb	62.584	5.69	110197	500000	
Li	7	2	45	69.557	ppb	69.557	68.52	5405	500000	
Li	7	3	45	64.823	ppb	64.823	3.08	3126903	50000	
Be	9	1	6	39.566	ppb	39.566	3.84	10891	2000	
B	11	1	6	30.126	ppb	30.126	9.43	9674	2000	
Na	23	1	45	-59.118	ppb	-59.118	-1.18	189993	2000	
Na	23	2	45	-59.208	ppb	-59.208	-1.29	13734	400000	
Mg	24	2	45	1.084	ppb	1.084	47.32	530	400000	
Al	27	2	45	400.577	ppb	400.577	2.44	10364	400000	
K	39	1	45	-1415.726	ppb	-1415.726	-1.18	4770231	400000	
K	39	2	45	-5.421	ppb	-5.421	-92.85	14518	400000	
Ca	40	1	45	0.991	ppb	0.991	5.29	72375	400000	
Ca	44	2	45	190.633	ppb	190.633	19.65	577	400000	
Ti	47	2	45	1.783	ppb	1.783	57.17	37	4000	
V	51	2	72	38.361	ppb	38.361	1.49	35418	2000	
Cr	52	2	72	40.395	ppb	40.395	0.65	45014	5000	
Mn	55	2	72	41.788	ppb	41.788	1.31	19093	10000	
Fe	57	2	72	400.633	ppb	400.633	4.55	8593	400000	
Co	59	2	72	41.620	ppb	41.620	1.44	78744	2000	
Ni	60	2	72	40.519	ppb	40.519	0.75	21884	5000	
Cu	63	2	72	41.405	ppb	41.405	2.07	60404	5000	
Zn	66	2	72	48.232	ppb	48.232	2.37	9847	5000	
As	75	2	72	39.184	ppb	39.184	1.97	5377	2000	
Se	78	1	72	39.450	ppb	39.450	1.61	7474	2000	
Sr	88	2	72	41.011	ppb	41.011	1.06	20432	4000	
Zr	90	2	72	9669.170	ppb	9669.170	0.44	50250	1000	>LDR
Nb	93	2	72	0.840	ppb	0.840	11.04	4264	200	
Mo	95	2	115	39.622	ppb	39.622	2.32	28626	2000	
Pd	105	2	115	0.033	ppb	0.033	254.00	63	100	
Ag	107	2	115	42.744	ppb	42.744	2.34	102261	100	
Cd	111	2	115	39.275	ppb	39.275	2.92	12656	2000	
Sn	120	2	115	40.452	ppb	40.452	2.28	36044	2000	
Sb	121	2	115	38.871	ppb	38.871	2.09	31136	1000	
Ba	137	2	115	38.880	ppb	38.880	6.54	10778	5000	
W	182	2	165	39.620	ppb	39.620	0.84	137640	100	
Pt	195	2	165	-0.014	ppb	-0.014	-96.24	30	100	
Tl	205	2	165	40.616	ppb	40.616	0.83	271103	2000	
Pb	208	2	165	40.500	ppb	40.500	0.32	361011	5000	
Th	232	2	165	40.013	ppb	40.013	0.34	422689	2000	
U	238	2	165	40.059	ppb	40.059	1.28	455290	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	589076	0.39	596260	98.80	60	120	
Sc (IS)	45	1	HMI H2	21609556	0.51	20835883	103.71	60	120	
Sc (IS)	45	2	HMI He	843978	0.42	823951	102.43	60	120	
Sc (IS)	45	3	No Gas	33021118	0.80	31260218	105.63	60	120	
Ge Internal Standard	72	1	HMI H2	8287163	0.46	8011210	103.44	60	120	
Ge Internal Standard	72	2	HMI He	930708	1.03	907478	102.56	60	120	
In Internal Standard	115	2	HMI He	3070363	2.02	3014874	101.84	60	120	
Ho-165	165	2	HMI He	14914709	0.70	14587244	102.24	60	120	

Sample Report

Sample Table

Sample Name	280-116483-E-1-A
Data File Name	183SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:01:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	8.915	ppb	8.915	78.05	92468	500000	
Li	7	2	45	1.712	ppb	1.712	1386.19	4424	500000	
Li	7	3	45	5.775	ppb	5.775	178.82	2556704	50000	
Be	9	1	6	0.020	ppb	0.020	297.28	23	2000	
B	11	1	6	277.018	ppb	277.018	1.84	76546	2000	
Na	23	1	45	95023.325	ppb	95023.325	1.59	249756470	2000	>LDR
Na	23	2	45	91885.759	ppb	91885.759	0.23	18078947	400000	
Mg	24	2	45	83217.937	ppb	83217.937	0.75	7370032	400000	
Al	27	2	45	11.099	ppb	11.099	43.34	423	400000	
K	39	1	45	7314.039	ppb	7314.039	1.96	27074247	400000	
K	39	2	45	8239.754	ppb	8239.754	0.38	389022	400000	
Ca	40	1	45	439039.668	ppb	439039.668	1.19	1687090002	400000	
Ca	44	2	45	437586.598	ppb	437586.598	0.48	1115957	400000	
Ti	47	2	45	0.337	ppb	0.337	173.21	7	4000	
V	51	2	72	0.219	ppb	0.219	131.78	2150	2000	
Cr	52	2	72	1.836	ppb	1.836	7.76	2074	5000	
Mn	55	2	72	3926.454	ppb	3926.454	0.53	1691636	10000	
Fe	57	2	72	1003.605	ppb	1003.605	2.31	20115	400000	
Co	59	2	72	4.251	ppb	4.251	2.18	7629	2000	
Ni	60	2	72	9.851	ppb	9.851	6.13	5215	5000	
Cu	63	2	72	0.370	ppb	0.370	23.36	1380	5000	
Zn	66	2	72	3.192	ppb	3.192	19.49	1003	5000	
As	75	2	72	1.826	ppb	1.826	14.92	260	2000	
Se	78	1	72	-0.068	ppb	-0.068	-65.91	28	2000	
Sr	88	2	72	2932.443	ppb	2932.443	3.78	1380649	4000	
Zr	90	2	72	344.004	ppb	344.004	7.58	1777	1000	
Nb	93	2	72	0.648	ppb	0.648	27.20	3591	200	
Mo	95	2	115	0.635	ppb	0.635	21.23	580	2000	
Pd	105	2	115	0.057	ppb	0.057	25.66	87	100	
Ag	107	2	115	0.010	ppb	0.010	169.72	83	100	
Cd	111	2	115	0.033	ppb	0.033	100.57	10	2000	
Sn	120	2	115	0.196	ppb	0.196	38.83	380	2000	
Sb	121	2	115	0.518	ppb	0.518	13.16	447	1000	
Ba	137	2	115	262.952	ppb	262.952	0.40	69077	5000	
W	182	2	165	0.253	ppb	0.253	12.85	1787	100	
Pt	195	2	165	-0.008	ppb	-0.008	-70.21	43	100	
Tl	205	2	165	0.015	ppb	0.015	81.72	217	2000	
Pb	208	2	165	0.132	ppb	0.132	15.32	1707	5000	
Th	232	2	165	0.168	ppb	0.168	22.07	2020	2000	
U	238	2	165	3.583	ppb	3.583	2.61	39060	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	537527	0.47	596260	90.15	60	120	
Sc (IS)	45	1	HMI H2	20560003	0.86	20835883	98.68	60	120	
Sc (IS)	45	2	HMI He	812571	0.49	823951	98.62	60	120	
Sc (IS)	45	3	No Gas	30946355	0.85	31260218	99.00	60	120	
Ge Internal Standard	72	1	HMI H2	7721080	0.78	8011210	96.38	60	120	
Ge Internal Standard	72	2	HMI He	880958	0.49	907478	97.08	60	120	
In Internal Standard	115	2	HMI He	2908173	0.86	3014874	96.46	60	120	
Ho-165	165	2	HMI He	14254010	0.28	14587244	97.72	60	120	

Sample Report

Sample Table

Sample Name	280-116483-E-1-Asd@5
Data File Name	184SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:05:21-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-5.971	ppb	-5.971	-116.64	91950	500000	
Li	7	2	45	29.252	ppb	29.252	100.26	4794	500000	
Li	7	3	45	-12.875	ppb	-12.875	-32.58	2535227	50000	
Be	9	1	6	-0.060	ppb	-0.060	-36.28	3	2000	
B	11	1	6	58.582	ppb	58.582	3.30	17711	2000	
Na	23	1	45	19071.258	ppb	19071.258	0.14	52046826	2000	>LDR
Na	23	2	45	18872.059	ppb	18872.059	1.20	3775159	400000	
Mg	24	2	45	17690.582	ppb	17690.582	0.19	1584808	400000	
Al	27	2	45	9.033	ppb	9.033	4.66	377	400000	
K	39	1	45	1380.675	ppb	1380.675	2.72	12142021	400000	
K	39	2	45	1633.573	ppb	1633.573	1.95	89529	400000	
Ca	40	1	45	87539.141	ppb	87539.141	1.17	347439781	400000	
Ca	44	2	45	86623.349	ppb	86623.349	0.82	223466	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.060	ppb	0.060	340.77	2084	2000	
Cr	52	2	72	0.399	ppb	0.399	17.14	580	5000	
Mn	55	2	72	739.675	ppb	739.675	1.00	328477	10000	
Fe	57	2	72	207.927	ppb	207.927	6.85	4431	400000	
Co	59	2	72	0.871	ppb	0.871	11.80	1624	2000	
Ni	60	2	72	1.759	ppb	1.759	7.37	1160	5000	
Cu	63	2	72	0.245	ppb	0.245	59.47	1247	5000	
Zn	66	2	72	0.403	ppb	0.403	150.82	503	5000	
As	75	2	72	0.353	ppb	0.353	18.19	72	2000	
Se	78	1	72	-0.119	ppb	-0.119	-83.56	20	2000	
Sr	88	2	72	552.208	ppb	552.208	1.50	267925	4000	
Zr	90	2	72	24.388	ppb	24.388	47.11	213	1000	
Nb	93	2	72	-0.044	ppb	-0.044	-279.54	2050	200	
Mo	95	2	115	0.342	ppb	0.342	16.11	390	2000	
Pd	105	2	115	0.018	ppb	0.018	171.80	47	100	
Ag	107	2	115	-0.014	ppb	-0.014	-79.42	30	100	
Cd	111	2	115	0.011	ppb	0.011	173.21	3	2000	
Sn	120	2	115	-0.079	ppb	-0.079	-109.09	153	2000	
Sb	121	2	115	0.095	ppb	0.095	48.77	130	1000	
Ba	137	2	115	53.115	ppb	53.115	1.67	14295	5000	
W	182	2	165	0.027	ppb	0.027	114.64	1057	100	
Pt	195	2	165	-0.005	ppb	-0.005	-410.77	53	100	
Tl	205	2	165	0.000	ppb	0.000	-1285.99	123	2000	
Pb	208	2	165	0.047	ppb	0.047	20.06	1003	5000	
Th	232	2	165	0.007	ppb	0.007	33.93	397	2000	
U	238	2	165	0.686	ppb	0.686	2.24	7729	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	572278	0.56	596260	95.98	60	120	
Sc (IS)	45	1	HMI H2	21231953	0.66	20835883	101.90	60	120	
Sc (IS)	45	2	HMI He	821770	0.42	823951	99.74	60	120	
Sc (IS)	45	3	No Gas	32169197	0.95	31260218	102.91	60	120	
Ge Internal Standard	72	1	HMI H2	8127178	0.19	8011210	101.45	60	120	
Ge Internal Standard	72	2	HMI He	907944	1.02	907478	100.05	60	120	
In Internal Standard	115	2	HMI He	2979226	1.04	3014874	98.82	60	120	
Ho-165	165	2	HMI He	14477316	1.18	14587244	99.25	60	120	

Sample Report

Sample Table

Sample Name	280-116483-E-1-B MS
Data File Name	185SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:09:06-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	87.947	ppb	87.947	7.46	104800	500000	
Li	7	2	45	100.076	ppb	100.076	11.49	5321	500000	
Li	7	3	45	66.891	ppb	66.891	9.45	2811782	50000	
Be	9	1	6	36.505	ppb	36.505	8.47	8589	2000	
B	11	1	6	318.800	ppb	318.800	1.13	82460	2000	
Na	23	1	45	96316.941	ppb	96316.941	1.19	239707450	2000	>LDR
Na	23	2	45	91912.035	ppb	91912.035	1.60	17328060	400000	
Mg	24	2	45	83521.531	ppb	83521.531	0.94	7088114	400000	
Al	27	2	45	469.767	ppb	469.767	3.21	11191	400000	
K	39	1	45	7404.558	ppb	7404.558	2.56	25856160	400000	
K	39	2	45	8287.296	ppb	8287.296	1.14	374848	400000	
Ca	40	1	45	444887.901	ppb	444887.901	1.77	1618673149	400000	
Ca	44	2	45	445899.502	ppb	445899.502	3.84	1089407	400000	
Ti	47	2	45	1.045	ppb	1.045	173.21	20	4000	
V	51	2	72	34.989	ppb	34.989	1.71	29524	2000	
Cr	52	2	72	36.667	ppb	36.667	1.89	37145	5000	
Mn	55	2	72	3994.794	ppb	3994.794	2.75	1652162	10000	
Fe	57	2	72	1451.422	ppb	1451.422	1.00	27861	400000	
Co	59	2	72	37.456	ppb	37.456	1.76	64401	2000	
Ni	60	2	72	41.703	ppb	41.703	4.42	20455	5000	
Cu	63	2	72	33.946	ppb	33.946	2.33	45148	5000	
Zn	66	2	72	41.107	ppb	41.107	0.96	7686	5000	
As	75	2	72	35.228	ppb	35.228	3.14	4394	2000	
Se	78	1	72	32.005	ppb	32.005	2.64	5412	2000	
Sr	88	2	72	2969.142	ppb	2969.142	3.47	1341706	4000	
Zr	90	2	72	9870.230	ppb	9870.230	3.46	46605	1000	>LDR
Nb	93	2	72	0.361	ppb	0.361	9.36	2809	200	
Mo	95	2	115	41.854	ppb	41.854	3.05	27578	2000	
Pd	105	2	115	0.077	ppb	0.077	59.26	103	100	
Ag	107	2	115	34.403	ppb	34.403	0.98	75115	100	
Cd	111	2	115	33.077	ppb	33.077	3.88	9727	2000	
Sn	120	2	115	41.665	ppb	41.665	2.34	33852	2000	
Sb	121	2	115	42.213	ppb	42.213	3.90	30842	1000	
Ba	137	2	115	298.306	ppb	298.306	0.85	75470	5000	
W	182	2	165	40.980	ppb	40.980	0.58	132073	100	
Pt	195	2	165	-0.002	ppb	-0.002	-751.77	57	100	
Tl	205	2	165	33.620	ppb	33.620	2.45	208236	2000	
Pb	208	2	165	33.260	ppb	33.260	1.05	275190	5000	
Th	232	2	165	34.603	ppb	34.603	1.69	339196	2000	
U	238	2	165	38.568	ppb	38.568	1.29	406739	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	503636	0.61	596260	84.47	60	120	
Sc (IS)	45	1	HMI H2	19467916	1.07	20835883	93.43	60	120	
Sc (IS)	45	2	HMI He	778700	1.27	823951	94.51	60	120	
Sc (IS)	45	3	No Gas	29563675	0.80	31260218	94.57	60	120	
Ge Internal Standard	72	1	HMI H2	7385630	0.86	8011210	92.19	60	120	
Ge Internal Standard	72	2	HMI He	845808	1.05	907478	93.20	60	120	
In Internal Standard	115	2	HMI He	2800967	1.60	3014874	92.90	60	120	
Ho-165	165	2	HMI He	13839486	0.94	14587244	94.87	60	120	

Sample Report

Sample Table

Sample Name	280-116483-E-1-C MSD
Data File Name	186SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:12:58-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	72.637	ppb	72.637	11.22	100481	500000	
Li	7	2	45	68.017	ppb	68.017	11.53	4894	500000	
Li	7	3	45	56.164	ppb	56.164	4.51	2667493	50000	
Be	9	1	6	41.540	ppb	41.540	5.93	9450	2000	
B	11	1	6	322.217	ppb	322.217	1.23	80546	2000	
Na	23	1	45	92978.072	ppb	92978.072	0.35	229174330	2000	>LDR
Na	23	2	45	89168.852	ppb	89168.852	0.43	16564632	400000	
Mg	24	2	45	81847.527	ppb	81847.527	1.13	6843296	400000	
Al	27	2	45	428.895	ppb	428.895	3.93	10074	400000	
K	39	1	45	7145.335	ppb	7145.335	0.69	24979984	400000	
K	39	2	45	8017.289	ppb	8017.289	0.66	357728	400000	
Ca	40	1	45	430742.171	ppb	430742.171	0.55	1552120137	400000	
Ca	44	2	45	429966.875	ppb	429966.875	0.47	1035264	400000	
Ti	47	2	45	1.598	ppb	1.598	65.94	30	4000	
V	51	2	72	40.444	ppb	40.444	0.32	33567	2000	
Cr	52	2	72	41.560	ppb	41.560	1.05	41757	5000	
Mn	55	2	72	3909.296	ppb	3909.296	1.67	1604603	10000	
Fe	57	2	72	1361.370	ppb	1361.370	0.59	25937	400000	
Co	59	2	72	42.777	ppb	42.777	0.39	72984	2000	
Ni	60	2	72	48.156	ppb	48.156	2.05	23410	5000	
Cu	63	2	72	38.462	ppb	38.462	1.00	50653	5000	
Zn	66	2	72	40.725	ppb	40.725	2.47	7559	5000	
As	75	2	72	41.022	ppb	41.022	0.62	5074	2000	
Se	78	1	72	37.623	ppb	37.623	1.51	6244	2000	
Sr	88	2	72	2796.453	ppb	2796.453	0.13	1254148	4000	
Zr	90	2	72	9676.394	ppb	9676.394	0.71	45347	1000	>LDR
Nb	93	2	72	0.276	ppb	0.276	43.34	2600	200	
Mo	95	2	115	41.321	ppb	41.321	0.57	27251	2000	
Pd	105	2	115	0.054	ppb	0.054	90.97	80	100	
Ag	107	2	115	39.497	ppb	39.497	1.51	86254	100	
Cd	111	2	115	38.348	ppb	38.348	0.87	11278	2000	
Sn	120	2	115	40.395	ppb	40.395	4.96	32830	2000	
Sb	121	2	115	41.412	ppb	41.412	4.68	30264	1000	
Ba	137	2	115	295.151	ppb	295.151	3.01	74689	5000	
W	182	2	165	39.633	ppb	39.633	1.71	126220	100	
Pt	195	2	165	-0.006	ppb	-0.006	-101.58	47	100	
Tl	205	2	165	39.048	ppb	39.048	1.17	238922	2000	
Pb	208	2	165	38.974	ppb	38.974	1.43	318467	5000	
Th	232	2	165	40.154	ppb	40.154	1.44	388818	2000	
U	238	2	165	43.465	ppb	43.465	1.27	452851	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	486771	0.58	596260	81.64	60	120	
Sc (IS)	45	1	HMI H2	19278579	0.53	20835883	92.53	60	120	
Sc (IS)	45	2	HMI He	767177	0.93	823951	93.11	60	120	
Sc (IS)	45	3	No Gas	28705435	0.81	31260218	91.83	60	120	
Ge Internal Standard	72	1	HMI H2	7258094	0.54	8011210	90.60	60	120	
Ge Internal Standard	72	2	HMI He	839245	0.47	907478	92.48	60	120	
In Internal Standard	115	2	HMI He	2802215	1.73	3014874	92.95	60	120	
Ho-165	165	2	HMI He	13672585	1.01	14587244	93.73	60	120	

Sample Report

Sample Table

Sample Name	280-116483-E-1-A pds
Data File Name	187SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:16:48-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	183.504	ppb	183.504	4.56	120320	500000	
Li	7	2	45	177.816	ppb	177.816	18.51	5988	500000	
Li	7	3	45	174.742	ppb	174.742	1.28	3225702	50000	
Be	9	1	6	221.554	ppb	221.554	2.38	48108	2000	
B	11	1	6	285.046	ppb	285.046	1.68	68189	2000	
Na	23	1	45	92300.856	ppb	92300.856	0.64	219988277	2000	>LDR
Na	23	2	45	87415.247	ppb	87415.247	0.70	15979185	400000	
Mg	24	2	45	80386.300	ppb	80386.300	1.07	6613610	400000	
Al	27	2	45	2075.792	ppb	2075.792	1.00	47447	400000	
K	39	1	45	7212.475	ppb	7212.475	0.63	24311658	400000	
K	39	2	45	7981.136	ppb	7981.136	1.29	350460	400000	
Ca	40	1	45	427475.679	ppb	427475.679	0.58	1489452404	400000	
Ca	44	2	45	426010.276	ppb	426010.276	1.00	1009274	400000	
Ti	47	2	45	5.629	ppb	5.629	53.75	103	4000	
V	51	2	72	207.376	ppb	207.376	1.21	161269	2000	
Cr	52	2	72	206.917	ppb	206.917	0.47	203453	5000	
Mn	55	2	72	4017.446	ppb	4017.446	2.24	1617706	10000	
Fe	57	2	72	3217.583	ppb	3217.583	0.41	59934	400000	
Co	59	2	72	203.633	ppb	203.633	0.99	340825	2000	
Ni	60	2	72	203.958	ppb	203.958	0.40	96564	5000	
Cu	63	2	72	201.034	ppb	201.034	1.58	256284	5000	
Zn	66	2	72	212.709	ppb	212.709	2.55	37099	5000	
As	75	2	72	200.390	ppb	200.390	0.25	24232	2000	
Se	78	1	72	195.594	ppb	195.594	1.15	31535	2000	
Sr	88	2	72	3030.530	ppb	3030.530	4.31	1333707	4000	
Zr	90	2	72	51548.095	ppb	51548.095	0.26	236662	1000	>LDR
Nb	93	2	72	13.834	ppb	13.834	2.27	31870	200	
Mo	95	2	115	207.067	ppb	207.067	0.73	133599	2000	
Pd	105	2	115	0.095	ppb	0.095	20.80	120	100	
Ag	107	2	115	39.966	ppb	39.966	0.94	85761	100	
Cd	111	2	115	200.214	ppb	200.214	1.13	57854	2000	
Sn	120	2	115	207.253	ppb	207.253	1.24	164718	2000	
Sb	121	2	115	201.327	ppb	201.327	1.49	144418	1000	
Ba	137	2	115	455.382	ppb	455.382	1.60	113246	5000	
W	182	2	165	210.195	ppb	210.195	0.21	664787	100	
Pt	195	2	165	0.059	ppb	0.059	7.68	213	100	
Tl	205	2	165	202.085	ppb	202.085	0.79	1234707	2000	
Pb	208	2	165	197.570	ppb	197.570	0.80	1610519	5000	
Th	232	2	165	263.193	ppb	263.193	0.20	2544289	2000	
U	238	2	165	242.417	ppb	242.417	0.66	2522394	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	465394	0.72	596260	78.05	60	120	
Sc (IS)	45	1	HMI H2	18641245	0.12	20835883	89.47	60	120	
Sc (IS)	45	2	HMI He	754906	1.11	823951	91.62	60	120	
Sc (IS)	45	3	No Gas	27532613	0.64	31260218	88.08	60	120	
Ge Internal Standard	72	1	HMI H2	7084739	0.41	8011210	88.44	60	120	
Ge Internal Standard	72	2	HMI He	823423	0.54	907478	90.74	60	120	
In Internal Standard	115	2	HMI He	2753091	0.79	3014874	91.32	60	120	
Ho-165	165	2	HMI He	13657764	0.06	14587244	93.63	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	188_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:20:40-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	470.035	ppb	2.494	188760	500	94.0	90	110	
Li	7	2	45	449.828	ppb	7.673	9036	500	90.0	90	110	>+\-10%
Li	7	3	45	452.503	ppb	3.814	5001034	500	90.5	90	110	
Be	9	1	6	51.754	ppb	2.592	12359	50	103.5	90	110	
B	11	1	6	60.638	ppb	4.514	16360	50	121.3	90	110	>+\-10%
Na	23	1	45	5060.239	ppb	0.939	12935785	5000	101.2	90	110	
Na	23	2	45	4767.044	ppb	0.444	908830	5000	95.3	90	110	
Mg	24	2	45	5078.955	ppb	0.577	425533	5000	101.6	90	110	
Al	27	2	45	5189.595	ppb	1.827	120484	5000	103.8	90	110	
K	39	1	45	5068.636	ppb	0.821	20211271	5000	101.4	90	110	
K	39	2	45	5111.490	ppb	0.615	233216	5000	102.2	90	110	
Ca	40	1	45	5225.725	ppb	0.197	19135324	5000	104.5	90	110	
Ca	44	2	45	5222.420	ppb	1.926	12653	5000	104.4	90	110	
Ti	47	2	45	52.492	ppb	13.325	983	50	105.0	90	110	
V	51	2	72	51.000	ppb	0.965	42914	50	102.0	90	110	
Cr	52	2	72	51.319	ppb	1.657	52860	50	102.6	90	110	
Mn	55	2	72	50.556	ppb	0.937	21350	50	101.1	90	110	
Fe	57	2	72	4955.782	ppb	1.451	96422	5000	99.1	90	110	
Co	59	2	72	50.717	ppb	1.845	88755	50	101.4	90	110	
Ni	60	2	72	49.289	ppb	1.948	24572	50	98.6	90	110	
Cu	63	2	72	51.984	ppb	1.632	69923	50	104.0	90	110	
Zn	66	2	72	51.367	ppb	2.494	9674	50	102.7	90	110	
As	75	2	72	50.819	ppb	2.290	6442	50	101.6	90	110	
Se	78	1	72	53.253	ppb	1.585	9163	50	106.5	90	110	
Sr	88	2	72	52.854	ppb	2.107	24345	50	105.7	90	110	
Zr	90	2	72	107.982	ppb	8.983	603	50	216.0	90	110	>+\-10%
Nb	93	2	72	84.423	ppb	0.140	192906	100	84.4	90	110	>+\-10%
Mo	95	2	115	49.210	ppb	2.880	33307	50	98.4	90	110	
Pd	105	2	115	49.653	ppb	2.952	52560	50	99.3	90	110	
Ag	107	2	115	49.922	ppb	3.430	111970	50	99.8	90	110	
Cd	111	2	115	50.657	ppb	2.328	15309	50	101.3	90	110	
Sn	120	2	115	51.162	ppb	1.162	42680	50	102.3	90	110	
Sb	121	2	115	50.945	ppb	3.531	38244	50	101.9	90	110	
Ba	137	2	115	49.202	ppb	4.387	12790	50	98.4	90	110	
W	182	2	165	50.407	ppb	0.758	164105	50	100.8	90	110	
Pt	195	2	165	50.685	ppb	2.158	132413	50	101.4	90	110	
Tl	205	2	165	51.432	ppb	0.683	322169	50	102.9	90	110	
Pb	208	2	165	51.220	ppb	0.438	428361	50	102.4	90	110	
Th	232	2	165	51.433	ppb	0.162	509857	50	102.9	90	110	
U	238	2	165	51.236	ppb	0.597	546531	50	102.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	511298	0.40	596260	85.75	60	120	
Sc (IS)	45	1	HMI H2	19528263	0.43	20835883	93.72	60	120	
Sc (IS)	45	2	HMI He	768051	0.47	823951	93.22	60	120	
Sc (IS)	45	3	No Gas	28758193	1.07	31260218	92.00	60	120	
Ge Internal Standard	72	1	HMI H2	7537697	0.57	8011210	94.09	60	120	
Ge Internal Standard	72	2	HMI He	860867	0.24	907478	94.86	60	120	
In Internal Standard	115	2	HMI He	2879025	1.65	3014874	95.49	60	120	
Ho-165	165	2	HMI He	13998394	0.38	14587244	95.96	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	189_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:24:27-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-21.897	ppb	-10.3	2239537	10	
Be	9	1	6	0.009	ppb	466.4	20	0.5	
B	11	1	6	4.684	ppb	18.0	1817	0.5	>RL
Na	23	1	45	-42.014	ppb	-3.6	215982	25	
Na	23	2	45	-43.949	ppb	-6.5	15502	25	
Mg	24	2	45	3.827	ppb	7.5	720	25	
Al	27	2	45	1.814	ppb	28.4	187	15	
K	39	1	45	-8.398	ppb	-623.0	7821194	50	
K	39	2	45	8.954	ppb	188.1	13984	50	
Ca	40	1	45	28.702	ppb	5.4	167807	50	
Ca	44	2	45	16.711	ppb	14.1	107	25	
Ti	47	2	45	0.176	ppb	173.2	3	0.5	
V	51	2	72	1.332	ppb	26.9	3014	1	>RL
Cr	52	2	72	0.094	ppb	83.5	237	1	
Mn	55	2	72	0.362	ppb	23.9	220	0.5	
Fe	57	2	72	-1.124	ppb	-184.9	143	25	
Co	59	2	72	0.014	ppb	72.0	40	0.5	
Ni	60	2	72	-0.031	ppb	-192.2	217	1	
Cu	63	2	72	0.043	ppb	152.2	920	1	
Zn	66	2	72	-0.996	ppb	-33.5	227	5	
As	75	2	72	-0.022	ppb	-385.8	21	1	
Se	78	1	72	-0.065	ppb	-33.8	28	1	
Sr	88	2	72	0.176	ppb	19.0	113	0.5	
Zr	90	2	72	-3.291	ppb	-107.5	70	1	
Nb	93	2	72	4.825	ppb	10.6	13030	2	>RL
Mo	95	2	115	0.142	ppb	110.9	247	0.5	
Pd	105	2	115	0.066	ppb	37.5	97	1	
Ag	107	2	115	0.008	ppb	188.5	80	1	
Cd	111	2	115	0.021	ppb	173.2	7	0.5	
Sn	120	2	115	0.167	ppb	66.1	357	1	
Sb	121	2	115	0.461	ppb	32.8	407	0.6	
Ba	137	2	115	0.076	ppb	133.3	20	0.5	
W	182	2	165	0.185	ppb	8.9	1537	1	
Pt	195	2	165	-0.002	ppb	-749.4	60	1	
Tl	205	2	165	0.024	ppb	43.5	273	0.1	
Pb	208	2	165	0.044	ppb	20.7	947	0.5	
Th	232	2	165	0.057	ppb	29.9	880	1	
U	238	2	165	0.082	ppb	19.7	1027	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	527950	0.33	596260	88.54	60	120	
Sc (IS)	45	1	HMI H2	19678414	0.52	20835883	94.44	60	120	
Sc (IS)	45	2	HMI He	776614	0.35	823951	94.25	60	120	
Sc (IS)	45	3	No Gas	29095908	0.34	31260218	93.08	60	120	
Ge Internal Standard	72	1	HMI H2	7623382	0.80	8011210	95.16	60	120	
Ge Internal Standard	72	2	HMI He	866059	0.31	907478	95.44	60	120	
In Internal Standard	115	2	HMI He	2920539	1.86	3014874	96.87	60	120	
Ho-165	165	2	HMI He	14040683	0.43	14587244	96.25	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	190LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:28:16-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-7.978	ppb	-32.250	2351275	50	-16.0	70	130	>+/-30%
Be	9	1	6	1.213	ppb	3.264	320	1	121.3	70	130	
Na	23	2	45	-4.916	ppb	-49.446	23152	50	-9.8	70	130	>+/-30%
Mg	24	2	45	53.441	ppb	5.634	4988	50	106.9	70	130	
Al	27	2	45	34.509	ppb	17.106	967	30	115.0	70	130	
K	39	2	45	121.541	ppb	4.451	19143	100	121.5	70	130	
Ca	44	2	45	65.990	ppb	31.599	230	50	132.0	70	130	>+/-30%
V	51	2	72	5.826	ppb	8.412	6689	5	116.5	70	130	
Cr	52	2	72	2.136	ppb	12.779	2360	2	106.8	70	130	
Mn	55	2	72	1.188	ppb	15.991	573	1	118.8	70	130	
Fe	57	2	72	54.303	ppb	13.196	1233	50	108.6	70	130	
Co	59	2	72	1.170	ppb	8.975	2087	1	117.0	70	130	
Ni	60	2	72	1.854	ppb	11.914	1160	2	92.7	70	130	
Cu	63	2	72	2.182	ppb	4.388	3801	2	109.1	70	130	
Zn	66	2	72	10.394	ppb	6.864	2307	10	103.9	70	130	
As	75	2	72	4.856	ppb	1.592	644	5	97.1	70	130	
Se	78	1	72	4.987	ppb	10.531	908	5	99.7	70	130	
Sr	88	2	72	1.170	ppb	11.529	577	1	117.0	70	130	
Zr	90	2	72	28.167	ppb	40.531	223	0.5	5633.3	70	130	>+/-30%
Nb	93	2	72	10.173	ppb	4.071	25337	2	508.7	70	130	>+/-30%
Mo	95	2	115	1.840	ppb	3.784	1413	2	92.0	70	130	
Pd	105	2	115	0.013	ppb	187.305	40	1	1.3	70	130	>+/-30%
Ag	107	2	115	5.262	ppb	4.092	12086	5	105.2	70	130	
Cd	111	2	115	1.213	ppb	21.940	373	1	121.3	70	130	
Sn	120	2	115	9.904	ppb	2.815	8596	10	99.0	70	130	
Sb	121	2	115	2.357	ppb	3.764	1857	2	117.9	70	130	
Ba	137	2	115	1.170	ppb	14.532	310	1	117.0	70	130	
W	182	2	165	5.165	ppb	2.539	17903	1	516.5	70	130	>+/-30%
Pt	195	2	165	0.005	ppb	175.560	77	1	0.5	70	130	>+/-30%
Tl	205	2	165	1.073	ppb	2.746	6935	1	107.3	70	130	
Pb	208	2	165	1.057	ppb	3.402	9532	1	105.7	70	130	
Th	232	2	165	2.116	ppb	3.787	21575	2	105.8	70	130	
U	238	2	165	1.023	ppb	2.383	11215	1	102.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	533853	0.15	596260	89.53	60	120	
Sc (IS)	45	1	HMI H2	19744841	0.43	20835883	94.76	60	120	
Sc (IS)	45	2	HMI He	787494	0.28	823951	95.58	60	120	
Sc (IS)	45	3	No Gas	29459245	0.80	31260218	94.24	60	120	
Ge Internal Standard	72	1	HMI H2	7659058	0.50	8011210	95.60	60	120	
Ge Internal Standard	72	2	HMI He	871007	0.72	907478	95.98	60	120	
In Internal Standard	115	2	HMI He	2934350	0.44	3014874	97.33	60	120	
Ho-165	165	2	HMI He	14195630	0.62	14587244	97.32	60	120	

Sample Report

Sample Table

Sample Name	280-116483-E-2-A
Data File Name	191SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:32:06-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.846	ppb	2.846	233.68	82161	500000	
Li	7	2	45	-11.368	ppb	-11.368	-120.60	3961	500000	
Li	7	3	45	-12.565	ppb	-12.565	-32.38	2163678	50000	
Be	9	1	6	0.004	ppb	0.004	1222.52	17	2000	
B	11	1	6	297.519	ppb	297.519	0.65	71106	2000	
Na	23	1	45	97863.350	ppb	97863.350	0.84	232036843	2000	>LDR
Na	23	2	45	92954.249	ppb	92954.249	0.94	16947428	400000	
Mg	24	2	45	84510.400	ppb	84510.400	0.58	6935486	400000	
Al	27	2	45	19.818	ppb	19.818	21.72	590	400000	
K	39	1	45	7738.400	ppb	7738.400	0.41	25412244	400000	
K	39	2	45	8514.131	ppb	8514.131	0.07	372057	400000	
Ca	40	1	45	454119.405	ppb	454119.405	0.52	1574179657	400000	
Ca	44	2	45	453804.814	ppb	453804.814	0.93	1072416	400000	
Ti	47	2	45	0.362	ppb	0.362	173.21	7	4000	
V	51	2	72	0.235	ppb	0.235	105.26	2024	2000	
Cr	52	2	72	1.553	ppb	1.553	5.49	1660	5000	
Mn	55	2	72	4089.944	ppb	4089.944	2.47	1647816	10000	
Fe	57	2	72	1054.241	ppb	1054.241	2.55	19751	400000	
Co	59	2	72	4.540	ppb	4.540	6.83	7616	2000	
Ni	60	2	72	9.226	ppb	9.226	6.07	4581	5000	
Cu	63	2	72	0.800	ppb	0.800	11.98	1837	5000	
Zn	66	2	72	3.449	ppb	3.449	37.10	983	5000	
As	75	2	72	1.966	ppb	1.966	7.34	260	2000	
Se	78	1	72	0.041	ppb	0.041	185.62	43	2000	
Sr	88	2	72	3025.409	ppb	3025.409	3.05	1331837	4000	
Zr	90	2	72	-1.818	ppb	-1.818	-180.91	73	1000	
Nb	93	2	72	1.064	ppb	1.064	12.82	4258	200	
Mo	95	2	115	0.576	ppb	0.576	8.80	513	2000	
Pd	105	2	115	0.045	ppb	0.045	20.57	70	100	
Ag	107	2	115	0.005	ppb	0.005	585.82	70	100	
Cd	111	2	115	0.046	ppb	0.046	173.21	13	2000	
Sn	120	2	115	0.123	ppb	0.123	89.87	303	2000	
Sb	121	2	115	0.104	ppb	0.104	39.85	127	1000	
Ba	137	2	115	273.787	ppb	273.787	1.31	68313	5000	
W	182	2	165	0.184	ppb	0.184	11.44	1500	100	
Pt	195	2	165	-0.005	ppb	-0.005	-79.83	50	100	
Tl	205	2	165	0.001	ppb	0.001	318.33	127	2000	
Pb	208	2	165	0.107	ppb	0.107	18.59	1443	5000	
Th	232	2	165	0.040	ppb	0.040	8.54	697	2000	
U	238	2	165	3.705	ppb	3.705	1.72	38886	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	465134	0.30	596260	78.01	60	120	
Sc (IS)	45	1	HMI H2	18546128	0.48	20835883	89.01	60	120	
Sc (IS)	45	2	HMI He	752971	0.40	823951	91.39	60	120	
Sc (IS)	45	3	No Gas	27430333	0.65	31260218	87.75	60	120	
Ge Internal Standard	72	1	HMI H2	6998916	0.25	8011210	87.36	60	120	
Ge Internal Standard	72	2	HMI He	823790	0.34	907478	90.78	60	120	
In Internal Standard	115	2	HMI He	2762369	1.02	3014874	91.62	60	120	
Ho-165	165	2	HMI He	13724242	0.13	14587244	94.08	60	120	

Sample Report

Sample Table

Sample Name	280-116483-E-3-A
Data File Name	192SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:35:57-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-7.755	ppb	-7.755	-77.78	79621	500000	
Li	7	2	45	-2.650	ppb	-2.650	-799.90	4011	500000	
Li	7	3	45	-18.884	ppb	-18.884	-16.55	2087643	50000	
Be	9	1	6	0.022	ppb	0.022	567.31	20	2000	
B	11	1	6	365.025	ppb	365.025	2.20	84749	2000	
Na	23	1	45	106718.822	ppb	106718.822	0.64	251952990	2000	>LDR
Na	23	2	45	101684.973	ppb	101684.973	0.14	18342490	400000	
Mg	24	2	45	101095.644	ppb	101095.644	0.82	8209374	400000	
Al	27	2	45	79.830	ppb	79.830	17.39	1934	400000	
K	39	1	45	8128.657	ppb	8128.657	0.47	26211770	400000	
K	39	2	45	8794.213	ppb	8794.213	1.62	379822	400000	
Ca	40	1	45	514949.171	ppb	514949.171	1.23	1777611067	400000	
Ca	44	2	45	547185.963	ppb	547185.963	0.60	1279527	400000	
Ti	47	2	45	1.098	ppb	1.098	132.06	20	4000	
V	51	2	72	-0.790	ppb	-0.790	-6.51	1220	2000	
Cr	52	2	72	0.706	ppb	0.706	8.59	817	5000	
Mn	55	2	72	6946.928	ppb	6946.928	0.39	2762991	10000	
Fe	57	2	72	960.966	ppb	960.966	1.07	17788	400000	
Co	59	2	72	6.653	ppb	6.653	4.60	11011	2000	
Ni	60	2	72	8.895	ppb	8.895	3.62	4368	5000	
Cu	63	2	72	0.553	ppb	0.553	19.94	1503	5000	
Zn	66	2	72	10.741	ppb	10.741	9.41	2214	5000	
As	75	2	72	3.154	ppb	3.154	9.57	399	2000	
Se	78	1	72	-0.049	ppb	-0.049	-186.21	28	2000	
Sr	88	2	72	3689.418	ppb	3689.418	1.63	1603387	4000	
Zr	90	2	72	22.693	ppb	22.693	83.14	183	1000	
Nb	93	2	72	0.412	ppb	0.412	37.73	2810	200	
Mo	95	2	115	0.852	ppb	0.852	30.42	683	2000	
Pd	105	2	115	0.089	ppb	0.089	55.39	113	100	
Ag	107	2	115	0.022	ppb	0.022	50.37	103	100	
Cd	111	2	115	0.081	ppb	0.081	89.12	23	2000	
Sn	120	2	115	1.217	ppb	1.217	9.34	1160	2000	
Sb	121	2	115	0.228	ppb	0.228	50.32	213	1000	
Ba	137	2	115	329.008	ppb	329.008	0.99	81122	5000	
W	182	2	165	0.149	ppb	0.149	68.40	1380	100	
Pt	195	2	165	-0.002	ppb	-0.002	-301.09	57	100	
Tl	205	2	165	0.006	ppb	0.006	102.40	157	2000	
Pb	208	2	165	0.183	ppb	0.183	0.93	2050	5000	
Th	232	2	165	0.058	ppb	0.058	23.84	863	2000	
U	238	2	165	6.666	ppb	6.666	2.30	69293	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	452479	0.85	596260	75.89	60	120	
Sc (IS)	45	1	HMI H2	18468985	0.18	20835883	88.64	60	120	
Sc (IS)	45	2	HMI He	745065	0.37	823951	90.43	60	120	
Sc (IS)	45	3	No Gas	26907119	0.46	31260218	86.07	60	120	
Ge Internal Standard	72	1	HMI H2	6930404	0.08	8011210	86.51	60	120	
Ge Internal Standard	72	2	HMI He	813277	0.37	907478	89.62	60	120	
In Internal Standard	115	2	HMI He	2729543	0.42	3014874	90.54	60	120	
Ho-165	165	2	HMI He	13617333	0.85	14587244	93.35	60	120	

Sample Report

Sample Table

Sample Name	280-116483-E-4-A
Data File Name	193SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:39:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	22.124	ppb	22.124	28.23	81923	500000	
Li	7	2	45	32.573	ppb	32.573	104.54	4251	500000	
Li	7	3	45	10.541	ppb	10.541	46.87	2134088	50000	
Be	9	1	6	0.011	ppb	0.011	258.87	17	2000	
B	11	1	6	202.931	ppb	202.931	2.13	44654	2000	
Na	23	1	45	156116.644	ppb	156116.644	0.35	351775141	2000	>LDR
Na	23	2	45	147005.052	ppb	147005.052	0.79	25725205	400000	
Mg	24	2	45	95631.731	ppb	95631.731	1.25	7536407	400000	
Al	27	2	45	234.058	ppb	234.058	7.04	5245	400000	
K	39	1	45	14921.133	ppb	14921.133	0.70	40066606	400000	
K	39	2	45	15234.107	ppb	15234.107	1.02	629296	400000	
Ca	40	1	45	561020.222	ppb	561020.222	0.45	1849078639	400000	
Ca	44	2	45	586484.957	ppb	586484.957	1.50	1330933	400000	
Ti	47	2	45	8.315	ppb	8.315	15.95	147	4000	
V	51	2	72	6.552	ppb	6.552	3.95	6595	2000	
Cr	52	2	72	2.320	ppb	2.320	1.74	2314	5000	
Mn	55	2	72	7014.367	ppb	7014.367	0.35	2708031	10000	
Fe	57	2	72	462.358	ppb	462.358	1.10	8386	400000	
Co	59	2	72	14.598	ppb	14.598	3.68	23437	2000	
Ni	60	2	72	16.479	ppb	16.479	7.16	7676	5000	
Cu	63	2	72	1.735	ppb	1.735	4.31	2900	5000	
Zn	66	2	72	36.893	ppb	36.893	10.07	6478	5000	
As	75	2	72	0.846	ppb	0.846	6.45	120	2000	
Se	78	1	72	0.307	ppb	0.307	10.15	81	2000	
Sr	88	2	72	6125.571	ppb	6125.571	0.85	2584024	4000	
Zr	90	2	72	46.686	ppb	46.686	56.80	283	1000	
Nb	93	2	72	0.201	ppb	0.201	44.72	2290	200	
Mo	95	2	115	3.191	ppb	3.191	13.37	2134	2000	
Pd	105	2	115	0.105	ppb	0.105	24.86	127	100	
Ag	107	2	115	0.010	ppb	0.010	197.39	77	100	
Cd	111	2	115	0.273	ppb	0.273	60.16	77	2000	
Sn	120	2	115	0.062	ppb	0.062	326.03	247	2000	
Sb	121	2	115	0.162	ppb	0.162	33.47	163	1000	
Ba	137	2	115	351.707	ppb	351.707	0.35	84995	5000	
W	182	2	165	0.274	ppb	0.274	26.78	1720	100	
Pt	195	2	165	-0.018	ppb	-0.018	-34.70	17	100	
Tl	205	2	165	0.020	ppb	0.020	57.13	237	2000	
Pb	208	2	165	1.325	ppb	1.325	6.11	10999	5000	
Th	232	2	165	0.109	ppb	0.109	15.82	1320	2000	
U	238	2	165	1.580	ppb	1.580	0.84	16067	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	426846	0.92	596260	71.59	60	120	
Sc (IS)	45	1	HMI H2	17633777	0.36	20835883	84.63	60	120	
Sc (IS)	45	2	HMI He	723110	0.93	823951	87.76	60	120	
Sc (IS)	45	3	No Gas	25527905	0.45	31260218	81.66	60	120	
Ge Internal Standard	72	1	HMI H2	6705926	0.17	8011210	83.71	60	120	
Ge Internal Standard	72	2	HMI He	789435	0.63	907478	86.99	60	120	
In Internal Standard	115	2	HMI He	2675282	0.62	3014874	88.74	60	120	
Ho-165	165	2	HMI He	13226119	1.19	14587244	90.67	60	120	

Sample Report

Sample Table

Sample Name	280-116483-E-6-A
Data File Name	194SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:43:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.885	ppb	-14.885	-32.22	74327	500000	
Li	7	2	45	-15.188	ppb	-15.188	-216.88	3741	500000	
Li	7	3	45	-31.655	ppb	-31.655	-25.53	1898087	50000	
Be	9	1	6	-0.073	ppb	-0.073	0.00	0	2000	
B	11	1	6	95.720	ppb	95.720	1.86	21279	2000	
Na	23	1	45	76954.311	ppb	76954.311	0.79	172887497	2000	>LDR
Na	23	2	45	72851.902	ppb	72851.902	0.40	12680815	400000	
Mg	24	2	45	95856.877	ppb	95856.877	0.52	7507467	400000	
Al	27	2	45	7.677	ppb	7.677	20.23	300	400000	
K	39	1	45	7426.103	ppb	7426.103	0.21	23381729	400000	
K	39	2	45	7964.276	ppb	7964.276	1.15	332937	400000	
Ca	40	1	45	521017.526	ppb	521017.526	0.28	1710720508	400000	
Ca	44	2	45	523083.210	ppb	523083.210	1.92	1179867	400000	
Ti	47	2	45	0.383	ppb	0.383	173.21	7	4000	
V	51	2	72	2.642	ppb	2.642	6.17	3704	2000	
Cr	52	2	72	0.712	ppb	0.712	7.87	797	5000	
Mn	55	2	72	42.744	ppb	42.744	3.90	16520	10000	
Fe	57	2	72	131.698	ppb	131.698	5.09	2490	400000	
Co	59	2	72	0.118	ppb	0.118	21.52	203	2000	
Ni	60	2	72	1.931	ppb	1.931	7.55	1083	5000	
Cu	63	2	72	0.540	ppb	0.540	18.24	1440	5000	
Zn	66	2	72	3.048	ppb	3.048	16.17	873	5000	
As	75	2	72	0.594	ppb	0.594	19.61	90	2000	
Se	78	1	72	0.381	ppb	0.381	13.91	92	2000	
Sr	88	2	72	3424.455	ppb	3424.455	1.00	1440978	4000	
Zr	90	2	72	0.432	ppb	0.432	1383.97	80	1000	
Nb	93	2	72	-0.078	ppb	-0.078	-85.75	1707	200	
Mo	95	2	115	0.040	ppb	0.040	278.39	160	2000	
Pd	105	2	115	0.020	ppb	0.020	76.76	43	100	
Ag	107	2	115	-0.021	ppb	-0.021	-36.11	13	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.000	ppb	0.000	17218.55	197	2000	
Sb	121	2	115	0.053	ppb	0.053	207.25	87	1000	
Ba	137	2	115	214.175	ppb	214.175	0.78	51327	5000	
W	182	2	165	0.057	ppb	0.057	27.85	1060	100	
Pt	195	2	165	-0.011	ppb	-0.011	-76.92	33	100	
Tl	205	2	165	-0.008	ppb	-0.008	-44.32	70	2000	
Pb	208	2	165	0.062	ppb	0.062	24.65	1037	5000	
Th	232	2	165	0.013	ppb	0.013	17.07	423	2000	
U	238	2	165	4.292	ppb	4.292	0.85	43498	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	426506	0.87	596260	71.53	60	120	
Sc (IS)	45	1	HMI H2	17566798	0.21	20835883	84.31	60	120	
Sc (IS)	45	2	HMI He	718607	0.93	823951	87.21	60	120	
Sc (IS)	45	3	No Gas	25317927	0.55	31260218	80.99	60	120	
Ge Internal Standard	72	1	HMI H2	6657370	0.19	8011210	83.10	60	120	
Ge Internal Standard	72	2	HMI He	787452	0.31	907478	86.77	60	120	
In Internal Standard	115	2	HMI He	2653075	0.82	3014874	88.00	60	120	
Ho-165	165	2	HMI He	13259024	0.28	14587244	90.89	60	120	

Sample Report

Sample Table

Sample Name	280-116483-E-11-A
Data File Name	195SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:47:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-9.431	ppb	-9.431	-83.06	75382	500000	
Li	7	2	45	-6.106	ppb	-6.106	-395.51	3817	500000	
Li	7	3	45	-21.247	ppb	-21.247	-24.22	1910443	50000	
Be	9	1	6	-0.021	ppb	-0.021	-423.28	10	2000	
B	11	1	6	42.681	ppb	42.681	5.34	9520	2000	
Na	23	1	45	71753.031	ppb	71753.031	0.59	161186278	2000	>LDR
Na	23	2	45	68292.554	ppb	68292.554	0.36	11837138	400000	
Mg	24	2	45	87836.095	ppb	87836.095	0.36	6849771	400000	
Al	27	2	45	12.528	ppb	12.528	17.07	403	400000	
K	39	1	45	7937.780	ppb	7937.780	0.29	24505267	400000	
K	39	2	45	8531.563	ppb	8531.563	0.51	354239	400000	
Ca	40	1	45	470794.503	ppb	470794.503	0.78	1545505044	400000	
Ca	44	2	45	475399.112	ppb	475399.112	0.89	1067534	400000	
Ti	47	2	45	0.383	ppb	0.383	86.60	7	4000	
V	51	2	72	2.865	ppb	2.865	13.84	3884	2000	
Cr	52	2	72	0.754	ppb	0.754	21.40	840	5000	
Mn	55	2	72	211.703	ppb	211.703	2.71	81938	10000	
Fe	57	2	72	85.704	ppb	85.704	7.74	1680	400000	
Co	59	2	72	0.223	ppb	0.223	23.95	373	2000	
Ni	60	2	72	1.415	ppb	1.415	13.90	853	5000	
Cu	63	2	72	1.512	ppb	1.512	11.48	2634	5000	
Zn	66	2	72	4.093	ppb	4.093	17.45	1050	5000	
As	75	2	72	0.569	ppb	0.569	30.57	88	2000	
Se	78	1	72	0.217	ppb	0.217	38.23	67	2000	
Sr	88	2	72	4224.654	ppb	4224.654	0.28	1785214	4000	
Zr	90	2	72	-1.901	ppb	-1.901	-4.93	70	1000	
Nb	93	2	72	-0.202	ppb	-0.202	-50.05	1457	200	
Mo	95	2	115	0.266	ppb	0.266	28.06	303	2000	
Pd	105	2	115	0.108	ppb	0.108	32.29	130	100	
Ag	107	2	115	-0.008	ppb	-0.008	-160.71	40	100	
Cd	111	2	115	0.036	ppb	0.036	100.24	10	2000	
Sn	120	2	115	-0.033	ppb	-0.033	-158.22	173	2000	
Sb	121	2	115	0.080	ppb	0.080	40.52	107	1000	
Ba	137	2	115	228.532	ppb	228.532	2.25	55406	5000	
W	182	2	165	0.078	ppb	0.078	12.83	1127	100	
Pt	195	2	165	-0.012	ppb	-0.012	-118.11	30	100	
Tl	205	2	165	0.007	ppb	0.007	67.29	160	2000	
Pb	208	2	165	0.153	ppb	0.153	9.47	1757	5000	
Th	232	2	165	0.017	ppb	0.017	13.59	457	2000	
U	238	2	165	2.878	ppb	2.878	2.55	29254	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	416958	0.14	596260	69.93	60	120	
Sc (IS)	45	1	HMI H2	17563143	0.40	20835883	84.29	60	120	
Sc (IS)	45	2	HMI He	715493	0.49	823951	86.84	60	120	
Sc (IS)	45	3	No Gas	24778670	0.44	31260218	79.27	60	120	
Ge Internal Standard	72	1	HMI H2	6601032	0.77	8011210	82.40	60	120	
Ge Internal Standard	72	2	HMI He	790770	0.58	907478	87.14	60	120	
In Internal Standard	115	2	HMI He	2683727	0.39	3014874	89.02	60	120	
Ho-165	165	2	HMI He	13273995	0.43	14587244	91.00	60	120	

Sample Report

Sample Table

Sample Name	280-116590-E-1-A
Data File Name	196SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:51:18-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.527	ppb	-14.527	-46.92	70265	500000	
Li	7	2	45	-0.374	ppb	-0.374	-6429.05	3691	500000	
Li	7	3	45	-31.941	ppb	-31.941	-8.33	1799059	50000	
Be	9	1	6	-0.055	ppb	-0.055	-56.35	3	2000	
B	11	1	6	75.766	ppb	75.766	2.94	15756	2000	
Na	23	1	45	103277.631	ppb	103277.631	0.29	219049483	2000	>LDR
Na	23	2	45	96987.719	ppb	96987.719	1.25	16005866	400000	
Mg	24	2	45	151850.144	ppb	151850.144	1.00	11280557	400000	
Al	27	2	45	27.694	ppb	27.694	29.81	697	400000	
K	39	1	45	9682.964	ppb	9682.964	0.14	26785165	400000	
K	39	2	45	9852.885	ppb	9852.885	1.32	387870	400000	
Ca	40	1	45	856011.638	ppb	856011.638	0.62	2654521987	400000	
Ca	44	2	45	887408.701	ppb	887408.701	0.53	1898333	400000	
Ti	47	2	45	1.002	ppb	1.002	91.45	17	4000	
V	51	2	72	1.808	ppb	1.808	7.16	2934	2000	
Cr	52	2	72	1.611	ppb	1.611	17.79	1557	5000	
Mn	55	2	72	14.968	ppb	14.968	3.20	5528	10000	
Fe	57	2	72	112.577	ppb	112.577	10.48	2040	400000	
Co	59	2	72	0.142	ppb	0.142	29.66	230	2000	
Ni	60	2	72	2.029	ppb	2.029	4.60	1070	5000	
Cu	63	2	72	0.399	ppb	0.399	9.12	1203	5000	
Zn	66	2	72	2.228	ppb	2.228	33.17	700	5000	
As	75	2	72	0.565	ppb	0.565	14.57	82	2000	
Se	78	1	72	7.399	ppb	7.399	10.29	1087	2000	
Sr	88	2	72	5493.178	ppb	5493.178	1.29	2193367	4000	
Zr	90	2	72	3.032	ppb	3.032	301.16	87	1000	
Nb	93	2	72	-0.243	ppb	-0.243	-19.85	1297	200	
Mo	95	2	115	0.007	ppb	0.007	329.16	133	2000	
Pd	105	2	115	0.119	ppb	0.119	9.61	133	100	
Ag	107	2	115	0.100	ppb	0.100	18.56	250	100	
Cd	111	2	115	0.025	ppb	0.025	86.60	7	2000	
Sn	120	2	115	0.017	ppb	0.017	232.88	200	2000	
Sb	121	2	115	0.034	ppb	0.034	135.69	70	1000	
Ba	137	2	115	146.765	ppb	146.765	2.74	33579	5000	
W	182	2	165	0.029	ppb	0.029	76.07	937	100	
Pt	195	2	165	-0.015	ppb	-0.015	-60.14	23	100	
Tl	205	2	165	0.009	ppb	0.009	62.52	160	2000	
Pb	208	2	165	0.041	ppb	0.041	19.37	840	5000	
Th	232	2	165	0.019	ppb	0.019	11.35	463	2000	
U	238	2	165	5.121	ppb	5.121	1.86	49931	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	396799	1.02	596260	66.55	60	120	
Sc (IS)	45	1	HMI H2	16591364	0.39	20835883	79.63	60	120	
Sc (IS)	45	2	HMI He	681619	0.43	823951	82.73	60	120	
Sc (IS)	45	3	No Gas	24014100	0.33	31260218	76.82	60	120	
Ge Internal Standard	72	1	HMI H2	6270051	0.24	8011210	78.27	60	120	
Ge Internal Standard	72	2	HMI He	747237	0.61	907478	82.34	60	120	
In Internal Standard	115	2	HMI He	2532552	0.82	3014874	84.00	60	120	
Ho-165	165	2	HMI He	12761796	0.45	14587244	87.49	60	120	

Sample Report

Sample Table

Sample Name	280-116590-E-2-A
Data File Name	197SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:55:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-18.972	ppb	-18.972	-47.93	67683	500000	
Li	7	2	45	-4.398	ppb	-4.398	-382.91	3544	500000	
Li	7	3	45	-34.950	ppb	-34.950	-8.64	1727814	50000	
Be	9	1	6	-0.036	ppb	-0.036	-178.19	7	2000	
B	11	1	6	74.068	ppb	74.068	3.27	14928	2000	
Na	23	1	45	101966.523	ppb	101966.523	3.35	210763390	2000	>LDR
Na	23	2	45	95886.762	ppb	95886.762	1.09	15355277	400000	
Mg	24	2	45	150092.247	ppb	150092.247	0.11	10819687	400000	
Al	27	2	45	33.396	ppb	33.396	13.71	790	400000	
K	39	1	45	9632.631	ppb	9632.631	3.85	26002741	400000	
K	39	2	45	9743.537	ppb	9743.537	0.75	372342	400000	
Ca	40	1	45	851764.568	ppb	851764.568	4.10	2573746202	400000	
Ca	44	2	45	879743.163	ppb	879743.163	0.49	1826130	400000	
Ti	47	2	45	1.443	ppb	1.443	64.89	23	4000	
V	51	2	72	2.180	ppb	2.180	15.18	3117	2000	
Cr	52	2	72	1.925	ppb	1.925	17.84	1794	5000	
Mn	55	2	72	10.572	ppb	10.572	10.38	3831	10000	
Fe	57	2	72	132.704	ppb	132.704	11.72	2324	400000	
Co	59	2	72	0.101	ppb	0.101	40.44	163	2000	
Ni	60	2	72	1.706	ppb	1.706	15.31	910	5000	
Cu	63	2	72	0.219	ppb	0.219	37.16	973	5000	
Zn	66	2	72	3.531	ppb	3.531	4.41	883	5000	
As	75	2	72	0.649	ppb	0.649	35.11	90	2000	
Se	78	1	72	7.270	ppb	7.270	11.32	1049	2000	
Sr	88	2	72	5464.977	ppb	5464.977	0.69	2131287	4000	
Zr	90	2	72	9.253	ppb	9.253	25.46	110	1000	
Nb	93	2	72	-0.354	ppb	-0.354	-26.58	1053	200	
Mo	95	2	115	0.099	ppb	0.099	108.87	190	2000	
Pd	105	2	115	0.121	ppb	0.121	5.45	137	100	
Ag	107	2	115	0.082	ppb	0.082	61.74	217	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.037	ppb	0.037	332.71	217	2000	
Sb	121	2	115	0.033	ppb	0.033	44.62	70	1000	
Ba	137	2	115	138.837	ppb	138.837	1.95	32092	5000	
W	182	2	165	0.045	ppb	0.045	111.13	963	100	
Pt	195	2	165	-0.010	ppb	-0.010	-24.64	33	100	
Tl	205	2	165	0.010	ppb	0.010	92.03	163	2000	
Pb	208	2	165	0.042	ppb	0.042	35.46	827	5000	
Th	232	2	165	0.024	ppb	0.024	17.96	490	2000	
U	238	2	165	5.019	ppb	5.019	1.14	47806	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	384383	1.47	596260	64.47	60	120	
Sc (IS)	45	1	HMI H2	16178344	2.68	20835883	77.65	60	120	
Sc (IS)	45	2	HMI He	661415	0.71	823951	80.27	60	120	
Sc (IS)	45	3	No Gas	23254004	0.62	31260218	74.39	60	120	
Ge Internal Standard	72	1	HMI H2	6167136	2.09	8011210	76.98	60	120	
Ge Internal Standard	72	2	HMI He	729802	0.50	907478	80.42	60	120	
In Internal Standard	115	2	HMI He	2559004	0.52	3014874	84.88	60	120	
Ho-165	165	2	HMI He	12467939	0.33	14587244	85.47	60	120	

Sample Report

Sample Table

Sample Name	280-116590-E-3-A
Data File Name	198SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T00:58:59-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-15.565	ppb	-15.565	-12.19	69592	500000	
Li	7	2	45	-16.606	ppb	-16.606	-60.95	3487	500000	
Li	7	3	45	-31.325	ppb	-31.325	-11.17	1729253	50000	
Be	9	1	6	-0.073	ppb	-0.073	0.00	0	2000	
B	11	1	6	47.904	ppb	47.904	3.87	10027	2000	
Na	23	1	45	61039.079	ppb	61039.079	0.57	128678928	2000	>LDR
Na	23	2	45	57866.991	ppb	57866.991	0.34	9428186	400000	
Mg	24	2	45	53487.854	ppb	53487.854	0.25	3919644	400000	
Al	27	2	45	11.594	ppb	11.594	26.94	360	400000	
K	39	1	45	5814.536	ppb	5814.536	1.38	18596294	400000	
K	39	2	45	6728.778	ppb	6728.778	1.20	265011	400000	
Ca	40	1	45	284090.993	ppb	284090.993	1.06	874919854	400000	
Ca	44	2	45	286114.781	ppb	286114.781	1.01	603749	400000	
Ti	47	2	45	1.219	ppb	1.219	0.39	20	4000	
V	51	2	72	4.823	ppb	4.823	12.34	5088	2000	
Cr	52	2	72	3.462	ppb	3.462	3.89	3241	5000	
Mn	55	2	72	111.775	ppb	111.775	1.40	41317	10000	
Fe	57	2	72	119.571	ppb	119.571	3.16	2180	400000	
Co	59	2	72	0.745	ppb	0.745	2.57	1157	2000	
Ni	60	2	72	22.683	ppb	22.683	2.42	10024	5000	
Cu	63	2	72	0.560	ppb	0.560	12.01	1403	5000	
Zn	66	2	72	3.571	ppb	3.571	15.61	920	5000	
As	75	2	72	0.716	ppb	0.716	24.97	100	2000	
Se	78	1	72	0.495	ppb	0.495	44.13	104	2000	
Sr	88	2	72	2165.982	ppb	2165.982	0.63	873639	4000	
Zr	90	2	72	8.347	ppb	8.347	130.03	110	1000	
Nb	93	2	72	-0.397	ppb	-0.397	-26.32	1003	200	
Mo	95	2	115	0.681	ppb	0.681	16.06	550	2000	
Pd	105	2	115	0.028	ppb	0.028	97.66	50	100	
Ag	107	2	115	-0.014	ppb	-0.014	-19.61	27	100	
Cd	111	2	115	0.086	ppb	0.086	138.30	23	2000	
Sn	120	2	115	-0.062	ppb	-0.062	-68.76	147	2000	
Sb	121	2	115	0.051	ppb	0.051	148.37	83	1000	
Ba	137	2	115	158.359	ppb	158.359	2.36	37375	5000	
W	182	2	165	0.349	ppb	0.349	28.33	1897	100	
Pt	195	2	165	-0.013	ppb	-0.013	-47.82	27	100	
Tl	205	2	165	0.005	ppb	0.005	36.65	140	2000	
Pb	208	2	165	0.159	ppb	0.159	18.73	1753	5000	
Th	232	2	165	0.020	ppb	0.020	57.42	470	2000	
U	238	2	165	2.522	ppb	2.522	0.06	24865	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	393360	0.87	596260	65.97	60	120	
Sc (IS)	45	1	HMI H2	16477125	0.61	20835883	79.08	60	120	
Sc (IS)	45	2	HMI He	672332	0.39	823951	81.60	60	120	
Sc (IS)	45	3	No Gas	23044007	0.49	31260218	73.72	60	120	
Ge Internal Standard	72	1	HMI H2	6344567	0.21	8011210	79.20	60	120	
Ge Internal Standard	72	2	HMI He	754787	0.34	907478	83.17	60	120	
In Internal Standard	115	2	HMI He	2613093	1.01	3014874	86.67	60	120	
Ho-165	165	2	HMI He	12866999	0.27	14587244	88.21	60	120	

Sample Report

Sample Table

Sample Name	280-116590-E-4-A
Data File Name	199SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:02:44-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-23.602	ppb	-23.602	-12.35	65356	500000	
Li	7	2	45	-20.423	ppb	-20.423	-90.24	3361	500000	
Li	7	3	45	-40.285	ppb	-40.285	-3.56	1635098	50000	
Be	9	1	6	-0.034	ppb	-0.034	-198.02	7	2000	
B	11	1	6	56.402	ppb	56.402	4.84	11151	2000	
Na	23	1	45	92533.526	ppb	92533.526	0.35	187059737	2000	>LDR
Na	23	2	45	87289.768	ppb	87289.768	0.52	13840215	400000	
Mg	24	2	45	132761.054	ppb	132761.054	0.78	9474055	400000	
Al	27	2	45	14.251	ppb	14.251	17.80	403	400000	
K	39	1	45	9324.857	ppb	9324.857	0.81	24814288	400000	
K	39	2	45	9606.817	ppb	9606.817	1.20	363575	400000	
Ca	40	1	45	738848.679	ppb	738848.679	0.35	2183483594	400000	
Ca	44	2	45	773260.970	ppb	773260.970	1.45	1588961	400000	
Ti	47	2	45	0.628	ppb	0.628	173.21	10	4000	
V	51	2	72	2.467	ppb	2.467	15.80	3287	2000	
Cr	52	2	72	1.354	ppb	1.354	8.35	1287	5000	
Mn	55	2	72	8.906	ppb	8.906	6.40	3207	10000	
Fe	57	2	72	94.653	ppb	94.653	3.97	1684	400000	
Co	59	2	72	0.091	ppb	0.091	37.36	147	2000	
Ni	60	2	72	1.821	ppb	1.821	20.55	950	5000	
Cu	63	2	72	0.887	ppb	0.887	17.03	1710	5000	
Zn	66	2	72	7.935	ppb	7.935	11.67	1543	5000	
As	75	2	72	0.558	ppb	0.558	28.66	79	2000	
Se	78	1	72	4.256	ppb	4.256	10.72	608	2000	
Sr	88	2	72	5113.858	ppb	5113.858	1.06	1977917	4000	
Zr	90	2	72	-4.586	ppb	-4.586	-110.90	53	1000	
Nb	93	2	72	-0.411	ppb	-0.411	-25.19	937	200	
Mo	95	2	115	0.013	ppb	0.013	504.61	137	2000	
Pd	105	2	115	0.073	ppb	0.073	128.40	90	100	
Ag	107	2	115	0.237	ppb	0.237	10.39	520	100	
Cd	111	2	115	0.013	ppb	0.013	173.21	3	2000	
Sn	120	2	115	0.004	ppb	0.004	2472.22	190	2000	
Sb	121	2	115	-0.027	ppb	-0.027	-56.39	30	1000	
Ba	137	2	115	230.346	ppb	230.346	1.56	52602	5000	
W	182	2	165	0.056	ppb	0.056	37.14	990	100	
Pt	195	2	165	-0.016	ppb	-0.016	-27.40	20	100	
Tl	205	2	165	0.001	ppb	0.001	547.78	117	2000	
Pb	208	2	165	0.090	ppb	0.090	12.92	1183	5000	
Th	232	2	165	0.020	ppb	0.020	52.80	457	2000	
U	238	2	165	3.649	ppb	3.649	3.00	34705	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	373846	1.31	596260	62.70	60	120	
Sc (IS)	45	1	HMI H2	15811159	0.39	20835883	75.88	60	120	
Sc (IS)	45	2	HMI He	654766	0.29	823951	79.47	60	120	
Sc (IS)	45	3	No Gas	22333870	0.51	31260218	71.45	60	120	
Ge Internal Standard	72	1	HMI H2	5968769	0.38	8011210	74.51	60	120	
Ge Internal Standard	72	2	HMI He	723755	0.67	907478	79.75	60	120	
In Internal Standard	115	2	HMI He	2527885	0.50	3014874	83.85	60	120	
Ho-165	165	2	HMI He	12435779	0.47	14587244	85.25	60	120	

Sample Report

Sample Table

Sample Name	280-116590-E-5-A
Data File Name	200SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:06:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436990 6020a dod4
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-11.742	ppb	-11.742	-19.58	65966	500000	
Li	7	2	45	-31.734	ppb	-31.734	-88.67	3241	500000	
Li	7	3	45	-34.120	ppb	-34.120	-6.50	1609230	50000	
Be	9	1	6	0.007	ppb	0.007	1050.74	13	2000	
B	11	1	6	59.581	ppb	59.581	7.96	11482	2000	
Na	23	1	45	78484.294	ppb	78484.294	3.87	155069698	2000	>LDR
Na	23	2	45	71466.300	ppb	71466.300	0.80	11283566	400000	
Mg	24	2	45	88199.098	ppb	88199.098	0.81	6265616	400000	
Al	27	2	45	47.055	ppb	47.055	10.31	1047	400000	
K	39	1	45	8288.487	ppb	8288.487	5.48	22236361	400000	
K	39	2	45	8557.223	ppb	8557.223	0.87	323634	400000	
Ca	40	1	45	476191.146	ppb	476191.146	4.26	1375011500	400000	
Ca	44	2	45	464248.670	ppb	464248.670	1.12	949683	400000	
Ti	47	2	45	2.513	ppb	2.513	65.84	40	4000	
V	51	2	72	5.494	ppb	5.494	11.95	5368	2000	
Cr	52	2	72	2.655	ppb	2.655	6.45	2427	5000	
Mn	55	2	72	336.964	ppb	336.964	0.92	120128	10000	
Fe	57	2	72	146.875	ppb	146.875	10.50	2554	400000	
Co	59	2	72	0.237	ppb	0.237	33.24	363	2000	
Ni	60	2	72	2.045	ppb	2.045	8.87	1050	5000	
Cu	63	2	72	0.760	ppb	0.760	14.74	1580	5000	
Zn	66	2	72	9.546	ppb	9.546	14.70	1800	5000	
As	75	2	72	1.128	ppb	1.128	29.05	141	2000	
Se	78	1	72	1.817	ppb	1.817	12.28	276	2000	
Sr	88	2	72	3788.984	ppb	3788.984	0.77	1475303	4000	
Zr	90	2	72	10.958	ppb	10.958	69.34	117	1000	
Nb	93	2	72	-0.494	ppb	-0.494	-16.64	783	200	
Mo	95	2	115	0.346	ppb	0.346	46.99	337	2000	
Pd	105	2	115	0.068	ppb	0.068	84.67	87	100	
Ag	107	2	115	-0.005	ppb	-0.005	-327.12	43	100	
Cd	111	2	115	0.025	ppb	0.025	86.60	7	2000	
Sn	120	2	115	-0.040	ppb	-0.040	-172.30	160	2000	
Sb	121	2	115	0.053	ppb	0.053	72.57	83	1000	
Ba	137	2	115	238.998	ppb	238.998	0.31	55201	5000	
W	182	2	165	0.195	ppb	0.195	2.76	1407	100	
Pt	195	2	165	-0.019	ppb	-0.019	-26.28	13	100	
Tl	205	2	165	0.005	ppb	0.005	119.51	140	2000	
Pb	208	2	165	0.237	ppb	0.237	6.69	2297	5000	
Th	232	2	165	0.026	ppb	0.026	24.57	517	2000	
U	238	2	165	6.079	ppb	6.079	0.25	58326	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	365439	2.27	596260	61.29	60	120	
Sc (IS)	45	1	HMI H2	15460095	2.63	20835883	74.20	60	120	
Sc (IS)	45	2	HMI He	651810	0.63	823951	79.11	60	120	
Sc (IS)	45	3	No Gas	21608845	0.43	31260218	69.13	60	120	
Ge Internal Standard	72	1	HMI H2	5934931	1.94	8011210	74.08	60	120	
Ge Internal Standard	72	2	HMI He	728643	0.32	907478	80.29	60	120	
In Internal Standard	115	2	HMI He	2556918	0.97	3014874	84.81	60	120	
Ho-165	165	2	HMI He	12564228	0.71	14587244	86.13	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	201_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:10:22-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	413.136	ppb	4.058	149556	500	82.6	90	110	>+\-10%
Li	7	2	45	397.574	ppb	11.622	7482	500	79.5	90	110	>+\-10%
Li	7	3	45	388.729	ppb	0.560	3658598	500	77.7	90	110	>+\-10%
Be	9	1	6	52.540	ppb	3.810	10030	50	105.1	90	110	
B	11	1	6	55.373	ppb	3.668	11979	50	110.7	90	110	>+\-10%
Na	23	1	45	5010.645	ppb	1.072	10869079	5000	100.2	90	110	
Na	23	2	45	4578.951	ppb	2.387	772169	5000	91.6	90	110	
Mg	24	2	45	4871.583	ppb	1.564	360676	5000	97.4	90	110	
Al	27	2	45	5105.396	ppb	1.174	104736	5000	102.1	90	110	
K	39	1	45	5243.866	ppb	1.078	17510954	5000	104.9	90	110	
K	39	2	45	5080.366	ppb	3.401	204870	5000	101.6	90	110	
Ca	40	1	45	5385.748	ppb	0.933	16729286	5000	107.7	90	110	
Ca	44	2	45	5186.872	ppb	5.235	11101	5000	103.7	90	110	
Ti	47	2	45	49.897	ppb	41.132	823	50	99.8	90	110	
V	51	2	72	49.269	ppb	1.747	36925	50	98.5	90	110	
Cr	52	2	72	50.435	ppb	1.882	46194	50	100.9	90	110	
Mn	55	2	72	50.314	ppb	3.377	18897	50	100.6	90	110	
Fe	57	2	72	4939.857	ppb	1.691	85462	5000	98.8	90	110	
Co	59	2	72	49.310	ppb	0.949	76737	50	98.6	90	110	
Ni	60	2	72	48.938	ppb	3.298	21694	50	97.9	90	110	
Cu	63	2	72	50.778	ppb	2.719	60749	50	101.6	90	110	
Zn	66	2	72	50.872	ppb	4.424	8523	50	101.7	90	110	
As	75	2	72	49.098	ppb	2.510	5535	50	98.2	90	110	
Se	78	1	72	49.807	ppb	1.898	7329	50	99.6	90	110	
Sr	88	2	72	54.047	ppb	4.584	22135	50	108.1	90	110	
Zr	90	2	72	84.640	ppb	38.149	437	50	169.3	90	110	>+\-10%
Nb	93	2	72	85.728	ppb	0.250	174159	100	85.7	90	110	>+\-10%
Mo	95	2	115	46.570	ppb	4.651	29245	50	93.1	90	110	
Pd	105	2	115	47.557	ppb	1.486	46708	50	95.1	90	110	
Ag	107	2	115	46.924	ppb	0.566	97658	50	93.8	90	110	
Cd	111	2	115	50.089	ppb	2.132	14041	50	100.2	90	110	
Sn	120	2	115	49.624	ppb	0.369	38411	50	99.2	90	110	
Sb	121	2	115	49.294	ppb	0.979	34340	50	98.6	90	110	
Ba	137	2	115	50.048	ppb	3.598	12073	50	100.1	90	110	
W	182	2	165	48.333	ppb	1.932	147574	50	96.7	90	110	
Pt	195	2	165	48.492	ppb	1.840	118778	50	97.0	90	110	
Tl	205	2	165	50.520	ppb	1.300	296733	50	101.0	90	110	
Pb	208	2	165	51.050	ppb	1.346	400335	50	102.1	90	110	
Th	232	2	165	51.146	ppb	1.594	475385	50	102.3	90	110	
U	238	2	165	50.724	ppb	0.962	507354	50	101.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	408721	0.37	596260	68.55	60	120	
Sc (IS)	45	1	HMI H2	16567278	0.80	20835883	79.51	60	120	
Sc (IS)	45	2	HMI He	678769	1.39	823951	82.38	60	120	
Sc (IS)	45	3	No Gas	22739861	0.45	31260218	72.74	60	120	
Ge Internal Standard	72	1	HMI H2	6443906	0.16	8011210	80.44	60	120	
Ge Internal Standard	72	2	HMI He	765503	0.43	907478	84.36	60	120	
In Internal Standard	115	2	HMI He	2670578	0.90	3014874	88.58	60	120	
Ho-165	165	2	HMI He	13126423	0.96	14587244	89.99	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	202_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:14:10-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-45.893	ppb	-11.6	1650891	10	
Be	9	1	6	0.013	ppb	220.0	17	0.5	
B	11	1	6	2.058	ppb	14.9	873	0.5	>RL
Na	23	1	45	-42.196	ppb	-1.9	179958	25	
Na	23	2	45	-48.362	ppb	-7.3	12849	25	
Mg	24	2	45	5.746	ppb	45.3	773	25	
Al	27	2	45	0.996	ppb	76.2	147	15	
K	39	1	45	115.990	ppb	21.4	6787158	50	>RL
K	39	2	45	11.999	ppb	105.2	12362	50	
Ca	40	1	45	29.559	ppb	5.1	142756	50	
Ca	44	2	45	10.466	ppb	91.7	80	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.422	ppb	4.6	2744	1	>RL
Cr	52	2	72	0.035	ppb	146.3	157	1	
Mn	55	2	72	0.019	ppb	397.8	67	0.5	
Fe	57	2	72	-0.211	ppb	-1634.4	143	25	
Co	59	2	72	0.006	ppb	63.2	23	0.5	
Ni	60	2	72	-0.037	ppb	-245.3	190	1	
Cu	63	2	72	-0.028	ppb	-314.9	733	1	
Zn	66	2	72	-1.190	ppb	-21.1	170	5	
As	75	2	72	0.022	ppb	369.7	24	1	
Se	78	1	72	-0.117	ppb	-61.7	16	1	
Sr	88	2	72	0.101	ppb	63.2	70	0.5	
Zr	90	2	72	-8.449	ppb	-73.4	40	1	
Nb	93	2	72	4.683	ppb	8.0	11292	2	>RL
Mo	95	2	115	-0.006	ppb	-989.7	133	0.5	
Pd	105	2	115	0.023	ppb	153.3	47	1	
Ag	107	2	115	0.002	ppb	1097.8	60	1	
Cd	111	2	115	0.023	ppb	173.2	7	0.5	
Sn	120	2	115	0.171	ppb	185.9	334	1	
Sb	121	2	115	0.293	ppb	28.9	257	0.6	
Ba	137	2	115	0.096	ppb	89.2	23	0.5	
W	182	2	165	0.123	ppb	1.4	1240	1	
Pt	195	2	165	0.000	ppb	4800.0	60	1	
Tl	205	2	165	0.021	ppb	17.8	233	0.1	
Pb	208	2	165	0.028	ppb	46.0	757	0.5	
Th	232	2	165	0.060	ppb	24.7	847	1	
U	238	2	165	0.051	ppb	16.2	653	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	415834	1.14	596260	69.74	60	120	
Sc (IS)	45	1	HMI H2	16430240	0.11	20835883	78.86	60	120	
Sc (IS)	45	2	HMI He	680085	0.60	823951	82.54	60	120	
Sc (IS)	45	3	No Gas	22907200	0.39	31260218	73.28	60	120	
Ge Internal Standard	72	1	HMI H2	6399919	0.65	8011210	79.89	60	120	
Ge Internal Standard	72	2	HMI He	769588	0.25	907478	84.81	60	120	
In Internal Standard	115	2	HMI He	2697283	0.48	3014874	89.47	60	120	
Ho-165	165	2	HMI He	13036160	0.41	14587244	89.37	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	203LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:17:58-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-30.929	ppb	-30.352	1733201	50	-61.9	70	130	>+/-30%
Be	9	1	6	0.879	ppb	19.592	187	1	87.9	70	130	
Na	23	2	45	-6.733	ppb	-40.761	19787	50	-13.5	70	130	>+/-30%
Mg	24	2	45	54.480	ppb	4.398	4404	50	109.0	70	130	
Al	27	2	45	35.046	ppb	13.186	850	30	116.8	70	130	
K	39	2	45	122.464	ppb	12.484	16647	100	122.5	70	130	
Ca	44	2	45	63.056	ppb	56.864	193	50	126.1	70	130	
V	51	2	72	5.919	ppb	6.603	6028	5	118.4	70	130	
Cr	52	2	72	2.113	ppb	12.834	2084	2	105.7	70	130	
Mn	55	2	72	1.027	ppb	16.836	450	1	102.7	70	130	
Fe	57	2	72	46.346	ppb	7.014	960	50	92.7	70	130	
Co	59	2	72	0.990	ppb	6.147	1577	1	99.0	70	130	
Ni	60	2	72	1.987	ppb	19.844	1093	2	99.4	70	130	
Cu	63	2	72	1.970	ppb	12.687	3134	2	98.5	70	130	
Zn	66	2	72	9.880	ppb	6.619	1974	10	98.8	70	130	
As	75	2	72	5.069	ppb	7.608	599	5	101.4	70	130	
Se	78	1	72	4.891	ppb	6.445	749	5	97.8	70	130	
Sr	88	2	72	1.096	ppb	16.312	483	1	109.6	70	130	
Zr	90	2	72	10.744	ppb	119.599	123	0.5	2148.8	70	130	>+/-30%
Nb	93	2	72	10.516	ppb	2.756	23290	2	525.8	70	130	>+/-30%
Mo	95	2	115	1.739	ppb	15.715	1253	2	86.9	70	130	
Pd	105	2	115	0.026	ppb	40.007	50	1	2.6	70	130	>+/-30%
Ag	107	2	115	4.936	ppb	2.581	10588	5	98.7	70	130	
Cd	111	2	115	0.986	ppb	16.048	283	1	98.6	70	130	
Sn	120	2	115	10.160	ppb	5.691	8230	10	101.6	70	130	
Sb	121	2	115	1.983	ppb	10.422	1467	2	99.2	70	130	
Ba	137	2	115	1.252	ppb	13.133	310	1	125.2	70	130	
W	182	2	165	4.838	ppb	1.212	15536	1	483.8	70	130	>+/-30%
Pt	195	2	165	0.015	ppb	84.182	97	1	1.5	70	130	>+/-30%
Tl	205	2	165	0.982	ppb	6.073	5868	1	98.2	70	130	
Pb	208	2	165	1.048	ppb	2.635	8728	1	104.8	70	130	
Th	232	2	165	2.194	ppb	1.353	20641	2	109.7	70	130	
U	238	2	165	1.072	ppb	0.938	10845	1	107.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	420267	0.81	596260	70.48	60	120	
Sc (IS)	45	1	HMI H2	16610679	0.29	20835883	79.72	60	120	
Sc (IS)	45	2	HMI He	683218	0.73	823951	82.92	60	120	
Sc (IS)	45	3	No Gas	23073730	0.71	31260218	73.81	60	120	
Ge Internal Standard	72	1	HMI H2	6439978	0.62	8011210	80.39	60	120	
Ge Internal Standard	72	2	HMI He	776543	0.41	907478	85.57	60	120	
In Internal Standard	115	2	HMI He	2739234	0.88	3014874	90.86	60	120	
Ho-165	165	2	HMI He	13103217	0.85	14587244	89.83	60	120	

Blank Report

Sample Table

Sample Name	MB 280-437002/1-A
Data File Name	204_BLK.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:21:45-07:00
Sample Type	Blank
Dilution	1
Comment	437002 6020a dod5
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-42.850	ppb	-4.575089019	62490	0.5
Li	7	2	45	-23.806	ppb	-90.42637317	3461	0.5
Li	7	3	45	-48.579	ppb	-15.97684867	1586956	10
Be	9	1	6	-0.036	ppb	-171.4935254	7	0.5
B	11	1	6	1.012	ppb	28.50890659	623	0.5
Na	23	1	45	-58.967	ppb	-2.031925826	140544	25
Na	23	2	45	-61.287	ppb	-3.31024362	10711	25
Mg	24	2	45	0.173	ppb	266.5812715	360	25
Al	27	2	45	1.847	ppb	88.65074494	163	15
K	39	1	45	-1245.741	ppb	-2.012747203	3861462	50
K	39	2	45	8.430	ppb	309.7772289	12199	50
Ca	40	1	45	4.623	ppb	11.53426069	64245	50
Ca	44	2	45	-8.310	ppb	-97.63588073	40	25
Ti	47	2	45	0.415	ppb	173.2050808	7	0.5
V	51	2	72	0.118	ppb	73.01429463	1797	1
Cr	52	2	72	0.146	ppb	8.791649079	257	1
Mn	55	2	72	0.257	ppb	97.14854813	157	0.5
Fe	57	2	72	15.757	ppb	60.47750914	417	25
Co	59	2	72	0.017	ppb	40.29916991	40	0.5
Ni	60	2	72	-0.255	ppb	-31.20052225	93	1
Cu	63	2	72	0.146	ppb	122.8052594	933	1
Zn	66	2	72	2.426	ppb	17.85790423	750	5
As	75	2	72	0.005	ppb	1686.302593	22	1
Se	78	1	72	-0.150	ppb	-55.02609358	11	1
Sr	88	2	72	-0.012	ppb	-493.4554376	23	0.5
Zr	90	2	72	-4.471	ppb	-111.5159819	57	1
Nb	93	2	72	0.939	ppb	14.90950848	3704	2
Mo	95	2	115	-0.164	ppb	-22.66816193	33	0.5
Pd	105	2	115	-0.004	ppb	-296.7474754	20	1
Ag	107	2	115	-0.011	ppb	-46.78533925	33	1
Cd	111	2	115	0.012	ppb	173.2050808	3	0.5
Sn	120	2	115	0.123	ppb	35.67314722	293	1
Sb	121	2	115	-0.005	ppb	-975.7461716	47	0.6
Ba	137	2	115	0.084	ppb	86.62785597	20	0.5
W	182	2	165	0.078	ppb	33.7152872	1107	1
Pt	195	2	165	-0.013	ppb	-63.27029809	27	1
Tl	205	2	165	-0.001	ppb	-239.5278224	110	0.1
Pb	208	2	165	0.043	ppb	44.50360163	877	0.5
Th	232	2	165	0.037	ppb	35.22060828	633	1
U	238	2	165	0.009	ppb	102.6172989	227	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	397664	0.34	596260	66.69	60	120	
Sc (IS)	45	1	HMI H2	15950700	0.54	20835883	76.55	60	120	
Sc (IS)	45	2	HMI He	679687	3.46	823951	82.49	60	120	
Sc (IS)	45	3	No Gas	22191993	0.67	31260218	70.99	60	120	
Ge Internal Standard	72	1	HMI H2	6146332	0.66	8011210	76.72	60	120	
Ge Internal Standard	72	2	HMI He	765675	2.43	907478	84.37	60	120	
In Internal Standard	115	2	HMI He	2679019	3.65	3014874	88.86	60	120	
Ho-165	165	2	HMI He	13059885	2.95	14587244	89.53	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-437002/2-A
Data File Name	205_LCS.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:25:33-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	437002 6020a dod5
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	33.907	33.907	ppb	9.192	77242	400	8.5	80	120	>+/-20%
Li	7	2	45	54.944	54.944	ppb	100.077	4244	400	13.7	80	120	>+/-20%
Li	7	3	45	20.583	20.583	ppb	10.659	1915738	400	5.1	80	120	>+/-20%
Be	9	1	6	39.844	39.844	ppb	2.735	7539	40	99.6	80	120	
Na	23	2	45	-62.401	-62.401	ppb	-1.733	10618	40	-156.0	80	120	>+/-20%
Mg	24	2	45	-1.911	-1.911	ppb	-50.790	207	40	-4.8	80	120	>+/-20%
Al	27	2	45	396.778	396.778	ppb	1.291	8333	40	991.9	80	120	>+/-20%
K	39	2	45	4.897	4.897	ppb	167.027	12179	40	12.2	80	120	>+/-20%
Ca	44	2	45	186.967	186.967	ppb	21.837	460	40	467.4	80	120	>+/-20%
V	51	2	72	37.918	37.918	ppb	2.919	28980	40	94.8	80	120	
Cr	52	2	72	38.264	38.264	ppb	1.012	35284	40	95.7	80	120	
Mn	55	2	72	38.611	38.611	ppb	0.303	14598	40	96.5	80	120	
Fe	57	2	72	398.831	398.831	ppb	1.547	7075	40	997.1	80	120	>+/-20%
Co	59	2	72	38.518	38.518	ppb	0.723	60293	40	96.3	80	120	
Ni	60	2	72	38.893	38.893	ppb	1.762	17385	40	97.2	80	120	
Cu	63	2	72	39.188	39.188	ppb	3.246	47332	40	98.0	80	120	
Zn	66	2	72	40.860	40.860	ppb	3.970	6955	40	102.2	80	120	
As	75	2	72	36.713	36.713	ppb	3.691	4169	40	91.8	80	120	
Se	78	1	72	35.492	35.492	ppb	4.184	5074	40	88.7	80	120	
Nb	93	2	72	0.519	0.519	ppb	13.315	2877	40	1.3	80	120	>+/-20%
Mo	95	2	115	36.801	36.801	ppb	2.123	23677	40	92.0	80	120	
Pd	105	2	115	-0.004	-0.004	ppb	-237.086	20	40	0.0	80	120	>+/-20%
Ag	107	2	115	38.639	38.639	ppb	2.049	82271	40	96.6	80	120	
Cd	111	2	115	37.652	37.652	ppb	4.420	10795	40	94.1	80	120	
Sn	120	2	115	38.904	38.904	ppb	1.679	30849	40	97.3	80	120	
Sb	121	2	115	37.441	37.441	ppb	1.295	26693	40	93.6	80	120	
Ba	137	2	115	39.957	39.957	ppb	3.487	9861	40	99.9	80	120	
W	182	2	165	37.651	37.651	ppb	1.155	115302	40	94.1	80	120	
Pt	195	2	165	-0.009	-0.009	ppb	-130.296	37	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.879	39.879	ppb	0.915	234547	40	99.7	80	120	
Pb	208	2	165	40.325	40.325	ppb	0.107	316747	40	100.8	80	120	
Th	232	2	165	39.777	39.777	ppb	1.055	370256	40	99.4	80	120	
U	238	2	165	39.771	39.771	ppb	1.406	398308	40	99.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	404927	0.70	596260	67.91	60	120	
Sc (IS)	45	1	HMI H2	16166070	0.44	20835883	77.59	60	120	
Sc (IS)	45	2	HMI He	684996	0.17	823951	83.14	60	120	
Sc (IS)	45	3	No Gas	22366349	0.51	31260218	71.55	60	120	
Ge Internal Standard	72	1	HMI H2	6249769	0.81	8011210	78.01	60	120	
Ge Internal Standard	72	2	HMI He	769961	0.54	907478	84.85	60	120	
In Internal Standard	115	2	HMI He	2732122	0.99	3014874	90.62	60	120	
Ho-165	165	2	HMI He	13142554	0.72	14587244	90.10	60	120	

Sample Table

Sample Name	LCSD 280-437002/3-A
Data File Name	206SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:29:22-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	31.899	ppb	31.899	22.38	76836	500000	
Li	7	2	45	47.932	ppb	47.932	41.95	4181	500000	
Li	7	3	45	27.702	ppb	27.702	14.75	1938196	50000	
Be	9	1	6	38.148	ppb	38.148	1.93	7255	2000	
B	11	1	6	31.852	ppb	31.852	8.94	7042	2000	
Na	23	1	45	-61.643	ppb	-61.643	-0.83	136850	2000	
Na	23	2	45	-64.072	ppb	-64.072	-4.72	10351	400000	
Mg	24	2	45	-1.468	ppb	-1.468	-17.48	240	400000	
Al	27	2	45	434.380	ppb	434.380	4.02	9120	400000	
K	39	1	45	-1330.653	ppb	-1330.653	-0.52	3739334	400000	
K	39	2	45	7.604	ppb	7.604	60.38	12296	400000	
Ca	40	1	45	7.332	ppb	7.332	6.27	73260	400000	
Ca	44	2	45	172.889	ppb	172.889	26.30	430	400000	
Ti	47	2	45	0.599	ppb	0.599	173.21	10	4000	
V	51	2	72	36.150	ppb	36.150	5.44	27857	2000	
Cr	52	2	72	37.786	ppb	37.786	2.49	35033	5000	
Mn	55	2	72	39.855	ppb	39.855	1.04	15148	10000	
Fe	57	2	72	408.069	ppb	408.069	4.68	7275	400000	
Co	59	2	72	38.226	ppb	38.226	0.66	60162	2000	
Ni	60	2	72	37.688	ppb	37.688	2.78	16944	5000	
Cu	63	2	72	39.154	ppb	39.154	2.26	47549	5000	
Zn	66	2	72	43.686	ppb	43.686	3.16	7452	5000	
As	75	2	72	37.240	ppb	37.240	0.72	4251	2000	
Se	78	1	72	37.962	ppb	37.962	2.23	5450	2000	
Sr	88	2	72	41.686	ppb	41.686	5.36	17274	4000	
Zr	90	2	72	9541.294	ppb	9541.294	2.03	41248	1000	>LDR
Nb	93	2	72	0.254	ppb	0.254	54.53	2354	200	
Mo	95	2	115	35.465	ppb	35.465	2.50	22963	2000	
Pd	105	2	115	-0.017	ppb	-0.017	-32.89	7	100	
Ag	107	2	115	39.118	ppb	39.118	1.16	83819	100	
Cd	111	2	115	37.333	ppb	37.333	4.64	10775	2000	
Sn	120	2	115	37.971	ppb	37.971	3.51	30301	2000	
Sb	121	2	115	38.014	ppb	38.014	2.42	27274	1000	
Ba	137	2	115	40.202	ppb	40.202	3.71	9984	5000	
W	182	2	165	38.020	ppb	38.020	2.46	116123	100	
Pt	195	2	165	-0.016	ppb	-0.016	-25.15	20	100	
Tl	205	2	165	40.176	ppb	40.176	0.39	235681	2000	
Pb	208	2	165	40.604	ppb	40.604	0.99	318099	5000	
Th	232	2	165	40.088	ppb	40.088	0.39	372185	2000	
U	238	2	165	40.138	ppb	40.138	0.89	400967	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	407012	0.69	596260	68.26	60	120	
Sc (IS)	45	1	HMI H2	16157374	0.70	20835883	77.55	60	120	
Sc (IS)	45	2	HMI He	685700	0.38	823951	83.22	60	120	
Sc (IS)	45	3	No Gas	22252016	0.91	31260218	71.18	60	120	
Ge Internal Standard	72	1	HMI H2	6279213	0.38	8011210	78.38	60	120	
Ge Internal Standard	72	2	HMI He	774148	0.26	907478	85.31	60	120	
In Internal Standard	115	2	HMI He	2749184	0.48	3014874	91.19	60	120	
Ho-165	165	2	HMI He	13108244	0.17	14587244	89.86	60	120	

Sample Report

Sample Table

Sample Name	280-116482-C-1-D
Data File Name	207SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:33:08-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.151	ppb	-31.151	-34.37	64506	500000	
Li	7	2	45	-19.552	ppb	-19.552	-264.03	3484	500000	
Li	7	3	45	-43.919	ppb	-43.919	-11.93	1604874	50000	
Be	9	1	6	0.016	ppb	0.016	378.57	17	2000	
B	11	1	6	206.571	ppb	206.571	2.16	42795	2000	
Na	23	1	45	11639.947	ppb	11639.947	1.13	23938570	2000	>LDR
Na	23	2	45	11174.610	ppb	11174.610	2.04	1850831	400000	
Mg	24	2	45	4639.262	ppb	4639.262	0.11	342822	400000	
Al	27	2	45	1344.188	ppb	1344.188	3.55	27617	400000	
K	39	1	45	2442.655	ppb	2442.655	1.57	11236460	400000	
K	39	2	45	3706.069	ppb	3706.069	0.85	152378	400000	
Ca	40	1	45	11514.988	ppb	11514.988	0.56	34340884	400000	
Ca	44	2	45	12058.710	ppb	12058.710	1.65	25690	400000	
Ti	47	2	45	8.461	ppb	8.461	32.35	140	4000	
V	51	2	72	2.537	ppb	2.537	9.37	3501	2000	
Cr	52	2	72	1.838	ppb	1.838	3.26	1790	5000	
Mn	55	2	72	25.529	ppb	25.529	3.78	9547	10000	
Fe	57	2	72	1221.670	ppb	1221.670	1.51	21093	400000	
Co	59	2	72	0.405	ppb	0.405	15.27	640	2000	
Ni	60	2	72	3.211	ppb	3.211	3.62	1603	5000	
Cu	63	2	72	10.714	ppb	10.714	3.65	13323	5000	
Zn	66	2	72	25.092	ppb	25.092	2.95	4354	5000	
As	75	2	72	0.604	ppb	0.604	17.27	88	2000	
Se	78	1	72	-0.018	ppb	-0.018	-488.80	29	2000	
Sr	88	2	72	249.858	ppb	249.858	2.75	101494	4000	
Zr	90	2	72	536.351	ppb	536.351	8.64	2347	1000	
Nb	93	2	72	0.161	ppb	0.161	62.67	2124	200	
Mo	95	2	115	0.238	ppb	0.238	35.11	287	2000	
Pd	105	2	115	0.020	ppb	0.020	76.24	43	100	
Ag	107	2	115	0.054	ppb	0.054	60.18	170	100	
Cd	111	2	115	0.590	ppb	0.590	32.88	167	2000	
Sn	120	2	115	0.254	ppb	0.254	18.56	397	2000	
Sb	121	2	115	1.663	ppb	1.663	15.72	1217	1000	
Ba	137	2	115	81.865	ppb	81.865	3.49	19902	5000	
W	182	2	165	0.368	ppb	0.368	13.34	1977	100	
Pt	195	2	165	-0.018	ppb	-0.018	-49.16	17	100	
Tl	205	2	165	0.024	ppb	0.024	63.96	250	2000	
Pb	208	2	165	3.854	ppb	3.854	3.94	30496	5000	
Th	232	2	165	0.368	ppb	0.368	4.16	3684	2000	
U	238	2	165	0.172	ppb	0.172	7.26	1847	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	402044	1.22	596260	67.43	60	120	
Sc (IS)	45	1	HMI H2	15932990	0.54	20835883	76.47	60	120	
Sc (IS)	45	2	HMI He	677351	0.66	823951	82.21	60	120	
Sc (IS)	45	3	No Gas	22147687	1.03	31260218	70.85	60	120	
Ge Internal Standard	72	1	HMI H2	6169043	0.48	8011210	77.01	60	120	
Ge Internal Standard	72	2	HMI He	759948	0.53	907478	83.74	60	120	
In Internal Standard	115	2	HMI He	2691512	1.03	3014874	89.27	60	120	
Ho-165	165	2	HMI He	13025461	0.52	14587244	89.29	60	120	

Sample Report

Sample Table

Sample Name	280-116482-C-1-Dsd@5
Data File Name	208SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:36:55-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-32.432	ppb	-32.432	-21.06	67730	500000	
Li	7	2	45	-49.333	ppb	-49.333	-38.12	3267	500000	
Li	7	3	45	-41.261	ppb	-41.261	-9.75	1734037	50000	
Be	9	1	6	-0.023	ppb	-0.023	-219.02	10	2000	
B	11	1	6	44.183	ppb	44.183	7.06	10194	2000	
Na	23	1	45	2252.787	ppb	2252.787	1.01	5102788	2000	
Na	23	2	45	2097.487	ppb	2097.487	0.95	371758	400000	
Mg	24	2	45	936.804	ppb	936.804	3.93	70919	400000	
Al	27	2	45	308.502	ppb	308.502	4.74	6569	400000	
K	39	1	45	512.905	ppb	512.905	8.64	7771084	400000	
K	39	2	45	739.765	ppb	739.765	3.50	40731	400000	
Ca	40	1	45	2242.549	ppb	2242.549	1.41	7089166	400000	
Ca	44	2	45	2397.637	ppb	2397.637	3.71	5261	400000	
Ti	47	2	45	3.361	ppb	3.361	61.77	57	4000	
V	51	2	72	1.021	ppb	1.021	37.71	2514	2000	
Cr	52	2	72	0.404	ppb	0.404	23.63	507	5000	
Mn	55	2	72	5.021	ppb	5.021	11.41	1997	10000	
Fe	57	2	72	239.409	ppb	239.409	7.16	4408	400000	
Co	59	2	72	0.108	ppb	0.108	22.83	187	2000	
Ni	60	2	72	0.263	ppb	0.263	44.32	330	5000	
Cu	63	2	72	1.935	ppb	1.935	6.06	3137	5000	
Zn	66	2	72	4.980	ppb	4.980	7.23	1193	5000	
As	75	2	72	0.068	ppb	0.068	141.39	29	2000	
Se	78	1	72	-0.146	ppb	-0.146	-18.30	12	2000	
Sr	88	2	72	47.238	ppb	47.238	1.94	19922	4000	
Zr	90	2	72	74.802	ppb	74.802	24.59	407	1000	
Nb	93	2	72	-0.392	ppb	-0.392	-39.18	1060	200	
Mo	95	2	115	0.071	ppb	0.071	224.65	187	2000	
Pd	105	2	115	0.006	ppb	0.006	302.08	30	100	
Ag	107	2	115	0.006	ppb	0.006	461.81	70	100	
Cd	111	2	115	0.151	ppb	0.151	70.82	43	2000	
Sn	120	2	115	-0.060	ppb	-0.060	-15.57	157	2000	
Sb	121	2	115	0.299	ppb	0.299	30.40	267	1000	
Ba	137	2	115	15.948	ppb	15.948	2.60	3967	5000	
W	182	2	165	0.031	ppb	0.031	116.96	980	100	
Pt	195	2	165	-0.002	ppb	-0.002	-932.76	57	100	
Tl	205	2	165	0.005	ppb	0.005	142.41	147	2000	
Pb	208	2	165	0.800	ppb	0.800	2.44	6871	5000	
Th	232	2	165	0.059	ppb	0.059	34.06	853	2000	
U	238	2	165	0.025	ppb	0.025	7.71	400	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	431953	0.42	596260	72.44	60	120	
Sc (IS)	45	1	HMI H2	16787289	0.42	20835883	80.57	60	120	
Sc (IS)	45	2	HMI He	691307	0.78	823951	83.90	60	120	
Sc (IS)	45	3	No Gas	23750175	0.30	31260218	75.98	60	120	
Ge Internal Standard	72	1	HMI H2	6523472	0.37	8011210	81.43	60	120	
Ge Internal Standard	72	2	HMI He	787988	0.73	907478	86.83	60	120	
In Internal Standard	115	2	HMI He	2754269	1.05	3014874	91.36	60	120	
Ho-165	165	2	HMI He	13253072	0.44	14587244	90.85	60	120	

Sample Report

Sample Table

Sample Name	280-116482-C-1-E MS
Data File Name	209SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:40:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	29.337	ppb	29.337	18.23	76800	500000	
Li	7	2	45	20.255	ppb	20.255	160.05	3861	500000	
Li	7	3	45	25.343	ppb	25.343	21.16	1926483	50000	
Be	9	1	6	38.270	ppb	38.270	5.21	7319	2000	
B	11	1	6	232.568	ppb	232.568	3.91	49008	2000	
Na	23	1	45	11163.162	ppb	11163.162	3.34	23417390	2000	>LDR
Na	23	2	45	10934.599	ppb	10934.599	1.50	1809152	400000	
Mg	24	2	45	4610.168	ppb	4610.168	1.41	340196	400000	
Al	27	2	45	2045.155	ppb	2045.155	2.49	41887	400000	
K	39	1	45	2275.516	ppb	2275.516	5.82	11115938	400000	
K	39	2	45	3688.859	ppb	3688.859	0.68	151525	400000	
Ca	40	1	45	10927.019	ppb	10927.019	3.91	33222663	400000	
Ca	44	2	45	11774.311	ppb	11774.311	2.05	25052	400000	
Ti	47	2	45	13.521	ppb	13.521	37.16	223	4000	
V	51	2	72	39.366	ppb	39.366	1.01	29518	2000	
Cr	52	2	72	38.148	ppb	38.148	0.97	34585	5000	
Mn	55	2	72	64.184	ppb	64.184	1.47	23820	10000	
Fe	57	2	72	1612.780	ppb	1612.780	2.48	27691	400000	
Co	59	2	72	37.952	ppb	37.952	0.99	58411	2000	
Ni	60	2	72	39.320	ppb	39.320	5.60	17281	5000	
Cu	63	2	72	48.473	ppb	48.473	1.86	57388	5000	
Zn	66	2	72	63.673	ppb	63.673	7.08	10461	5000	
As	75	2	72	36.215	ppb	36.215	3.58	4043	2000	
Se	78	1	72	34.467	ppb	34.467	5.30	4910	2000	
Sr	88	2	72	287.301	ppb	287.301	0.97	116253	4000	
Zr	90	2	72	7133.734	ppb	7133.734	0.20	30177	1000	>LDR
Nb	93	2	72	-0.060	ppb	-0.060	-209.83	1677	200	
Mo	95	2	115	35.967	ppb	35.967	2.42	22616	2000	
Pd	105	2	115	-0.010	ppb	-0.010	-54.67	13	100	
Ag	107	2	115	37.401	ppb	37.401	2.08	77836	100	
Cd	111	2	115	37.374	ppb	37.374	2.93	10474	2000	
Sn	120	2	115	25.698	ppb	25.698	0.88	19985	2000	
Sb	121	2	115	32.599	ppb	32.599	1.68	22723	1000	
Ba	137	2	115	116.923	ppb	116.923	3.00	28206	5000	
W	182	2	165	34.654	ppb	34.654	0.73	105559	100	
Pt	195	2	165	-0.015	ppb	-0.015	-42.00	23	100	
Tl	205	2	165	38.324	ppb	38.324	0.74	224052	2000	
Pb	208	2	165	42.330	ppb	42.330	0.45	330464	5000	
Th	232	2	165	36.844	ppb	36.844	0.61	340928	2000	
U	238	2	165	38.750	ppb	38.750	0.43	385783	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	409416	1.34	596260	68.66	60	120	
Sc (IS)	45	1	HMI H2	16250510	2.02	20835883	77.99	60	120	
Sc (IS)	45	2	HMI He	676431	0.65	823951	82.10	60	120	
Sc (IS)	45	3	No Gas	22240339	0.50	31260218	71.15	60	120	
Ge Internal Standard	72	1	HMI H2	6230308	2.06	8011210	77.77	60	120	
Ge Internal Standard	72	2	HMI He	757056	0.31	907478	83.42	60	120	
In Internal Standard	115	2	HMI He	2670292	1.00	3014874	88.57	60	120	
Ho-165	165	2	HMI He	13063499	0.35	14587244	89.55	60	120	

Sample Report

Sample Table

Sample Name	280-116482-C-1-F MSD
Data File Name	210SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:44:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	39.829	ppb	39.829	37.28	77058	500000	
Li	7	2	45	26.518	ppb	26.518	48.52	3907	500000	
Li	7	3	45	27.650	ppb	27.650	9.62	1933754	50000	
Be	9	1	6	38.735	ppb	38.735	6.18	7362	2000	
B	11	1	6	244.029	ppb	244.029	1.74	51078	2000	
Na	23	1	45	11599.687	ppb	11599.687	0.61	23821811	2000	>LDR
Na	23	2	45	11082.566	ppb	11082.566	0.64	1827664	400000	
Mg	24	2	45	4691.689	ppb	4691.689	2.10	345127	400000	
Al	27	2	45	2224.817	ppb	2224.817	2.38	45418	400000	
K	39	1	45	2426.717	ppb	2426.717	2.53	11187651	400000	
K	39	2	45	3691.192	ppb	3691.192	1.28	151134	400000	
Ca	40	1	45	11394.821	ppb	11394.821	0.72	33932354	400000	
Ca	44	2	45	12048.270	ppb	12048.270	1.91	25553	400000	
Ti	47	2	45	16.611	ppb	16.611	49.62	273	4000	
V	51	2	72	39.611	ppb	39.611	2.02	29868	2000	
Cr	52	2	72	40.441	ppb	40.441	2.20	36878	5000	
Mn	55	2	72	65.557	ppb	65.557	3.68	24475	10000	
Fe	57	2	72	1750.370	ppb	1750.370	2.22	30222	400000	
Co	59	2	72	38.736	ppb	38.736	1.10	59975	2000	
Ni	60	2	72	40.843	ppb	40.843	2.70	18049	5000	
Cu	63	2	72	48.362	ppb	48.362	1.73	57602	5000	
Zn	66	2	72	68.116	ppb	68.116	2.51	11232	5000	
As	75	2	72	36.301	ppb	36.301	1.94	4077	2000	
Se	78	1	72	36.675	ppb	36.675	2.87	5164	2000	
Sr	88	2	72	289.147	ppb	289.147	1.43	117701	4000	
Zr	90	2	72	7472.852	ppb	7472.852	2.43	31797	1000	>LDR
Nb	93	2	72	-0.133	ppb	-0.133	-88.13	1540	200	
Mo	95	2	115	36.587	ppb	36.587	2.83	22963	2000	
Pd	105	2	115	0.000	ppb	0.000	-14341.02	23	100	
Ag	107	2	115	38.193	ppb	38.193	0.60	79354	100	
Cd	111	2	115	38.851	ppb	38.851	3.72	10868	2000	
Sn	120	2	115	27.167	ppb	27.167	2.09	21080	2000	
Sb	121	2	115	33.379	ppb	33.379	4.37	23220	1000	
Ba	137	2	115	118.345	ppb	118.345	1.26	28497	5000	
W	182	2	165	35.385	ppb	35.385	0.95	107754	100	
Pt	195	2	165	-0.018	ppb	-0.018	-35.45	17	100	
Tl	205	2	165	39.278	ppb	39.278	0.24	229608	2000	
Pb	208	2	165	43.156	ppb	43.156	1.38	336861	5000	
Th	232	2	165	38.100	ppb	38.100	1.41	352496	2000	
U	238	2	165	39.771	ppb	39.771	0.86	395893	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	406747	0.24	596260	68.22	60	120	
Sc (IS)	45	1	HMI H2	15909477	0.79	20835883	76.36	60	120	
Sc (IS)	45	2	HMI He	674305	0.16	823951	81.84	60	120	
Sc (IS)	45	3	No Gas	22202632	0.26	31260218	71.03	60	120	
Ge Internal Standard	72	1	HMI H2	6156040	0.06	8011210	76.84	60	120	
Ge Internal Standard	72	2	HMI He	761587	0.10	907478	83.92	60	120	
In Internal Standard	115	2	HMI He	2665588	0.78	3014874	88.41	60	120	
Ho-165	165	2	HMI He	13062342	0.67	14587244	89.55	60	120	

Sample Report

Sample Table

Sample Name	280-116482-C-1-Dpds
Data File Name	211SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:48:17-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	164.553	ppb	164.553	7.64	99099	500000	
Li	7	2	45	148.382	ppb	148.382	8.01	5088	500000	
Li	7	3	45	139.384	ppb	139.384	3.20	2460123	50000	
Be	9	1	6	210.086	ppb	210.086	1.91	39409	2000	
B	11	1	6	209.280	ppb	209.280	2.79	43357	2000	
Na	23	1	45	11276.558	ppb	11276.558	0.53	23117944	2000	>LDR
Na	23	2	45	10782.893	ppb	10782.893	0.96	1786222	400000	
Mg	24	2	45	4466.311	ppb	4466.311	0.70	329945	400000	
Al	27	2	45	3490.756	ppb	3490.756	1.22	71486	400000	
K	39	1	45	2332.559	ppb	2332.559	1.61	10977262	400000	
K	39	2	45	3566.245	ppb	3566.245	1.45	147031	400000	
Ca	40	1	45	11127.115	ppb	11127.115	1.03	33068212	400000	
Ca	44	2	45	12128.109	ppb	12128.109	1.51	25830	400000	
Ti	47	2	45	22.193	ppb	22.193	7.88	367	4000	
V	51	2	72	197.690	ppb	197.690	1.38	141624	2000	
Cr	52	2	72	195.639	ppb	195.639	1.68	177122	5000	
Mn	55	2	72	229.850	ppb	229.850	1.32	85283	10000	
Fe	57	2	72	3237.080	ppb	3237.080	0.96	55518	400000	
Co	59	2	72	199.339	ppb	199.339	0.99	307196	2000	
Ni	60	2	72	197.846	ppb	197.846	1.12	86253	5000	
Cu	63	2	72	211.103	ppb	211.103	1.02	247767	5000	
Zn	66	2	72	241.077	ppb	241.077	0.95	38666	5000	
As	75	2	72	192.473	ppb	192.473	0.91	21431	2000	
Se	78	1	72	195.315	ppb	195.315	1.86	27505	2000	
Sr	88	2	72	463.936	ppb	463.936	0.86	187990	4000	
Zr	90	2	72	50882.764	ppb	50882.764	0.81	215104	1000	>LDR
Nb	93	2	72	7.438	ppb	7.438	3.44	16610	200	
Mo	95	2	115	192.137	ppb	192.137	1.39	119275	2000	
Pd	105	2	115	0.031	ppb	0.031	49.84	53	100	
Ag	107	2	115	42.979	ppb	42.979	1.40	88727	100	
Cd	111	2	115	193.621	ppb	193.621	2.85	53838	2000	
Sn	120	2	115	204.920	ppb	204.920	0.05	156715	2000	
Sb	121	2	115	202.061	ppb	202.061	0.50	139466	1000	
Ba	137	2	115	286.449	ppb	286.449	1.43	68545	5000	
W	182	2	165	202.892	ppb	202.892	0.98	609700	100	
Pt	195	2	165	0.051	ppb	0.051	20.66	183	100	
Tl	205	2	165	207.534	ppb	207.534	0.62	1204738	2000	
Pb	208	2	165	208.836	ppb	208.836	0.56	1617399	5000	
Th	232	2	165	265.519	ppb	265.519	0.45	2438796	2000	
U	238	2	165	241.621	ppb	241.621	1.11	2388668	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	402030	0.22	596260	67.43	60	120	
Sc (IS)	45	1	HMI H2	15876680	0.49	20835883	76.20	60	120	
Sc (IS)	45	2	HMI He	677123	0.07	823951	82.18	60	120	
Sc (IS)	45	3	No Gas	22379195	1.03	31260218	71.59	60	120	
Ge Internal Standard	72	1	HMI H2	6188426	0.37	8011210	77.25	60	120	
Ge Internal Standard	72	2	HMI He	758190	0.55	907478	83.55	60	120	
In Internal Standard	115	2	HMI He	2648947	0.66	3014874	87.86	60	120	
Ho-165	165	2	HMI He	12976622	0.46	14587244	88.96	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	212_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:52:03-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	472.346	ppb	27.622	157784	500	94.5	90	110	
Li	7	2	45	481.989	ppb	9.049	8493	500	96.4	90	110	
Li	7	3	45	434.898	ppb	2.070	4023009	500	87.0	90	110	>+\-10%
Be	9	1	6	53.040	ppb	20.464	10474	50	106.1	90	110	
B	11	1	6	58.985	ppb	19.934	13183	50	118.0	90	110	>+\-10%
Na	23	1	45	5254.915	ppb	23.624	11110772	5000	105.1	90	110	
Na	23	2	45	4593.866	ppb	0.805	793309	5000	91.9	90	110	
Mg	24	2	45	4904.007	ppb	1.049	371816	5000	98.1	90	110	
Al	27	2	45	5104.606	ppb	1.181	107242	5000	102.1	90	110	
K	39	1	45	5455.533	ppb	28.540	17595123	5000	109.1	90	110	
K	39	2	45	5168.693	ppb	0.425	213267	5000	103.4	90	110	
Ca	40	1	45	5369.485	ppb	25.614	16239790	5000	107.4	90	110	
Ca	44	2	45	5123.147	ppb	3.139	11235	5000	102.5	90	110	
Ti	47	2	45	50.699	ppb	11.989	860	50	101.4	90	110	
V	51	2	72	49.773	ppb	1.968	38278	50	99.5	90	110	
Cr	52	2	72	49.117	ppb	0.818	46194	50	98.2	90	110	
Mn	55	2	72	50.515	ppb	3.384	19477	50	101.0	90	110	
Fe	57	2	72	4916.931	ppb	1.534	87338	5000	98.3	90	110	
Co	59	2	72	48.600	ppb	1.321	77652	50	97.2	90	110	
Ni	60	2	72	48.597	ppb	1.684	22121	50	97.2	90	110	
Cu	63	2	72	50.103	ppb	1.101	61555	50	100.2	90	110	
Zn	66	2	72	49.373	ppb	2.503	8503	50	98.7	90	110	
As	75	2	72	50.242	ppb	1.573	5815	50	100.5	90	110	
Se	78	1	72	52.664	ppb	22.542	7612	50	105.3	90	110	
Sr	88	2	72	52.738	ppb	1.750	22178	50	105.5	90	110	
Zr	90	2	72	117.671	ppb	3.947	593	50	235.3	90	110	>+\-10%
Nb	93	2	72	84.399	ppb	1.260	176061	100	84.4	90	110	>+\-10%
Mo	95	2	115	46.829	ppb	3.378	29949	50	93.7	90	110	
Pd	105	2	115	47.685	ppb	1.792	47699	50	95.4	90	110	
Ag	107	2	115	47.355	ppb	1.807	100356	50	94.7	90	110	
Cd	111	2	115	49.469	ppb	1.654	14121	50	98.9	90	110	
Sn	120	2	115	50.574	ppb	1.559	39862	50	101.1	90	110	
Sb	121	2	115	50.574	ppb	2.208	35877	50	101.1	90	110	
Ba	137	2	115	51.623	ppb	3.959	12680	50	103.2	90	110	
W	182	2	165	49.367	ppb	1.222	151890	50	98.7	90	110	
Pt	195	2	165	48.794	ppb	0.486	120454	50	97.6	90	110	
Tl	205	2	165	51.413	ppb	0.299	304328	50	102.8	90	110	
Pb	208	2	165	51.626	ppb	1.444	407980	50	103.3	90	110	
Th	232	2	165	51.776	ppb	0.534	485011	50	103.6	90	110	
U	238	2	165	51.585	ppb	0.372	519977	50	103.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	428166	9.20	596260	71.81	60	120	
Sc (IS)	45	1	HMI H2	16495740	12.99	20835883	79.17	60	120	
Sc (IS)	45	2	HMI He	695038	0.59	823951	84.35	60	120	
Sc (IS)	45	3	No Gas	23620376	0.57	31260218	75.56	60	120	
Ge Internal Standard	72	1	HMI H2	6429432	10.21	8011210	80.26	60	120	
Ge Internal Standard	72	2	HMI He	785936	0.24	907478	86.61	60	120	
In Internal Standard	115	2	HMI He	2719541	0.63	3014874	90.20	60	120	
Ho-165	165	2	HMI He	13228165	0.66	14587244	90.68	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	213_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:55:51-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-33.561	ppb	-7.7	1809206	10	
Be	9	1	6	0.057	ppb	258.8	27	0.5	
B	11	1	6	4.256	ppb	9.1	1420	0.5	>RL
Na	23	1	45	-65.885	ppb	-1.5	132692	25	
Na	23	2	45	-68.882	ppb	-3.6	9697	25	
Mg	24	2	45	0.155	ppb	468.1	367	25	
Al	27	2	45	0.355	ppb	986.1	137	15	
K	39	1	45	74.325	ppb	37.3	6826342	50	>RL
K	39	2	45	2.394	ppb	641.2	12276	50	
Ca	40	1	45	-0.013	ppb	-1843.7	52916	50	
Ca	44	2	45	0.397	ppb	3029.5	60	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.515	ppb	10.0	2860	1	>RL
Cr	52	2	72	0.021	ppb	224.5	147	1	
Mn	55	2	72	0.104	ppb	127.2	100	0.5	
Fe	57	2	72	0.013	ppb	30735.4	150	25	
Co	59	2	72	0.018	ppb	53.0	43	0.5	
Ni	60	2	72	-0.215	ppb	-83.4	113	1	
Cu	63	2	72	-0.072	ppb	-44.2	693	1	
Zn	66	2	72	-0.475	ppb	-175.3	290	5	
As	75	2	72	0.018	ppb	577.7	24	1	
Se	78	1	72	-0.092	ppb	-29.2	20	1	
Sr	88	2	72	0.051	ppb	125.3	50	0.5	
Zr	90	2	72	-7.868	ppb	-60.2	43	1	
Nb	93	2	72	4.562	ppb	3.6	11245	2	>RL
Mo	95	2	115	0.042	ppb	174.9	167	0.5	
Pd	105	2	115	0.022	ppb	69.2	47	1	
Ag	107	2	115	-0.005	ppb	-52.5	47	1	
Cd	111	2	115	0.012	ppb	173.2	3	0.5	
Sn	120	2	115	0.100	ppb	169.9	283	1	
Sb	121	2	115	0.506	ppb	28.1	413	0.6	
Ba	137	2	115	0.081	ppb	132.5	20	0.5	
W	182	2	165	0.153	ppb	20.1	1350	1	
Pt	195	2	165	-0.003	ppb	-611.1	53	1	
Tl	205	2	165	0.020	ppb	42.0	233	0.1	
Pb	208	2	165	0.031	ppb	69.8	787	0.5	
Th	232	2	165	0.055	ppb	25.6	817	1	
U	238	2	165	0.072	ppb	7.6	873	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	440739	0.97	596260	73.92	60	120	
Sc (IS)	45	1	HMI H2	16737378	0.46	20835883	80.33	60	120	
Sc (IS)	45	2	HMI He	695982	0.37	823951	84.47	60	120	
Sc (IS)	45	3	No Gas	24256755	0.38	31260218	77.60	60	120	
Ge Internal Standard	72	1	HMI H2	6533029	0.20	8011210	81.55	60	120	
Ge Internal Standard	72	2	HMI He	783383	0.54	907478	86.33	60	120	
In Internal Standard	115	2	HMI He	2747370	0.66	3014874	91.13	60	120	
Ho-165	165	2	HMI He	13215939	0.16	14587244	90.60	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	214LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T01:59:39-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	5.289	ppb	914.762	1798661	50	10.6	70	130	>+/-30%
Be	9	1	6	1.050	ppb	28.841	233	1	105.0	70	130	
Na	23	2	45	-19.768	ppb	-14.134	18015	50	-39.5	70	130	>+/-30%
Mg	24	2	45	49.819	ppb	6.599	4147	50	99.6	70	130	
Al	27	2	45	27.552	ppb	7.130	710	30	91.8	70	130	
K	39	2	45	112.506	ppb	0.690	16617	100	112.5	70	130	
Ca	44	2	45	42.947	ppb	22.249	153	50	85.9	70	130	
V	51	2	72	5.855	ppb	5.308	6075	5	117.1	70	130	
Cr	52	2	72	1.908	ppb	6.349	1924	2	95.4	70	130	
Mn	55	2	72	1.243	ppb	17.958	540	1	124.3	70	130	
Fe	57	2	72	56.553	ppb	4.507	1157	50	113.1	70	130	
Co	59	2	72	0.977	ppb	17.194	1580	1	97.7	70	130	
Ni	60	2	72	1.729	ppb	3.921	993	2	86.4	70	130	
Cu	63	2	72	1.957	ppb	9.718	3167	2	97.9	70	130	
Zn	66	2	72	10.666	ppb	7.716	2134	10	106.7	70	130	
As	75	2	72	4.762	ppb	2.974	573	5	95.2	70	130	
Se	78	1	72	4.835	ppb	6.797	759	5	96.7	70	130	
Sr	88	2	72	1.339	ppb	8.942	593	1	133.9	70	130	>+/-30%
Zr	90	2	72	29.989	ppb	32.886	210	0.5	5997.7	70	130	>+/-30%
Nb	93	2	72	10.064	ppb	3.862	22713	2	503.2	70	130	>+/-30%
Mo	95	2	115	1.807	ppb	4.521	1317	2	90.4	70	130	
Pd	105	2	115	-0.004	ppb	-430.140	20	1	-0.4	70	130	>+/-30%
Ag	107	2	115	4.958	ppb	4.372	10781	5	99.2	70	130	
Cd	111	2	115	0.985	ppb	21.526	287	1	98.5	70	130	
Sn	120	2	115	9.600	ppb	8.278	7889	10	96.0	70	130	
Sb	121	2	115	2.181	ppb	4.082	1630	2	109.0	70	130	
Ba	137	2	115	0.917	ppb	24.400	230	1	91.7	70	130	
W	182	2	165	4.872	ppb	1.083	15877	1	487.2	70	130	>+/-30%
Pt	195	2	165	0.004	ppb	103.385	70	1	0.4	70	130	>+/-30%
Tl	205	2	165	1.048	ppb	5.572	6352	1	104.8	70	130	
Pb	208	2	165	1.099	ppb	1.145	9268	1	109.9	70	130	
Th	232	2	165	2.193	ppb	1.937	20951	2	109.7	70	130	
U	238	2	165	1.027	ppb	1.821	10555	1	102.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	445094	0.95	596260	74.65	60	120	
Sc (IS)	45	1	HMI H2	17009676	0.74	20835883	81.64	60	120	
Sc (IS)	45	2	HMI He	698071	0.74	823951	84.72	60	120	
Sc (IS)	45	3	No Gas	22263739	26.63	31260218	71.22	60	120	
Ge Internal Standard	72	1	HMI H2	6593057	0.76	8011210	82.30	60	120	
Ge Internal Standard	72	2	HMI He	788572	0.16	907478	86.90	60	120	
In Internal Standard	115	2	HMI He	2777722	1.34	3014874	92.13	60	120	
Ho-165	165	2	HMI He	13303844	0.40	14587244	91.20	60	120	

Sample Report

Sample Table

Sample Name	280-116558-b-4-b
Data File Name	215SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:03:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	737009 6020A
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-34.750	ppb	-34.750	-12.21	66719	500000	
Li	7	2	45	-55.200	ppb	-55.200	-79.58	3237	500000	
Li	7	3	45	-36.488	ppb	-36.488	-9.51	1732360	50000	
Be	9	1	6	-0.006	ppb	-0.006	-1261.02	13	2000	
B	11	1	6	2.303	ppb	2.303	6.68	953	2000	
Na	23	1	45	-68.710	ppb	-68.710	-0.57	125955	2000	
Na	23	2	45	-68.441	ppb	-68.441	-4.27	9794	400000	
Mg	24	2	45	-0.075	ppb	-0.075	-329.49	350	400000	
Al	27	2	45	10.156	ppb	10.156	31.96	343	400000	
K	39	1	45	-1332.784	ppb	-1332.784	-1.17	3847546	400000	
K	39	2	45	-8.976	ppb	-8.976	-101.43	11862	400000	
Ca	40	1	45	2.067	ppb	2.067	8.64	59089	400000	
Ca	44	2	45	-11.820	ppb	-11.820	-97.66	33	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.331	ppb	-0.331	-15.03	1513	2000	
Cr	52	2	72	0.121	ppb	0.121	16.48	240	5000	
Mn	55	2	72	0.545	ppb	0.545	32.67	270	10000	
Fe	57	2	72	3.785	ppb	3.785	86.07	217	400000	
Co	59	2	72	0.026	ppb	0.026	75.67	57	2000	
Ni	60	2	72	-0.231	ppb	-0.231	-54.05	107	5000	
Cu	63	2	72	1.708	ppb	1.708	5.47	2850	5000	
Zn	66	2	72	1.951	ppb	1.951	6.96	690	5000	
As	75	2	72	-0.062	ppb	-0.062	-43.18	14	2000	
Se	78	1	72	-0.154	ppb	-0.154	-20.55	11	2000	
Sr	88	2	72	0.027	ppb	0.027	179.22	40	4000	
Zr	90	2	72	-1.779	ppb	-1.779	-590.49	70	1000	
Nb	93	2	72	0.691	ppb	0.691	15.51	3287	200	
Mo	95	2	115	-0.109	ppb	-0.109	-64.69	70	2000	
Pd	105	2	115	-0.021	ppb	-0.021	-27.79	3	100	
Ag	107	2	115	-0.013	ppb	-0.013	-62.78	30	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.041	ppb	0.041	81.48	237	2000	
Sb	121	2	115	0.114	ppb	0.114	15.54	133	1000	
Ba	137	2	115	0.254	ppb	0.254	70.44	63	5000	
W	182	2	165	0.044	ppb	0.044	81.26	1030	100	
Pt	195	2	165	-0.016	ppb	-0.016	-42.84	20	100	
Tl	205	2	165	0.005	ppb	0.005	220.44	147	2000	
Pb	208	2	165	0.082	ppb	0.082	9.09	1203	5000	
Th	232	2	165	0.023	ppb	0.023	24.28	520	2000	
U	238	2	165	0.012	ppb	0.012	58.42	270	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	428166	0.69	596260	71.81	60	120	
Sc (IS)	45	1	HMI H2	16643798	0.44	20835883	79.88	60	120	
Sc (IS)	45	2	HMI He	697578	0.43	823951	84.66	60	120	
Sc (IS)	45	3	No Gas	23414481	0.33	31260218	74.90	60	120	
Ge Internal Standard	72	1	HMI H2	6478070	0.48	8011210	80.86	60	120	
Ge Internal Standard	72	2	HMI He	784633	0.59	907478	86.46	60	120	
In Internal Standard	115	2	HMI He	2751033	0.93	3014874	91.25	60	120	
Ho-165	165	2	HMI He	13391043	0.63	14587244	91.80	60	120	

Sample Report

Sample Table

Sample Name	280-116482-C-2-B
Data File Name	216SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:07:17-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-30.741	ppb	-30.741	-32.49	65380	500000	
Li	7	2	45	-27.438	ppb	-27.438	-59.37	3507	500000	
Li	7	3	45	-37.754	ppb	-37.754	-9.31	1716659	50000	
Be	9	1	6	0.062	ppb	0.062	160.97	27	2000	
B	11	1	6	23.946	ppb	23.946	11.93	5538	2000	
Na	23	1	45	2980.132	ppb	2980.132	11.12	6370092	2000	
Na	23	2	45	2615.405	ppb	2615.405	0.86	461979	400000	
Mg	24	2	45	1530.517	ppb	1530.517	0.56	116587	400000	
Al	27	2	45	1519.203	ppb	1519.203	3.37	32086	400000	
K	39	1	45	789.163	ppb	789.163	38.16	7999517	400000	
K	39	2	45	2007.511	ppb	2007.511	0.41	90505	400000	
Ca	40	1	45	5595.123	ppb	5595.123	11.84	16828349	400000	
Ca	44	2	45	5438.978	ppb	5438.978	1.82	11952	400000	
Ti	47	2	45	10.386	ppb	10.386	25.14	177	4000	
V	51	2	72	2.324	ppb	2.324	9.08	3411	2000	
Cr	52	2	72	1.673	ppb	1.673	2.46	1670	5000	
Mn	55	2	72	26.626	ppb	26.626	2.18	10137	10000	
Fe	57	2	72	1181.709	ppb	1181.709	3.54	20782	400000	
Co	59	2	72	0.567	ppb	0.567	18.67	907	2000	
Ni	60	2	72	3.437	ppb	3.437	10.59	1734	5000	
Cu	63	2	72	3.162	ppb	3.162	6.69	4548	5000	
Zn	66	2	72	11.052	ppb	11.052	7.14	2157	5000	
As	75	2	72	0.475	ppb	0.475	16.76	75	2000	
Se	78	1	72	0.023	ppb	0.023	590.69	36	2000	
Sr	88	2	72	62.138	ppb	62.138	0.62	25727	4000	
Zr	90	2	72	157.624	ppb	157.624	5.77	757	1000	
Nb	93	2	72	0.691	ppb	0.691	15.71	3241	200	
Mo	95	2	115	-0.114	ppb	-0.114	-28.63	67	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-609.02	23	100	
Ag	107	2	115	-0.005	ppb	-0.005	-180.16	47	100	
Cd	111	2	115	0.081	ppb	0.081	49.96	23	2000	
Sn	120	2	115	-0.060	ppb	-0.060	-31.75	157	2000	
Sb	121	2	115	0.225	ppb	0.225	24.44	213	1000	
Ba	137	2	115	53.352	ppb	53.352	3.71	13274	5000	
W	182	2	165	0.078	ppb	0.078	49.23	1127	100	
Pt	195	2	165	-0.012	ppb	-0.012	-86.77	30	100	
Tl	205	2	165	0.026	ppb	0.026	53.19	270	2000	
Pb	208	2	165	1.266	ppb	1.266	3.11	10589	5000	
Th	232	2	165	0.318	ppb	0.318	3.02	3291	2000	
U	238	2	165	0.143	ppb	0.143	10.09	1594	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	418621	4.46	596260	70.21	60	120	
Sc (IS)	45	1	HMI H2	16134029	7.16	20835883	77.43	60	120	
Sc (IS)	45	2	HMI He	696811	0.93	823951	84.57	60	120	
Sc (IS)	45	3	No Gas	23283770	0.39	31260218	74.48	60	120	
Ge Internal Standard	72	1	HMI H2	6255613	5.60	8011210	78.09	60	120	
Ge Internal Standard	72	2	HMI He	773965	0.15	907478	85.29	60	120	
In Internal Standard	115	2	HMI He	2754559	0.87	3014874	91.37	60	120	
Ho-165	165	2	HMI He	13296919	0.46	14587244	91.15	60	120	

Sample Report

Sample Table

Sample Name	280-116482-C-3-B
Data File Name	217SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:11:06-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-29.094	ppb	-29.094	-23.53	67041	500000	
Li	7	2	45	-8.325	ppb	-8.325	-78.09	3687	500000	
Li	7	3	45	-30.755	ppb	-30.755	-20.10	1747463	50000	
Be	9	1	6	-0.007	ppb	-0.007	-789.02	13	2000	
B	11	1	6	18.165	ppb	18.165	15.41	4404	2000	
Na	23	1	45	2655.728	ppb	2655.728	14.27	5811877	2000	
Na	23	2	45	2389.536	ppb	2389.536	0.55	423020	400000	
Mg	24	2	45	1398.171	ppb	1398.171	0.63	106305	400000	
Al	27	2	45	1424.743	ppb	1424.743	2.94	30035	400000	
K	39	1	45	615.882	ppb	615.882	62.64	7796632	400000	
K	39	2	45	1927.409	ppb	1927.409	1.12	87191	400000	
Ca	40	1	45	5199.621	ppb	5199.621	16.44	15918689	400000	
Ca	44	2	45	5181.312	ppb	5181.312	4.55	11365	400000	
Ti	47	2	45	10.018	ppb	10.018	25.52	170	4000	
V	51	2	72	2.010	ppb	2.010	12.63	3201	2000	
Cr	52	2	72	1.696	ppb	1.696	23.39	1700	5000	
Mn	55	2	72	26.003	ppb	26.003	0.32	9954	10000	
Fe	57	2	72	1090.805	ppb	1090.805	0.35	19297	400000	
Co	59	2	72	0.583	ppb	0.583	17.75	937	2000	
Ni	60	2	72	3.776	ppb	3.776	6.02	1894	5000	
Cu	63	2	72	2.898	ppb	2.898	4.97	4254	5000	
Zn	66	2	72	9.981	ppb	9.981	3.49	1994	5000	
As	75	2	72	0.546	ppb	0.546	35.07	84	2000	
Se	78	1	72	0.029	ppb	0.029	372.18	37	2000	
Sr	88	2	72	55.171	ppb	55.171	4.05	22966	4000	
Zr	90	2	72	149.807	ppb	149.807	5.20	727	1000	
Nb	93	2	72	0.288	ppb	0.288	37.92	2434	200	
Mo	95	2	115	-0.066	ppb	-0.066	-90.22	97	2000	
Pd	105	2	115	0.016	ppb	0.016	64.33	40	100	
Ag	107	2	115	-0.002	ppb	-0.002	-871.59	53	100	
Cd	111	2	115	0.023	ppb	0.023	86.61	7	2000	
Sn	120	2	115	0.030	ppb	0.030	124.94	227	2000	
Sb	121	2	115	0.110	ppb	0.110	22.59	130	1000	
Ba	137	2	115	53.177	ppb	53.177	3.38	13154	5000	
W	182	2	165	0.074	ppb	0.074	72.05	1130	100	
Pt	195	2	165	-0.016	ppb	-0.016	-64.01	20	100	
Tl	205	2	165	0.018	ppb	0.018	76.86	227	2000	
Pb	208	2	165	1.055	ppb	1.055	2.53	9028	5000	
Th	232	2	165	0.325	ppb	0.325	9.74	3401	2000	
U	238	2	165	0.117	ppb	0.117	5.22	1350	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	428567	5.33	596260	71.88	60	120	
Sc (IS)	45	1	HMI H2	16479244	8.50	20835883	79.09	60	120	
Sc (IS)	45	2	HMI He	695303	0.24	823951	84.39	60	120	
Sc (IS)	45	3	No Gas	23250214	0.40	31260218	74.38	60	120	
Ge Internal Standard	72	1	HMI H2	6411181	5.75	8011210	80.03	60	120	
Ge Internal Standard	72	2	HMI He	778039	0.27	907478	85.74	60	120	
In Internal Standard	115	2	HMI He	2738520	0.49	3014874	90.83	60	120	
Ho-165	165	2	HMI He	13460265	0.33	14587244	92.27	60	120	

Sample Report

Sample Table

Sample Name	280-116482-C-4-B
Data File Name	218SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:14:53-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-35.537	ppb	-35.537	-17.17	66889	500000	
Li	7	2	45	-40.511	ppb	-40.511	-30.78	3401	500000	
Li	7	3	45	-38.938	ppb	-38.938	-14.08	1743541	50000	
Be	9	1	6	0.159	ppb	0.159	89.85	47	2000	
B	11	1	6	25.650	ppb	25.650	8.25	6118	2000	
Na	23	1	45	2798.698	ppb	2798.698	0.91	6249433	2000	
Na	23	2	45	2549.025	ppb	2549.025	0.94	453607	400000	
Mg	24	2	45	1485.035	ppb	1485.035	1.64	113846	400000	
Al	27	2	45	1555.274	ppb	1555.274	2.22	33048	400000	
K	39	1	45	608.253	ppb	608.253	4.72	7942373	400000	
K	39	2	45	1967.974	ppb	1967.974	1.96	89509	400000	
Ca	40	1	45	5226.311	ppb	5226.311	1.65	16388896	400000	
Ca	44	2	45	5201.373	ppb	5201.373	7.69	11508	400000	
Ti	47	2	45	14.038	ppb	14.038	15.17	240	4000	
V	51	2	72	2.138	ppb	2.138	13.24	3317	2000	
Cr	52	2	72	1.839	ppb	1.839	8.71	1847	5000	
Mn	55	2	72	24.450	ppb	24.450	3.21	9430	10000	
Fe	57	2	72	1169.897	ppb	1169.897	4.06	20832	400000	
Co	59	2	72	0.583	ppb	0.583	24.00	943	2000	
Ni	60	2	72	3.553	ppb	3.553	10.24	1807	5000	
Cu	63	2	72	2.889	ppb	2.889	3.93	4274	5000	
Zn	66	2	72	11.011	ppb	11.011	4.85	2177	5000	
As	75	2	72	0.530	ppb	0.530	38.39	82	2000	
Se	78	1	72	-0.044	ppb	-0.044	-400.03	27	2000	
Sr	88	2	72	61.475	ppb	61.475	3.36	25771	4000	
Zr	90	2	72	186.066	ppb	186.066	14.17	890	1000	
Nb	93	2	72	0.007	ppb	0.007	304.05	1874	200	
Mo	95	2	115	-0.114	ppb	-0.114	-28.22	67	2000	
Pd	105	2	115	-0.004	ppb	-0.004	-0.49	20	100	
Ag	107	2	115	0.001	ppb	0.001	520.88	60	100	
Cd	111	2	115	0.092	ppb	0.092	57.23	27	2000	
Sn	120	2	115	-0.094	ppb	-0.094	-100.64	130	2000	
Sb	121	2	115	0.094	ppb	0.094	53.09	120	1000	
Ba	137	2	115	53.679	ppb	53.679	1.19	13410	5000	
W	182	2	165	0.043	ppb	0.043	19.18	1030	100	
Pt	195	2	165	-0.015	ppb	-0.015	-40.43	23	100	
Tl	205	2	165	0.006	ppb	0.006	95.65	153	2000	
Pb	208	2	165	1.112	ppb	1.112	0.85	9452	5000	
Th	232	2	165	0.334	ppb	0.334	10.64	3477	2000	
U	238	2	165	0.104	ppb	0.104	4.14	1210	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	432711	1.11	596260	72.57	60	120	
Sc (IS)	45	1	HMI H2	16724504	0.53	20835883	80.27	60	120	
Sc (IS)	45	2	HMI He	701176	1.14	823951	85.10	60	120	
Sc (IS)	45	3	No Gas	23726800	0.96	31260218	75.90	60	120	
Ge Internal Standard	72	1	HMI H2	6425967	0.77	8011210	80.21	60	120	
Ge Internal Standard	72	2	HMI He	783553	0.42	907478	86.34	60	120	
In Internal Standard	115	2	HMI He	2765659	0.11	3014874	91.73	60	120	
Ho-165	165	2	HMI He	13418698	0.20	14587244	91.99	60	120	

Sample Report

Sample Table

Sample Name	280-116489-A-1-B
Data File Name	219SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:18:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-35.042	ppb	-35.042	-12.84	66574	500000	
Li	7	2	45	-41.166	ppb	-41.166	-68.08	3401	500000	
Li	7	3	45	-35.216	ppb	-35.216	-6.34	1720212	50000	
Be	9	1	6	-0.005	ppb	-0.005	-531.47	13	2000	
B	11	1	6	14.443	ppb	14.443	1.40	3587	2000	
Na	23	1	45	2513.158	ppb	2513.158	0.71	5605070	2000	
Na	23	2	45	2307.670	ppb	2307.670	1.24	413393	400000	
Mg	24	2	45	1236.482	ppb	1236.482	2.09	95000	400000	
Al	27	2	45	1374.119	ppb	1374.119	1.41	29270	400000	
K	39	1	45	963.852	ppb	963.852	0.35	8635891	400000	
K	39	2	45	2286.414	ppb	2286.414	2.46	102184	400000	
Ca	40	1	45	5080.643	ppb	5080.643	0.34	15836517	400000	
Ca	44	2	45	5156.822	ppb	5156.822	2.95	11428	400000	
Ti	47	2	45	7.586	ppb	7.586	20.40	130	4000	
V	51	2	72	2.204	ppb	2.204	7.10	3374	2000	
Cr	52	2	72	1.574	ppb	1.574	15.36	1604	5000	
Mn	55	2	72	29.795	ppb	29.795	5.14	11505	10000	
Fe	57	2	72	1043.934	ppb	1043.934	1.54	18649	400000	
Co	59	2	72	0.465	ppb	0.465	24.70	757	2000	
Ni	60	2	72	2.439	ppb	2.439	13.46	1310	5000	
Cu	63	2	72	2.919	ppb	2.919	3.28	4321	5000	
Zn	66	2	72	10.880	ppb	10.880	11.19	2160	5000	
As	75	2	72	0.454	ppb	0.454	13.33	74	2000	
Se	78	1	72	-0.126	ppb	-0.126	-12.51	15	2000	
Sr	88	2	72	62.958	ppb	62.958	1.53	26453	4000	
Zr	90	2	72	180.095	ppb	180.095	17.54	867	1000	
Nb	93	2	72	-0.176	ppb	-0.176	-87.34	1500	200	
Mo	95	2	115	-0.046	ppb	-0.046	-157.54	110	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-392.74	17	100	
Ag	107	2	115	0.000	ppb	0.000	-4148.66	57	100	
Cd	111	2	115	0.035	ppb	0.035	100.14	10	2000	
Sn	120	2	115	-0.084	ppb	-0.084	-32.19	137	2000	
Sb	121	2	115	0.058	ppb	0.058	161.77	93	1000	
Ba	137	2	115	61.122	ppb	61.122	2.36	15112	5000	
W	182	2	165	0.038	ppb	0.038	85.91	1013	100	
Pt	195	2	165	-0.019	ppb	-0.019	-24.20	13	100	
Tl	205	2	165	0.011	ppb	0.011	90.98	183	2000	
Pb	208	2	165	1.169	ppb	1.169	2.22	9912	5000	
Th	232	2	165	0.253	ppb	0.253	4.20	2710	2000	
U	238	2	165	0.126	ppb	0.126	6.42	1430	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	425976	0.15	596260	71.44	60	120	
Sc (IS)	45	1	HMI H2	16621714	0.28	20835883	79.77	60	120	
Sc (IS)	45	2	HMI He	702369	0.72	823951	85.24	60	120	
Sc (IS)	45	3	No Gas	23168090	0.54	31260218	74.11	60	120	
Ge Internal Standard	72	1	HMI H2	6388525	0.18	8011210	79.74	60	120	
Ge Internal Standard	72	2	HMI He	785490	0.89	907478	86.56	60	120	
In Internal Standard	115	2	HMI He	2736851	0.74	3014874	90.78	60	120	
Ho-165	165	2	HMI He	13417620	0.35	14587244	91.98	60	120	

Sample Report

Sample Table

Sample Name	280-116489-A-2-B
Data File Name	220SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:22:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-27.791	ppb	-27.791	-17.50	68041	500000	
Li	7	2	45	-35.709	ppb	-35.709	-12.52	3457	500000	
Li	7	3	45	-36.672	ppb	-36.672	-19.07	1742239	50000	
Be	9	1	6	-0.006	ppb	-0.006	-970.99	13	2000	
B	11	1	6	15.093	ppb	15.093	1.07	3761	2000	
Na	23	1	45	2514.568	ppb	2514.568	0.98	5617953	2000	
Na	23	2	45	2279.245	ppb	2279.245	0.97	409039	400000	
Mg	24	2	45	1231.732	ppb	1231.732	1.10	94745	400000	
Al	27	2	45	1384.488	ppb	1384.488	1.11	29520	400000	
K	39	1	45	954.350	ppb	954.350	7.23	8630504	400000	
K	39	2	45	2313.907	ppb	2313.907	1.30	103384	400000	
Ca	40	1	45	5111.919	ppb	5111.919	1.32	15961476	400000	
Ca	44	2	45	5347.714	ppb	5347.714	2.85	11862	400000	
Ti	47	2	45	10.318	ppb	10.318	38.35	177	4000	
V	51	2	72	2.026	ppb	2.026	6.04	3234	2000	
Cr	52	2	72	1.741	ppb	1.741	8.88	1754	5000	
Mn	55	2	72	29.712	ppb	29.712	4.02	11442	10000	
Fe	57	2	72	1020.797	ppb	1020.797	4.52	18189	400000	
Co	59	2	72	0.517	ppb	0.517	14.29	837	2000	
Ni	60	2	72	2.768	ppb	2.768	17.78	1453	5000	
Cu	63	2	72	2.620	ppb	2.620	6.63	3947	5000	
Zn	66	2	72	9.942	ppb	9.942	12.75	2000	5000	
As	75	2	72	0.723	ppb	0.723	21.60	105	2000	
Se	78	1	72	-0.117	ppb	-0.117	-24.16	16	2000	
Sr	88	2	72	63.181	ppb	63.181	4.13	26476	4000	
Zr	90	2	72	146.430	ppb	146.430	24.55	717	1000	
Nb	93	2	72	-0.291	ppb	-0.291	-12.08	1260	200	
Mo	95	2	115	-0.126	ppb	-0.126	-51.39	60	2000	
Pd	105	2	115	-0.018	ppb	-0.018	-62.74	7	100	
Ag	107	2	115	-0.010	ppb	-0.010	-134.07	37	100	
Cd	111	2	115	0.068	ppb	0.068	1.28	20	2000	
Sn	120	2	115	0.016	ppb	0.016	80.29	220	2000	
Sb	121	2	115	0.051	ppb	0.051	132.06	90	1000	
Ba	137	2	115	58.766	ppb	58.766	0.87	14852	5000	
W	182	2	165	0.068	ppb	0.068	20.00	1113	100	
Pt	195	2	165	-0.014	ppb	-0.014	-59.33	27	100	
Tl	205	2	165	0.011	ppb	0.011	86.19	187	2000	
Pb	208	2	165	1.190	ppb	1.190	4.72	10142	5000	
Th	232	2	165	0.302	ppb	0.302	6.99	3189	2000	
U	238	2	165	0.109	ppb	0.109	6.61	1270	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	429619	0.46	596260	72.05	60	120	
Sc (IS)	45	1	HMI H2	16651586	1.09	20835883	79.92	60	120	
Sc (IS)	45	2	HMI He	703167	1.10	823951	85.34	60	120	
Sc (IS)	45	3	No Gas	23562390	1.02	31260218	75.38	60	120	
Ge Internal Standard	72	1	HMI H2	6414467	0.95	8011210	80.07	60	120	
Ge Internal Standard	72	2	HMI He	783281	0.27	907478	86.31	60	120	
In Internal Standard	115	2	HMI He	2797984	1.29	3014874	92.81	60	120	
Ho-165	165	2	HMI He	13499849	0.48	14587244	92.55	60	120	

Sample Report

Sample Table

Sample Name	280-116489-A-3-B
Data File Name	221SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:26:14-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-32.710	ppb	-32.710	-9.89	67445	500000	
Li	7	2	45	-32.512	ppb	-32.512	-95.58	3521	500000	
Li	7	3	45	-38.598	ppb	-38.598	-16.36	1731914	50000	
Be	9	1	6	0.109	ppb	0.109	69.41	37	2000	
B	11	1	6	14.765	ppb	14.765	5.21	3714	2000	
Na	23	1	45	2463.408	ppb	2463.408	0.38	5535345	2000	
Na	23	2	45	2226.012	ppb	2226.012	0.63	403493	400000	
Mg	24	2	45	1191.513	ppb	1191.513	0.53	92473	400000	
Al	27	2	45	1390.119	ppb	1390.119	1.56	29901	400000	
K	39	1	45	933.621	ppb	933.621	1.91	8628569	400000	
K	39	2	45	2287.432	ppb	2287.432	2.66	103238	400000	
Ca	40	1	45	4708.410	ppb	4708.410	1.07	14775228	400000	
Ca	44	2	45	4901.548	ppb	4901.548	1.24	10971	400000	
Ti	47	2	45	11.567	ppb	11.567	35.37	200	4000	
V	51	2	72	1.943	ppb	1.943	17.58	3197	2000	
Cr	52	2	72	1.386	ppb	1.386	5.10	1433	5000	
Mn	55	2	72	27.681	ppb	27.681	1.64	10744	10000	
Fe	57	2	72	1042.639	ppb	1042.639	5.06	18716	400000	
Co	59	2	72	0.454	ppb	0.454	10.34	743	2000	
Ni	60	2	72	2.552	ppb	2.552	8.80	1367	5000	
Cu	63	2	72	2.032	ppb	2.032	7.98	3261	5000	
Zn	66	2	72	8.720	ppb	8.720	8.18	1814	5000	
As	75	2	72	0.688	ppb	0.688	1.23	101	2000	
Se	78	1	72	0.002	ppb	0.002	4238.12	33	2000	
Sr	88	2	72	62.878	ppb	62.878	2.99	26546	4000	
Zr	90	2	72	144.362	ppb	144.362	26.76	713	1000	
Nb	93	2	72	-0.307	ppb	-0.307	-40.73	1237	200	
Mo	95	2	115	-0.125	ppb	-0.125	-53.29	60	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-868.78	23	100	
Ag	107	2	115	-0.015	ppb	-0.015	-18.04	27	100	
Cd	111	2	115	0.046	ppb	0.046	173.21	13	2000	
Sn	120	2	115	-0.071	ppb	-0.071	-29.41	150	2000	
Sb	121	2	115	0.038	ppb	0.038	227.13	80	1000	
Ba	137	2	115	56.454	ppb	56.454	3.11	14225	5000	
W	182	2	165	0.042	ppb	0.042	127.91	1037	100	
Pt	195	2	165	-0.009	ppb	-0.009	-80.67	40	100	
Tl	205	2	165	0.013	ppb	0.013	78.53	200	2000	
Pb	208	2	165	1.083	ppb	1.083	5.69	9312	5000	
Th	232	2	165	0.258	ppb	0.258	7.68	2784	2000	
U	238	2	165	0.094	ppb	0.094	7.86	1117	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	432586	0.21	596260	72.55	60	120	
Sc (IS)	45	1	HMI H2	16730100	0.61	20835883	80.29	60	120	
Sc (IS)	45	2	HMI He	709318	0.40	823951	86.09	60	120	
Sc (IS)	45	3	No Gas	23545465	0.12	31260218	75.32	60	120	
Ge Internal Standard	72	1	HMI H2	6414967	0.63	8011210	80.07	60	120	
Ge Internal Standard	72	2	HMI He	789193	0.17	907478	86.97	60	120	
In Internal Standard	115	2	HMI He	2789580	0.42	3014874	92.53	60	120	
Ho-165	165	2	HMI He	13555022	0.94	14587244	92.92	60	120	

Sample Report

Sample Table

Sample Name	280-116489-A-4-D
Data File Name	222SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:30:01-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.557	ppb	-31.557	-12.03	67251	500000	
Li	7	2	45	-41.922	ppb	-41.922	-68.72	3427	500000	
Li	7	3	45	-34.082	ppb	-34.082	-10.59	1757185	50000	
Be	9	1	6	0.276	ppb	0.276	31.87	70	2000	
B	11	1	6	14.562	ppb	14.562	8.15	3657	2000	
Na	23	1	45	2469.138	ppb	2469.138	1.81	5512873	2000	
Na	23	2	45	2218.042	ppb	2218.042	0.64	402285	400000	
Mg	24	2	45	1190.077	ppb	1190.077	0.47	92396	400000	
Al	27	2	45	1272.254	ppb	1272.254	1.29	27386	400000	
K	39	1	45	876.412	ppb	876.412	3.15	8455860	400000	
K	39	2	45	2200.675	ppb	2200.675	0.65	99837	400000	
Ca	40	1	45	5176.943	ppb	5176.943	1.54	16140801	400000	
Ca	44	2	45	5213.034	ppb	5213.034	3.69	11669	400000	
Ti	47	2	45	9.239	ppb	9.239	32.37	160	4000	
V	51	2	72	1.950	ppb	1.950	2.96	3197	2000	
Cr	52	2	72	1.609	ppb	1.609	14.30	1640	5000	
Mn	55	2	72	27.443	ppb	27.443	0.74	10634	10000	
Fe	57	2	72	1000.309	ppb	1000.309	2.94	17932	400000	
Co	59	2	72	0.426	ppb	0.426	13.89	697	2000	
Ni	60	2	72	2.948	ppb	2.948	4.08	1543	5000	
Cu	63	2	72	2.944	ppb	2.944	3.19	4364	5000	
Zn	66	2	72	9.911	ppb	9.911	13.60	2007	5000	
As	75	2	72	0.537	ppb	0.537	28.07	84	2000	
Se	78	1	72	0.038	ppb	0.038	108.86	39	2000	
Sr	88	2	72	63.549	ppb	63.549	3.33	26783	4000	
Zr	90	2	72	144.678	ppb	144.678	20.77	713	1000	
Nb	93	2	72	-0.428	ppb	-0.428	-4.26	983	200	
Mo	95	2	115	-0.110	ppb	-0.110	-64.48	70	2000	
Pd	105	2	115	-0.011	ppb	-0.011	-136.86	13	100	
Ag	107	2	115	-0.002	ppb	-0.002	-435.01	53	100	
Cd	111	2	115	0.046	ppb	0.046	42.45	13	2000	
Sn	120	2	115	0.404	ppb	0.404	18.71	530	2000	
Sb	121	2	115	0.020	ppb	0.020	37.95	67	1000	
Ba	137	2	115	58.032	ppb	58.032	2.35	14578	5000	
W	182	2	165	0.012	ppb	0.012	524.14	947	100	
Pt	195	2	165	-0.017	ppb	-0.017	-41.23	20	100	
Tl	205	2	165	0.013	ppb	0.013	55.98	200	2000	
Pb	208	2	165	1.106	ppb	1.106	1.85	9542	5000	
Th	232	2	165	0.260	ppb	0.260	0.51	2814	2000	
U	238	2	165	0.106	ppb	0.106	6.85	1243	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	431046	0.65	596260	72.29	60	120	
Sc (IS)	45	1	HMI H2	16627441	1.19	20835883	79.80	60	120	
Sc (IS)	45	2	HMI He	709583	0.31	823951	86.12	60	120	
Sc (IS)	45	3	No Gas	23593427	0.49	31260218	75.47	60	120	
Ge Internal Standard	72	1	HMI H2	6432072	0.63	8011210	80.29	60	120	
Ge Internal Standard	72	2	HMI He	787856	0.30	907478	86.82	60	120	
In Internal Standard	115	2	HMI He	2781325	0.79	3014874	92.25	60	120	
Ho-165	165	2	HMI He	13606600	0.27	14587244	93.28	60	120	

Sample Report

Sample Table

Sample Name	280-116489-A-4-E MS
Data File Name	223SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:33:49-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	42.450	ppb	42.450	13.31	81832	500000	
Li	7	2	45	3.010	ppb	3.010	327.51	3887	500000	
Li	7	3	45	34.118	ppb	34.118	10.98	2089365	50000	
Be	9	1	6	39.990	ppb	39.990	3.84	8073	2000	
B	11	1	6	45.312	ppb	45.312	2.44	10444	2000	
Na	23	1	45	2478.126	ppb	2478.126	1.62	5586786	2000	
Na	23	2	45	2238.194	ppb	2238.194	0.85	406849	400000	
Mg	24	2	45	1233.030	ppb	1233.030	1.97	95979	400000	
Al	27	2	45	2189.120	ppb	2189.120	1.90	47163	400000	
K	39	1	45	891.070	ppb	891.070	3.88	8570112	400000	
K	39	2	45	2277.715	ppb	2277.715	1.33	103177	400000	
Ca	40	1	45	5174.908	ppb	5174.908	1.59	16292806	400000	
Ca	44	2	45	5460.857	ppb	5460.857	2.08	12256	400000	
Ti	47	2	45	11.157	ppb	11.157	47.26	193	4000	
V	51	2	72	41.059	ppb	41.059	2.16	32053	2000	
Cr	52	2	72	41.053	ppb	41.053	1.95	38840	5000	
Mn	55	2	72	70.690	ppb	70.690	1.38	27377	10000	
Fe	57	2	72	1580.654	ppb	1580.654	0.74	28328	400000	
Co	59	2	72	40.097	ppb	40.097	3.62	64400	2000	
Ni	60	2	72	40.888	ppb	40.888	1.49	18746	5000	
Cu	63	2	72	43.555	ppb	43.555	0.97	53902	5000	
Zn	66	2	72	49.517	ppb	49.517	5.26	8573	5000	
As	75	2	72	38.634	ppb	38.634	2.71	4500	2000	
Se	78	1	72	35.992	ppb	35.992	2.60	5322	2000	
Sr	88	2	72	106.005	ppb	106.005	2.01	44785	4000	
Zr	90	2	72	7217.656	ppb	7217.656	1.74	31863	1000	>LDR
Nb	93	2	72	-0.283	ppb	-0.283	-23.30	1287	200	
Mo	95	2	115	35.863	ppb	35.863	2.10	23560	2000	
Pd	105	2	115	-0.005	ppb	-0.005	-5.36	20	100	
Ag	107	2	115	39.745	ppb	39.745	0.90	86415	100	
Cd	111	2	115	39.849	ppb	39.849	2.98	11669	2000	
Sn	120	2	115	25.787	ppb	25.787	1.94	20947	2000	
Sb	121	2	115	32.379	ppb	32.379	3.24	23574	1000	
Ba	137	2	115	100.740	ppb	100.740	3.02	25381	5000	
W	182	2	165	35.589	ppb	35.589	1.02	112137	100	
Pt	195	2	165	-0.018	ppb	-0.018	-46.68	17	100	
Tl	205	2	165	40.565	ppb	40.565	0.75	245361	2000	
Pb	208	2	165	42.387	ppb	42.387	1.48	342363	5000	
Th	232	2	165	39.230	ppb	39.230	1.25	375555	2000	
U	238	2	165	41.086	ppb	41.086	0.40	423190	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	432052	0.47	596260	72.46	60	120	
Sc (IS)	45	1	HMI H2	16790834	0.47	20835883	80.59	60	120	
Sc (IS)	45	2	HMI He	711550	0.74	823951	86.36	60	120	
Sc (IS)	45	3	No Gas	23630264	0.18	31260218	75.59	60	120	
Ge Internal Standard	72	1	HMI H2	6465415	0.50	8011210	80.70	60	120	
Ge Internal Standard	72	2	HMI He	790137	0.63	907478	87.07	60	120	
In Internal Standard	115	2	HMI He	2789719	1.23	3014874	92.53	60	120	
Ho-165	165	2	HMI He	13515867	0.35	14587244	92.66	60	120	

Sample Report

Sample Table

Sample Name	280-116489-A-4-F MSD
Data File Name	224SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:37:34-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	40.651	ppb	40.651	5.05	81159	500000	
Li	7	2	45	53.568	ppb	53.568	7.63	4377	500000	
Li	7	3	45	37.457	ppb	37.457	15.18	2125671	50000	
Be	9	1	6	41.343	ppb	41.343	6.27	8376	2000	
B	11	1	6	45.154	ppb	45.154	3.08	10444	2000	
Na	23	1	45	2491.176	ppb	2491.176	0.45	5591895	2000	
Na	23	2	45	2244.977	ppb	2244.977	0.27	406407	400000	
Mg	24	2	45	1231.295	ppb	1231.295	1.67	95466	400000	
Al	27	2	45	2165.193	ppb	2165.193	2.34	46460	400000	
K	39	1	45	880.895	ppb	880.895	1.24	8513613	400000	
K	39	2	45	2221.022	ppb	2221.022	1.33	100525	400000	
Ca	40	1	45	5167.715	ppb	5167.715	0.87	16203794	400000	
Ca	44	2	45	5294.798	ppb	5294.798	5.52	11839	400000	
Ti	47	2	45	12.333	ppb	12.333	11.40	213	4000	
V	51	2	72	39.940	ppb	39.940	2.50	31205	2000	
Cr	52	2	72	39.833	ppb	39.833	2.73	37653	5000	
Mn	55	2	72	70.229	ppb	70.229	2.02	27173	10000	
Fe	57	2	72	1528.521	ppb	1528.521	1.95	27377	400000	
Co	59	2	72	38.432	ppb	38.432	1.71	61679	2000	
Ni	60	2	72	41.245	ppb	41.245	4.43	18890	5000	
Cu	63	2	72	42.597	ppb	42.597	2.24	52684	5000	
Zn	66	2	72	50.613	ppb	50.613	6.87	8746	5000	
As	75	2	72	37.091	ppb	37.091	0.48	4318	2000	
Se	78	1	72	36.439	ppb	36.439	4.48	5348	2000	
Sr	88	2	72	104.447	ppb	104.447	2.52	44090	4000	
Zr	90	2	72	7084.301	ppb	7084.301	5.46	31252	1000	>LDR
Nb	93	2	72	-0.482	ppb	-0.482	-15.55	873	200	
Mo	95	2	115	35.857	ppb	35.857	4.49	23601	2000	
Pd	105	2	115	0.008	ppb	0.008	240.93	33	100	
Ag	107	2	115	38.742	ppb	38.742	1.35	84390	100	
Cd	111	2	115	39.516	ppb	39.516	2.54	11592	2000	
Sn	120	2	115	24.828	ppb	24.828	3.30	20216	2000	
Sb	121	2	115	30.320	ppb	30.320	4.26	22122	1000	
Ba	137	2	115	96.157	ppb	96.157	0.82	24276	5000	
W	182	2	165	34.505	ppb	34.505	1.91	109160	100	
Pt	195	2	165	-0.014	ppb	-0.014	-65.84	27	100	
Tl	205	2	165	39.631	ppb	39.631	0.67	240629	2000	
Pb	208	2	165	40.818	ppb	40.818	0.38	330971	5000	
Th	232	2	165	37.680	ppb	37.680	0.91	362090	2000	
U	238	2	165	39.781	ppb	39.781	0.82	411301	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	433542	0.57	596260	72.71	60	120	
Sc (IS)	45	1	HMI H2	16721662	0.28	20835883	80.25	60	120	
Sc (IS)	45	2	HMI He	708718	0.59	823951	86.01	60	120	
Sc (IS)	45	3	No Gas	23858230	0.64	31260218	76.32	60	120	
Ge Internal Standard	72	1	HMI H2	6415888	0.87	8011210	80.09	60	120	
Ge Internal Standard	72	2	HMI He	789444	0.29	907478	86.99	60	120	
In Internal Standard	115	2	HMI He	2794763	0.46	3014874	92.70	60	120	
Ho-165	165	2	HMI He	13567174	0.35	14587244	93.01	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	225_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:41:21-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	428.776	ppb	20.117	166800	500	85.8	90	110	>+\-10%
Li	7	2	45	407.791	ppb	4.459	8263	500	81.6	90	110	>+\-10%
Li	7	3	45	419.843	ppb	0.900	4332892	500	84.0	90	110	>+\-10%
Be	9	1	6	47.048	ppb	21.366	10374	50	94.1	90	110	
B	11	1	6	48.579	ppb	11.908	12262	50	97.2	90	110	
Na	23	1	45	4612.856	ppb	19.060	10915888	5000	92.3	90	110	
Na	23	2	45	4452.781	ppb	8.153	817633	5000	89.1	90	110	>+\-10%
Mg	24	2	45	4775.768	ppb	9.150	384595	5000	95.5	90	110	
Al	27	2	45	4935.822	ppb	8.717	110149	5000	98.7	90	110	
K	39	1	45	4648.197	ppb	23.112	17765480	5000	93.0	90	110	
K	39	2	45	4962.278	ppb	8.505	218040	5000	99.2	90	110	
Ca	40	1	45	4714.308	ppb	19.941	15932939	5000	94.3	90	110	
Ca	44	2	45	5069.889	ppb	7.783	11812	5000	101.4	90	110	
Ti	47	2	45	49.293	ppb	14.802	887	50	98.6	90	110	
V	51	2	72	48.177	ppb	9.375	39111	50	96.4	90	110	
Cr	52	2	72	47.607	ppb	8.507	47194	50	95.2	90	110	
Mn	55	2	72	48.280	ppb	7.259	19627	50	96.6	90	110	
Fe	57	2	72	4767.747	ppb	7.280	89288	5000	95.4	90	110	
Co	59	2	72	48.191	ppb	7.705	81168	50	96.4	90	110	
Ni	60	2	72	48.872	ppb	9.046	23443	50	97.7	90	110	
Cu	63	2	72	47.660	ppb	6.003	61789	50	95.3	90	110	
Zn	66	2	72	49.982	ppb	7.519	9070	50	100.0	90	110	
As	75	2	72	50.312	ppb	6.522	6140	50	100.6	90	110	
Se	78	1	72	47.191	ppb	13.815	7569	50	94.4	90	110	
Sr	88	2	72	50.929	ppb	8.352	22579	50	101.9	90	110	
Zr	90	2	72	210.746	ppb	1.562	1057	50	421.5	90	110	>+\-10%
Nb	93	2	72	82.421	ppb	8.273	181277	100	82.4	90	110	>+\-10%
Mo	95	2	115	46.531	ppb	6.376	31459	50	93.1	90	110	
Pd	105	2	115	46.718	ppb	9.256	49361	50	93.4	90	110	
Ag	107	2	115	45.878	ppb	10.704	102678	50	91.8	90	110	
Cd	111	2	115	47.535	ppb	12.445	14325	50	95.1	90	110	
Sn	120	2	115	48.368	ppb	7.658	40293	50	96.7	90	110	
Sb	121	2	115	48.990	ppb	9.429	36710	50	98.0	90	110	
Ba	137	2	115	48.990	ppb	10.487	12710	50	98.0	90	110	
W	182	2	165	47.943	ppb	7.785	156430	50	95.9	90	110	
Pt	195	2	165	47.260	ppb	9.300	123652	50	94.5	90	110	
Tl	205	2	165	50.100	ppb	8.593	314358	50	100.2	90	110	
Pb	208	2	165	49.690	ppb	8.177	416326	50	99.4	90	110	
Th	232	2	165	49.974	ppb	8.412	496259	50	99.9	90	110	
U	238	2	165	50.006	ppb	7.882	534418	50	100.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	477446	8.01	596260	80.07	60	120	
Sc (IS)	45	1	HMI H2	18242426	9.31	20835883	87.55	60	120	
Sc (IS)	45	2	HMI He	739828	3.65	823951	89.79	60	120	
Sc (IS)	45	3	No Gas	25906933	0.21	31260218	82.88	60	120	
Ge Internal Standard	72	1	HMI H2	7074335	8.05	8011210	88.31	60	120	
Ge Internal Standard	72	2	HMI He	829846	3.20	907478	91.45	60	120	
In Internal Standard	115	2	HMI He	2878802	3.44	3014874	95.49	60	120	
Ho-165	165	2	HMI He	14049181	3.39	14587244	96.31	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	226_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:45:09-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-27.961	ppb	-17.0	2027015	10	
Be	9	1	6	0.032	ppb	351.4	23	0.5	
B	11	1	6	1.880	ppb	15.9	960	0.5	>RL
Na	23	1	45	-67.293	ppb	-3.3	137856	25	
Na	23	2	45	-75.391	ppb	-3.7	8963	25	
Mg	24	2	45	6.150	ppb	27.3	857	25	
Al	27	2	45	1.777	ppb	135.3	173	15	
K	39	1	45	42.151	ppb	50.7	7184484	50	
K	39	2	45	-6.773	ppb	-133.0	12422	50	
Ca	40	1	45	6.660	ppb	35.7	78437	50	
Ca	44	2	45	-9.413	ppb	-170.1	40	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.226	ppb	11.7	2774	1	>RL
Cr	52	2	72	0.116	ppb	47.5	247	1	
Mn	55	2	72	0.108	ppb	163.5	107	0.5	
Fe	57	2	72	0.185	ppb	3169.7	160	25	
Co	59	2	72	0.015	ppb	80.4	40	0.5	
Ni	60	2	72	-0.078	ppb	-203.9	183	1	
Cu	63	2	72	0.016	ppb	110.5	837	1	
Zn	66	2	72	-0.538	ppb	-42.5	293	5	
As	75	2	72	0.003	ppb	2696.4	23	1	
Se	78	1	72	-0.100	ppb	-68.0	20	1	
Sr	88	2	72	-0.008	ppb	-611.1	27	0.5	
Zr	90	2	72	1.893	ppb	415.8	90	1	>RL
Nb	93	2	72	4.690	ppb	10.0	12052	2	>RL
Mo	95	2	115	0.023	ppb	433.1	160	0.5	
Pd	105	2	115	0.062	ppb	0.7	90	1	
Ag	107	2	115	-0.001	ppb	-479.0	57	1	
Cd	111	2	115	0.078	ppb	65.1	23	0.5	
Sn	120	2	115	0.068	ppb	125.5	267	1	
Sb	121	2	115	0.495	ppb	17.2	420	0.6	
Ba	137	2	115	0.026	ppb	173.2	7	0.5	
W	182	2	165	0.170	ppb	23.7	1463	1	
Pt	195	2	165	0.009	ppb	50.0	87	1	
Tl	205	2	165	0.024	ppb	27.6	267	0.1	
Pb	208	2	165	0.031	ppb	32.3	823	0.5	
Th	232	2	165	0.061	ppb	13.6	903	1	
U	238	2	165	0.096	ppb	5.3	1157	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	477419	0.33	596260	80.07	60	120	
Sc (IS)	45	1	HMI H2	17791429	0.11	20835883	85.39	60	120	
Sc (IS)	45	2	HMI He	725378	0.71	823951	88.04	60	120	
Sc (IS)	45	3	No Gas	26766969	0.46	31260218	85.63	60	120	
Ge Internal Standard	72	1	HMI H2	6926444	0.49	8011210	86.46	60	120	
Ge Internal Standard	72	2	HMI He	820269	0.41	907478	90.39	60	120	
In Internal Standard	115	2	HMI He	2845416	0.49	3014874	94.38	60	120	
Ho-165	165	2	HMI He	13799229	0.73	14587244	94.60	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	227LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:49:00-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-19.041	ppb	-13.018	2106156	50	-38.1	70	130	>+/-30%
Be	9	1	6	0.872	ppb	40.313	210	1	87.2	70	130	
Na	23	2	45	-24.776	ppb	-11.381	17898	50	-49.6	70	130	>+/-30%
Mg	24	2	45	62.348	ppb	5.922	5315	50	124.7	70	130	
Al	27	2	45	32.707	ppb	13.534	853	30	109.0	70	130	
K	39	2	45	108.788	ppb	12.038	17168	100	108.8	70	130	
Ca	44	2	45	35.702	ppb	18.121	143	50	71.4	70	130	
V	51	2	72	5.625	ppb	3.266	6152	5	112.5	70	130	
Cr	52	2	72	2.201	ppb	1.862	2290	2	110.0	70	130	
Mn	55	2	72	1.054	ppb	10.731	487	1	105.4	70	130	
Fe	57	2	72	52.509	ppb	6.063	1130	50	105.0	70	130	
Co	59	2	72	1.077	ppb	11.095	1814	1	107.7	70	130	
Ni	60	2	72	1.407	ppb	18.044	883	2	70.4	70	130	
Cu	63	2	72	2.119	ppb	9.429	3504	2	105.9	70	130	
Zn	66	2	72	11.174	ppb	7.462	2310	10	111.7	70	130	
As	75	2	72	5.089	ppb	14.804	636	5	101.8	70	130	
Se	78	1	72	5.034	ppb	2.831	837	5	100.7	70	130	
Sr	88	2	72	0.972	ppb	11.690	457	1	97.2	70	130	
Zr	90	2	72	31.717	ppb	15.647	227	0.5	6343.5	70	130	>+/-30%
Nb	93	2	72	10.673	ppb	5.176	24973	2	533.6	70	130	>+/-30%
Mo	95	2	115	1.775	ppb	15.390	1340	2	88.7	70	130	
Pd	105	2	115	0.014	ppb	179.649	40	1	1.4	70	130	>+/-30%
Ag	107	2	115	5.234	ppb	0.226	11762	5	104.7	70	130	
Cd	111	2	115	1.138	ppb	17.987	343	1	113.8	70	130	
Sn	120	2	115	9.980	ppb	3.470	8473	10	99.8	70	130	
Sb	121	2	115	2.161	ppb	6.286	1670	2	108.0	70	130	
Ba	137	2	115	1.157	ppb	4.376	300	1	115.7	70	130	
W	182	2	165	5.147	ppb	1.744	17279	1	514.7	70	130	>+/-30%
Pt	195	2	165	0.016	ppb	68.786	103	1	1.6	70	130	>+/-30%
Tl	205	2	165	1.085	ppb	2.437	6789	1	108.5	70	130	
Pb	208	2	165	1.082	ppb	5.910	9438	1	108.2	70	130	
Th	232	2	165	2.219	ppb	0.630	21903	2	111.0	70	130	
U	238	2	165	1.092	ppb	3.127	11586	1	109.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	475930	0.89	596260	79.82	60	120	
Sc (IS)	45	1	HMI H2	17945636	0.53	20835883	86.13	60	120	
Sc (IS)	45	2	HMI He	727630	0.41	823951	88.31	60	120	
Sc (IS)	45	3	No Gas	27156590	0.72	31260218	86.87	60	120	
Ge Internal Standard	72	1	HMI H2	7001813	1.32	8011210	87.40	60	120	
Ge Internal Standard	72	2	HMI He	821477	0.19	907478	90.52	60	120	
In Internal Standard	115	2	HMI He	2870723	1.07	3014874	95.22	60	120	
Ho-165	165	2	HMI He	13745841	1.11	14587244	94.23	60	120	

Sample Report

Sample Table

Sample Name	280-116511-A-1-B
Data File Name	228SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:52:48-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-36.224	ppb	-36.224	-15.14	67856	500000	
Li	7	2	45	-28.474	ppb	-28.474	-54.50	3551	500000	
Li	7	3	45	-33.872	ppb	-33.872	-6.93	1866452	50000	
Be	9	1	6	-0.040	ppb	-0.040	-69.56	7	2000	
B	11	1	6	2.588	ppb	2.588	26.77	1043	2000	
Na	23	1	45	2236.724	ppb	2236.724	1.22	5132196	2000	
Na	23	2	45	2096.459	ppb	2096.459	0.78	380238	400000	
Mg	24	2	45	3058.259	ppb	3058.259	0.74	236133	400000	
Al	27	2	45	9.152	ppb	9.152	41.68	327	400000	
K	39	1	45	1977.776	ppb	1977.776	1.68	10995656	400000	
K	39	2	45	3368.147	ppb	3368.147	1.54	145758	400000	
Ca	40	1	45	26834.401	ppb	26834.401	0.63	85306582	400000	
Ca	44	2	45	26235.424	ppb	26235.424	2.42	58301	400000	
Ti	47	2	45	0.193	ppb	0.193	173.21	3	4000	
V	51	2	72	0.069	ppb	0.069	507.57	1844	2000	
Cr	52	2	72	0.496	ppb	0.496	22.80	603	5000	
Mn	55	2	72	0.557	ppb	0.557	20.80	280	10000	
Fe	57	2	72	53.921	ppb	53.921	3.78	1127	400000	
Co	59	2	72	0.034	ppb	0.034	0.51	70	2000	
Ni	60	2	72	0.469	ppb	0.469	38.39	430	5000	
Cu	63	2	72	3.206	ppb	3.206	14.72	4758	5000	
Zn	66	2	72	7.590	ppb	7.590	6.92	1650	5000	
As	75	2	72	0.025	ppb	0.025	629.94	25	2000	
Se	78	1	72	0.028	ppb	0.028	192.31	39	2000	
Sr	88	2	72	95.285	ppb	95.285	2.65	40793	4000	
Zr	90	2	72	0.904	ppb	0.904	523.03	83	1000	
Nb	93	2	72	1.252	ppb	1.252	8.90	4531	200	
Mo	95	2	115	-0.010	ppb	-0.010	-844.07	137	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-184.43	17	100	
Ag	107	2	115	-0.013	ppb	-0.013	-33.71	30	100	
Cd	111	2	115	0.011	ppb	0.011	173.21	3	2000	
Sn	120	2	115	0.170	ppb	0.170	43.79	347	2000	
Sb	121	2	115	0.146	ppb	0.146	18.24	160	1000	
Ba	137	2	115	4.943	ppb	4.943	11.57	1257	5000	
W	182	2	165	0.377	ppb	0.377	24.61	2100	100	
Pt	195	2	165	-0.006	ppb	-0.006	-98.76	47	100	
Tl	205	2	165	0.007	ppb	0.007	97.34	160	2000	
Pb	208	2	165	0.067	ppb	0.067	57.83	1103	5000	
Th	232	2	165	0.060	ppb	0.060	10.93	887	2000	
U	238	2	165	0.198	ppb	0.198	10.34	2210	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	440326	1.20	596260	73.85	60	120	
Sc (IS)	45	1	HMI H2	16998326	0.68	20835883	81.58	60	120	
Sc (IS)	45	2	HMI He	707379	0.18	823951	85.85	60	120	
Sc (IS)	45	3	No Gas	25045169	0.51	31260218	80.12	60	120	
Ge Internal Standard	72	1	HMI H2	6670524	0.50	8011210	83.26	60	120	
Ge Internal Standard	72	2	HMI He	800558	0.40	907478	88.22	60	120	
In Internal Standard	115	2	HMI He	2813973	0.61	3014874	93.34	60	120	
Ho-165	165	2	HMI He	13632076	0.27	14587244	93.45	60	120	

Sample Report

Sample Table

Sample Name	280-116511-A-2-B
Data File Name	229SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T02:56:36-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-30.407	ppb	-30.407	-15.76	68724	500000	
Li	7	2	45	-39.296	ppb	-39.296	-23.97	3391	500000	
Li	7	3	45	-37.114	ppb	-37.114	-7.85	1819998	50000	
Be	9	1	6	-0.056	ppb	-0.056	-51.28	3	2000	
B	11	1	6	2.099	ppb	2.099	31.71	917	2000	
Na	23	1	45	4297.096	ppb	4297.096	0.48	9570425	2000	
Na	23	2	45	4002.141	ppb	4002.141	0.99	695465	400000	
Mg	24	2	45	5908.489	ppb	5908.489	0.89	448940	400000	
Al	27	2	45	4.172	ppb	4.172	104.82	217	400000	
K	39	1	45	2970.253	ppb	2970.253	1.95	13068351	400000	
K	39	2	45	4396.530	ppb	4396.530	0.33	183653	400000	
Ca	40	1	45	49917.572	ppb	49917.572	0.35	158093818	400000	
Ca	44	2	45	49904.227	ppb	49904.227	1.75	109165	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.174	ppb	-0.174	-72.58	1654	2000	
Cr	52	2	72	0.481	ppb	0.481	10.73	587	5000	
Mn	55	2	72	10.205	ppb	10.205	4.70	4037	10000	
Fe	57	2	72	8.218	ppb	8.218	47.82	300	400000	
Co	59	2	72	0.018	ppb	0.018	100.54	43	2000	
Ni	60	2	72	0.423	ppb	0.423	24.59	407	5000	
Cu	63	2	72	5.043	ppb	5.043	7.70	6992	5000	
Zn	66	2	72	10.934	ppb	10.934	8.58	2200	5000	
As	75	2	72	-0.041	ppb	-0.041	-61.99	17	2000	
Se	78	1	72	-0.075	ppb	-0.075	-53.14	23	2000	
Sr	88	2	72	211.063	ppb	211.063	0.54	89884	4000	
Zr	90	2	72	-0.539	ppb	-0.539	-1870.68	77	1000	
Nb	93	2	72	0.637	ppb	0.637	6.08	3224	200	
Mo	95	2	115	0.657	ppb	0.657	33.60	570	2000	
Pd	105	2	115	0.015	ppb	0.015	62.23	40	100	
Ag	107	2	115	-0.016	ppb	-0.016	-17.29	23	100	
Cd	111	2	115	0.034	ppb	0.034	99.12	10	2000	
Sn	120	2	115	0.213	ppb	0.213	63.22	377	2000	
Sb	121	2	115	0.043	ppb	0.043	65.61	83	1000	
Ba	137	2	115	10.275	ppb	10.275	9.27	2577	5000	
W	182	2	165	0.578	ppb	0.578	24.95	2694	100	
Pt	195	2	165	-0.008	ppb	-0.008	-172.19	40	100	
Tl	205	2	165	0.016	ppb	0.016	38.59	213	2000	
Pb	208	2	165	0.062	ppb	0.062	14.66	1053	5000	
Th	232	2	165	0.030	ppb	0.030	9.88	590	2000	
U	238	2	165	1.901	ppb	1.901	1.61	19606	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	431894	0.14	596260	72.43	60	120	
Sc (IS)	45	1	HMI H2	16939352	0.40	20835883	81.30	60	120	
Sc (IS)	45	2	HMI He	696650	0.63	823951	84.55	60	120	
Sc (IS)	45	3	No Gas	24641199	0.46	31260218	78.83	60	120	
Ge Internal Standard	72	1	HMI H2	6572019	0.64	8011210	82.04	60	120	
Ge Internal Standard	72	2	HMI He	796683	0.45	907478	87.79	60	120	
In Internal Standard	115	2	HMI He	2778484	1.37	3014874	92.16	60	120	
Ho-165	165	2	HMI He	13434558	0.35	14587244	92.10	60	120	

Sample Report

Sample Table

Sample Name	280-116511-A-3-B
Data File Name	230SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:00:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-26.683	ppb	-26.683	-36.72	69106	500000	
Li	7	2	45	-24.691	ppb	-24.691	-83.94	3547	500000	
Li	7	3	45	-37.013	ppb	-37.013	-16.40	1825296	50000	
Be	9	1	6	-0.073	ppb	-0.073	0.00	0	2000	
B	11	1	6	2.432	ppb	2.432	25.82	1000	2000	
Na	23	1	45	3472.907	ppb	3472.907	0.46	7751218	2000	
Na	23	2	45	3230.321	ppb	3230.321	0.49	567669	400000	
Mg	24	2	45	3751.812	ppb	3751.812	1.21	286316	400000	
Al	27	2	45	5.851	ppb	5.851	5.26	253	400000	
K	39	1	45	1913.167	ppb	1913.167	3.08	10768922	400000	
K	39	2	45	3336.340	ppb	3336.340	2.51	142854	400000	
Ca	40	1	45	29652.086	ppb	29652.086	0.80	93489379	400000	
Ca	44	2	45	30579.626	ppb	30579.626	2.08	67174	400000	
Ti	47	2	45	0.392	ppb	0.392	173.21	7	4000	
V	51	2	72	-0.396	ppb	-0.396	-59.99	1480	2000	
Cr	52	2	72	0.312	ppb	0.312	31.66	423	5000	
Mn	55	2	72	0.496	ppb	0.496	16.91	253	10000	
Fe	57	2	72	8.501	ppb	8.501	46.38	303	400000	
Co	59	2	72	0.034	ppb	0.034	78.71	70	2000	
Ni	60	2	72	0.589	ppb	0.589	3.86	480	5000	
Cu	63	2	72	7.565	ppb	7.565	8.09	10041	5000	
Zn	66	2	72	4.238	ppb	4.238	16.41	1077	5000	
As	75	2	72	0.066	ppb	0.066	135.27	29	2000	
Se	78	1	72	0.149	ppb	0.149	17.69	56	2000	
Sr	88	2	72	458.407	ppb	458.407	1.92	194152	4000	
Zr	90	2	72	-0.425	ppb	-0.425	-2017.52	77	1000	
Nb	93	2	72	0.099	ppb	0.099	134.32	2087	200	
Mo	95	2	115	0.262	ppb	0.262	57.32	313	2000	
Pd	105	2	115	-0.024	ppb	-0.024	0.00	0	100	
Ag	107	2	115	-0.015	ppb	-0.015	-94.32	27	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.581	ppb	0.581	23.87	673	2000	
Sb	121	2	115	0.024	ppb	0.024	151.55	70	1000	
Ba	137	2	115	9.979	ppb	9.979	6.07	2514	5000	
W	182	2	165	1.094	ppb	1.094	5.93	4331	100	
Pt	195	2	165	-0.014	ppb	-0.014	-59.73	27	100	
Tl	205	2	165	0.008	ppb	0.008	109.06	163	2000	
Pb	208	2	165	0.024	ppb	0.024	45.92	750	5000	
Th	232	2	165	0.025	ppb	0.025	15.79	550	2000	
U	238	2	165	0.963	ppb	0.963	2.15	10081	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	436305	0.54	596260	73.17	60	120	
Sc (IS)	45	1	HMI H2	16859511	0.32	20835883	80.92	60	120	
Sc (IS)	45	2	HMI He	699349	0.37	823951	84.88	60	120	
Sc (IS)	45	3	No Gas	24707335	0.53	31260218	79.04	60	120	
Ge Internal Standard	72	1	HMI H2	6560721	0.47	8011210	81.89	60	120	
Ge Internal Standard	72	2	HMI He	792484	0.14	907478	87.33	60	120	
In Internal Standard	115	2	HMI He	2787807	0.90	3014874	92.47	60	120	
Ho-165	165	2	HMI He	13546711	0.76	14587244	92.87	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-2-B
Data File Name	231SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:04:11-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-24.581	ppb	-24.581	-44.77	66892	500000	
Li	7	2	45	-26.121	ppb	-26.121	-73.38	3414	500000	
Li	7	3	45	-35.972	ppb	-35.972	-8.12	1798976	50000	
Be	9	1	6	-0.004	ppb	-0.004	-2106.65	13	2000	
B	11	1	6	198.726	ppb	198.726	3.14	42381	2000	
Na	23	1	45	7355.810	ppb	7355.810	0.44	15504672	2000	
Na	23	2	45	7267.394	ppb	7267.394	0.62	1208131	400000	
Mg	24	2	45	23290.250	ppb	23290.250	1.11	1715506	400000	
Al	27	2	45	9.228	ppb	9.228	43.74	313	400000	
K	39	1	45	2718.324	ppb	2718.324	1.66	12005291	400000	
K	39	2	45	4257.815	ppb	4257.815	1.88	172879	400000	
Ca	40	1	45	188905.082	ppb	188905.082	0.72	572960405	400000	
Ca	44	2	45	192329.419	ppb	192329.419	0.80	407914	400000	
Ti	47	2	45	0.405	ppb	0.405	86.61	7	4000	
V	51	2	72	-0.906	ppb	-0.906	-28.19	1067	2000	
Cr	52	2	72	0.334	ppb	0.334	9.04	430	5000	
Mn	55	2	72	739.509	ppb	739.509	0.98	277429	10000	
Fe	57	2	72	7812.616	ppb	7812.616	1.73	135335	400000	
Co	59	2	72	0.070	ppb	0.070	42.82	123	2000	
Ni	60	2	72	0.025	ppb	0.025	197.28	217	5000	
Cu	63	2	72	-0.060	ppb	-0.060	-131.29	693	5000	
Zn	66	2	72	1.966	ppb	1.966	42.06	677	5000	
As	75	2	72	1.904	ppb	1.904	7.84	235	2000	
Se	78	1	72	-0.116	ppb	-0.116	-83.28	16	2000	
Sr	88	2	72	1583.133	ppb	1583.133	1.41	648862	4000	
Zr	90	2	72	35.244	ppb	35.244	26.83	227	1000	
Nb	93	2	72	-0.008	ppb	-0.008	-560.31	1804	200	
Mo	95	2	115	0.677	ppb	0.677	25.01	563	2000	
Pd	105	2	115	0.020	ppb	0.020	59.08	43	100	
Ag	107	2	115	-0.014	ppb	-0.014	-37.34	27	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	-0.090	ppb	-0.090	-15.57	130	2000	
Sb	121	2	115	0.090	ppb	0.090	61.57	113	1000	
Ba	137	2	115	54.331	ppb	54.331	2.71	13227	5000	
W	182	2	165	0.250	ppb	0.250	30.05	1647	100	
Pt	195	2	165	-0.019	ppb	-0.019	-24.68	13	100	
Tl	205	2	165	0.004	ppb	0.004	211.72	140	2000	
Pb	208	2	165	0.047	ppb	0.047	5.78	917	5000	
Th	232	2	165	0.023	ppb	0.023	52.69	510	2000	
U	238	2	165	0.699	ppb	0.699	5.43	7186	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	413678	0.84	596260	69.38	60	120	
Sc (IS)	45	1	HMI H2	16226486	0.19	20835883	77.88	60	120	
Sc (IS)	45	2	HMI He	675741	0.73	823951	82.01	60	120	
Sc (IS)	45	3	No Gas	24280314	0.51	31260218	77.67	60	120	
Ge Internal Standard	72	1	HMI H2	6325949	0.66	8011210	78.96	60	120	
Ge Internal Standard	72	2	HMI He	766992	0.53	907478	84.52	60	120	
In Internal Standard	115	2	HMI He	2694787	1.16	3014874	89.38	60	120	
Ho-165	165	2	HMI He	13217215	0.08	14587244	90.61	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-3-D
Data File Name	232SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:07:58-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-27.040	ppb	-27.040	-15.94	66702	500000	
Li	7	2	45	-14.837	ppb	-14.837	-273.67	3531	500000	
Li	7	3	45	-36.705	ppb	-36.705	-10.59	1792483	50000	
Be	9	1	6	-0.003	ppb	-0.003	-3474.17	13	2000	
B	11	1	6	202.804	ppb	202.804	2.80	43103	2000	
Na	23	1	45	7282.522	ppb	7282.522	1.02	15411965	2000	
Na	23	2	45	7088.477	ppb	7088.477	1.35	1181546	400000	
Mg	24	2	45	23581.506	ppb	23581.506	0.60	1740958	400000	
Al	27	2	45	12.444	ppb	12.444	41.91	380	400000	
K	39	1	45	2798.427	ppb	2798.427	2.17	12215453	400000	
K	39	2	45	4270.553	ppb	4270.553	0.69	173766	400000	
Ca	40	1	45	190971.684	ppb	190971.684	0.70	581467218	400000	
Ca	44	2	45	193492.580	ppb	193492.580	0.21	411322	400000	
Ti	47	2	45	0.809	ppb	0.809	114.79	13	4000	
V	51	2	72	-0.792	ppb	-0.792	-21.37	1143	2000	
Cr	52	2	72	0.285	ppb	0.285	27.62	383	5000	
Mn	55	2	72	757.473	ppb	757.473	1.63	282757	10000	
Fe	57	2	72	7829.049	ppb	7829.049	1.21	134951	400000	
Co	59	2	72	0.060	ppb	0.060	16.42	107	2000	
Ni	60	2	72	0.051	ppb	0.051	132.63	227	5000	
Cu	63	2	72	0.048	ppb	0.048	15.54	817	5000	
Zn	66	2	72	1.821	ppb	1.821	28.15	650	5000	
As	75	2	72	1.891	ppb	1.891	6.23	233	2000	
Se	78	1	72	-0.014	ppb	-0.014	-738.65	31	2000	
Sr	88	2	72	1606.368	ppb	1606.368	0.95	655106	4000	
Zr	90	2	72	24.522	ppb	24.522	58.15	180	1000	
Nb	93	2	72	-0.050	ppb	-0.050	-197.26	1710	200	
Mo	95	2	115	0.619	ppb	0.619	20.64	530	2000	
Pd	105	2	115	0.040	ppb	0.040	35.47	63	100	
Ag	107	2	115	-0.006	ppb	-0.006	-159.43	43	100	
Cd	111	2	115	0.023	ppb	0.023	173.21	7	2000	
Sn	120	2	115	-0.030	ppb	-0.030	-103.44	177	2000	
Sb	121	2	115	0.090	ppb	0.090	109.84	113	1000	
Ba	137	2	115	54.929	ppb	54.929	4.57	13424	5000	
W	182	2	165	0.125	ppb	0.125	38.42	1267	100	
Pt	195	2	165	-0.016	ppb	-0.016	-49.34	20	100	
Tl	205	2	165	0.002	ppb	0.002	483.47	127	2000	
Pb	208	2	165	0.144	ppb	0.144	7.26	1680	5000	
Th	232	2	165	0.033	ppb	0.033	29.74	613	2000	
U	238	2	165	0.757	ppb	0.757	2.26	7789	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	412330	0.39	596260	69.15	60	120	
Sc (IS)	45	1	HMI H2	16289433	0.48	20835883	78.18	60	120	
Sc (IS)	45	2	HMI He	677270	0.40	823951	82.20	60	120	
Sc (IS)	45	3	No Gas	24241641	0.38	31260218	77.55	60	120	
Ge Internal Standard	72	1	HMI H2	6337683	0.44	8011210	79.11	60	120	
Ge Internal Standard	72	2	HMI He	763143	0.38	907478	84.09	60	120	
In Internal Standard	115	2	HMI He	2704019	2.15	3014874	89.69	60	120	
Ho-165	165	2	HMI He	13252143	0.72	14587244	90.85	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-3-E MS
Data File Name	233SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:11:46-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	51.818	ppb	51.818	27.98	81638	500000	
Li	7	2	45	21.040	ppb	21.040	184.46	3857	500000	
Li	7	3	45	32.291	ppb	32.291	14.85	2131534	50000	
Be	9	1	6	39.343	ppb	39.343	3.59	7552	2000	
B	11	1	6	239.825	ppb	239.825	3.63	50707	2000	
Na	23	1	45	7222.102	ppb	7222.102	0.37	15388821	2000	
Na	23	2	45	7120.485	ppb	7120.485	0.30	1182514	400000	
Mg	24	2	45	23613.334	ppb	23613.334	0.74	1736983	400000	
Al	27	2	45	395.467	ppb	395.467	3.24	8183	400000	
K	39	1	45	2758.296	ppb	2758.296	1.00	12214646	400000	
K	39	2	45	4247.184	ppb	4247.184	0.25	172251	400000	
Ca	40	1	45	188954.060	ppb	188954.060	0.25	579176951	400000	
Ca	44	2	45	194177.958	ppb	194177.958	0.54	411280	400000	
Ti	47	2	45	0.809	ppb	0.809	43.11	13	4000	
V	51	2	72	37.696	ppb	37.696	0.65	28516	2000	
Cr	52	2	72	38.664	ppb	38.664	0.40	35274	5000	
Mn	55	2	72	793.697	ppb	793.697	0.25	295764	10000	
Fe	57	2	72	8370.377	ppb	8370.377	1.15	144021	400000	
Co	59	2	72	38.619	ppb	38.619	1.23	59814	2000	
Ni	60	2	72	37.959	ppb	37.959	3.92	16794	5000	
Cu	63	2	72	37.734	ppb	37.734	0.77	45125	5000	
Zn	66	2	72	40.186	ppb	40.186	5.67	6775	5000	
As	75	2	72	41.728	ppb	41.728	2.49	4685	2000	
Se	78	1	72	36.606	ppb	36.606	2.29	5322	2000	
Sr	88	2	72	1651.241	ppb	1651.241	0.23	672255	4000	
Zr	90	2	72	9590.499	ppb	9590.499	1.58	40799	1000	>LDR
Nb	93	2	72	-0.159	ppb	-0.159	-10.98	1490	200	
Mo	95	2	115	39.271	ppb	39.271	1.70	24759	2000	
Pd	105	2	115	0.057	ppb	0.057	36.64	80	100	
Ag	107	2	115	39.170	ppb	39.170	0.87	81774	100	
Cd	111	2	115	39.280	ppb	39.280	5.11	11041	2000	
Sn	120	2	115	39.686	ppb	39.686	1.19	30848	2000	
Sb	121	2	115	39.121	ppb	39.121	1.79	27344	1000	
Ba	137	2	115	95.843	ppb	95.843	1.62	23190	5000	
W	182	2	165	39.991	ppb	39.991	1.68	123452	100	
Pt	195	2	165	-0.011	ppb	-0.011	-131.68	33	100	
Tl	205	2	165	40.348	ppb	40.348	0.53	239333	2000	
Pb	208	2	165	40.276	ppb	40.276	1.32	319048	5000	
Th	232	2	165	41.212	ppb	41.212	0.99	386871	2000	
U	238	2	165	42.010	ppb	42.010	0.60	424327	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	410886	0.92	596260	68.91	60	120	
Sc (IS)	45	1	HMI H2	16398240	0.38	20835883	78.70	60	120	
Sc (IS)	45	2	HMI He	674803	0.37	823951	81.90	60	120	
Sc (IS)	45	3	No Gas	24210562	0.56	31260218	77.45	60	120	
Ge Internal Standard	72	1	HMI H2	6357744	0.50	8011210	79.36	60	120	
Ge Internal Standard	72	2	HMI He	761840	0.03	907478	83.95	60	120	
In Internal Standard	115	2	HMI He	2678609	0.84	3014874	88.85	60	120	
Ho-165	165	2	HMI He	13254689	0.96	14587244	90.86	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-3-F MSD
Data File Name	234SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:15:34-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	44.968	ppb	44.968	19.18	79638	500000	
Li	7	2	45	42.604	ppb	42.604	64.20	4057	500000	
Li	7	3	45	26.242	ppb	26.242	8.34	2079812	50000	
Be	9	1	6	39.472	ppb	39.472	4.05	7489	2000	
B	11	1	6	242.500	ppb	242.500	3.68	50670	2000	
Na	23	1	45	7326.476	ppb	7326.476	0.26	15463462	2000	
Na	23	2	45	7156.379	ppb	7156.379	2.19	1186417	400000	
Mg	24	2	45	23530.424	ppb	23530.424	1.84	1727914	400000	
Al	27	2	45	429.910	ppb	429.910	0.42	8870	400000	
K	39	1	45	2820.156	ppb	2820.156	1.38	12228249	400000	
K	39	2	45	4255.157	ppb	4255.157	1.49	172269	400000	
Ca	40	1	45	193067.245	ppb	193067.245	0.99	586321058	400000	
Ca	44	2	45	193140.075	ppb	193140.075	0.78	408409	400000	
Ti	47	2	45	2.018	ppb	2.018	74.89	33	4000	
V	51	2	72	37.149	ppb	37.149	1.62	28111	2000	
Cr	52	2	72	38.791	ppb	38.791	2.44	35371	5000	
Mn	55	2	72	795.674	ppb	795.674	0.34	296328	10000	
Fe	57	2	72	8543.641	ppb	8543.641	1.26	146915	400000	
Co	59	2	72	38.245	ppb	38.245	1.33	59202	2000	
Ni	60	2	72	38.114	ppb	38.114	3.16	16851	5000	
Cu	63	2	72	38.148	ppb	38.148	0.89	45586	5000	
Zn	66	2	72	43.571	ppb	43.571	4.04	7312	5000	
As	75	2	72	40.912	ppb	40.912	2.47	4591	2000	
Se	78	1	72	38.796	ppb	38.796	3.51	5601	2000	
Sr	88	2	72	1670.882	ppb	1670.882	0.42	679860	4000	
Zr	90	2	72	10041.615	ppb	10041.615	2.36	42688	1000	>LDR
Nb	93	2	72	-0.285	ppb	-0.285	-9.29	1237	200	
Mo	95	2	115	39.031	ppb	39.031	1.53	24729	2000	
Pd	105	2	115	0.023	ppb	0.023	176.69	47	100	
Ag	107	2	115	38.686	ppb	38.686	1.30	81158	100	
Cd	111	2	115	37.299	ppb	37.299	2.34	10538	2000	
Sn	120	2	115	41.137	ppb	41.137	2.23	32125	2000	
Sb	121	2	115	39.438	ppb	39.438	3.27	27695	1000	
Ba	137	2	115	100.898	ppb	100.898	2.38	24529	5000	
W	182	2	165	39.704	ppb	39.704	0.53	122354	100	
Pt	195	2	165	-0.015	ppb	-0.015	-68.84	23	100	
Tl	205	2	165	40.300	ppb	40.300	0.26	238601	2000	
Pb	208	2	165	40.039	ppb	40.039	0.38	316586	5000	
Th	232	2	165	41.157	ppb	41.157	0.93	385644	2000	
U	238	2	165	42.243	ppb	42.243	0.67	425886	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	406056	0.38	596260	68.10	60	120	
Sc (IS)	45	1	HMI H2	16247116	0.53	20835883	77.98	60	120	
Sc (IS)	45	2	HMI He	673729	0.93	823951	81.77	60	120	
Sc (IS)	45	3	No Gas	23958839	0.33	31260218	76.64	60	120	
Ge Internal Standard	72	1	HMI H2	6315352	0.62	8011210	78.83	60	120	
Ge Internal Standard	72	2	HMI He	761404	0.37	907478	83.90	60	120	
In Internal Standard	115	2	HMI He	2691599	0.80	3014874	89.28	60	120	
Ho-165	165	2	HMI He	13229905	0.51	14587244	90.70	60	120	

Sample Report

Sample Table

Sample Name	280-116538-J-1-B
Data File Name	235SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:19:20-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-24.045	ppb	-24.045	-41.03	67020	500000	
Li	7	2	45	-17.693	ppb	-17.693	-85.62	3441	500000	
Li	7	3	45	-31.007	ppb	-31.007	-7.37	1775091	50000	
Be	9	1	6	0.087	ppb	0.087	60.19	30	2000	
B	11	1	6	155.587	ppb	155.587	2.88	32319	2000	
Na	23	1	45	23807.096	ppb	23807.096	1.03	49610293	2000	>LDR
Na	23	2	45	22673.038	ppb	22673.038	0.65	3667720	400000	
Mg	24	2	45	32983.359	ppb	32983.359	1.30	2391768	400000	
Al	27	2	45	45.651	ppb	45.651	14.87	1040	400000	
K	39	1	45	3157.543	ppb	3157.543	1.06	12905888	400000	
K	39	2	45	4646.674	ppb	4646.674	0.47	184700	400000	
Ca	40	1	45	177107.830	ppb	177107.830	0.40	537423659	400000	
Ca	44	2	45	177841.616	ppb	177841.616	0.91	371362	400000	
Ti	47	2	45	1.641	ppb	1.641	42.88	27	4000	
V	51	2	72	-0.690	ppb	-0.690	-10.80	1207	2000	
Cr	52	2	72	0.454	ppb	0.454	2.75	533	5000	
Mn	55	2	72	202.892	ppb	202.892	0.41	75222	10000	
Fe	57	2	72	110.727	ppb	110.727	1.83	2037	400000	
Co	59	2	72	2.464	ppb	2.464	6.66	3807	2000	
Ni	60	2	72	9.846	ppb	9.846	6.32	4481	5000	
Cu	63	2	72	1.699	ppb	1.699	11.48	2740	5000	
Zn	66	2	72	4.788	ppb	4.788	12.36	1117	5000	
As	75	2	72	4.821	ppb	4.821	13.18	557	2000	
Se	78	1	72	0.851	ppb	0.851	20.13	155	2000	
Sr	88	2	72	953.095	ppb	953.095	0.74	385839	4000	
Zr	90	2	72	240.388	ppb	240.388	2.26	1090	1000	
Nb	93	2	72	-0.370	ppb	-0.370	-13.97	1060	200	
Mo	95	2	115	5.841	ppb	5.841	1.34	3784	2000	
Pd	105	2	115	0.000	ppb	0.000	-12164.57	23	100	
Ag	107	2	115	0.178	ppb	0.178	28.14	427	100	
Cd	111	2	115	0.344	ppb	0.344	60.39	97	2000	
Sn	120	2	115	0.449	ppb	0.449	13.92	543	2000	
Sb	121	2	115	15.672	ppb	15.672	2.87	10941	1000	
Ba	137	2	115	107.351	ppb	107.351	6.27	25869	5000	
W	182	2	165	0.350	ppb	0.350	17.71	1927	100	
Pt	195	2	165	-0.019	ppb	-0.019	-12.56	13	100	
Tl	205	2	165	0.042	ppb	0.042	41.36	357	2000	
Pb	208	2	165	0.308	ppb	0.308	6.25	2937	5000	
Th	232	2	165	0.126	ppb	0.126	6.65	1464	2000	
U	238	2	165	4.575	ppb	4.575	3.57	45615	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	401782	0.53	596260	67.38	60	120	
Sc (IS)	45	1	HMI H2	16233613	0.19	20835883	77.91	60	120	
Sc (IS)	45	2	HMI He	665286	0.45	823951	80.74	60	120	
Sc (IS)	45	3	No Gas	23633728	0.26	31260218	75.60	60	120	
Ge Internal Standard	72	1	HMI H2	6305869	1.21	8011210	78.71	60	120	
Ge Internal Standard	72	2	HMI He	757518	0.74	907478	83.48	60	120	
In Internal Standard	115	2	HMI He	2668337	0.71	3014874	88.51	60	120	
Ho-165	165	2	HMI He	13047649	0.51	14587244	89.45	60	120	

Sample Report

Sample Table

Sample Name	280-116538-J-2-B
Data File Name	236SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:23:07-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.158	ppb	-0.158	-2163.06	70921	500000	
Li	7	2	45	-2.089	ppb	-2.089	-1440.87	3614	500000	
Li	7	3	45	-13.848	ppb	-13.848	-35.00	1844823	50000	
Be	9	1	6	0.018	ppb	0.018	636.50	17	2000	
B	11	1	6	100.963	ppb	100.963	1.34	20842	2000	
Na	23	1	45	24243.246	ppb	24243.246	0.65	50198896	2000	>LDR
Na	23	2	45	23270.206	ppb	23270.206	0.58	3793578	400000	
Mg	24	2	45	49092.740	ppb	49092.740	0.65	3588052	400000	
Al	27	2	45	234.543	ppb	234.543	8.92	4871	400000	
K	39	1	45	3971.135	ppb	3971.135	1.74	14473331	400000	
K	39	2	45	5337.395	ppb	5337.395	0.20	212090	400000	
Ca	40	1	45	120086.212	ppb	120086.212	0.75	362127648	400000	
Ca	44	2	45	117735.759	ppb	117735.759	1.17	247833	400000	
Ti	47	2	45	4.678	ppb	4.678	45.45	77	4000	
V	51	2	72	-0.635	ppb	-0.635	-26.57	1250	2000	
Cr	52	2	72	0.864	ppb	0.864	11.70	907	5000	
Mn	55	2	72	245.885	ppb	245.885	0.80	91437	10000	
Fe	57	2	72	615.477	ppb	615.477	2.86	10698	400000	
Co	59	2	72	6.637	ppb	6.637	6.06	10264	2000	
Ni	60	2	72	14.141	ppb	14.141	1.88	6368	5000	
Cu	63	2	72	1.274	ppb	1.274	12.77	2250	5000	
Zn	66	2	72	3.847	ppb	3.847	17.46	970	5000	
As	75	2	72	9.961	ppb	9.961	3.72	1131	2000	
Se	78	1	72	0.896	ppb	0.896	8.99	161	2000	
Sr	88	2	72	427.280	ppb	427.280	1.53	173537	4000	
Zr	90	2	72	123.860	ppb	123.860	23.06	600	1000	
Nb	93	2	72	-0.431	ppb	-0.431	-16.23	943	200	
Mo	95	2	115	2.386	ppb	2.386	6.62	1647	2000	
Pd	105	2	115	-0.011	ppb	-0.011	-57.43	13	100	
Ag	107	2	115	0.006	ppb	0.006	74.97	70	100	
Cd	111	2	115	0.071	ppb	0.071	51.30	20	2000	
Sn	120	2	115	0.060	ppb	0.060	145.72	247	2000	
Sb	121	2	115	1.364	ppb	1.364	16.25	1010	1000	
Ba	137	2	115	41.406	ppb	41.406	2.02	10114	5000	
W	182	2	165	0.111	ppb	0.111	68.46	1210	100	
Pt	195	2	165	-0.016	ppb	-0.016	-67.41	20	100	
Tl	205	2	165	0.096	ppb	0.096	47.27	673	2000	
Pb	208	2	165	0.612	ppb	0.612	2.50	5321	5000	
Th	232	2	165	0.134	ppb	0.134	6.28	1537	2000	
U	238	2	165	3.622	ppb	3.622	3.13	36269	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	396458	0.93	596260	66.49	60	120	
Sc (IS)	45	1	HMI H2	16132383	0.60	20835883	77.43	60	120	
Sc (IS)	45	2	HMI He	670556	0.71	823951	81.38	60	120	
Sc (IS)	45	3	No Gas	23467031	0.43	31260218	75.07	60	120	
Ge Internal Standard	72	1	HMI H2	6318267	0.61	8011210	78.87	60	120	
Ge Internal Standard	72	2	HMI He	759918	0.14	907478	83.74	60	120	
In Internal Standard	115	2	HMI He	2704099	1.47	3014874	89.69	60	120	
Ho-165	165	2	HMI He	13094976	0.52	14587244	89.77	60	120	

Sample Report

Sample Table

Sample Name	280-116572-E-1-A
Data File Name	237SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:26:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-30.074	ppb	-30.074	-21.79	63970	500000	
Li	7	2	45	-48.273	ppb	-48.273	-105.39	3080	500000	
Li	7	3	45	-47.129	ppb	-47.129	-5.18	1647270	50000	
Be	9	1	6	2.396	ppb	2.396	22.14	447	2000	
B	11	1	6	48.537	ppb	48.537	11.87	10054	2000	
Na	23	1	45	14705.214	ppb	14705.214	11.67	29692602	2000	>LDR
Na	23	2	45	14423.149	ppb	14423.149	1.20	2286677	400000	
Mg	24	2	45	2343.714	ppb	2343.714	0.35	166353	400000	
Al	27	2	45	279.328	ppb	279.328	9.20	5601	400000	
K	39	1	45	1247.561	ppb	1247.561	27.92	8717353	400000	
K	39	2	45	2754.602	ppb	2754.602	1.11	111601	400000	
Ca	40	1	45	42307.186	ppb	42307.186	12.91	123956031	400000	
Ca	44	2	45	43232.551	ppb	43232.551	1.34	88242	400000	
Ti	47	2	45	1.893	ppb	1.893	33.54	30	4000	
V	51	2	72	4.688	ppb	4.688	5.89	4878	2000	
Cr	52	2	72	3.523	ppb	3.523	7.23	3221	5000	
Mn	55	2	72	1549.745	ppb	1549.745	0.48	559022	10000	
Fe	57	2	72	36088.431	ppb	36088.431	0.26	600667	400000	
Co	59	2	72	0.658	ppb	0.658	13.99	1000	2000	
Ni	60	2	72	2.274	ppb	2.274	9.65	1160	5000	
Cu	63	2	72	70.856	ppb	70.856	1.13	81389	5000	
Zn	66	2	72	33.924	ppb	33.924	2.57	5591	5000	
As	75	2	72	27.770	ppb	27.770	3.94	3025	2000	
Se	78	1	72	0.116	ppb	0.116	58.37	48	2000	
Sr	88	2	72	240.240	ppb	240.240	0.77	94711	4000	
Zr	90	2	72	70.604	ppb	70.604	5.26	363	1000	
Nb	93	2	72	-0.513	ppb	-0.513	-5.39	757	200	
Mo	95	2	115	1.682	ppb	1.682	9.88	1160	2000	
Pd	105	2	115	-0.017	ppb	-0.017	-70.33	7	100	
Ag	107	2	115	-0.007	ppb	-0.007	-204.21	40	100	
Cd	111	2	115	0.036	ppb	0.036	100.08	10	2000	
Sn	120	2	115	0.599	ppb	0.599	39.19	643	2000	
Sb	121	2	115	0.301	ppb	0.301	20.67	253	1000	
Ba	137	2	115	128.072	ppb	128.072	2.18	30178	5000	
W	182	2	165	0.238	ppb	0.238	20.91	1574	100	
Pt	195	2	165	-0.019	ppb	-0.019	-25.55	13	100	
Tl	205	2	165	0.020	ppb	0.020	55.57	227	2000	
Pb	208	2	165	17.611	ppb	17.611	1.64	136139	5000	
Th	232	2	165	0.153	ppb	0.153	7.95	1687	2000	
U	238	2	165	1.318	ppb	1.318	3.86	13104	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	390823	5.32	596260	65.55	60	120	
Sc (IS)	45	1	HMI H2	15752320	6.10	20835883	75.60	60	120	
Sc (IS)	45	2	HMI He	649962	0.27	823951	78.88	60	120	
Sc (IS)	45	3	No Gas	22938485	0.35	31260218	73.38	60	120	
Ge Internal Standard	72	1	HMI H2	6146635	5.72	8011210	76.73	60	120	
Ge Internal Standard	72	2	HMI He	737541	0.22	907478	81.27	60	120	
In Internal Standard	115	2	HMI He	2608409	0.23	3014874	86.52	60	120	
Ho-165	165	2	HMI He	12906702	0.81	14587244	88.48	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	238_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:30:41-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	448.839	ppb	3.168	159879	500	89.8	90	110	>+\-10%
Li	7	2	45	391.398	ppb	7.076	7662	500	78.3	90	110	>+\-10%
Li	7	3	45	390.445	ppb	4.344	4134830	500	78.1	90	110	>+\-10%
Be	9	1	6	54.296	ppb	2.256	10814	50	108.6	90	110	
B	11	1	6	57.017	ppb	1.534	12856	50	114.0	90	110	>+\-10%
Na	23	1	45	5173.897	ppb	0.540	11479249	5000	103.5	90	110	
Na	23	2	45	4816.684	ppb	1.143	836964	5000	96.3	90	110	
Mg	24	2	45	5179.135	ppb	0.359	395603	5000	103.6	90	110	
Al	27	2	45	5434.915	ppb	1.766	115026	5000	108.7	90	110	
K	39	1	45	5484.108	ppb	1.433	18435558	5000	109.7	90	110	
K	39	2	45	5470.155	ppb	0.802	226680	5000	109.4	90	110	
Ca	40	1	45	5529.653	ppb	0.652	17579696	5000	110.6	90	110	>+\-10%
Ca	44	2	45	5268.014	ppb	2.472	11635	5000	105.4	90	110	
Ti	47	2	45	53.081	ppb	10.331	907	50	106.2	90	110	
V	51	2	72	53.978	ppb	3.099	41674	50	108.0	90	110	
Cr	52	2	72	52.240	ppb	1.874	49485	50	104.5	90	110	
Mn	55	2	72	55.546	ppb	1.062	21570	50	111.1	90	110	>+\-10%
Fe	57	2	72	5231.415	ppb	1.151	93608	5000	104.6	90	110	
Co	59	2	72	52.038	ppb	0.271	83762	50	104.1	90	110	
Ni	60	2	72	51.548	ppb	4.880	23620	50	103.1	90	110	
Cu	63	2	72	53.407	ppb	1.541	66048	50	106.8	90	110	
Zn	66	2	72	53.227	ppb	3.812	9207	50	106.5	90	110	
As	75	2	72	53.306	ppb	2.231	6214	50	106.6	90	110	
Se	78	1	72	53.924	ppb	2.306	8105	50	107.8	90	110	
Sr	88	2	72	56.560	ppb	2.277	23958	50	113.1	90	110	>+\-10%
Zr	90	2	72	277.459	ppb	14.345	1303	50	554.9	90	110	>+\-10%
Nb	93	2	72	94.487	ppb	1.798	198343	100	94.5	90	110	
Mo	95	2	115	48.849	ppb	4.847	31757	50	97.7	90	110	
Pd	105	2	115	50.333	ppb	1.779	51194	50	100.7	90	110	
Ag	107	2	115	50.548	ppb	1.637	108939	50	101.1	90	110	
Cd	111	2	115	52.677	ppb	3.882	15289	50	105.4	90	110	
Sn	120	2	115	52.574	ppb	1.923	42128	50	105.1	90	110	
Sb	121	2	115	53.456	ppb	1.652	38568	50	106.9	90	110	
Ba	137	2	115	52.284	ppb	2.545	13060	50	104.6	90	110	
W	182	2	165	51.302	ppb	0.738	159945	50	102.6	90	110	
Pt	195	2	165	51.411	ppb	0.681	128620	50	102.8	90	110	
Tl	205	2	165	54.636	ppb	1.075	327759	50	109.3	90	110	
Pb	208	2	165	54.705	ppb	0.294	438125	50	109.4	90	110	
Th	232	2	165	55.025	ppb	0.581	522373	50	110.1	90	110	>+\-10%
U	238	2	165	54.993	ppb	0.727	561796	50	110.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	426443	0.51	596260	71.52	60	120	
Sc (IS)	45	1	HMI H2	16957817	0.30	20835883	81.39	60	120	
Sc (IS)	45	2	HMI He	700238	0.61	823951	84.99	60	120	
Sc (IS)	45	3	No Gas	25647165	0.95	31260218	82.04	60	120	
Ge Internal Standard	72	1	HMI H2	6585132	0.41	8011210	82.20	60	120	
Ge Internal Standard	72	2	HMI He	791805	0.94	907478	87.25	60	120	
In Internal Standard	115	2	HMI He	2765880	1.47	3014874	91.74	60	120	
Ho-165	165	2	HMI He	13406200	0.36	14587244	91.90	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	239_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:34:28-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-41.621	ppb	-6.9	1873129	10	
Be	9	1	6	-0.008	ppb	-691.7	13	0.5	
B	11	1	6	3.445	ppb	22.5	1250	0.5	>RL
Na	23	1	45	-71.748	ppb	-2.2	123673	25	
Na	23	2	45	-75.092	ppb	-4.9	8479	25	
Mg	24	2	45	13.953	ppb	16.8	1390	25	
Al	27	2	45	4.072	ppb	148.3	210	15	
K	39	1	45	53.200	ppb	10.9	6980208	50	>RL
K	39	2	45	25.388	ppb	61.1	12913	50	
Ca	40	1	45	33.337	ppb	4.4	161826	50	
Ca	44	2	45	30.359	ppb	27.0	123	25	>RL
Ti	47	2	45	0.416	ppb	173.2	7	0.5	
V	51	2	72	1.623	ppb	11.2	2927	1	>RL
Cr	52	2	72	0.069	ppb	72.7	190	1	
Mn	55	2	72	0.070	ppb	28.0	87	0.5	
Fe	57	2	72	3.893	ppb	88.5	217	25	
Co	59	2	72	0.029	ppb	82.6	60	0.5	
Ni	60	2	72	-0.169	ppb	-19.7	133	1	
Cu	63	2	72	-0.054	ppb	-206.7	713	1	
Zn	66	2	72	-0.522	ppb	-126.3	280	5	
As	75	2	72	0.028	ppb	336.7	25	1	
Se	78	1	72	-0.139	ppb	-39.3	13	1	
Sr	88	2	72	0.189	ppb	43.5	107	0.5	
Zr	90	2	72	-4.085	ppb	-141.6	60	1	
Nb	93	2	72	4.727	ppb	21.0	11485	2	>RL
Mo	95	2	115	0.086	ppb	196.4	193	0.5	
Pd	105	2	115	0.111	ppb	31.0	137	1	
Ag	107	2	115	0.011	ppb	185.6	83	1	
Cd	111	2	115	0.011	ppb	173.2	3	0.5	
Sn	120	2	115	0.105	ppb	103.6	290	1	
Sb	121	2	115	0.599	ppb	7.9	483	0.6	
Ba	137	2	115	0.081	ppb	86.8	20	0.5	
W	182	2	165	0.198	ppb	33.3	1480	1	
Pt	195	2	165	0.006	ppb	364.7	73	1	
Tl	205	2	165	0.032	ppb	16.3	300	0.1	
Pb	208	2	165	0.031	ppb	51.5	780	0.5	
Th	232	2	165	0.061	ppb	24.8	860	1	
U	238	2	165	0.079	ppb	18.7	930	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	445275	0.74	596260	74.68	60	120	
Sc (IS)	45	1	HMI H2	17226276	0.37	20835883	82.68	60	120	
Sc (IS)	45	2	HMI He	682684	3.40	823951	82.85	60	120	
Sc (IS)	45	3	No Gas	25681277	0.65	31260218	82.15	60	120	
Ge Internal Standard	72	1	HMI H2	6717604	0.35	8011210	83.85	60	120	
Ge Internal Standard	72	2	HMI He	779393	2.98	907478	85.89	60	120	
In Internal Standard	115	2	HMI He	2762152	3.68	3014874	91.62	60	120	
Ho-165	165	2	HMI He	13155606	4.13	14587244	90.19	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	240LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:38:17-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-37.350	ppb	-17.040	1975950	50	-74.7	70	130	>+/-30%
Be	9	1	6	1.267	ppb	3.870	280	1	126.7	70	130	
Na	23	2	45	-30.974	ppb	-8.297	16410	50	-61.9	70	130	>+/-30%
Mg	24	2	45	60.912	ppb	8.420	5078	50	121.8	70	130	
Al	27	2	45	38.142	ppb	9.179	950	30	127.1	70	130	
K	39	2	45	117.675	ppb	15.813	17114	100	117.7	70	130	
Ca	44	2	45	73.094	ppb	24.511	223	50	146.2	70	130	>+/-30%
V	51	2	72	6.149	ppb	7.559	6415	5	123.0	70	130	
Cr	52	2	72	2.050	ppb	7.450	2097	2	102.5	70	130	
Mn	55	2	72	1.410	ppb	15.216	617	1	141.0	70	130	>+/-30%
Fe	57	2	72	53.269	ppb	16.048	1120	50	106.5	70	130	
Co	59	2	72	1.078	ppb	11.184	1777	1	107.8	70	130	
Ni	60	2	72	2.142	ppb	12.691	1203	2	107.1	70	130	
Cu	63	2	72	2.065	ppb	6.624	3364	2	103.2	70	130	
Zn	66	2	72	11.144	ppb	6.830	2257	10	111.4	70	130	
As	75	2	72	5.031	ppb	8.745	616	5	100.6	70	130	
Se	78	1	72	5.283	ppb	4.886	852	5	105.7	70	130	
Sr	88	2	72	1.288	ppb	26.935	583	1	128.8	70	130	
Zr	90	2	72	43.225	ppb	20.140	273	0.5	8645.0	70	130	>+/-30%
Nb	93	2	72	10.380	ppb	6.493	23828	2	519.0	70	130	>+/-30%
Mo	95	2	115	1.682	ppb	2.402	1270	2	84.1	70	130	
Pd	105	2	115	0.043	ppb	37.336	70	1	4.3	70	130	>+/-30%
Ag	107	2	115	5.244	ppb	5.711	11719	5	104.9	70	130	
Cd	111	2	115	0.990	ppb	9.904	297	1	99.0	70	130	
Sn	120	2	115	10.423	ppb	3.787	8793	10	104.2	70	130	
Sb	121	2	115	2.282	ppb	5.877	1750	2	114.1	70	130	
Ba	137	2	115	1.111	ppb	13.819	287	1	111.1	70	130	
W	182	2	165	5.193	ppb	1.521	17188	1	519.3	70	130	>+/-30%
Pt	195	2	165	0.031	ppb	65.964	140	1	3.1	70	130	>+/-30%
Tl	205	2	165	1.090	ppb	2.064	6732	1	109.0	70	130	
Pb	208	2	165	1.108	ppb	4.891	9519	1	110.8	70	130	
Th	232	2	165	2.202	ppb	1.159	21435	2	110.1	70	130	
U	238	2	165	1.110	ppb	4.521	11619	1	111.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	448073	0.49	596260	75.15	60	120	
Sc (IS)	45	1	HMI H2	17396000	0.24	20835883	83.49	60	120	
Sc (IS)	45	2	HMI He	710395	0.36	823951	86.22	60	120	
Sc (IS)	45	3	No Gas	26773358	1.07	31260218	85.65	60	120	
Ge Internal Standard	72	1	HMI H2	6802419	0.40	8011210	84.91	60	120	
Ge Internal Standard	72	2	HMI He	804195	0.52	907478	88.62	60	120	
In Internal Standard	115	2	HMI He	2856400	1.66	3014874	94.74	60	120	
Ho-165	165	2	HMI He	13559427	0.40	14587244	92.95	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436754/1-A
Data File Name	241_BLK.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:42:03-07:00
Sample Type	Blank
Dilution	1
Comment	436754 6020
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-38.570	ppb	-6.737299167	67583	0.5
Li	7	2	45	-59.701	ppb	-7.420143756	3247	0.5
Li	7	3	45	-50.019	ppb	-7.349067202	1795498	10
Be	9	1	6	0.061	ppb	207.4061323	27	0.5
B	11	1	6	1.434	ppb	20.53540083	767	0.5
Na	23	1	45	-85.911	ppb	-0.428998899	91541	25
Na	23	2	45	-85.227	ppb	-3.551553664	7075	25
Mg	24	2	45	6.359	ppb	4.752627465	853	25
Al	27	2	45	-0.229	ppb	-601.2591707	127	15
K	39	1	45	-1393.806	ppb	-1.717160436	3808942	50
K	39	2	45	3.026	ppb	44.99737581	12536	50
Ca	40	1	45	3.194	ppb	8.66418428	64094	50
Ca	44	2	45	-12.142	ppb	-112.054804	33	25
Ti	47	2	45	0.387	ppb	173.2050808	7	0.5
V	51	2	72	-0.237	ppb	-128.6180968	1614	1
Cr	52	2	72	0.207	ppb	19.11675908	327	1
Mn	55	2	72	0.080	ppb	131.1223623	93	0.5
Fe	57	2	72	0.775	ppb	184.9185205	167	25
Co	59	2	72	0.001	ppb	771.8752294	17	0.5
Ni	60	2	72	-0.300	ppb	-3.960726593	77	1
Cu	63	2	72	-0.111	ppb	-24.64188289	660	1
Zn	66	2	72	0.857	ppb	43.39994903	520	5
As	75	2	72	-0.048	ppb	-133.3515486	16	1
Se	78	1	72	-0.156	ppb	-26.18479818	11	1
Sr	88	2	72	0.009	ppb	291.7513952	33	0.5
Zr	90	2	72	-1.353	ppb	-341.3058295	73	1
Nb	93	2	72	0.791	ppb	17.74752843	3561	2
Mo	95	2	115	-0.147	ppb	-29.15280865	47	0.5
Pd	105	2	115	-0.011	ppb	-49.41112725	13	1
Ag	107	2	115	-0.021	ppb	-12.6433758	13	1
Cd	111	2	115	0.011	ppb	173.2050808	3	0.5
Sn	120	2	115	-0.037	ppb	-36.46722943	180	1
Sb	121	2	115	0.027	ppb	126.9394206	73	0.6
Ba	137	2	115	0.039	ppb	173.2050808	10	0.5
W	182	2	165	0.071	ppb	41.64611062	1133	1
Pt	195	2	165	-0.010	ppb	-90.74639239	37	1
Tl	205	2	165	-0.001	ppb	-942.5577321	113	0.1
Pb	208	2	165	0.024	ppb	25.71363299	753	0.5
Th	232	2	165	0.013	ppb	44.51623091	430	1
U	238	2	165	0.005	ppb	26.12543747	207	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	430031	0.25	596260	72.12	60	120	
Sc (IS)	45	1	HMI H2	17042085	0.33	20835883	81.79	60	120	
Sc (IS)	45	2	HMI He	709223	1.02	823951	86.08	60	120	
Sc (IS)	45	3	No Gas	25208129	0.80	31260218	80.64	60	120	
Ge Internal Standard	72	1	HMI H2	6618114	0.75	8011210	82.61	60	120	
Ge Internal Standard	72	2	HMI He	800159	0.45	907478	88.17	60	120	
In Internal Standard	115	2	HMI He	2837900	0.58	3014874	94.13	60	120	
Ho-165	165	2	HMI He	13637731	0.27	14587244	93.49	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436754/2-A
Data File Name	242_LCS.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:45:52-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436754 6020
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	36.090	36.090	ppb	5.491	81310	400	9.0	80	120	>+/-20%
Li	7	2	45	12.573	12.573	ppb	454.855	3977	400	3.1	80	120	>+/-20%
Li	7	3	45	19.050	19.050	ppb	15.954	2152541	400	4.8	80	120	>+/-20%
Be	9	1	6	42.549	42.549	ppb	1.982	8499	40	106.4	80	120	
Na	23	2	45	-82.468	-82.468	ppb	-1.059	7569	40	-206.2	80	120	>+/-20%
Mg	24	2	45	5.741	5.741	ppb	42.671	807	40	14.4	80	120	>+/-20%
Al	27	2	45	413.954	413.954	ppb	2.549	9017	40	1034.9	80	120	>+/-20%
K	39	2	45	-6.405	-6.405	ppb	-63.055	12189	40	-16.0	80	120	>+/-20%
Ca	44	2	45	185.187	185.187	ppb	31.062	473	40	463.0	80	120	>+/-20%
V	51	2	72	39.112	39.112	ppb	0.575	31114	40	97.8	80	120	
Cr	52	2	72	39.529	39.529	ppb	0.864	38004	40	98.8	80	120	
Mn	55	2	72	43.021	43.021	ppb	4.654	16954	40	107.6	80	120	
Fe	57	2	72	416.044	416.044	ppb	1.958	7689	40	1040.1	80	120	>+/-20%
Co	59	2	72	40.371	40.371	ppb	1.382	65897	40	100.9	80	120	
Ni	60	2	72	39.997	39.997	ppb	0.902	18640	40	100.0	80	120	
Cu	63	2	72	41.140	41.140	ppb	0.854	51777	40	102.8	80	120	
Zn	66	2	72	41.157	41.157	ppb	2.838	7306	40	102.9	80	120	
As	75	2	72	38.759	38.759	ppb	6.421	4586	40	96.9	80	120	
Se	78	1	72	39.281	39.281	ppb	4.012	5968	40	98.2	80	120	
Nb	93	2	72	0.491	0.491	ppb	11.959	2940	40	1.2	80	120	>+/-20%
Mo	95	2	115	36.793	36.793	ppb	4.455	24455	40	92.0	80	120	
Pd	105	2	115	-0.014	-0.014	ppb	-65.661	10	40	0.0	80	120	>+/-20%
Ag	107	2	115	40.620	40.620	ppb	3.503	89357	40	101.5	80	120	
Cd	111	2	115	40.808	40.808	ppb	2.994	12096	40	102.0	80	120	
Sn	120	2	115	42.021	42.021	ppb	5.804	34400	40	105.1	80	120	
Sb	121	2	115	37.694	37.694	ppb	4.357	27765	40	94.2	80	120	
Ba	137	2	115	41.340	41.340	ppb	2.892	10541	40	103.3	80	120	
W	182	2	165	37.145	37.145	ppb	1.187	117975	40	92.9	80	120	
Pt	195	2	165	-0.017	-0.017	ppb	-40.160	20	40	0.0	80	120	>+/-20%
Tl	205	2	165	41.424	41.424	ppb	1.649	252634	40	103.6	80	120	
Pb	208	2	165	41.874	41.874	ppb	3.318	340996	40	104.7	80	120	
Th	232	2	165	41.263	41.263	ppb	2.048	398261	40	103.2	80	120	
U	238	2	165	41.158	41.158	ppb	2.622	427414	40	102.9	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	427505	0.75	596260	71.70	60	120	
Sc (IS)	45	1	HMI H2	16931281	0.89	20835883	81.26	60	120	
Sc (IS)	45	2	HMI He	710862	0.60	823951	86.27	60	120	
Sc (IS)	45	3	No Gas	25223497	0.12	31260218	80.69	60	120	
Ge Internal Standard	72	1	HMI H2	6645802	0.29	8011210	82.96	60	120	
Ge Internal Standard	72	2	HMI He	802923	1.17	907478	88.48	60	120	
In Internal Standard	115	2	HMI He	2823460	1.65	3014874	93.65	60	120	
Ho-165	165	2	HMI He	13629683	1.31	14587244	93.44	60	120	

Sample Report

Sample Table

Sample Name	280-116488-E-1-B
Data File Name	243SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:49:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	15.713	ppb	15.713	16.36	69501	500000	
Li	7	2	45	11.883	ppb	11.883	450.52	3597	500000	
Li	7	3	45	-13.754	ppb	-13.754	-26.86	1842248	50000	
Be	9	1	6	-0.011	ppb	-0.011	-558.06	10	2000	
B	11	1	6	32.868	ppb	32.868	8.28	6295	2000	
Na	23	1	45	410958.477	ppb	410958.477	3.25	797156841	2000	>LDR
Na	23	2	45	363780.564	ppb	363780.564	0.90	56676046	400000	
Mg	24	2	45	62614.826	ppb	62614.826	2.02	4395402	400000	
Al	27	2	45	1.393	ppb	1.393	41.38	147	400000	
K	39	1	45	17226.062	ppb	17226.062	2.62	38910398	400000	
K	39	2	45	17168.666	ppb	17168.666	1.81	630266	400000	
Ca	40	1	45	675149.766	ppb	675149.766	3.96	1916376558	400000	
Ca	44	2	45	698078.647	ppb	698078.647	2.09	1411031	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.786	ppb	-0.786	-5.00	1070	2000	
Cr	52	2	72	0.320	ppb	0.320	37.30	387	5000	
Mn	55	2	72	44.718	ppb	44.718	2.04	15619	10000	
Fe	57	2	72	74.164	ppb	74.164	4.18	1327	400000	
Co	59	2	72	0.348	ppb	0.348	19.95	517	2000	
Ni	60	2	72	0.994	ppb	0.994	29.60	597	5000	
Cu	63	2	72	0.411	ppb	0.411	32.93	1160	5000	
Zn	66	2	72	3.835	ppb	3.835	19.35	907	5000	
As	75	2	72	0.195	ppb	0.195	58.04	40	2000	
Se	78	1	72	175.784	ppb	175.784	2.09	23183	2000	
Sr	88	2	72	12622.554	ppb	12622.554	0.70	4800670	4000	
Zr	90	2	72	470.482	ppb	470.482	2.80	1937	1000	
Nb	93	2	72	0.283	ppb	0.283	33.71	2217	200	
Mo	95	2	115	0.094	ppb	0.094	73.51	183	2000	
Pd	105	2	115	0.257	ppb	0.257	36.72	260	100	
Ag	107	2	115	-0.003	ppb	-0.003	-803.81	47	100	
Cd	111	2	115	0.089	ppb	0.089	138.13	23	2000	
Sn	120	2	115	0.349	ppb	0.349	20.94	440	2000	
Sb	121	2	115	0.609	ppb	0.609	22.53	447	1000	
Ba	137	2	115	13.063	ppb	13.063	8.09	2970	5000	
W	182	2	165	0.183	ppb	0.183	40.79	1367	100	
Pt	195	2	165	-0.012	ppb	-0.012	-98.93	30	100	
Tl	205	2	165	0.023	ppb	0.023	28.42	240	2000	
Pb	208	2	165	0.055	ppb	0.055	29.70	927	5000	
Th	232	2	165	0.183	ppb	0.183	14.98	1910	2000	
U	238	2	165	42.901	ppb	42.901	0.41	409537	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	353646	2.73	596260	59.31	60	120	IS Failed
Sc (IS)	45	1	HMI H2	15194748	2.14	20835883	72.93	60	120	
Sc (IS)	45	2	HMI He	644109	0.73	823951	78.17	60	120	
Sc (IS)	45	3	No Gas	23426754	0.94	31260218	74.94	60	120	
Ge Internal Standard	72	1	HMI H2	5795533	1.90	8011210	72.34	60	120	
Ge Internal Standard	72	2	HMI He	711720	0.06	907478	78.43	60	120	
In Internal Standard	115	2	HMI He	2518005	0.64	3014874	83.52	60	120	
Ho-165	165	2	HMI He	12526493	0.49	14587244	85.87	60	120	

Sample Report

Sample Table

Sample Name	280-116375-B-1-B
Data File Name	244SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:53:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	410.451	ppb	410.451	2.92	133106	500000	
Li	7	2	45	383.797	ppb	383.797	5.28	6718	500000	
Li	7	3	45	333.611	ppb	333.611	1.09	3406999	50000	
Be	9	1	6	-0.005	ppb	-0.005	-1507.05	10	2000	
B	11	1	6	3146.577	ppb	3146.577	1.32	510676	2000	
Na	23	1	45	910695.779	ppb	910695.779	1.56	1719860294	2000	>LDR
Na	23	2	45	846691.732	ppb	846691.732	2.35	126981411	400000	
Mg	24	2	45	198946.383	ppb	198946.383	2.78	13445942	400000	
Al	27	2	45	126.571	ppb	126.571	13.02	2484	400000	
K	39	1	45	11499.332	ppb	11499.332	2.08	27248520	400000	
K	39	2	45	12020.988	ppb	12020.988	2.83	428147	400000	
Ca	40	1	45	645344.443	ppb	645344.443	1.64	1783867760	400000	
Ca	44	2	45	730700.051	ppb	730700.051	1.81	1422091	400000	
Ti	47	2	45	1.106	ppb	1.106	91.80	17	4000	
V	51	2	72	-0.280	ppb	-0.280	-122.13	1350	2000	
Cr	52	2	72	0.449	ppb	0.449	22.79	477	5000	
Mn	55	2	72	19.099	ppb	19.099	4.42	6438	10000	
Fe	57	2	72	159.088	ppb	159.088	10.79	2584	400000	
Co	59	2	72	0.272	ppb	0.272	9.62	390	2000	
Ni	60	2	72	6.437	ppb	6.437	8.73	2707	5000	
Cu	63	2	72	1.781	ppb	1.781	2.25	2560	5000	
Zn	66	2	72	8.596	ppb	8.596	10.82	1554	5000	
As	75	2	72	0.309	ppb	0.309	75.43	50	2000	
Se	78	1	72	1749.297	ppb	1749.297	0.95	222280	2000	
Sr	88	2	72	16563.239	ppb	16563.239	2.40	6051528	4000	
Zr	90	2	72	310.262	ppb	310.262	6.98	1250	1000	
Nb	93	2	72	0.325	ppb	0.325	59.94	2207	200	
Mo	95	2	115	24.935	ppb	24.935	3.43	14098	2000	
Pd	105	2	115	0.260	ppb	0.260	15.39	250	100	
Ag	107	2	115	0.034	ppb	0.034	24.19	113	100	
Cd	111	2	115	0.292	ppb	0.292	56.92	73	2000	
Sn	120	2	115	0.013	ppb	0.013	593.16	187	2000	
Sb	121	2	115	0.997	ppb	0.997	16.42	667	1000	
Ba	137	2	115	15.015	ppb	15.015	9.17	3247	5000	
W	182	2	165	0.031	ppb	0.031	37.87	890	100	
Pt	195	2	165	-0.020	ppb	-0.020	-22.33	10	100	
Tl	205	2	165	0.053	ppb	0.053	15.49	390	2000	
Pb	208	2	165	0.141	ppb	0.141	15.72	1510	5000	
Th	232	2	165	0.198	ppb	0.198	6.34	1957	2000	
U	238	2	165	17.802	ppb	17.802	1.02	163406	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	317881	1.70	596260	53.31	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14791196	1.39	20835883	70.99	60	120	
Sc (IS)	45	2	HMI He	620169	0.76	823951	75.27	60	120	
Sc (IS)	45	3	No Gas	22770158	0.20	31260218	72.84	60	120	
Ge Internal Standard	72	1	HMI H2	5589769	1.00	8011210	69.77	60	120	
Ge Internal Standard	72	2	HMI He	683732	0.61	907478	75.34	60	120	
In Internal Standard	115	2	HMI He	2393917	0.70	3014874	79.40	60	120	
Ho-165	165	2	HMI He	12038786	0.72	14587244	82.53	60	120	

Sample Report

Sample Table

Sample Name	280-116375-A-2-B
Data File Name	245SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T03:57:26-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-65.276	ppb	-65.276	-5.72	58040	500000	
Li	7	2	45	-43.801	ppb	-43.801	-80.74	3104	500000	
Li	7	3	45	-78.808	ppb	-78.808	-2.26	1535306	50000	
Be	9	1	6	-0.073	ppb	-0.073	0.00	0	2000	
B	11	1	6	71.991	ppb	71.991	2.66	13917	2000	
Na	23	1	45	1043.215	ppb	1043.215	13.78	2367915	2000	
Na	23	2	45	508.536	ppb	508.536	11.96	99215	400000	
Mg	24	2	45	47.488	ppb	47.488	22.87	3674	400000	
Al	27	2	45	1.376	ppb	1.376	168.92	147	400000	
K	39	1	45	-1469.048	ppb	-1469.048	-0.23	3388550	400000	
K	39	2	45	9.763	ppb	9.763	28.38	11662	400000	
Ca	40	1	45	445.247	ppb	445.247	22.74	1368209	400000	
Ca	44	2	45	158.762	ppb	158.762	50.56	377	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-1.132	ppb	-1.132	-5.31	880	2000	
Cr	52	2	72	0.172	ppb	0.172	41.41	273	5000	
Mn	55	2	72	0.446	ppb	0.446	22.40	220	10000	
Fe	57	2	72	16.313	ppb	16.313	5.01	417	400000	
Co	59	2	72	0.002	ppb	0.002	948.39	17	2000	
Ni	60	2	72	-0.195	ppb	-0.195	-53.21	117	5000	
Cu	63	2	72	0.056	ppb	0.056	138.72	807	5000	
Zn	66	2	72	1.255	ppb	1.255	33.07	547	5000	
As	75	2	72	-0.032	ppb	-0.032	-167.48	17	2000	
Se	78	1	72	0.945	ppb	0.945	18.35	168	2000	
Sr	88	2	72	3.571	ppb	3.571	8.54	1450	4000	
Zr	90	2	72	4.729	ppb	4.729	182.77	93	1000	
Nb	93	2	72	-0.215	ppb	-0.215	-38.30	1347	200	
Mo	95	2	115	-0.132	ppb	-0.132	-17.95	53	2000	
Pd	105	2	115	-0.024	ppb	-0.024	0.00	0	100	
Ag	107	2	115	-0.016	ppb	-0.016	-76.06	23	100	
Cd	111	2	115	0.012	ppb	0.012	173.21	3	2000	
Sn	120	2	115	0.048	ppb	0.048	290.54	233	2000	
Sb	121	2	115	0.029	ppb	0.029	201.82	70	1000	
Ba	137	2	115	2.258	ppb	2.258	5.05	543	5000	
W	182	2	165	0.031	ppb	0.031	126.38	963	100	
Pt	195	2	165	-0.011	ppb	-0.011	-23.13	33	100	
Tl	205	2	165	-0.001	ppb	-0.001	-801.62	110	2000	
Pb	208	2	165	0.019	ppb	0.019	57.42	687	5000	
Th	232	2	165	0.011	ppb	0.011	103.25	397	2000	
U	238	2	165	0.024	ppb	0.024	11.86	380	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	368280	0.37	596260	61.77	60	120	
Sc (IS)	45	1	HMI H2	15829979	0.39	20835883	75.97	60	120	
Sc (IS)	45	2	HMI He	645990	0.60	823951	78.40	60	120	
Sc (IS)	45	3	No Gas	23497609	0.55	31260218	75.17	60	120	
Ge Internal Standard	72	1	HMI H2	6309532	0.84	8011210	78.76	60	120	
Ge Internal Standard	72	2	HMI He	745443	0.89	907478	82.14	60	120	
In Internal Standard	115	2	HMI He	2663938	0.86	3014874	88.36	60	120	
Ho-165	165	2	HMI He	13036432	0.64	14587244	89.37	60	120	

Sample Report

Sample Table

Sample Name	280-116375-A-4-B
Data File Name	246SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:01:13-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	415.612	ppb	415.612	2.99	129335	500000	
Li	7	2	45	364.827	ppb	364.827	9.39	6422	500000	
Li	7	3	45	356.982	ppb	356.982	1.66	3333750	50000	
Be	9	1	6	0.142	ppb	0.142	84.35	30	2000	
B	11	1	6	3463.532	ppb	3463.532	2.22	526861	2000	
Na	23	1	45	969843.025	ppb	969843.025	0.69	1768665254	2000	>LDR
Na	23	2	45	867868.105	ppb	867868.105	1.26	127578451	400000	
Mg	24	2	45	205480.818	ppb	205480.818	1.20	13612282	400000	
Al	27	2	45	105.110	ppb	105.110	16.08	2040	400000	
K	39	1	45	12459.931	ppb	12459.931	0.75	28036041	400000	
K	39	2	45	12492.069	ppb	12492.069	0.56	435703	400000	
Ca	40	1	45	697201.822	ppb	697201.822	0.75	1861046906	400000	
Ca	44	2	45	746395.884	ppb	746395.884	0.40	1423895	400000	
Ti	47	2	45	2.691	ppb	2.691	65.82	40	4000	
V	51	2	72	-0.280	ppb	-0.280	-50.08	1327	2000	
Cr	52	2	72	0.497	ppb	0.497	24.42	507	5000	
Mn	55	2	72	18.570	ppb	18.570	3.25	6148	10000	
Fe	57	2	72	150.472	ppb	150.472	2.85	2407	400000	
Co	59	2	72	0.291	ppb	0.291	13.45	410	2000	
Ni	60	2	72	6.597	ppb	6.597	2.06	2720	5000	
Cu	63	2	72	2.213	ppb	2.213	10.14	2960	5000	
Zn	66	2	72	8.298	ppb	8.298	11.50	1483	5000	
As	75	2	72	0.146	ppb	0.146	97.41	33	2000	
Se	78	1	72	1919.193	ppb	1919.193	1.49	235569	2000	
Sr	88	2	72	17246.583	ppb	17246.583	0.91	6185991	4000	
Zr	90	2	72	171.166	ppb	171.166	13.87	707	1000	
Nb	93	2	72	-0.011	ppb	-0.011	-810.81	1574	200	
Mo	95	2	115	25.336	ppb	25.336	1.44	14161	2000	
Pd	105	2	115	0.347	ppb	0.347	19.49	323	100	
Ag	107	2	115	0.018	ppb	0.018	73.57	83	100	
Cd	111	2	115	0.311	ppb	0.311	60.38	77	2000	
Sn	120	2	115	0.036	ppb	0.036	283.50	200	2000	
Sb	121	2	115	0.868	ppb	0.868	3.48	580	1000	
Ba	137	2	115	15.858	ppb	15.858	7.15	3394	5000	
W	182	2	165	0.018	ppb	0.018	81.22	843	100	
Pt	195	2	165	-0.014	ppb	-0.014	-50.32	23	100	
Tl	205	2	165	0.043	ppb	0.043	21.88	333	2000	
Pb	208	2	165	0.167	ppb	0.167	8.49	1670	5000	
Th	232	2	165	0.155	ppb	0.155	25.59	1574	2000	
U	238	2	165	18.234	ppb	18.234	1.47	165214	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	297995	1.77	596260	49.98	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14281787	0.75	20835883	68.54	60	120	
Sc (IS)	45	2	HMI He	607863	0.88	823951	73.77	60	120	
Sc (IS)	45	3	No Gas	21591609	0.29	31260218	69.07	60	120	
Ge Internal Standard	72	1	HMI H2	5400303	1.85	8011210	67.41	60	120	
Ge Internal Standard	72	2	HMI He	671238	0.57	907478	73.97	60	120	
In Internal Standard	115	2	HMI He	2367174	2.02	3014874	78.52	60	120	
Ho-165	165	2	HMI He	11885356	0.97	14587244	81.48	60	120	

Sample Report

Sample Table

Sample Name	280-116410-A-6-C
Data File Name	247SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:05:06-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-71.019	ppb	-71.019	-5.74	56049	500000	
Li	7	2	45	-53.658	ppb	-53.658	-57.86	2970	500000	
Li	7	3	45	-81.502	ppb	-81.502	-8.41	1457987	50000	
Be	9	1	6	-0.073	ppb	-0.073	0.00	0	2000	
B	11	1	6	82.227	ppb	82.227	3.73	15098	2000	
Na	23	1	45	870.166	ppb	870.166	7.82	1983326	2000	
Na	23	2	45	542.357	ppb	542.357	6.42	102952	400000	
Mg	24	2	45	49.059	ppb	49.059	12.45	3727	400000	
Al	27	2	45	0.107	ppb	0.107	3433.04	120	400000	
K	39	1	45	-1503.970	ppb	-1503.970	-0.90	3262350	400000	
K	39	2	45	10.670	ppb	10.670	55.63	11525	400000	
Ca	40	1	45	274.014	ppb	274.014	16.64	846411	400000	
Ca	44	2	45	146.471	ppb	146.471	40.96	347	400000	
Ti	47	2	45	1.510	ppb	1.510	138.04	23	4000	
V	51	2	72	-1.259	ppb	-1.259	-11.90	777	2000	
Cr	52	2	72	0.200	ppb	0.200	16.42	293	5000	
Mn	55	2	72	0.243	ppb	0.243	35.12	143	10000	
Fe	57	2	72	3.249	ppb	3.249	38.35	193	400000	
Co	59	2	72	0.016	ppb	0.016	24.67	37	2000	
Ni	60	2	72	-0.166	ppb	-0.166	-50.26	127	5000	
Cu	63	2	72	1.026	ppb	1.026	10.66	1887	5000	
Zn	66	2	72	0.843	ppb	0.843	73.74	473	5000	
As	75	2	72	-0.004	ppb	-0.004	-881.49	20	2000	
Se	78	1	72	0.768	ppb	0.768	26.66	140	2000	
Sr	88	2	72	3.214	ppb	3.214	22.40	1283	4000	
Zr	90	2	72	-1.425	ppb	-1.425	-948.50	67	1000	
Nb	93	2	72	-0.378	ppb	-0.378	-31.55	1010	200	
Mo	95	2	115	-0.142	ppb	-0.142	-53.44	47	2000	
Pd	105	2	115	-0.021	ppb	-0.021	-28.71	3	100	
Ag	107	2	115	-0.012	ppb	-0.012	-38.90	30	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.482	ppb	0.482	26.12	567	2000	
Sb	121	2	115	-0.015	ppb	-0.015	-297.25	40	1000	
Ba	137	2	115	0.278	ppb	0.278	31.29	67	5000	
W	182	2	165	0.037	ppb	0.037	152.99	977	100	
Pt	195	2	165	-0.013	ppb	-0.013	-92.93	27	100	
Tl	205	2	165	-0.006	ppb	-0.006	-96.53	77	2000	
Pb	208	2	165	0.059	ppb	0.059	49.95	993	5000	
Th	232	2	165	0.006	ppb	0.006	83.10	347	2000	
U	238	2	165	0.021	ppb	0.021	6.76	347	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	350979	0.68	596260	58.86	60	120	IS Failed
Sc (IS)	45	1	HMI H2	15559912	0.80	20835883	74.68	60	120	
Sc (IS)	45	2	HMI He	636677	0.58	823951	77.27	60	120	
Sc (IS)	45	3	No Gas	22503758	0.12	31260218	71.99	60	120	
Ge Internal Standard	72	1	HMI H2	6189907	0.05	8011210	77.27	60	120	
Ge Internal Standard	72	2	HMI He	731697	0.16	907478	80.63	60	120	
In Internal Standard	115	2	HMI He	2658957	0.17	3014874	88.19	60	120	
Ho-165	165	2	HMI He	12992200	0.70	14587244	89.07	60	120	

Sample Report

Sample Table

Sample Name	280-116419-E-1-B
Data File Name	248SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:08:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-70.634	ppb	-70.634	-1.91	52790	500000	
Li	7	2	45	-70.320	ppb	-70.320	-38.95	2774	500000	
Li	7	3	45	-84.856	ppb	-84.856	-6.54	1400270	50000	
Be	9	1	6	-0.073	ppb	-0.073	0.00	0	2000	
B	11	1	6	254.066	ppb	254.066	1.48	41970	2000	
Na	23	1	45	529364.487	ppb	529364.487	0.64	989604999	2000	>LDR
Na	23	2	45	478621.125	ppb	478621.125	0.66	72499294	400000	
Mg	24	2	45	64970.262	ppb	64970.262	0.43	4434777	400000	
Al	27	2	45	79.889	ppb	79.889	10.01	1627	400000	
K	39	1	45	27131.209	ppb	27131.209	0.66	55703274	400000	
K	39	2	45	27052.381	ppb	27052.381	0.11	959357	400000	
Ca	40	1	45	29167.025	ppb	29167.025	0.02	79846189	400000	
Ca	44	2	45	28898.687	ppb	28898.687	1.53	56851	400000	
Ti	47	2	45	5.451	ppb	5.451	42.04	83	4000	
V	51	2	72	156.513	ppb	156.513	2.23	104248	2000	
Cr	52	2	72	4.823	ppb	4.823	1.54	4157	5000	
Mn	55	2	72	0.832	ppb	0.832	24.98	340	10000	
Fe	57	2	72	62.190	ppb	62.190	8.68	1120	400000	
Co	59	2	72	0.087	ppb	0.087	47.30	137	2000	
Ni	60	2	72	0.641	ppb	0.641	15.15	447	5000	
Cu	63	2	72	0.686	ppb	0.686	3.81	1443	5000	
Zn	66	2	72	3.217	ppb	3.217	52.67	803	5000	
As	75	2	72	1.423	ppb	1.423	7.49	166	2000	
Se	78	1	72	1.661	ppb	1.661	34.89	245	2000	
Sr	88	2	72	403.308	ppb	403.308	1.25	151447	4000	
Zr	90	2	72	57.100	ppb	57.100	13.08	293	1000	
Nb	93	2	72	-0.343	ppb	-0.343	-23.53	1033	200	
Mo	95	2	115	6.688	ppb	6.688	7.57	4021	2000	
Pd	105	2	115	0.001	ppb	0.001	1122.98	23	100	
Ag	107	2	115	-0.005	ppb	-0.005	-69.29	43	100	
Cd	111	2	115	0.013	ppb	0.013	173.21	3	2000	
Sn	120	2	115	0.035	ppb	0.035	444.16	210	2000	
Sb	121	2	115	0.015	ppb	0.015	61.04	57	1000	
Ba	137	2	115	8.891	ppb	8.891	9.69	1997	5000	
W	182	2	165	1.218	ppb	1.218	2.64	4304	100	
Pt	195	2	165	-0.017	ppb	-0.017	-28.90	17	100	
Tl	205	2	165	0.003	ppb	0.003	204.09	123	2000	
Pb	208	2	165	0.009	ppb	0.009	160.31	577	5000	
Th	232	2	165	0.025	ppb	0.025	66.75	500	2000	
U	238	2	165	0.242	ppb	0.242	4.39	2414	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	321153	1.08	596260	53.86	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14638238	0.30	20835883	70.25	60	120	
Sc (IS)	45	2	HMI He	626263	0.14	823951	76.01	60	120	
Sc (IS)	45	3	No Gas	21845107	0.47	31260218	69.88	60	120	
Ge Internal Standard	72	1	HMI H2	5711058	0.61	8011210	71.29	60	120	
Ge Internal Standard	72	2	HMI He	702631	0.56	907478	77.43	60	120	
In Internal Standard	115	2	HMI He	2487525	0.80	3014874	82.51	60	120	
Ho-165	165	2	HMI He	12353614	0.46	14587244	84.69	60	120	

Sample Report

Sample Table

Sample Name	280-116419-E-2-B
Data File Name	249SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:12:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-64.830	ppb	-64.830	-13.05	52800	500000	
Li	7	2	45	-56.146	ppb	-56.146	-73.30	2820	500000	
Li	7	3	45	-78.395	ppb	-78.395	-1.25	1404494	50000	
Be	9	1	6	-0.073	ppb	-0.073	0.00	0	2000	
B	11	1	6	274.516	ppb	274.516	2.75	43795	2000	
Na	23	1	45	604465.963	ppb	604465.963	0.20	1110199263	2000	>LDR
Na	23	2	45	542738.987	ppb	542738.987	0.63	80015640	400000	
Mg	24	2	45	76913.824	ppb	76913.824	0.79	5109895	400000	
Al	27	2	45	239.852	ppb	239.852	5.17	4528	400000	
K	39	1	45	31873.596	ppb	31873.596	0.30	63293146	400000	
K	39	2	45	31178.902	ppb	31178.902	0.65	1074546	400000	
Ca	40	1	45	37605.688	ppb	37605.688	0.29	101131992	400000	
Ca	44	2	45	36697.041	ppb	36697.041	2.59	70252	400000	
Ti	47	2	45	12.783	ppb	12.783	24.46	190	4000	
V	51	2	72	157.044	ppb	157.044	1.96	103512	2000	
Cr	52	2	72	7.215	ppb	7.215	6.41	6102	5000	
Mn	55	2	72	7.488	ppb	7.488	1.56	2600	10000	
Fe	57	2	72	218.122	ppb	218.122	9.66	3554	400000	
Co	59	2	72	0.173	ppb	0.173	28.34	257	2000	
Ni	60	2	72	0.727	ppb	0.727	13.23	477	5000	
Cu	63	2	72	6.273	ppb	6.273	5.55	7426	5000	
Zn	66	2	72	2.354	ppb	2.354	15.91	670	5000	
As	75	2	72	1.285	ppb	1.285	12.91	150	2000	
Se	78	1	72	2.795	ppb	2.795	1.40	384	2000	
Sr	88	2	72	467.299	ppb	467.299	0.67	173687	4000	
Zr	90	2	72	177.378	ppb	177.378	19.26	757	1000	
Nb	93	2	72	-0.307	ppb	-0.307	-12.66	1090	200	
Mo	95	2	115	10.031	ppb	10.031	1.29	5865	2000	
Pd	105	2	115	0.006	ppb	0.006	489.15	27	100	
Ag	107	2	115	-0.020	ppb	-0.020	-30.30	13	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.093	ppb	0.093	7.70	247	2000	
Sb	121	2	115	0.059	ppb	0.059	82.38	83	1000	
Ba	137	2	115	14.297	ppb	14.297	4.34	3157	5000	
W	182	2	165	1.247	ppb	1.247	7.65	4264	100	
Pt	195	2	165	-0.017	ppb	-0.017	-40.32	17	100	
Tl	205	2	165	0.010	ppb	0.010	112.58	157	2000	
Pb	208	2	165	0.169	ppb	0.169	5.54	1703	5000	
Th	232	2	165	0.069	ppb	0.069	18.00	863	2000	
U	238	2	165	0.342	ppb	0.342	2.13	3264	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	310366	1.16	596260	52.05	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14382032	0.25	20835883	69.03	60	120	
Sc (IS)	45	2	HMI He	609550	0.50	823951	73.98	60	120	
Sc (IS)	45	3	No Gas	21467671	0.22	31260218	68.67	60	120	
Ge Internal Standard	72	1	HMI H2	5591304	0.30	8011210	69.79	60	120	
Ge Internal Standard	72	2	HMI He	695472	0.93	907478	76.64	60	120	
In Internal Standard	115	2	HMI He	2444475	0.49	3014874	81.08	60	120	
Ho-165	165	2	HMI He	12008713	1.27	14587244	82.32	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	250_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:16:32-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	435.168	ppb	2.219	141858	500	87.0	90	110	>+\-10%
Li	7	2	45	471.144	ppb	8.971	7499	500	94.2	90	110	
Li	7	3	45	387.166	ppb	0.579	3646231	500	77.4	90	110	>+\-10%
Be	9	1	6	62.532	ppb	5.615	10401	50	125.1	90	110	>+\-10%
B	11	1	6	79.381	ppb	3.602	14805	50	158.8	90	110	>+\-10%
Na	23	1	45	6365.697	ppb	1.633	12681111	5000	127.3	90	110	>+\-10%
Na	23	2	45	5691.688	ppb	0.895	874284	5000	113.8	90	110	>+\-10%
Mg	24	2	45	5478.816	ppb	1.282	371365	5000	109.6	90	110	
Al	27	2	45	5693.406	ppb	1.029	106930	5000	113.9	90	110	>+\-10%
K	39	1	45	6079.673	ppb	0.336	17771356	5000	121.6	90	110	>+\-10%
K	39	2	45	5803.553	ppb	1.132	212762	5000	116.1	90	110	>+\-10%
Ca	40	1	45	5951.386	ppb	1.150	17061523	5000	119.0	90	110	>+\-10%
Ca	44	2	45	5890.568	ppb	4.715	11538	5000	117.8	90	110	>+\-10%
Ti	47	2	45	59.822	ppb	7.860	907	50	119.6	90	110	>+\-10%
V	51	2	72	54.788	ppb	2.669	38138	50	109.6	90	110	
Cr	52	2	72	54.315	ppb	0.990	46419	50	108.6	90	110	
Mn	55	2	72	56.780	ppb	2.444	19891	50	113.6	90	110	>+\-10%
Fe	57	2	72	5530.955	ppb	1.826	89283	5000	110.6	90	110	>+\-10%
Co	59	2	72	55.081	ppb	1.183	79990	50	110.2	90	110	>+\-10%
Ni	60	2	72	54.586	ppb	0.899	22562	50	109.2	90	110	
Cu	63	2	72	56.379	ppb	2.613	62871	50	112.8	90	110	>+\-10%
Zn	66	2	72	57.419	ppb	3.474	8933	50	114.8	90	110	>+\-10%
As	75	2	72	58.140	ppb	4.267	6113	50	116.3	90	110	>+\-10%
Se	78	1	72	58.792	ppb	3.718	8124	50	117.6	90	110	>+\-10%
Sr	88	2	72	62.289	ppb	1.128	23804	50	124.6	90	110	>+\-10%
Zr	90	2	72	226.712	ppb	16.250	973	50	453.4	90	110	>+\-10%
Nb	93	2	72	102.849	ppb	0.495	194647	100	102.8	90	110	
Mo	95	2	115	51.552	ppb	0.446	30818	50	103.1	90	110	
Pd	105	2	115	52.877	ppb	2.089	49451	50	105.8	90	110	
Ag	107	2	115	53.874	ppb	0.906	106756	50	107.7	90	110	
Cd	111	2	115	55.356	ppb	1.319	14775	50	110.7	90	110	>+\-10%
Sn	120	2	115	56.260	ppb	0.653	41439	50	112.5	90	110	>+\-10%
Sb	121	2	115	55.827	ppb	1.950	37024	50	111.7	90	110	>+\-10%
Ba	137	2	115	56.366	ppb	6.052	12947	50	112.7	90	110	>+\-10%
W	182	2	165	54.936	ppb	0.783	158955	50	109.9	90	110	
Pt	195	2	165	54.448	ppb	2.345	126464	50	108.9	90	110	
Tl	205	2	165	57.888	ppb	1.386	322402	50	115.8	90	110	>+\-10%
Pb	208	2	165	58.175	ppb	0.174	432540	50	116.3	90	110	>+\-10%
Th	232	2	165	58.238	ppb	1.768	513286	50	116.5	90	110	>+\-10%
U	238	2	165	58.308	ppb	0.924	553019	50	116.6	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	356276	0.96	596260	59.75	60	120	IS Failed
Sc (IS)	45	1	HMI H2	15294545	0.27	20835883	73.40	60	120	
Sc (IS)	45	2	HMI He	621445	0.82	823951	75.42	60	120	
Sc (IS)	45	3	No Gas	22707851	0.50	31260218	72.64	60	120	
Ge Internal Standard	72	1	HMI H2	6055761	0.53	8011210	75.59	60	120	
Ge Internal Standard	72	2	HMI He	714371	0.15	907478	78.72	60	120	
In Internal Standard	115	2	HMI He	2542882	0.21	3014874	84.34	60	120	
Ho-165	165	2	HMI He	12446923	0.29	14587244	85.33	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	251_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:20:20-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-58.072	ppb	-9.9	1600718	10	
Be	9	1	6	-0.015	ppb	-383.0	10	0.5	
B	11	1	6	12.241	ppb	12.2	2724	0.5	>RL
Na	23	1	45	337.557	ppb	3.2	916786	25	>RL
Na	23	2	45	258.504	ppb	6.0	59593	25	>RL
Mg	24	2	45	38.299	ppb	13.2	2997	25	>RL
Al	27	2	45	2.642	ppb	84.1	170	15	
K	39	1	45	230.114	ppb	10.1	6591801	50	>RL
K	39	2	45	26.214	ppb	42.6	12146	50	
Ca	40	1	45	47.360	ppb	1.5	185324	50	
Ca	44	2	45	26.078	ppb	79.8	107	25	>RL
Ti	47	2	45	0.431	ppb	173.2	7	0.5	
V	51	2	72	0.004	ppb	2763.9	1644	1	
Cr	52	2	72	0.062	ppb	136.7	173	1	
Mn	55	2	72	0.000	ppb	88335.7	57	0.5	
Fe	57	2	72	0.193	ppb	1707.7	143	25	
Co	59	2	72	0.038	ppb	64.1	70	0.5	
Ni	60	2	72	0.017	ppb	615.0	203	1	
Cu	63	2	72	0.024	ppb	414.7	757	1	
Zn	66	2	72	-0.768	ppb	-33.1	227	5	
As	75	2	72	0.056	ppb	147.9	26	1	
Se	78	1	72	0.121	ppb	82.7	48	1	
Sr	88	2	72	0.578	ppb	29.2	253	0.5	>RL
Zr	90	2	72	-7.170	ppb	-71.5	43	1	
Nb	93	2	72	5.075	ppb	4.5	11512	2	>RL
Mo	95	2	115	-0.094	ppb	-54.0	77	0.5	
Pd	105	2	115	0.048	ppb	22.3	70	1	
Ag	107	2	115	-0.014	ppb	-70.7	27	1	
Cd	111	2	115	0.048	ppb	42.9	13	0.5	
Sn	120	2	115	-0.053	ppb	-89.3	157	1	
Sb	121	2	115	0.346	ppb	11.4	290	0.6	
Ba	137	2	115	0.083	ppb	86.6	20	0.5	
W	182	2	165	0.216	ppb	18.7	1487	1	
Pt	195	2	165	0.002	ppb	566.4	63	1	
Tl	205	2	165	0.019	ppb	28.5	217	0.1	
Pb	208	2	165	0.032	ppb	31.6	767	0.5	
Th	232	2	165	0.062	ppb	20.3	847	1	
U	238	2	165	0.082	ppb	17.3	937	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	373199	0.26	596260	62.59	60	120	
Sc (IS)	45	1	HMI H2	15422736	0.66	20835883	74.02	60	120	
Sc (IS)	45	2	HMI He	640267	0.89	823951	77.71	60	120	
Sc (IS)	45	3	No Gas	23007555	0.52	31260218	73.60	60	120	
Ge Internal Standard	72	1	HMI H2	6074993	0.48	8011210	75.83	60	120	
Ge Internal Standard	72	2	HMI He	733177	0.51	907478	80.79	60	120	
In Internal Standard	115	2	HMI He	2660212	0.61	3014874	88.24	60	120	
Ho-165	165	2	HMI He	12733241	0.38	14587244	87.29	60	120	

Sample Table

Sample Name	280-116419-E-3-B
Data File Name	252SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:24:08-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-53.984	ppb	-53.984	-7.09	53764	500000	
Li	7	2	45	-87.712	ppb	-87.712	-22.59	2557	500000	
Li	7	3	45	-71.313	ppb	-71.313	-7.13	1400542	50000	
Be	9	1	6	0.018	ppb	0.018	430.58	13	2000	
B	11	1	6	269.117	ppb	269.117	1.61	43628	2000	
Na	23	1	45	634248.355	ppb	634248.355	0.66	1148130116	2000	>LDR
Na	23	2	45	572025.429	ppb	572025.429	0.79	84539545	400000	
Mg	24	2	45	78895.374	ppb	78895.374	0.86	5254379	400000	
Al	27	2	45	114.028	ppb	114.028	4.42	2217	400000	
K	39	1	45	32864.024	ppb	32864.024	0.36	64144974	400000	
K	39	2	45	32524.281	ppb	32524.281	0.34	1123251	400000	
Ca	40	1	45	37539.186	ppb	37539.186	0.56	99500822	400000	
Ca	44	2	45	37958.745	ppb	37958.745	1.76	72841	400000	
Ti	47	2	45	2.010	ppb	2.010	32.89	30	4000	
V	51	2	72	152.899	ppb	152.899	1.35	99202	2000	
Cr	52	2	72	8.256	ppb	8.256	2.95	6852	5000	
Mn	55	2	72	3.217	ppb	3.217	11.97	1130	10000	
Fe	57	2	72	88.038	ppb	88.038	6.86	1490	400000	
Co	59	2	72	0.089	ppb	0.089	16.62	137	2000	
Ni	60	2	72	0.925	ppb	0.925	38.90	547	5000	
Cu	63	2	72	0.845	ppb	0.845	7.58	1574	5000	
Zn	66	2	72	5.385	ppb	5.385	25.32	1093	5000	
As	75	2	72	1.291	ppb	1.291	33.21	148	2000	
Se	78	1	72	2.689	ppb	2.689	5.47	364	2000	
Sr	88	2	72	510.305	ppb	510.305	0.83	186615	4000	
Zr	90	2	72	8.482	ppb	8.482	95.25	100	1000	
Nb	93	2	72	4.276	ppb	4.276	10.69	9310	200	
Mo	95	2	115	8.737	ppb	8.737	1.73	5121	2000	
Pd	105	2	115	0.021	ppb	0.021	94.31	40	100	
Ag	107	2	115	-0.009	ppb	-0.009	-84.78	33	100	
Cd	111	2	115	0.013	ppb	0.013	173.21	3	2000	
Sn	120	2	115	0.230	ppb	0.230	49.29	343	2000	
Sb	121	2	115	0.200	ppb	0.200	24.19	173	1000	
Ba	137	2	115	14.229	ppb	14.229	5.41	3141	5000	
W	182	2	165	1.241	ppb	1.241	5.50	4251	100	
Pt	195	2	165	-0.005	ppb	-0.005	-423.43	43	100	
Tl	205	2	165	0.008	ppb	0.008	109.77	147	2000	
Pb	208	2	165	0.162	ppb	0.162	11.30	1653	5000	
Th	232	2	165	0.084	ppb	0.084	4.76	983	2000	
U	238	2	165	0.313	ppb	0.313	7.72	3000	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	315282	0.57	596260	52.88	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14174909	0.29	20835883	68.03	60	120	
Sc (IS)	45	2	HMI He	611060	0.58	823951	74.16	60	120	
Sc (IS)	45	3	No Gas	20943353	0.26	31260218	67.00	60	120	
Ge Internal Standard	72	1	HMI H2	5490861	0.82	8011210	68.54	60	120	
Ge Internal Standard	72	2	HMI He	684222	0.81	907478	75.40	60	120	
In Internal Standard	115	2	HMI He	2443108	0.36	3014874	81.04	60	120	
Ho-165	165	2	HMI He	12011472	0.83	14587244	82.34	60	120	

Sample Report

Sample Table

Sample Name	280-116419-E-4-B
Data File Name	253SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:27:58-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-63.423	ppb	-63.423	-9.92	49646	500000	
Li	7	2	45	-44.955	ppb	-44.955	-28.25	2764	500000	
Li	7	3	45	-72.147	ppb	-72.147	-4.22	1348177	50000	
Be	9	1	6	-0.025	ppb	-0.025	-168.27	7	2000	
B	11	1	6	279.050	ppb	279.050	2.50	42859	2000	
Na	23	1	45	653048.572	ppb	653048.572	0.97	1122957183	2000	>LDR
Na	23	2	45	598036.259	ppb	598036.259	1.78	83524942	400000	
Mg	24	2	45	83905.286	ppb	83905.286	0.99	5281246	400000	
Al	27	2	45	186.986	ppb	186.986	2.45	3367	400000	
K	39	1	45	34206.222	ppb	34206.222	0.74	63203907	400000	
K	39	2	45	34035.543	ppb	34035.543	1.60	1110362	400000	
Ca	40	1	45	39426.969	ppb	39426.969	0.53	99271962	400000	
Ca	44	2	45	39759.759	ppb	39759.759	0.99	72111	400000	
Ti	47	2	45	3.789	ppb	3.789	71.22	53	4000	
V	51	2	72	507.140	ppb	507.140	1.31	310043	2000	
Cr	52	2	72	7908.979	ppb	7908.979	0.01	6151734	5000	
Mn	55	2	72	154.641	ppb	154.641	0.80	49342	10000	
Fe	57	2	72	24887.938	ppb	24887.938	0.64	366111	400000	
Co	59	2	72	16.491	ppb	16.491	4.35	21861	2000	
Ni	60	2	72	626.996	ppb	626.996	0.15	234613	5000	
Cu	63	2	72	63.449	ppb	63.449	1.29	64474	5000	
Zn	66	2	72	7.007	ppb	7.007	18.37	1263	5000	
As	75	2	72	4.748	ppb	4.748	3.77	472	2000	
Se	78	1	72	2.402	ppb	2.402	13.73	312	2000	
Sr	88	2	72	530.433	ppb	530.433	1.13	184770	4000	
Zr	90	2	72	24.450	ppb	24.450	47.40	153	1000	
Nb	93	2	72	4.458	ppb	4.458	8.21	9177	200	
Mo	95	2	115	76.811	ppb	76.811	1.49	41960	2000	
Pd	105	2	115	0.003	ppb	0.003	410.27	23	100	
Ag	107	2	115	-0.018	ppb	-0.018	-17.82	17	100	
Cd	111	2	115	0.096	ppb	0.096	89.26	23	2000	
Sn	120	2	115	3.379	ppb	3.379	9.13	2440	2000	
Sb	121	2	115	0.549	ppb	0.549	13.72	377	1000	
Ba	137	2	115	16.356	ppb	16.356	4.99	3437	5000	
W	182	2	165	10.344	ppb	10.344	2.52	28331	100	
Pt	195	2	165	-0.017	ppb	-0.017	-42.68	17	100	
Tl	205	2	165	-0.002	ppb	-0.002	-441.37	90	2000	
Pb	208	2	165	0.543	ppb	0.543	3.19	4207	5000	
Th	232	2	165	0.054	ppb	0.054	26.01	700	2000	
U	238	2	165	0.602	ppb	0.602	3.94	5411	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	298855	1.75	596260	50.12	60	120	IS Failed
Sc (IS)	45	1	HMI H2	13465996	0.87	20835883	64.63	60	120	
Sc (IS)	45	2	HMI He	577538	1.02	823951	70.09	60	120	
Sc (IS)	45	3	No Gas	20212611	0.28	31260218	64.66	60	120	
Ge Internal Standard	72	1	HMI H2	5223849	0.64	8011210	65.21	60	120	
Ge Internal Standard	72	2	HMI He	651787	0.52	907478	71.82	60	120	
In Internal Standard	115	2	HMI He	2326949	0.75	3014874	77.18	60	120	
Ho-165	165	2	HMI He	11522865	0.73	14587244	78.99	60	120	

Sample Report

Sample Table

Sample Name	280-116419-E-5-B
Data File Name	254SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:31:48-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-64.615	ppb	-64.615	-12.16	52650	500000	
Li	7	2	45	-47.956	ppb	-47.956	-30.21	2917	500000	
Li	7	3	45	-75.892	ppb	-75.892	-2.16	1416876	50000	
Be	9	1	6	-0.051	ppb	-0.051	-71.38	3	2000	
B	11	1	6	12.984	ppb	12.984	5.49	2560	2000	
Na	23	1	45	1081.591	ppb	1081.591	5.33	2213356	2000	
Na	23	2	45	771.420	ppb	771.420	4.69	133473	400000	
Mg	24	2	45	28.323	ppb	28.323	25.88	2210	400000	
Al	27	2	45	14.126	ppb	14.126	50.33	377	400000	
K	39	1	45	-1362.475	ppb	-1362.475	-1.16	3259186	400000	
K	39	2	45	53.315	ppb	53.315	28.45	12596	400000	
Ca	40	1	45	141.203	ppb	141.203	1.24	423552	400000	
Ca	44	2	45	126.674	ppb	126.674	19.01	297	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-1.095	ppb	-1.095	-26.78	853	2000	
Cr	52	2	72	1.257	ppb	1.257	17.10	1167	5000	
Mn	55	2	72	0.920	ppb	0.920	19.46	370	10000	
Fe	57	2	72	16.804	ppb	16.804	39.73	400	400000	
Co	59	2	72	0.005	ppb	0.005	242.19	20	2000	
Ni	60	2	72	-0.029	ppb	-0.029	-325.89	177	5000	
Cu	63	2	72	-0.002	ppb	-0.002	-1266.30	697	5000	
Zn	66	2	72	1.291	ppb	1.291	65.57	520	5000	
As	75	2	72	-0.054	ppb	-0.054	-61.97	14	2000	
Se	78	1	72	0.136	ppb	0.136	106.71	47	2000	
Sr	88	2	72	0.216	ppb	0.216	71.45	107	4000	
Zr	90	2	72	-5.872	ppb	-5.872	-132.49	47	1000	
Nb	93	2	72	1.266	ppb	1.266	23.81	4001	200	
Mo	95	2	115	0.013	ppb	0.013	802.63	137	2000	
Pd	105	2	115	-0.020	ppb	-0.020	-30.39	3	100	
Ag	107	2	115	-0.020	ppb	-0.020	-38.07	13	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.459	ppb	0.459	51.99	523	2000	
Sb	121	2	115	-0.052	ppb	-0.052	-16.63	13	1000	
Ba	137	2	115	1.832	ppb	1.832	12.95	420	5000	
W	182	2	165	0.130	ppb	0.130	16.50	1193	100	
Pt	195	2	165	-0.016	ppb	-0.016	-27.70	20	100	
Tl	205	2	165	0.005	ppb	0.005	135.32	133	2000	
Pb	208	2	165	0.036	ppb	0.036	36.81	773	5000	
Th	232	2	165	0.014	ppb	0.014	83.41	397	2000	
U	238	2	165	-0.004	ppb	-0.004	-54.35	97	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	333616	1.20	596260	55.95	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14330244	0.47	20835883	68.78	60	120	
Sc (IS)	45	2	HMI He	614797	0.47	823951	74.62	60	120	
Sc (IS)	45	3	No Gas	21489019	0.46	31260218	68.74	60	120	
Ge Internal Standard	72	1	HMI H2	5646552	0.59	8011210	70.48	60	120	
Ge Internal Standard	72	2	HMI He	702118	0.29	907478	77.37	60	120	
In Internal Standard	115	2	HMI He	2536764	0.33	3014874	84.14	60	120	
Ho-165	165	2	HMI He	12311726	0.48	14587244	84.40	60	120	

Sample Report

Sample Table

Sample Name	280-116419-E-6-B
Data File Name	255SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:35:35-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-60.476	ppb	-60.476	-5.67	50332	500000	
Li	7	2	45	-45.432	ppb	-45.432	-79.72	2774	500000	
Li	7	3	45	-68.597	ppb	-68.597	-6.82	1380481	50000	
Be	9	1	6	-0.025	ppb	-0.025	-168.09	7	2000	
B	11	1	6	270.548	ppb	270.548	1.75	41569	2000	
Na	23	1	45	657826.827	ppb	657826.827	1.34	1136558010	2000	>LDR
Na	23	2	45	597611.082	ppb	597611.082	0.73	83855200	400000	
Mg	24	2	45	83802.231	ppb	83802.231	0.49	5299127	400000	
Al	27	2	45	183.464	ppb	183.464	18.56	3324	400000	
K	39	1	45	34367.485	ppb	34367.485	1.43	63777276	400000	
K	39	2	45	34133.890	ppb	34133.890	0.96	1118761	400000	
Ca	40	1	45	39687.905	ppb	39687.905	0.91	100402635	400000	
Ca	44	2	45	40266.700	ppb	40266.700	0.78	73364	400000	
Ti	47	2	45	5.659	ppb	5.659	45.67	80	4000	
V	51	2	72	498.163	ppb	498.163	0.23	304049	2000	
Cr	52	2	72	7606.640	ppb	7606.640	0.12	5905951	5000	
Mn	55	2	72	155.254	ppb	155.254	0.63	49448	10000	
Fe	57	2	72	24436.170	ppb	24436.170	0.31	358832	400000	
Co	59	2	72	16.184	ppb	16.184	3.03	21413	2000	
Ni	60	2	72	625.842	ppb	625.842	0.17	233763	5000	
Cu	63	2	72	62.427	ppb	62.427	2.37	63329	5000	
Zn	66	2	72	14.159	ppb	14.159	11.86	2237	5000	
As	75	2	72	4.735	ppb	4.735	12.80	470	2000	
Se	78	1	72	2.968	ppb	2.968	14.60	381	2000	
Sr	88	2	72	538.603	ppb	538.603	0.91	187278	4000	
Zr	90	2	72	37.355	ppb	37.355	26.33	200	1000	
Nb	93	2	72	3.071	ppb	3.071	11.96	6792	200	
Mo	95	2	115	74.211	ppb	74.211	1.87	40352	2000	
Pd	105	2	115	0.019	ppb	0.019	248.01	37	100	
Ag	107	2	115	-0.014	ppb	-0.014	-61.32	23	100	
Cd	111	2	115	0.096	ppb	0.096	23.95	23	2000	
Sn	120	2	115	3.249	ppb	3.249	12.80	2340	2000	
Sb	121	2	115	0.564	ppb	0.564	35.95	383	1000	
Ba	137	2	115	17.151	ppb	17.151	7.85	3587	5000	
W	182	2	165	9.796	ppb	9.796	1.92	26781	100	
Pt	195	2	165	-0.007	ppb	-0.007	-129.90	37	100	
Tl	205	2	165	0.009	ppb	0.009	201.47	147	2000	
Pb	208	2	165	0.867	ppb	0.867	1.21	6414	5000	
Th	232	2	165	0.025	ppb	0.025	8.68	460	2000	
U	238	2	165	0.597	ppb	0.597	13.81	5351	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	298812	0.21	596260	50.11	60	120	IS Failed
Sc (IS)	45	1	HMI H2	13529964	0.65	20835883	64.94	60	120	
Sc (IS)	45	2	HMI He	580180	0.68	823951	70.41	60	120	
Sc (IS)	45	3	No Gas	20475396	0.78	31260218	65.50	60	120	
Ge Internal Standard	72	1	HMI H2	5247710	0.74	8011210	65.50	60	120	
Ge Internal Standard	72	2	HMI He	650619	0.35	907478	71.70	60	120	
In Internal Standard	115	2	HMI He	2316149	0.79	3014874	76.82	60	120	
Ho-165	165	2	HMI He	11482890	0.90	14587244	78.72	60	120	

Sample Report

Sample Table

Sample Name	280-116334-E-2-D
Data File Name	256SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:39:26-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-32.129	ppb	-32.129	-37.01	57019	500000	
Li	7	2	45	-5.059	ppb	-5.059	-877.65	3197	500000	
Li	7	3	45	-49.683	ppb	-49.683	-3.30	1521404	50000	
Be	9	1	6	-0.050	ppb	-0.050	-76.97	3	2000	
B	11	1	6	571.497	ppb	571.497	0.95	93752	2000	
Na	23	1	45	121970.722	ppb	121970.722	1.61	220169470	2000	>LDR
Na	23	2	45	110299.034	ppb	110299.034	0.49	15960478	400000	
Mg	24	2	45	36120.729	ppb	36120.729	0.95	2353421	400000	
Al	27	2	45	49.443	ppb	49.443	9.80	1003	400000	
K	39	1	45	18602.271	ppb	18602.271	1.31	38619703	400000	
K	39	2	45	19275.194	ppb	19275.194	0.55	655431	400000	
Ca	40	1	45	31252.482	ppb	31252.482	1.52	82541265	400000	
Ca	44	2	45	33764.925	ppb	33764.925	0.97	63392	400000	
Ti	47	2	45	1.372	ppb	1.372	99.86	20	4000	
V	51	2	72	0.627	ppb	0.627	2.73	1924	2000	
Cr	52	2	72	2.398	ppb	2.398	2.59	2060	5000	
Mn	55	2	72	73.637	ppb	73.637	3.68	24592	10000	
Fe	57	2	72	2132.523	ppb	2132.523	2.03	32912	400000	
Co	59	2	72	1.878	ppb	1.878	9.55	2614	2000	
Ni	60	2	72	19.862	ppb	19.862	3.48	7946	5000	
Cu	63	2	72	3.242	ppb	3.242	13.32	4087	5000	
Zn	66	2	72	15.010	ppb	15.010	11.48	2464	5000	
As	75	2	72	1.768	ppb	1.768	9.80	195	2000	
Se	78	1	72	0.239	ppb	0.239	20.16	59	2000	
Sr	88	2	72	906.595	ppb	906.595	0.90	330114	4000	
Zr	90	2	72	524.627	ppb	524.627	8.91	2060	1000	
Nb	93	2	72	0.931	ppb	0.931	27.21	3284	200	
Mo	95	2	115	0.777	ppb	0.777	21.43	567	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-184.92	13	100	
Ag	107	2	115	-0.018	ppb	-0.018	-60.54	17	100	
Cd	111	2	115	0.052	ppb	0.052	86.60	13	2000	
Sn	120	2	115	0.488	ppb	0.488	35.11	523	2000	
Sb	121	2	115	0.374	ppb	0.374	32.15	283	1000	
Ba	137	2	115	125.726	ppb	125.726	1.18	27676	5000	
W	182	2	165	0.354	ppb	0.354	25.41	1774	100	
Pt	195	2	165	-0.011	ppb	-0.011	-40.82	30	100	
Tl	205	2	165	-0.008	ppb	-0.008	-78.04	63	2000	
Pb	208	2	165	0.783	ppb	0.783	5.01	6071	5000	
Th	232	2	165	0.035	ppb	0.035	29.93	570	2000	
U	238	2	165	0.797	ppb	0.797	6.40	7383	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	320324	0.33	596260	53.72	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14124871	1.26	20835883	67.79	60	120	
Sc (IS)	45	2	HMI He	597740	0.35	823951	72.55	60	120	
Sc (IS)	45	3	No Gas	21340832	0.42	31260218	68.27	60	120	
Ge Internal Standard	72	1	HMI H2	5545682	0.78	8011210	69.22	60	120	
Ge Internal Standard	72	2	HMI He	681368	0.38	907478	75.08	60	120	
In Internal Standard	115	2	HMI He	2436752	0.39	3014874	80.82	60	120	
Ho-165	165	2	HMI He	11940129	0.61	14587244	81.85	60	120	

Sample Report

Sample Table

Sample Name	280-116334-E-2-Dsd@5
Data File Name	257SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:43:13-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-50.660	ppb	-50.660	-7.71	57263	500000	
Li	7	2	45	-45.014	ppb	-45.014	-21.23	3037	500000	
Li	7	3	45	-68.308	ppb	-68.308	-3.44	1539489	50000	
Be	9	1	6	-0.073	ppb	-0.073	0.00	0	2000	
B	11	1	6	129.341	ppb	129.341	3.76	23740	2000	
Na	23	1	45	25643.070	ppb	25643.070	0.66	49191351	2000	>LDR
Na	23	2	45	23058.201	ppb	23058.201	0.25	3557881	400000	
Mg	24	2	45	7114.032	ppb	7114.032	0.50	492366	400000	
Al	27	2	45	12.822	ppb	12.822	13.25	363	400000	
K	39	1	45	4090.749	ppb	4090.749	1.88	13637106	400000	
K	39	2	45	3947.454	ppb	3947.454	0.28	151349	400000	
Ca	40	1	45	6471.835	ppb	6471.835	0.95	18130775	400000	
Ca	44	2	45	6713.117	ppb	6713.117	5.19	13427	400000	
Ti	47	2	45	0.430	ppb	0.430	86.61	7	4000	
V	51	2	72	0.064	ppb	0.064	176.12	1670	2000	
Cr	52	2	72	1.585	ppb	1.585	14.75	1493	5000	
Mn	55	2	72	15.172	ppb	15.172	5.94	5451	10000	
Fe	57	2	72	468.979	ppb	468.979	8.74	7833	400000	
Co	59	2	72	0.388	ppb	0.388	23.97	587	2000	
Ni	60	2	72	3.984	ppb	3.984	4.98	1857	5000	
Cu	63	2	72	0.674	ppb	0.674	31.40	1480	5000	
Zn	66	2	72	3.553	ppb	3.553	40.05	883	5000	
As	75	2	72	0.291	ppb	0.291	35.22	51	2000	
Se	78	1	72	0.050	ppb	0.050	125.35	37	2000	
Sr	88	2	72	179.973	ppb	179.973	1.25	69963	4000	
Zr	90	2	72	112.965	ppb	112.965	50.37	530	1000	
Nb	93	2	72	0.064	ppb	0.064	240.02	1847	200	
Mo	95	2	115	1.027	ppb	1.027	5.20	757	2000	
Pd	105	2	115	-0.010	ppb	-0.010	-159.66	13	100	
Ag	107	2	115	-0.017	ppb	-0.017	-29.02	20	100	
Cd	111	2	115	0.024	ppb	0.024	86.60	7	2000	
Sn	120	2	115	0.001	ppb	0.001	3138.23	193	2000	
Sb	121	2	115	0.016	ppb	0.016	270.25	60	1000	
Ba	137	2	115	23.567	ppb	23.567	6.23	5531	5000	
W	182	2	165	0.089	ppb	0.089	76.08	1080	100	
Pt	195	2	165	-0.006	ppb	-0.006	-191.34	43	100	
Tl	205	2	165	0.001	ppb	0.001	888.67	113	2000	
Pb	208	2	165	0.174	ppb	0.174	8.77	1793	5000	
Th	232	2	165	0.011	ppb	0.011	83.52	380	2000	
U	238	2	165	0.151	ppb	0.151	6.27	1564	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	354049	0.48	596260	59.38	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14950003	0.35	20835883	71.75	60	120	
Sc (IS)	45	2	HMI He	634636	0.58	823951	77.02	60	120	
Sc (IS)	45	3	No Gas	22811075	1.08	31260218	72.97	60	120	
Ge Internal Standard	72	1	HMI H2	5933876	0.50	8011210	74.07	60	120	
Ge Internal Standard	72	2	HMI He	727194	0.18	907478	80.13	60	120	
In Internal Standard	115	2	HMI He	2598001	0.28	3014874	86.17	60	120	
Ho-165	165	2	HMI He	12381512	0.37	14587244	84.88	60	120	

Sample Report

Sample Table

Sample Name	280-116334-E-2-E MS
Data File Name	258SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:47:00-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	35.668	ppb	35.668	6.65	68362	500000	
Li	7	2	45	24.720	ppb	24.720	102.56	3521	500000	
Li	7	3	45	19.242	ppb	19.242	41.27	1802139	50000	
Be	9	1	6	48.228	ppb	48.228	5.41	7225	2000	
B	11	1	6	649.683	ppb	649.683	0.51	106678	2000	
Na	23	1	45	127144.531	ppb	127144.531	1.05	231540397	2000	>LDR
Na	23	2	45	115165.663	ppb	115165.663	0.23	17011655	400000	
Mg	24	2	45	37208.460	ppb	37208.460	0.96	2474831	400000	
Al	27	2	45	521.668	ppb	521.668	3.52	9724	400000	
K	39	1	45	19630.935	ppb	19630.935	0.71	40802369	400000	
K	39	2	45	20295.176	ppb	20295.176	0.83	703945	400000	
Ca	40	1	45	32664.161	ppb	32664.161	0.65	87037915	400000	
Ca	44	2	45	35752.011	ppb	35752.011	1.57	68518	400000	
Ti	47	2	45	4.030	ppb	4.030	16.70	60	4000	
V	51	2	72	44.489	ppb	44.489	2.56	30450	2000	
Cr	52	2	72	44.798	ppb	44.798	1.05	37302	5000	
Mn	55	2	72	123.231	ppb	123.231	2.36	41975	10000	
Fe	57	2	72	2719.843	ppb	2719.843	2.95	42824	400000	
Co	59	2	72	45.234	ppb	45.234	0.76	63971	2000	
Ni	60	2	72	62.212	ppb	62.212	4.46	25016	5000	
Cu	63	2	72	47.423	ppb	47.423	1.21	51606	5000	
Zn	66	2	72	60.530	ppb	60.530	4.72	9153	5000	
As	75	2	72	45.454	ppb	45.454	0.85	4658	2000	
Se	78	1	72	44.768	ppb	44.768	2.13	5696	2000	
Sr	88	2	72	1001.084	ppb	1001.084	0.97	372171	4000	
Zr	90	2	72	11958.691	ppb	11958.691	1.63	46437	1000	>LDR
Nb	93	2	72	0.596	ppb	0.596	15.55	2740	200	
Mo	95	2	115	42.877	ppb	42.877	1.41	25023	2000	
Pd	105	2	115	0.009	ppb	0.009	213.81	30	100	
Ag	107	2	115	42.710	ppb	42.710	0.62	82566	100	
Cd	111	2	115	42.868	ppb	42.868	2.59	11162	2000	
Sn	120	2	115	44.733	ppb	44.733	2.85	32178	2000	
Sb	121	2	115	47.853	ppb	47.853	1.25	30962	1000	
Ba	137	2	115	175.309	ppb	175.309	2.35	39281	5000	
W	182	2	165	43.388	ppb	43.388	1.40	121315	100	
Pt	195	2	165	-0.015	ppb	-0.015	-29.09	20	100	
Tl	205	2	165	44.935	ppb	44.935	0.97	241512	2000	
Pb	208	2	165	45.208	ppb	45.208	0.71	324459	5000	
Th	232	2	165	44.549	ppb	44.549	0.22	378937	2000	
U	238	2	165	46.906	ppb	46.906	1.11	429285	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	320760	0.42	596260	53.80	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14248998	0.45	20835883	68.39	60	120	
Sc (IS)	45	2	HMI He	610208	0.06	823951	74.06	60	120	
Sc (IS)	45	3	No Gas	21108985	0.58	31260218	67.53	60	120	
Ge Internal Standard	72	1	HMI H2	5569382	1.17	8011210	69.52	60	120	
Ge Internal Standard	72	2	HMI He	695657	0.27	907478	76.66	60	120	
In Internal Standard	115	2	HMI He	2480493	0.91	3014874	82.28	60	120	
Ho-165	165	2	HMI He	12010300	0.59	14587244	82.33	60	120	

Sample Report

Sample Table

Sample Name	280-116334-E-2-F MSD
Data File Name	259SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:50:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	49.640	ppb	49.640	10.69	70205	500000	
Li	7	2	45	13.434	ppb	13.434	268.97	3411	500000	
Li	7	3	45	17.223	ppb	17.223	60.98	1789442	50000	
Be	9	1	6	50.597	ppb	50.597	1.45	7482	2000	
B	11	1	6	658.673	ppb	658.673	1.38	106737	2000	
Na	23	1	45	127867.269	ppb	127867.269	0.65	231580730	2000	>LDR
Na	23	2	45	115665.071	ppb	115665.071	2.20	17015916	400000	
Mg	24	2	45	37744.606	ppb	37744.606	2.54	2500114	400000	
Al	27	2	45	509.983	ppb	509.983	1.67	9470	400000	
K	39	1	45	19767.074	ppb	19767.074	0.05	40820832	400000	
K	39	2	45	20312.575	ppb	20312.575	0.83	701753	400000	
Ca	40	1	45	32931.304	ppb	32931.304	0.85	87265699	400000	
Ca	44	2	45	36008.908	ppb	36008.908	0.29	68743	400000	
Ti	47	2	45	4.303	ppb	4.303	73.27	63	4000	
V	51	2	72	45.378	ppb	45.378	2.09	30874	2000	
Cr	52	2	72	45.314	ppb	45.314	5.79	37543	5000	
Mn	55	2	72	124.237	ppb	124.237	3.13	42109	10000	
Fe	57	2	72	2749.014	ppb	2749.014	2.63	43065	400000	
Co	59	2	72	45.536	ppb	45.536	1.89	64079	2000	
Ni	60	2	72	62.917	ppb	62.917	3.98	25170	5000	
Cu	63	2	72	46.725	ppb	46.725	0.44	50606	5000	
Zn	66	2	72	58.087	ppb	58.087	2.50	8753	5000	
As	75	2	72	46.234	ppb	46.234	3.38	4715	2000	
Se	78	1	72	44.512	ppb	44.512	4.53	5615	2000	
Sr	88	2	72	1012.535	ppb	1012.535	0.63	374558	4000	
Zr	90	2	72	11732.928	ppb	11732.928	0.99	45337	1000	>LDR
Nb	93	2	72	0.298	ppb	0.298	52.36	2184	200	
Mo	95	2	115	42.220	ppb	42.220	3.12	24582	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-1327.74	20	100	
Ag	107	2	115	42.469	ppb	42.469	1.74	81912	100	
Cd	111	2	115	44.233	ppb	44.233	2.86	11492	2000	
Sn	120	2	115	45.663	ppb	45.663	2.38	32766	2000	
Sb	121	2	115	46.984	ppb	46.984	0.50	30334	1000	
Ba	137	2	115	177.618	ppb	177.618	1.79	39705	5000	
W	182	2	165	42.688	ppb	42.688	0.70	118577	100	
Pt	195	2	165	-0.011	ppb	-0.011	-40.83	30	100	
Tl	205	2	165	45.102	ppb	45.102	1.14	240813	2000	
Pb	208	2	165	45.819	ppb	45.819	0.60	326648	5000	
Th	232	2	165	45.813	ppb	45.813	0.54	387110	2000	
U	238	2	165	47.372	ppb	47.372	0.46	430697	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	316586	0.61	596260	53.10	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14170652	0.28	20835883	68.01	60	120	
Sc (IS)	45	2	HMI He	607847	1.55	823951	73.77	60	120	
Sc (IS)	45	3	No Gas	21062923	0.62	31260218	67.38	60	120	
Ge Internal Standard	72	1	HMI H2	5521262	0.16	8011210	68.92	60	120	
Ge Internal Standard	72	2	HMI He	692208	0.17	907478	76.28	60	120	
In Internal Standard	115	2	HMI He	2474835	0.74	3014874	82.09	60	120	
Ho-165	165	2	HMI He	11930923	0.34	14587244	81.79	60	120	

Sample Report

Sample Table

Sample Name	280-116334-E-2-D pds
Data File Name	260SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:54:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-38.524	ppb	-38.524	-12.60	55340	500000	
Li	7	2	45	-46.806	ppb	-46.806	-46.63	2877	500000	
Li	7	3	45	-43.125	ppb	-43.125	-2.95	1520078	50000	
Be	9	1	6	262.986	ppb	262.986	1.57	38815	2000	
B	11	1	6	596.217	ppb	596.217	0.42	96573	2000	
Na	23	1	45	122411.789	ppb	122411.789	0.72	218295703	2000	>LDR
Na	23	2	45	108949.725	ppb	108949.725	1.05	15941996	400000	
Mg	24	2	45	35285.612	ppb	35285.612	1.10	2324687	400000	
Al	27	2	45	2384.227	ppb	2384.227	0.96	43625	400000	
K	39	1	45	18806.384	ppb	18806.384	0.22	38509661	400000	
K	39	2	45	19188.264	ppb	19188.264	0.42	659850	400000	
Ca	40	1	45	31708.018	ppb	31708.018	0.50	82732424	400000	
Ca	44	2	45	33047.657	ppb	33047.657	3.08	62735	400000	
Ti	47	2	45	10.412	ppb	10.412	33.98	153	4000	
V	51	2	72	221.514	ppb	221.514	1.46	144344	2000	
Cr	52	2	72	222.932	ppb	222.932	1.52	183816	5000	
Mn	55	2	72	302.780	ppb	302.780	1.41	102299	10000	
Fe	57	2	72	4401.032	ppb	4401.032	1.53	68696	400000	
Co	59	2	72	220.477	ppb	220.477	1.12	309449	2000	
Ni	60	2	72	235.525	ppb	235.525	2.16	93483	5000	
Cu	63	2	72	226.099	ppb	226.099	0.44	241652	5000	
Zn	66	2	72	254.161	ppb	254.161	1.96	37109	5000	
As	75	2	72	225.850	ppb	225.850	1.97	22899	2000	
Se	78	1	72	229.549	ppb	229.549	1.81	28638	2000	
Sr	88	2	72	897.245	ppb	897.245	1.50	331100	4000	
Zr	90	2	72	58445.167	ppb	58445.167	0.41	225017	1000	>LDR
Nb	93	2	72	9.301	ppb	9.301	3.24	18506	200	
Mo	95	2	115	218.230	ppb	218.230	0.58	125175	2000	
Pd	105	2	115	0.050	ppb	0.050	121.19	67	100	
Ag	107	2	115	40.456	ppb	40.456	1.00	77188	100	
Cd	111	2	115	218.458	ppb	218.458	2.21	56123	2000	
Sn	120	2	115	232.006	ppb	232.006	1.79	163939	2000	
Sb	121	2	115	226.446	ppb	226.446	1.12	144420	1000	
Ba	137	2	115	355.415	ppb	355.415	1.00	78591	5000	
W	182	2	165	228.102	ppb	228.102	0.30	630456	100	
Pt	195	2	165	0.071	ppb	0.071	81.82	213	100	
Tl	205	2	165	230.699	ppb	230.699	0.51	1231922	2000	
Pb	208	2	165	227.576	ppb	227.576	0.74	1621306	5000	
Th	232	2	165	21.062	ppb	21.062	16.90	178226	2000	
U	238	2	165	276.039	ppb	276.039	1.46	2510345	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	316323	0.87	596260	53.05	60	120	IS Failed
Sc (IS)	45	1	HMI H2	13952704	0.46	20835883	66.96	60	120	
Sc (IS)	45	2	HMI He	604472	1.18	823951	73.36	60	120	
Sc (IS)	45	3	No Gas	20928466	0.30	31260218	66.95	60	120	
Ge Internal Standard	72	1	HMI H2	5483660	1.02	8011210	68.45	60	120	
Ge Internal Standard	72	2	HMI He	690535	0.54	907478	76.09	60	120	
In Internal Standard	115	2	HMI He	2447870	1.03	3014874	81.19	60	120	
Ho-165	165	2	HMI He	11936994	0.20	14587244	81.83	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	261_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T04:58:21-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	464.440	ppb	3.572	140233	500	92.9	90	110	
Li	7	2	45	428.724	ppb	14.396	7199	500	85.7	90	110	>+\-10%
Li	7	3	45	365.604	ppb	1.608	3450753	500	73.1	90	110	>+\-10%
Be	9	1	6	58.176	ppb	5.040	9397	50	116.4	90	110	>+\-10%
B	11	1	6	89.801	ppb	1.120	16213	50	179.6	90	110	>+\-10%
Na	23	1	45	5964.746	ppb	1.047	11360146	5000	119.3	90	110	>+\-10%
Na	23	2	45	5143.345	ppb	1.275	799979	5000	102.9	90	110	
Mg	24	2	45	5261.263	ppb	1.475	360290	5000	105.2	90	110	
Al	27	2	45	5617.063	ppb	2.425	106571	5000	112.3	90	110	>+\-10%
K	39	1	45	6400.588	ppb	1.442	17556920	5000	128.0	90	110	>+\-10%
K	39	2	45	5793.501	ppb	1.951	214583	5000	115.9	90	110	>+\-10%
Ca	40	1	45	6074.161	ppb	1.029	16625342	5000	121.5	90	110	>+\-10%
Ca	44	2	45	5948.396	ppb	3.107	11772	5000	119.0	90	110	>+\-10%
Ti	47	2	45	53.731	ppb	6.319	823	50	107.5	90	110	
V	51	2	72	52.455	ppb	1.669	36727	50	104.9	90	110	
Cr	52	2	72	53.416	ppb	1.980	45833	50	106.8	90	110	
Mn	55	2	72	56.531	ppb	4.307	19881	50	113.1	90	110	>+\-10%
Fe	57	2	72	5414.924	ppb	2.360	87751	5000	108.3	90	110	
Co	59	2	72	54.381	ppb	0.382	79287	50	108.8	90	110	
Ni	60	2	72	52.356	ppb	3.524	21730	50	104.7	90	110	
Cu	63	2	72	53.948	ppb	1.859	60424	50	107.9	90	110	
Zn	66	2	72	55.037	ppb	3.860	8610	50	110.1	90	110	>+\-10%
As	75	2	72	55.862	ppb	4.858	5897	50	111.7	90	110	>+\-10%
Se	78	1	72	60.809	ppb	2.657	7981	50	121.6	90	110	>+\-10%
Sr	88	2	72	61.127	ppb	6.713	23447	50	122.3	90	110	>+\-10%
Zr	90	2	72	135.689	ppb	6.285	613	50	271.4	90	110	>+\-10%
Nb	93	2	72	98.879	ppb	0.501	187946	100	98.9	90	110	
Mo	95	2	115	51.125	ppb	4.468	30945	50	102.2	90	110	
Pd	105	2	115	51.513	ppb	3.645	48779	50	103.0	90	110	
Ag	107	2	115	51.572	ppb	1.225	103489	50	103.1	90	110	
Cd	111	2	115	53.268	ppb	1.554	14398	50	106.5	90	110	
Sn	120	2	115	53.822	ppb	1.840	40152	50	107.6	90	110	
Sb	121	2	115	56.522	ppb	0.971	37963	50	113.0	90	110	>+\-10%
Ba	137	2	115	57.316	ppb	5.019	13330	50	114.6	90	110	>+\-10%
W	182	2	165	53.221	ppb	1.280	154379	50	106.4	90	110	
Pt	195	2	165	52.202	ppb	0.743	121542	50	104.4	90	110	
Tl	205	2	165	55.937	ppb	0.714	312279	50	111.9	90	110	>+\-10%
Pb	208	2	165	55.991	ppb	1.137	417293	50	112.0	90	110	>+\-10%
Th	232	2	165	56.585	ppb	1.689	499892	50	113.2	90	110	>+\-10%
U	238	2	165	56.584	ppb	1.293	537919	50	113.2	90	110	>+\-10%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	345874	0.28	596260	58.01	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14604061	0.67	20835883	70.09	60	120	
Sc (IS)	45	2	HMI He	627827	0.79	823951	76.20	60	120	
Sc (IS)	45	3	No Gas	22097498	0.53	31260218	70.69	60	120	
Ge Internal Standard	72	1	HMI H2	5752633	0.30	8011210	71.81	60	120	
Ge Internal Standard	72	2	HMI He	717212	0.66	907478	79.03	60	120	
In Internal Standard	115	2	HMI He	2575216	0.89	3014874	85.42	60	120	
Ho-165	165	2	HMI He	12476912	1.08	14587244	85.53	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	262_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:02:07-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-68.459	ppb	-3.2	1499689	10	
Be	9	1	6	0.109	ppb	147.9	30	0.5	
B	11	1	6	12.476	ppb	9.5	2640	0.5	>RL
Na	23	1	45	134.104	ppb	3.3	490515	25	>RL
Na	23	2	45	110.718	ppb	3.5	35353	25	>RL
Mg	24	2	45	20.921	ppb	9.5	1720	25	
Al	27	2	45	5.335	ppb	101.5	213	15	
K	39	1	45	335.806	ppb	1.7	6460109	50	>RL
K	39	2	45	51.497	ppb	33.3	12569	50	>RL
Ca	40	1	45	10.297	ppb	18.2	74594	50	
Ca	44	2	45	-4.653	ppb	-230.5	43	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.981	ppb	55.4	2240	1	
Cr	52	2	72	0.265	ppb	17.9	340	1	
Mn	55	2	72	-0.081	ppb	-20.6	27	0.5	
Fe	57	2	72	1.310	ppb	219.7	157	25	
Co	59	2	72	0.021	ppb	115.7	43	0.5	
Ni	60	2	72	-0.107	ppb	-80.5	147	1	
Cu	63	2	72	0.042	ppb	284.2	753	1	
Zn	66	2	72	-0.566	ppb	-105.3	250	5	
As	75	2	72	-0.005	ppb	-1286.7	19	1	
Se	78	1	72	0.098	ppb	46.9	43	1	
Sr	88	2	72	0.151	ppb	43.9	83	0.5	
Zr	90	2	72	4.098	ppb	310.0	87	1	>RL
Nb	93	2	72	4.823	ppb	3.9	10688	2	>RL
Mo	95	2	115	0.126	ppb	98.0	207	0.5	
Pd	105	2	115	0.064	ppb	34.0	83	1	
Ag	107	2	115	-0.010	ppb	-56.3	33	1	
Cd	111	2	115	0.062	ppb	34.5	17	0.5	
Sn	120	2	115	0.102	ppb	122.0	267	1	
Sb	121	2	115	0.708	ppb	11.6	523	0.6	>RL
Ba	137	2	115	0.086	ppb	50.2	20	0.5	
W	182	2	165	0.256	ppb	23.2	1547	1	
Pt	195	2	165	0.000	ppb	6344.5	57	1	
Tl	205	2	165	0.030	ppb	69.6	273	0.1	
Pb	208	2	165	0.030	ppb	59.2	723	0.5	
Th	232	2	165	0.062	ppb	15.5	817	1	
U	238	2	165	0.114	ppb	8.8	1197	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	355857	0.63	596260	59.68	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14659069	0.43	20835883	70.35	60	120	
Sc (IS)	45	2	HMI He	616319	0.83	823951	74.80	60	120	
Sc (IS)	45	3	No Gas	22232141	0.61	31260218	71.12	60	120	
Ge Internal Standard	72	1	HMI H2	5785253	0.37	8011210	72.21	60	120	
Ge Internal Standard	72	2	HMI He	710658	0.12	907478	78.31	60	120	
In Internal Standard	115	2	HMI He	2575629	0.43	3014874	85.43	60	120	
Ho-165	165	2	HMI He	12278964	0.22	14587244	84.18	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	263WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:05:55-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.029	ppb	324.1938272	17	0.5
Na	23	2	45	84.833	ppb	4.675174427	31799	25
Mg	24	2	45	19.207	ppb	15.64402739	1620	25
Al	27	2	45	1.666	ppb	114.7556257	147	15
K	39	2	45	32.589	ppb	52.81765795	12029	50
Ca	44	2	45	-8.256	ppb	-73.19516345	37	25
V	51	2	72	0.557	ppb	55.4966517	1974	1
Cr	52	2	72	0.215	ppb	53.74120333	300	1
Mn	55	2	72	0.089	ppb	175.7777899	87	0.5
Fe	57	2	72	0.009	ppb	17789.81699	137	25
Co	59	2	72	0.005	ppb	2.624795085	20	0.5
Ni	60	2	72	-0.158	ppb	-63.2869422	127	1
Cu	63	2	72	-0.066	ppb	-120.0580907	640	1
Zn	66	2	72	-1.156	ppb	-2.689115171	163	5
As	75	2	72	0.006	ppb	776.8810877	20	1
Se	78	1	72	-0.026	ppb	-403.0294791	27	1
Nb	93	2	72	2.804	ppb	13.46328534	6969	2
Mo	95	2	115	-0.151	ppb	-18.68716827	40	0.5
Pd	105	2	115	-0.010	ppb	-63.01537637	13	1
Ag	107	2	115	-0.010	ppb	-122.4847837	33	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	-0.033	ppb	-274.9553442	167	1
Sb	121	2	115	0.200	ppb	14.54543864	183	0.6
Ba	137	2	115	0.058	ppb	114.6624578	13	0.5
W	182	2	165	0.069	ppb	12.87259895	1013	1
Pt	195	2	165	-0.007	ppb	-111.4052905	40	1
Tl	205	2	165	0.020	ppb	12.71567452	217	0.1
Pb	208	2	165	0.039	ppb	23.81634493	790	0.5
Th	232	2	165	0.016	ppb	23.02682443	413	1
U	238	2	165	0.028	ppb	44.886982	393	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	352615	0.44	596260	59.14	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14738272	0.61	20835883	70.74	60	120	
Sc (IS)	45	2	HMI He	622228	0.59	823951	75.52	60	120	
Sc (IS)	45	3	No Gas	22015068	0.71	31260218	70.43	60	120	
Ge Internal Standard	72	1	HMI H2	5846128	0.87	8011210	72.97	60	120	
Ge Internal Standard	72	2	HMI He	715974	0.90	907478	78.90	60	120	
In Internal Standard	115	2	HMI He	2583442	1.82	3014874	85.69	60	120	
Ho-165	165	2	HMI He	12264750	1.10	14587244	84.08	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	264WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:09:42-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.031	ppb	-115.554786	7	0.5
Na	23	2	45	71.716	ppb	4.854676919	29958	25
Mg	24	2	45	15.582	ppb	9.854113322	1380	25
Al	27	2	45	-0.674	ppb	-162.1204827	103	15
K	39	2	45	34.653	ppb	64.23337809	12152	50
Ca	44	2	45	-8.361	ppb	-93.43532809	37	25
V	51	2	72	0.476	ppb	58.83100274	1910	1
Cr	52	2	72	0.214	ppb	59.57280903	297	1
Mn	55	2	72	-0.015	ppb	-1231.937913	50	0.5
Fe	57	2	72	1.069	ppb	162.8246841	153	25
Co	59	2	72	0.019	ppb	64.25912367	40	0.5
Ni	60	2	72	-0.174	ppb	-23.36702431	120	1
Cu	63	2	72	-0.011	ppb	-667.0920333	697	1
Zn	66	2	72	-0.818	ppb	-51.55180523	213	5
As	75	2	72	0.020	ppb	420.6183302	22	1
Se	78	1	72	-0.034	ppb	-232.5410038	25	1
Nb	93	2	72	1.557	ppb	5.11761778	4604	2
Mo	95	2	115	-0.108	ppb	-23.16531599	67	0.5
Pd	105	2	115	-0.010	ppb	-60.99222261	13	1
Ag	107	2	115	-0.015	ppb	-81.19264915	23	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	-0.083	ppb	-57.92164386	130	1
Sb	121	2	115	0.032	ppb	94.85589371	70	0.6
Ba	137	2	115	0.014	ppb	173.2050808	3	0.5
W	182	2	165	0.034	ppb	50.65126512	923	1
Pt	195	2	165	-0.013	ppb	-68.42169603	27	1
Tl	205	2	165	-0.001	ppb	-1241.042071	103	0.1
Pb	208	2	165	0.036	ppb	41.80377715	777	0.5
Th	232	2	165	0.010	ppb	41.39275417	363	1
U	238	2	165	0.020	ppb	40.11693948	327	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	347386	1.31	596260	58.26	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14526989	1.68	20835883	69.72	60	120	
Sc (IS)	45	2	HMI He	625058	0.47	823951	75.86	60	120	
Sc (IS)	45	3	No Gas	22280447	0.17	31260218	71.27	60	120	
Ge Internal Standard	72	1	HMI H2	5775976	0.77	8011210	72.10	60	120	
Ge Internal Standard	72	2	HMI He	712610	0.78	907478	78.53	60	120	
In Internal Standard	115	2	HMI He	2591007	0.39	3014874	85.94	60	120	
Ho-165	165	2	HMI He	12349022	1.39	14587244	84.66	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	265WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:13:29-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.012	ppb	-2.869143449	10	0.5
Na	23	2	45	51.136	ppb	2.572619466	26805	25
Mg	24	2	45	14.286	ppb	22.13298904	1290	25
Al	27	2	45	1.276	ppb	271.1212366	140	15
K	39	2	45	40.524	ppb	33.38431789	12339	50
Ca	44	2	45	-11.750	ppb	-86.80027623	30	25
V	51	2	72	0.092	ppb	444.1842486	1650	1
Cr	52	2	72	0.132	ppb	87.05811773	227	1
Mn	55	2	72	0.015	ppb	387.4538759	60	0.5
Fe	57	2	72	-0.351	ppb	-614.4764924	130	25
Co	59	2	72	0.005	ppb	247.7549285	20	0.5
Ni	60	2	72	-0.238	ppb	-29.87871234	93	1
Cu	63	2	72	-0.001	ppb	-27234.57862	707	1
Zn	66	2	72	-0.901	ppb	-56.4304787	200	5
As	75	2	72	0.008	ppb	574.2453898	20	1
Se	78	1	72	-0.086	ppb	-87.26917344	19	1
Nb	93	2	72	0.975	ppb	31.62999733	3504	2
Mo	95	2	115	-0.190	ppb	-4.963198977	17	0.5
Pd	105	2	115	-0.003	ppb	-1.649936783	20	1
Ag	107	2	115	-0.017	ppb	-57.46874016	20	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	-0.124	ppb	-60.02531669	100	1
Sb	121	2	115	0.036	ppb	63.44110593	73	0.6
Ba	137	2	115	0.000	ppb	#DIV/0!	0	0.5
W	182	2	165	0.012	ppb	404.8144508	853	1
Pt	195	2	165	-0.016	ppb	-74.15073327	20	1
Tl	205	2	165	0.005	ppb	115.5118747	133	0.1
Pb	208	2	165	0.039	ppb	28.15511222	793	0.5
Th	232	2	165	0.009	ppb	80.25272114	357	1
U	238	2	165	0.007	ppb	135.2204227	197	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	352394	0.55	596260	59.10	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14735274	0.46	20835883	70.72	60	120	
Sc (IS)	45	2	HMI He	624032	0.28	823951	75.74	60	120	
Sc (IS)	45	3	No Gas	22147886	0.50	31260218	70.85	60	120	
Ge Internal Standard	72	1	HMI H2	5810851	0.93	8011210	72.53	60	120	
Ge Internal Standard	72	2	HMI He	710326	0.16	907478	78.27	60	120	
In Internal Standard	115	2	HMI He	2603771	0.25	3014874	86.36	60	120	
Ho-165	165	2	HMI He	12276022	0.74	14587244	84.16	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	266WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:17:16-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	157CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.011	ppb	-563.3298203	10	0.5
Na	23	2	45	49.930	ppb	12.80432699	26688	25
Mg	24	2	45	15.579	ppb	21.11974669	1380	25
Al	27	2	45	0.039	ppb	6202.836452	117	15
K	39	2	45	27.148	ppb	51.20041079	11902	50
Ca	44	2	45	3.605	ppb	518.5929185	60	25
V	51	2	72	0.532	ppb	5.426576993	1957	1
Cr	52	2	72	0.196	ppb	51.18448015	283	1
Mn	55	2	72	0.004	ppb	2523.140844	57	0.5
Fe	57	2	72	-1.658	ppb	-147.0535833	110	25
Co	59	2	72	0.005	ppb	381.2168875	20	0.5
Ni	60	2	72	-0.240	ppb	-14.8998592	93	1
Cu	63	2	72	-0.141	ppb	-11.84007344	557	1
Zn	66	2	72	-1.043	ppb	-19.76224188	180	5
As	75	2	72	-0.019	ppb	-178.229636	18	1
Se	78	1	72	-0.147	ppb	-93.40147031	11	1
Nb	93	2	72	0.367	ppb	57.33160374	2387	2
Mo	95	2	115	-0.137	ppb	-0.771198148	50	0.5
Pd	105	2	115	0.017	ppb	215.3389535	40	1
Ag	107	2	115	-0.012	ppb	-76.31682407	30	1
Cd	111	2	115	0.012	ppb	173.2050808	3	0.5
Sn	120	2	115	-0.104	ppb	-38.1808	117	1
Sb	121	2	115	-0.024	ppb	-89.75930357	33	0.6
Ba	137	2	115	0.154	ppb	63.44768099	37	0.5
W	182	2	165	-0.009	ppb	-587.8188546	797	1
Pt	195	2	165	-0.009	ppb	-125.727258	37	1
Tl	205	2	165	-0.003	ppb	-212.4616061	93	0.1
Pb	208	2	165	0.012	ppb	67.56686386	593	0.5
Th	232	2	165	-0.005	ppb	-121.6555239	237	1
U	238	2	165	0.001	ppb	766.7779362	143	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	354196	2.43	596260	59.40	60	120	IS Failed
Sc (IS)	45	1	HMI H2	14665764	2.05	20835883	70.39	60	120	
Sc (IS)	45	2	HMI He	625671	0.86	823951	75.94	60	120	
Sc (IS)	45	3	No Gas	22332204	0.36	31260218	71.44	60	120	
Ge Internal Standard	72	1	HMI H2	5836879	1.88	8011210	72.86	60	120	
Ge Internal Standard	72	2	HMI He	715744	0.62	907478	78.87	60	120	
In Internal Standard	115	2	HMI He	2642692	1.31	3014874	87.66	60	120	
Ho-165	165	2	HMI He	12319261	1.48	14587244	84.45	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5425622
Data File Name	267CALB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:21:05-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	54269	0.00
Li	7	2	HMI He	2797	0.10
Li	7	3	No Gas	1507853	0.00
Be	9	1	HMI H2	0	#VALUE!
B	11	1	HMI H2	1300	0.36
Na	23	1	HMI H2	332550	0.00
Na	23	2	HMI He	24965	0.01
Mg	24	2	HMI He	1177	0.89
Al	27	2	HMI He	227	2.97
K	39	2	HMI He	12362	0.04
Ca	44	2	HMI He	20	250.00
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	1827	0.52
Cr	52	2	HMI He	173	13.86
Mn	55	2	HMI He	60	48.12
Fe	57	2	HMI He	100	17.32
Co	59	2	HMI He	20	250.00
Ni	60	2	HMI He	130	15.65
Cu	63	2	HMI He	583	2.36
Zn	66	2	HMI He	290	7.42
As	75	2	HMI He	24	69.76
Se	78	1	HMI H2	12	277.78
Sr	88	2	HMI He	17	549.91
Zr	90	2	HMI He	37	239.10
Nb	93	2	HMI He	1847	0.62
Mo	95	2	HMI He	57	109.37
Pd	105	2	HMI He	10	1000.00
Ag	107	2	HMI He	13	1299.04
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	97	43.25
Sb	121	2	HMI He	37	171.77
Ba	137	2	HMI He	20	500.00
W	182	2	HMI He	767	0.35
Pt	195	2	HMI He	27	353.90
Tl	205	2	HMI He	100	36.06
Pb	208	2	HMI He	590	1.72
Th	232	2	HMI He	313	3.27
U	238	2	HMI He	127	25.19

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	355078	0.64
Sc (IS)	45	1	HMI H2	14780058	0.90
Sc (IS)	45	2	HMI He	628472	0.45
Sc (IS)	45	3	No Gas	21982103	1.79
Ge Internal Standard	72	1	HMI H2	5863330	0.24
Ge Internal Standard	72	2	HMI He	718381	0.36
In Internal Standard	115	2	HMI He	2598721	0.86
Ho-165	165	2	HMI He	12368139	0.19

Calibration Standard Report

Sample Table

Sample Name	ic-5425623
Data File Name	268CALS.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:24:55-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	217357	0.00
Li	7	2	HMI He	10844	0.03
Li	7	3	No Gas	5359864	0.00
Be	9	1	HMI H2	19667	0.02
B	11	1	HMI H2	23029	0.01
Na	23	1	HMI H2	20936834	0.00
Na	23	2	HMI He	1587868	0.00
Mg	24	2	HMI He	717951	0.00
Al	27	2	HMI He	212210	0.00
K	39	1	HMI H2	28216169	0.00
K	39	2	HMI He	414741	0.00
Ca	40	1	HMI H2	32025642	0.00
Ca	44	2	HMI He	22608	0.02
Ti	47	2	HMI He	1764	0.19
V	51	2	HMI He	72420	0.00
Cr	52	2	HMI He	90950	0.00
Mn	55	2	HMI He	39054	0.00
Fe	57	2	HMI He	175328	0.00
Co	59	2	HMI He	154661	0.00
Ni	60	2	HMI He	43533	0.00
Cu	63	2	HMI He	118106	0.00
Zn	66	2	HMI He	17127	0.02
As	75	2	HMI He	11668	0.01
Se	78	1	HMI H2	14825	0.02
Sr	88	2	HMI He	46400	0.00
Zr	90	2	HMI He	683	3.00
Nb	93	2	HMI He	437355	0.00
Mo	95	2	HMI He	60815	0.00
Pd	105	2	HMI He	95150	0.00
Ag	107	2	HMI He	204250	0.00
Cd	111	2	HMI He	28747	0.01
Sn	120	2	HMI He	80992	0.00
Sb	121	2	HMI He	72448	0.00
Ba	137	2	HMI He	25672	0.00
Nd	146	2	HMI He	92743	0.00
Sm	147	2	HMI He	80551	0.00
Sm	150	2	HMI He	77422	0.00
Gd	156	1	HMI H2	271840	0.00
Gd	157	1	HMI H2	204103	0.00
W	182	2	HMI He	306436	0.00
Pt	195	2	HMI He	244792	0.00
Tl	205	2	HMI He	618971	0.00
Pb	208	2	HMI He	829064	0.00
Th	232	2	HMI He	1003039	0.00
U	238	2	HMI He	1067969	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	332827	0.62	355078	93.73	60	120	
Sc (IS)	45	1	HMI H2	14429938	0.38	14780058	97.63	60	120	
Sc (IS)	45	2	HMI He	618660	0.23	628472	98.44	60	120	
Sc (IS)	45	3	No Gas	21933100	0.72	21982103	99.78	60	120	
Ge Internal Standard	72	1	HMI H2	5671178	0.60	5863330	96.72	60	120	
Ge Internal Standard	72	2	HMI He	702978	0.63	718381	97.86	60	120	
In Internal Standard	115	2	HMI He	2508296	0.58	2598721	96.52	60	120	
Ho-165	165	2	HMI He	12219940	0.30	12368139	98.80	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	269_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:28:43-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	513.832	ppb	2.402	138209	500	102.8	90	110	
Li	7	2	45	516.353	ppb	5.168	6932	500	103.3	90	110	
Li	7	3	45	518.943	ppb	1.760	3514536	500	103.8	90	110	
Be	9	1	6	51.904	ppb	2.708	10527	50	103.8	90	110	
B	11	1	6	51.717	ppb	2.819	12889	50	103.4	90	110	
Na	23	1	45	5153.983	ppb	1.017	11008981	5000	103.1	90	110	
Na	23	2	45	4929.082	ppb	1.305	795316	5000	98.6	90	110	
Mg	24	2	45	5193.555	ppb	1.864	373489	5000	103.9	90	110	
Al	27	2	45	5131.409	ppb	1.104	109028	5000	102.6	90	110	
K	39	1	45	5176.834	ppb	0.195	17779107	5000	103.5	90	110	
K	39	2	45	5097.534	ppb	1.973	217419	5000	102.0	90	110	
Ca	40	1	45	5135.945	ppb	0.487	16560779	5000	102.7	90	110	
Ca	44	2	45	5244.687	ppb	3.346	11869	5000	104.9	90	110	
Ti	47	2	45	55.379	ppb	4.576	977	50	110.8	90	110	>+\-10%
V	51	2	72	51.859	ppb	2.367	38535	50	103.7	90	110	
Cr	52	2	72	50.899	ppb	1.450	46515	50	101.8	90	110	
Mn	55	2	72	49.657	ppb	3.120	19481	50	99.3	90	110	
Fe	57	2	72	5149.767	ppb	2.103	90612	5000	103.0	90	110	
Co	59	2	72	51.841	ppb	1.417	80433	50	103.7	90	110	
Ni	60	2	72	51.399	ppb	2.217	22505	50	102.8	90	110	
Cu	63	2	72	52.501	ppb	2.090	62472	50	105.0	90	110	
Zn	66	2	72	50.972	ppb	6.444	8896	50	101.9	90	110	
As	75	2	72	51.362	ppb	1.642	6022	50	102.7	90	110	
Se	78	1	72	52.281	ppb	2.015	7816	50	104.6	90	110	
Sr	88	2	72	51.265	ppb	2.933	23868	50	102.5	90	110	
Zr	90	2	72	48.895	ppb	23.060	353	50	97.8	90	110	
Nb	93	2	72	104.847	ppb	1.644	230837	100	104.8	90	110	
Mo	95	2	115	50.425	ppb	2.075	31523	50	100.9	90	110	
Pd	105	2	115	51.074	ppb	0.699	49923	50	102.1	90	110	
Ag	107	2	115	50.938	ppb	3.022	106847	50	101.9	90	110	
Cd	111	2	115	50.849	ppb	1.408	15012	50	101.7	90	110	
Sn	120	2	115	50.941	ppb	1.667	42423	50	101.9	90	110	
Sb	121	2	115	51.114	ppb	3.318	38043	50	102.2	90	110	
Ba	137	2	115	51.773	ppb	1.053	13661	50	103.5	90	110	
W	182	2	165	51.732	ppb	0.738	158982	50	103.5	90	110	
Pt	195	2	165	51.719	ppb	2.309	126686	50	103.4	90	110	
Tl	205	2	165	51.919	ppb	1.747	321594	50	103.8	90	110	
Pb	208	2	165	51.852	ppb	0.511	430411	50	103.7	90	110	
Th	232	2	165	51.432	ppb	1.089	516317	50	102.9	90	110	
U	238	2	165	51.539	ppb	0.743	550782	50	103.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	343264	0.49	355078	96.67	60	120	
Sc (IS)	45	1	HMI H2	14510403	0.34	14780058	98.18	60	120	
Sc (IS)	45	2	HMI He	618850	1.25	628472	98.47	60	120	
Sc (IS)	45	3	No Gas	21991379	0.66	21982103	100.04	60	120	
Ge Internal Standard	72	1	HMI H2	5714733	0.35	5863330	97.47	60	120	
Ge Internal Standard	72	2	HMI He	705115	0.28	718381	98.15	60	120	
In Internal Standard	115	2	HMI He	2576302	1.14	2598721	99.14	60	120	
Ho-165	165	2	HMI He	12226728	0.19	12368139	98.86	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	270_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:32:30-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-2.249	ppb	-108.1	1535624	10	
Be	9	1	6	0.156	ppb	20.0	33	0.5	
B	11	1	6	1.517	ppb	13.6	1690	0.5	>RL
Na	23	1	45	-20.404	ppb	-29.9	298148	25	
Na	23	2	45	-17.121	ppb	-14.5	22114	25	
Mg	24	2	45	3.350	ppb	69.0	1413	25	
Al	27	2	45	-0.553	ppb	-365.3	213	15	
K	39	1	45	-10.765	ppb	-1501.9	6695003	50	
K	39	2	45	-3.233	ppb	-413.5	12162	50	
Ca	40	1	45	2.414	ppb	37.8	53569	50	
Ca	44	2	45	5.829	ppb	170.8	33	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.789	ppb	41.3	2370	1	
Cr	52	2	72	0.067	ppb	87.3	233	1	
Mn	55	2	72	0.027	ppb	187.6	70	0.5	
Fe	57	2	72	5.151	ppb	129.3	190	25	
Co	59	2	72	0.024	ppb	55.9	57	0.5	
Ni	60	2	72	-0.005	ppb	-2041.4	127	1	
Cu	63	2	72	-0.003	ppb	-2735.4	573	1	
Zn	66	2	72	-0.353	ppb	-116.7	227	5	
As	75	2	72	0.024	ppb	508.6	27	1	
Se	78	1	72	0.055	ppb	177.9	20	1	
Sr	88	2	72	0.036	ppb	90.3	33	0.5	
Zr	90	2	72	3.645	ppb	152.9	60	1	>RL
Nb	93	2	72	6.733	ppb	8.0	16654	2	>RL
Mo	95	2	115	0.288	ppb	39.5	237	0.5	
Pd	105	2	115	0.082	ppb	32.8	90	1	
Ag	107	2	115	0.017	ppb	81.6	50	1	
Cd	111	2	115	0.045	ppb	173.2	13	0.5	
Sn	120	2	115	0.193	ppb	34.1	257	1	
Sb	121	2	115	0.541	ppb	2.8	440	0.6	
Ba	137	2	115	-0.012	ppb	-484.2	17	0.5	
W	182	2	165	0.198	ppb	10.1	1367	1	
Pt	195	2	165	0.018	ppb	60.3	70	1	
Tl	205	2	165	0.032	ppb	22.0	297	0.1	
Pb	208	2	165	0.010	ppb	133.5	667	0.5	
Th	232	2	165	0.047	ppb	15.1	783	1	
U	238	2	165	0.079	ppb	6.8	973	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	362775	4.03	355078	102.17	60	120	
Sc (IS)	45	1	HMI H2	15245790	5.20	14780058	103.15	60	120	
Sc (IS)	45	2	HMI He	624760	0.92	628472	99.41	60	120	
Sc (IS)	45	3	No Gas	22513830	1.19	21982103	102.42	60	120	
Ge Internal Standard	72	1	HMI H2	5860644	3.72	5863330	99.95	60	120	
Ge Internal Standard	72	2	HMI He	710936	0.57	718381	98.96	60	120	
In Internal Standard	115	2	HMI He	2583851	0.41	2598721	99.43	60	120	
Ho-165	165	2	HMI He	12258585	0.96	12368139	99.11	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	271LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:36:18-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	17.976	ppb	27.182	1600073	50	36.0	70	130	>+/-30%
Be	9	1	6	1.151	ppb	21.405	243	1	115.1	70	130	
Na	23	2	45	28.971	ppb	19.830	29591	50	57.9	70	130	>+/-30%
Mg	24	2	45	53.120	ppb	9.846	5048	50	106.2	70	130	
Al	27	2	45	26.599	ppb	17.366	800	30	88.7	70	130	
K	39	2	45	95.294	ppb	10.936	16273	100	95.3	70	130	
Ca	44	2	45	47.916	ppb	33.295	130	50	95.8	70	130	
V	51	2	72	5.423	ppb	6.832	5738	5	108.5	70	130	
Cr	52	2	72	1.956	ppb	13.124	1987	2	97.8	70	130	
Mn	55	2	72	0.963	ppb	28.828	443	1	96.3	70	130	
Fe	57	2	72	53.098	ppb	20.082	1050	50	106.2	70	130	
Co	59	2	72	0.952	ppb	3.439	1523	1	95.2	70	130	
Ni	60	2	72	1.978	ppb	10.069	1007	2	98.9	70	130	
Cu	63	2	72	2.333	ppb	7.032	3384	2	116.7	70	130	
Zn	66	2	72	9.965	ppb	9.174	2004	10	99.6	70	130	
As	75	2	72	4.551	ppb	5.062	565	5	91.0	70	130	
Se	78	1	72	5.143	ppb	6.443	796	5	102.9	70	130	
Sr	88	2	72	0.971	ppb	19.538	477	1	97.1	70	130	
Zr	90	2	72	11.597	ppb	54.126	113	0.5	2319.4	70	130	>+/-30%
Nb	93	2	72	14.698	ppb	1.948	34536	2	734.9	70	130	>+/-30%
Mo	95	2	115	1.878	ppb	15.456	1247	2	93.9	70	130	
Pd	105	2	115	0.067	ppb	82.598	77	1	6.7	70	130	>+/-30%
Ag	107	2	115	5.157	ppb	1.729	10985	5	103.1	70	130	
Cd	111	2	115	1.080	ppb	39.743	323	1	108.0	70	130	
Sn	120	2	115	9.736	ppb	3.261	8303	10	97.4	70	130	
Sb	121	2	115	2.188	ppb	7.305	1687	2	109.4	70	130	
Ba	137	2	115	0.986	ppb	21.943	283	1	98.6	70	130	
W	182	2	165	5.206	ppb	6.117	16811	1	520.6	70	130	>+/-30%
Pt	195	2	165	0.022	ppb	0.593	80	1	2.2	70	130	>+/-30%
Tl	205	2	165	1.040	ppb	2.522	6592	1	104.0	70	130	
Pb	208	2	165	1.072	ppb	7.633	9544	1	107.2	70	130	
Th	232	2	165	2.177	ppb	0.133	22324	2	108.8	70	130	
U	238	2	165	1.062	ppb	4.603	11569	1	106.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	357928	0.68	355078	100.80	60	120	
Sc (IS)	45	1	HMI H2	14928001	0.35	14780058	101.00	60	120	
Sc (IS)	45	2	HMI He	628985	0.53	628472	100.08	60	120	
Sc (IS)	45	3	No Gas	22296363	0.24	21982103	101.43	60	120	
Ge Internal Standard	72	1	HMI H2	5837095	0.20	5863330	99.55	60	120	
Ge Internal Standard	72	2	HMI He	717938	0.10	718381	99.94	60	120	
In Internal Standard	115	2	HMI He	2612766	0.63	2598721	100.54	60	120	
Ho-165	165	2	HMI He	12323650	0.40	12368139	99.64	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436131/1-A
Data File Name	272_BLK.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:40:06-07:00
Sample Type	Blank
Dilution	1
Comment	436131 6020a dod5
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	7.140	ppb	105.1127118	53355	0.5
Li	7	2	45	-0.758	ppb	-2851.664322	2737	0.5
Li	7	3	45	-8.548	ppb	-102.5184267	1436180	10
Be	9	1	6	0.017	ppb	173.2050808	3	0.5
B	11	1	6	-0.082	ppb	-465.1421443	1217	0.5
Na	23	1	45	-21.036	ppb	-4.772401051	277161	25
Na	23	2	45	-18.009	ppb	-4.766120432	21687	25
Mg	24	2	45	-0.332	ppb	-688.7149515	1130	25
Al	27	2	45	6.367	ppb	42.53699641	357	15
K	39	1	45	-1332.598	ppb	-0.843320387	3410123	50
K	39	2	45	-14.018	ppb	-105.9528845	11565	50
Ca	40	1	45	5.170	ppb	8.409490847	58738	50
Ca	44	2	45	7.545	ppb	89.64979515	37	25
Ti	47	2	45	0.190	ppb	173.2050808	3	0.5
V	51	2	72	-0.895	ppb	-43.36186417	1153	1
Cr	52	2	72	0.188	ppb	20.46163868	340	1
Mn	55	2	72	0.200	ppb	44.46887209	137	0.5
Fe	57	2	72	9.085	ppb	23.13210116	257	25
Co	59	2	72	0.002	ppb	151.9241802	23	0.5
Ni	60	2	72	-0.078	ppb	-17.93515086	93	1
Cu	63	2	72	-0.025	ppb	-291.7482808	540	1
Zn	66	2	72	-0.058	ppb	-260.6857011	273	5
As	75	2	72	-0.040	ppb	-122.5267132	19	1
Se	78	1	72	0.068	ppb	61.59229007	21	1
Sr	88	2	72	0.022	ppb	55.50759329	27	0.5
Zr	90	2	72	2.209	ppb	280.8858524	50	1
Nb	93	2	72	1.841	ppb	7.60290882	5808	2
Mo	95	2	115	0.042	ppb	153.8251996	83	0.5
Pd	105	2	115	0.024	ppb	64.07553228	33	1
Ag	107	2	115	0.016	ppb	33.30280344	47	1
Cd	111	2	115	0.011	ppb	173.2050808	3	0.5
Sn	120	2	115	0.088	ppb	35.00368523	170	1
Sb	121	2	115	0.058	ppb	41.39796135	80	0.6
Ba	137	2	115	1.256	ppb	16.49472275	353	0.5
W	182	2	165	0.089	ppb	55.39634849	1043	1
Pt	195	2	165	0.001	ppb	602.7147257	30	1
Tl	205	2	165	0.007	ppb	97.5605455	147	0.1
Pb	208	2	165	0.015	ppb	44.36189601	713	0.5
Th	232	2	165	0.031	ppb	21.86474513	633	1
U	238	2	165	0.016	ppb	43.01627242	297	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	337215	1.06	355078	94.97	60	120	
Sc (IS)	45	1	HMI H2	14216581	0.43	14780058	96.19	60	120	
Sc (IS)	45	2	HMI He	616554	0.73	628472	98.10	60	120	
Sc (IS)	45	3	No Gas	21402767	0.22	21982103	97.36	60	120	
Ge Internal Standard	72	1	HMI H2	5583902	0.19	5863330	95.23	60	120	
Ge Internal Standard	72	2	HMI He	701780	0.40	718381	97.69	60	120	
In Internal Standard	115	2	HMI He	2592382	0.96	2598721	99.76	60	120	
Ho-165	165	2	HMI He	12377533	0.44	12368139	100.08	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436131/2-A
Data File Name	273_LCS.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:43:54-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436131 6020a dod5
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	78.808	78.808	ppb	10.780	65744	400	19.7	80	120	>+/-20%
Li	7	2	45	51.658	51.658	ppb	22.542	3204	400	12.9	80	120	>+/-20%
Li	7	3	45	72.065	72.065	ppb	15.508	1729399	400	18.0	80	120	>+/-20%
Be	9	1	6	37.178	37.178	ppb	4.518	7439	40	92.9	80	120	
Na	23	2	45	-37.423	-37.423	ppb	-9.854	18916	40	-93.6	80	120	>+/-20%
Mg	24	2	45	-1.618	-1.618	ppb	-143.700	1053	40	-4.0	80	120	>+/-20%
Al	27	2	45	388.976	388.976	ppb	7.711	8556	40	972.4	80	120	>+/-20%
K	39	2	45	-0.461	-0.461	ppb	-1563.171	12276	40	-1.2	80	120	>+/-20%
Ca	44	2	45	206.058	206.058	ppb	23.886	490	40	515.1	80	120	>+/-20%
V	51	2	72	38.408	38.408	ppb	2.511	28977	40	96.0	80	120	
Cr	52	2	72	39.752	39.752	ppb	3.189	36326	40	99.4	80	120	
Mn	55	2	72	41.491	41.491	ppb	4.444	16270	40	103.7	80	120	
Fe	57	2	72	395.836	395.836	ppb	5.817	7049	40	989.6	80	120	>+/-20%
Co	59	2	72	40.364	40.364	ppb	1.229	62566	40	100.9	80	120	
Ni	60	2	72	39.608	39.608	ppb	0.893	17355	40	99.0	80	120	
Cu	63	2	72	39.905	39.905	ppb	4.441	47576	40	99.8	80	120	
Zn	66	2	72	36.785	36.785	ppb	3.647	6492	40	92.0	80	120	
As	75	2	72	37.713	37.713	ppb	3.815	4424	40	94.3	80	120	
Se	78	1	72	37.820	37.820	ppb	1.052	5593	40	94.6	80	120	
Nb	93	2	72	1.536	1.536	ppb	12.562	5165	40	3.8	80	120	>+/-20%
Mo	95	2	115	37.106	37.106	ppb	1.871	23397	40	92.8	80	120	
Pd	105	2	115	0.020	0.020	ppb	86.822	30	40	0.1	80	120	>+/-20%
Ag	107	2	115	40.719	40.719	ppb	0.906	86104	40	101.8	80	120	
Cd	111	2	115	38.349	38.349	ppb	2.028	11412	40	95.9	80	120	
Sn	120	2	115	39.214	39.214	ppb	0.993	32934	40	98.0	80	120	
Sb	121	2	115	38.471	38.471	ppb	4.552	28871	40	96.2	80	120	
Ba	137	2	115	39.138	39.138	ppb	4.500	10411	40	97.8	80	120	
W	182	2	165	10.909	10.909	ppb	0.653	34556	40	27.3	80	120	>+/-20%
Pt	195	2	165	0.004	0.004	ppb	406.420	37	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.207	39.207	ppb	0.774	245946	40	98.0	80	120	
Pb	208	2	165	40.152	40.152	ppb	0.231	337643	40	100.4	80	120	
Th	232	2	165	38.671	38.671	ppb	0.622	393208	40	96.7	80	120	
U	238	2	165	38.658	38.658	ppb	0.613	418398	40	96.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	338617	0.54	355078	95.36	60	120	
Sc (IS)	45	1	HMI H2	14387379	0.19	14780058	97.34	60	120	
Sc (IS)	45	2	HMI He	624958	0.31	628472	99.44	60	120	
Sc (IS)	45	3	No Gas	21281507	0.56	21982103	96.81	60	120	
Ge Internal Standard	72	1	HMI H2	5650044	0.13	5863330	96.36	60	120	
Ge Internal Standard	72	2	HMI He	704385	0.39	718381	98.05	60	120	
In Internal Standard	115	2	HMI He	2596456	0.73	2598721	99.91	60	120	
Ho-165	165	2	HMI He	12381433	0.08	12368139	100.11	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-436131/3-A
Data File Name	274SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:47:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	89.841	ppb	89.841	33.92	66884	500000	
Li	7	2	45	79.247	ppb	79.247	32.33	3444	500000	
Li	7	3	45	75.670	ppb	75.670	3.48	1758995	50000	
Be	9	1	6	38.043	ppb	38.043	27.64	7409	2000	
B	11	1	6	30.820	ppb	30.820	25.73	7899	2000	
Na	23	1	45	-37.159	ppb	-37.159	-50.63	242881	2000	
Na	23	2	45	-40.717	ppb	-40.717	-4.55	18479	400000	
Mg	24	2	45	-2.461	ppb	-2.461	-27.83	997	400000	
Al	27	2	45	404.469	ppb	404.469	1.66	8926	400000	
K	39	1	45	-1356.728	ppb	-1356.728	-13.05	3351783	400000	
K	39	2	45	-5.700	ppb	-5.700	-173.78	12116	400000	
Ca	40	1	45	2.716	ppb	2.716	105.83	50578	400000	
Ca	44	2	45	177.504	ppb	177.504	19.16	427	400000	
Ti	47	2	45	1.678	ppb	1.678	58.01	30	4000	
V	51	2	72	37.825	ppb	37.825	1.26	28973	2000	
Cr	52	2	72	39.097	ppb	39.097	0.29	36246	5000	
Mn	55	2	72	38.392	ppb	38.392	1.76	15275	10000	
Fe	57	2	72	403.465	ppb	403.465	1.34	7285	400000	
Co	59	2	72	39.203	ppb	39.203	2.90	61646	2000	
Ni	60	2	72	39.930	ppb	39.930	2.57	17745	5000	
Cu	63	2	72	39.948	ppb	39.948	3.15	48302	5000	
Zn	66	2	72	40.465	ppb	40.465	6.03	7215	5000	
As	75	2	72	38.003	ppb	38.003	1.26	4522	2000	
Se	78	1	72	38.854	ppb	38.854	24.17	5600	2000	
Sr	88	2	72	40.947	ppb	40.947	1.73	19321	4000	
Zr	90	2	72	6588.678	ppb	6588.678	2.63	43391	1000	>LDR
Nb	93	2	72	0.923	ppb	0.923	10.23	3881	200	
Mo	95	2	115	36.113	ppb	36.113	2.22	22736	2000	
Pd	105	2	115	0.010	ppb	0.010	98.98	20	100	
Ag	107	2	115	40.449	ppb	40.449	1.40	85395	100	
Cd	111	2	115	38.447	ppb	38.447	2.18	11422	2000	
Sn	120	2	115	39.561	ppb	39.561	2.86	33170	2000	
Sb	121	2	115	39.858	ppb	39.858	2.53	29863	1000	
Ba	137	2	115	39.949	ppb	39.949	2.33	10611	5000	
W	182	2	165	10.411	ppb	10.411	1.58	32855	100	
Pt	195	2	165	0.018	ppb	0.018	47.04	70	100	
Tl	205	2	165	39.961	ppb	39.961	1.87	249426	2000	
Pb	208	2	165	40.329	ppb	40.329	0.29	337462	5000	
Th	232	2	165	39.332	ppb	39.332	1.70	397920	2000	
U	238	2	165	39.555	ppb	39.555	0.93	425983	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	336465	11.04	355078	94.76	60	120	
Sc (IS)	45	1	HMI H2	14350490	14.96	14780058	97.09	60	120	
Sc (IS)	45	2	HMI He	627765	0.51	628472	99.89	60	120	
Sc (IS)	45	3	No Gas	21476677	1.02	21982103	97.70	60	120	
Ge Internal Standard	72	1	HMI H2	5626990	13.34	5863330	95.97	60	120	
Ge Internal Standard	72	2	HMI He	714490	0.44	718381	99.46	60	120	
In Internal Standard	115	2	HMI He	2592426	0.55	2598721	99.76	60	120	
Ho-165	165	2	HMI He	12320966	1.09	12368139	99.62	60	120	

Sample Report

Sample Table

Sample Name	280-116299-C-4-B
Data File Name	275SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:51:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.387	ppb	10.387	45.64	53580	500000	
Li	7	2	45	-0.935	ppb	-0.935	-1190.09	2714	500000	
Li	7	3	45	-6.377	ppb	-6.377	-55.29	1423018	50000	
Be	9	1	6	0.103	ppb	0.103	1.15	20	2000	
B	11	1	6	51.638	ppb	51.638	1.59	12292	2000	
Na	23	1	45	14907.803	ppb	14907.803	1.00	30421387	2000	>LDR
Na	23	2	45	14847.495	ppb	14847.495	0.57	2318421	400000	
Mg	24	2	45	1079.080	ppb	1079.080	0.75	77593	400000	
Al	27	2	45	26.063	ppb	26.063	16.85	767	400000	
K	39	1	45	-280.535	ppb	-280.535	-7.93	5642505	400000	
K	39	2	45	1093.985	ppb	1093.985	1.21	55556	400000	
Ca	40	1	45	8745.334	ppb	8745.334	0.93	27443178	400000	
Ca	44	2	45	8734.469	ppb	8734.469	3.89	19520	400000	
Ti	47	2	45	0.574	ppb	0.574	99.97	10	4000	
V	51	2	72	-0.459	ppb	-0.459	-34.90	1463	2000	
Cr	52	2	72	0.217	ppb	0.217	22.61	367	5000	
Mn	55	2	72	103.995	ppb	103.995	2.66	40608	10000	
Fe	57	2	72	3443.058	ppb	3443.058	1.04	60430	400000	
Co	59	2	72	0.237	ppb	0.237	20.23	387	2000	
Ni	60	2	72	0.475	ppb	0.475	27.80	333	5000	
Cu	63	2	72	9.993	ppb	9.993	4.24	12316	5000	
Zn	66	2	72	32.069	ppb	32.069	2.35	5685	5000	
As	75	2	72	0.364	ppb	0.364	29.95	66	2000	
Se	78	1	72	0.224	ppb	0.224	97.63	44	2000	
Sr	88	2	72	57.154	ppb	57.154	0.37	26526	4000	
Zr	90	2	72	185.473	ppb	185.473	11.64	1237	1000	
Nb	93	2	72	0.638	ppb	0.638	13.27	3197	200	
Mo	95	2	115	0.066	ppb	0.066	13.25	97	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-90.01	3	100	
Ag	107	2	115	0.019	ppb	0.019	56.56	53	100	
Cd	111	2	115	0.023	ppb	0.023	86.61	7	2000	
Sn	120	2	115	0.756	ppb	0.756	9.16	717	2000	
Sb	121	2	115	0.580	ppb	0.580	18.95	463	1000	
Ba	137	2	115	4.821	ppb	4.821	7.74	1277	5000	
W	182	2	165	0.087	ppb	0.087	74.98	1037	100	
Pt	195	2	165	0.000	ppb	0.000	-94236.56	27	100	
Tl	205	2	165	0.036	ppb	0.036	18.08	327	2000	
Pb	208	2	165	1.069	ppb	1.069	5.61	9585	5000	
Th	232	2	165	0.141	ppb	0.141	23.35	1750	2000	
U	238	2	165	0.055	ppb	0.055	33.29	727	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	327787	1.15	355078	92.31	60	120	
Sc (IS)	45	1	HMI H2	14136936	0.52	14780058	95.65	60	120	
Sc (IS)	45	2	HMI He	611460	0.24	628472	97.29	60	120	
Sc (IS)	45	3	No Gas	21086975	0.32	21982103	95.93	60	120	
Ge Internal Standard	72	1	HMI H2	5579864	0.16	5863330	95.17	60	120	
Ge Internal Standard	72	2	HMI He	702954	0.26	718381	97.85	60	120	
In Internal Standard	115	2	HMI He	2550747	0.70	2598721	98.15	60	120	
Ho-165	165	2	HMI He	12404442	0.63	12368139	100.29	60	120	

Sample Report

Sample Table

Sample Name	280-116336-E-3-B
Data File Name	276SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:55:16-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	29.320	ppb	29.320	3.47	56239	500000	
Li	7	2	45	13.422	ppb	13.422	101.69	2817	500000	
Li	7	3	45	18.434	ppb	18.434	4.69	1512964	50000	
Be	9	1	6	0.035	ppb	0.035	173.21	7	2000	
B	11	1	6	47.066	ppb	47.066	2.46	11158	2000	
Na	23	1	45	9465.192	ppb	9465.192	0.37	19297224	2000	
Na	23	2	45	9499.516	ppb	9499.516	1.06	1485713	400000	
Mg	24	2	45	63216.954	ppb	63216.954	0.72	4460662	400000	
Al	27	2	45	66.630	ppb	66.630	11.51	1610	400000	
K	39	1	45	716.456	ppb	716.456	3.57	7722307	400000	
K	39	2	45	2145.638	ppb	2145.638	0.51	96985	400000	
Ca	40	1	45	127416.163	ppb	127416.163	0.51	396509727	400000	
Ca	44	2	45	125960.898	ppb	125960.898	0.95	280070	400000	
Ti	47	2	45	0.959	ppb	0.959	125.13	17	4000	
V	51	2	72	-1.029	ppb	-1.029	-7.68	1047	2000	
Cr	52	2	72	0.480	ppb	0.480	29.48	597	5000	
Mn	55	2	72	132.207	ppb	132.207	2.89	50951	10000	
Fe	57	2	72	264.003	ppb	264.003	6.48	4664	400000	
Co	59	2	72	0.409	ppb	0.409	16.00	643	2000	
Ni	60	2	72	1.357	ppb	1.357	13.44	707	5000	
Cu	63	2	72	0.236	ppb	0.236	16.23	837	5000	
Zn	66	2	72	2.243	ppb	2.243	37.00	653	5000	
As	75	2	72	0.320	ppb	0.320	53.93	60	2000	
Se	78	1	72	0.145	ppb	0.145	101.25	32	2000	
Sr	88	2	72	235.017	ppb	235.017	1.97	107631	4000	
Zr	90	2	72	187.977	ppb	187.977	2.49	1237	1000	
Nb	93	2	72	0.611	ppb	0.611	13.72	3097	200	
Mo	95	2	115	0.359	ppb	0.359	42.28	273	2000	
Pd	105	2	115	0.014	ppb	0.014	84.43	23	100	
Ag	107	2	115	0.008	ppb	0.008	176.63	30	100	
Cd	111	2	115	0.058	ppb	0.058	91.78	17	2000	
Sn	120	2	115	0.255	ppb	0.255	9.41	300	2000	
Sb	121	2	115	0.204	ppb	0.204	33.29	183	1000	
Ba	137	2	115	21.103	ppb	21.103	3.93	5435	5000	
W	182	2	165	0.141	ppb	0.141	32.44	1193	100	
Pt	195	2	165	-0.001	ppb	-0.001	-500.24	23	100	
Tl	205	2	165	0.048	ppb	0.048	8.52	397	2000	
Pb	208	2	165	0.123	ppb	0.123	17.40	1610	5000	
Th	232	2	165	0.152	ppb	0.152	9.83	1844	2000	
U	238	2	165	2.195	ppb	2.195	3.98	23656	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	323396	0.08	355078	91.08	60	120	
Sc (IS)	45	1	HMI H2	14039125	0.34	14780058	94.99	60	120	
Sc (IS)	45	2	HMI He	608871	0.65	628472	96.88	60	120	
Sc (IS)	45	3	No Gas	21059417	0.57	21982103	95.80	60	120	
Ge Internal Standard	72	1	HMI H2	5479036	0.45	5863330	93.45	60	120	
Ge Internal Standard	72	2	HMI He	694010	0.61	718381	96.61	60	120	
In Internal Standard	115	2	HMI He	2508949	0.27	2598721	96.55	60	120	
Ho-165	165	2	HMI He	12267222	0.64	12368139	99.18	60	120	

Sample Report

Sample Table

Sample Name	280-116336-E-6-B
Data File Name	277SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T05:59:02-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	46.454	ppb	46.454	5.21	60004	500000	
Li	7	2	45	59.271	ppb	59.271	56.68	3231	500000	
Li	7	3	45	26.196	ppb	26.196	12.21	1582966	50000	
Be	9	1	6	0.102	ppb	0.102	100.27	20	2000	
B	11	1	6	27.450	ppb	27.450	8.85	7159	2000	
Na	23	1	45	19838.984	ppb	19838.984	0.47	40797241	2000	>LDR
Na	23	2	45	19428.412	ppb	19428.412	0.83	3061454	400000	
Mg	24	2	45	46032.340	ppb	46032.340	1.73	3300058	400000	
Al	27	2	45	485.170	ppb	485.170	5.24	10504	400000	
K	39	1	45	379.967	ppb	379.967	2.38	7128914	400000	
K	39	2	45	1814.312	ppb	1814.312	1.79	85193	400000	
Ca	40	1	45	73055.615	ppb	73055.615	0.35	231312197	400000	
Ca	44	2	45	72238.615	ppb	72238.615	1.36	163200	400000	
Ti	47	2	45	4.160	ppb	4.160	90.98	73	4000	
V	51	2	72	-0.198	ppb	-0.198	-180.52	1660	2000	
Cr	52	2	72	0.979	ppb	0.979	14.25	1067	5000	
Mn	55	2	72	117.702	ppb	117.702	1.21	46305	10000	
Fe	57	2	72	2630.116	ppb	2630.116	2.30	46539	400000	
Co	59	2	72	1.316	ppb	1.316	6.31	2070	2000	
Ni	60	2	72	1.254	ppb	1.254	16.30	677	5000	
Cu	63	2	72	2.225	ppb	2.225	3.69	3211	5000	
Zn	66	2	72	3.895	ppb	3.895	27.17	947	5000	
As	75	2	72	20.767	ppb	20.767	3.49	2460	2000	
Se	78	1	72	0.004	ppb	0.004	1919.11	12	2000	
Sr	88	2	72	256.622	ppb	256.622	1.50	119955	4000	
Zr	90	2	72	166.158	ppb	166.158	8.84	1120	1000	
Nb	93	2	72	0.197	ppb	0.197	82.12	2254	200	
Mo	95	2	115	1.543	ppb	1.543	8.22	1010	2000	
Pd	105	2	115	0.034	ppb	0.034	146.40	43	100	
Ag	107	2	115	0.015	ppb	0.015	21.01	43	100	
Cd	111	2	115	0.011	ppb	0.011	173.21	3	2000	
Sn	120	2	115	0.047	ppb	0.047	107.70	133	2000	
Sb	121	2	115	0.096	ppb	0.096	28.55	107	1000	
Ba	137	2	115	28.148	ppb	28.148	5.84	7369	5000	
W	182	2	165	0.080	ppb	0.080	25.51	1020	100	
Pt	195	2	165	-0.009	ppb	-0.009	-24.66	3	100	
Tl	205	2	165	0.029	ppb	0.029	22.58	280	2000	
Pb	208	2	165	1.357	ppb	1.357	3.56	12036	5000	
Th	232	2	165	0.573	ppb	0.573	2.68	6165	2000	
U	238	2	165	2.779	ppb	2.779	2.11	30317	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	330623	0.50	355078	93.11	60	120	
Sc (IS)	45	1	HMI H2	14282935	0.06	14780058	96.64	60	120	
Sc (IS)	45	2	HMI He	618614	1.24	628472	98.43	60	120	
Sc (IS)	45	3	No Gas	21622704	0.33	21982103	98.37	60	120	
Ge Internal Standard	72	1	HMI H2	5598885	0.52	5863330	95.49	60	120	
Ge Internal Standard	72	2	HMI He	708329	0.06	718381	98.60	60	120	
In Internal Standard	115	2	HMI He	2552399	1.22	2598721	98.22	60	120	
Ho-165	165	2	HMI He	12434143	0.36	12368139	100.53	60	120	

Sample Report

Sample Table

Sample Name	280-116336-E-7-B
Data File Name	278SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:02:48-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.165	ppb	10.165	44.78	53202	500000	
Li	7	2	45	16.901	ppb	16.901	309.28	2820	500000	
Li	7	3	45	-5.950	ppb	-5.950	-145.24	1419189	50000	
Be	9	1	6	0.120	ppb	0.120	99.52	23	2000	
B	11	1	6	14.395	ppb	14.395	6.22	4324	2000	
Na	23	1	45	5537.309	ppb	5537.309	0.92	11425692	2000	
Na	23	2	45	5347.315	ppb	5347.315	1.21	839694	400000	
Mg	24	2	45	11488.894	ppb	11488.894	0.64	804725	400000	
Al	27	2	45	-0.346	ppb	-0.346	-1543.47	210	400000	
K	39	1	45	-357.631	ppb	-357.631	-4.39	5442081	400000	
K	39	2	45	1090.922	ppb	1090.922	2.50	54733	400000	
Ca	40	1	45	34519.025	ppb	34519.025	0.57	107500182	400000	
Ca	44	2	45	33778.512	ppb	33778.512	0.44	74484	400000	
Ti	47	2	45	0.193	ppb	0.193	173.21	3	4000	
V	51	2	72	-0.639	ppb	-0.639	-11.91	1313	2000	
Cr	52	2	72	0.370	ppb	0.370	9.25	497	5000	
Mn	55	2	72	397.629	ppb	397.629	1.07	152419	10000	
Fe	57	2	72	8333.060	ppb	8333.060	1.20	143590	400000	
Co	59	2	72	5.933	ppb	5.933	7.26	9033	2000	
Ni	60	2	72	8.314	ppb	8.314	8.15	3671	5000	
Cu	63	2	72	0.533	ppb	0.533	10.25	1177	5000	
Zn	66	2	72	46.210	ppb	46.210	2.91	7926	5000	
As	75	2	72	1.756	ppb	1.756	6.40	224	2000	
Se	78	1	72	-0.023	ppb	-0.023	-117.52	8	2000	
Sr	88	2	72	59.680	ppb	59.680	1.73	27221	4000	
Zr	90	2	72	41.580	ppb	41.580	19.17	300	1000	
Nb	93	2	72	0.022	ppb	0.022	375.92	1824	200	
Mo	95	2	115	0.014	ppb	0.014	409.66	63	2000	
Pd	105	2	115	0.011	ppb	0.011	166.85	20	100	
Ag	107	2	115	0.003	ppb	0.003	495.16	20	100	
Cd	111	2	115	0.058	ppb	0.058	34.71	17	2000	
Sn	120	2	115	0.173	ppb	0.173	64.10	233	2000	
Sb	121	2	115	0.034	ppb	0.034	146.88	60	1000	
Ba	137	2	115	19.666	ppb	19.666	2.44	5061	5000	
W	182	2	165	0.039	ppb	0.039	184.81	877	100	
Pt	195	2	165	-0.008	ppb	-0.008	-29.31	7	100	
Tl	205	2	165	0.150	ppb	0.150	11.78	1027	2000	
Pb	208	2	165	0.028	ppb	0.028	15.21	813	5000	
Th	232	2	165	0.026	ppb	0.026	42.67	567	2000	
U	238	2	165	0.150	ppb	0.150	4.18	1734	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	330265	0.88	355078	93.01	60	120	
Sc (IS)	45	1	HMI H2	14045602	0.45	14780058	95.03	60	120	
Sc (IS)	45	2	HMI He	603713	0.84	628472	96.06	60	120	
Sc (IS)	45	3	No Gas	21007330	0.85	21982103	95.57	60	120	
Ge Internal Standard	72	1	HMI H2	5566013	0.57	5863330	94.93	60	120	
Ge Internal Standard	72	2	HMI He	690818	0.68	718381	96.16	60	120	
In Internal Standard	115	2	HMI He	2506676	0.26	2598721	96.46	60	120	
Ho-165	165	2	HMI He	12235844	1.02	12368139	98.93	60	120	

Sample Report

Sample Table

Sample Name	280-116336-E-12-B
Data File Name	279SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:06:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.403	ppb	10.403	64.94	53730	500000	
Li	7	2	45	7.550	ppb	7.550	315.79	2817	500000	
Li	7	3	45	-2.329	ppb	-2.329	-260.32	1459120	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	13.804	ppb	13.804	14.12	4204	2000	
Na	23	1	45	6267.554	ppb	6267.554	0.52	13009473	2000	
Na	23	2	45	5947.859	ppb	5947.859	0.99	955403	400000	
Mg	24	2	45	21222.203	ppb	21222.203	2.23	1523832	400000	
Al	27	2	45	115.990	ppb	115.990	11.14	2684	400000	
K	39	1	45	-172.219	ppb	-172.219	-5.10	5890155	400000	
K	39	2	45	1245.387	ppb	1245.387	2.93	62363	400000	
Ca	40	1	45	78920.776	ppb	78920.776	1.04	247987443	400000	
Ca	44	2	45	77520.707	ppb	77520.707	0.60	175326	400000	
Ti	47	2	45	3.016	ppb	3.016	27.75	53	4000	
V	51	2	72	-0.528	ppb	-0.528	-49.27	1430	2000	
Cr	52	2	72	0.474	ppb	0.474	17.59	607	5000	
Mn	55	2	72	332.642	ppb	332.642	0.39	131200	10000	
Fe	57	2	72	1157.722	ppb	1157.722	4.63	20605	400000	
Co	59	2	72	0.152	ppb	0.152	8.65	257	2000	
Ni	60	2	72	0.284	ppb	0.284	85.61	253	5000	
Cu	63	2	72	0.269	ppb	0.269	31.19	897	5000	
Zn	66	2	72	1.313	ppb	1.313	38.02	510	5000	
As	75	2	72	6.826	ppb	6.826	6.66	827	2000	
Se	78	1	72	-0.015	ppb	-0.015	-284.61	9	2000	
Sr	88	2	72	132.280	ppb	132.280	0.61	62053	4000	
Zr	90	2	72	34.176	ppb	34.176	3.54	260	1000	
Nb	93	2	72	0.060	ppb	0.060	129.35	1960	200	
Mo	95	2	115	1.307	ppb	1.307	13.97	887	2000	
Pd	105	2	115	0.003	ppb	0.003	357.41	13	100	
Ag	107	2	115	0.009	ppb	0.009	104.82	33	100	
Cd	111	2	115	0.033	ppb	0.033	99.37	10	2000	
Sn	120	2	115	0.110	ppb	0.110	83.22	190	2000	
Sb	121	2	115	0.013	ppb	0.013	123.94	47	1000	
Ba	137	2	115	83.954	ppb	83.954	4.46	22496	5000	
W	182	2	165	0.060	ppb	0.060	52.51	957	100	
Pt	195	2	165	0.004	ppb	0.004	115.02	37	100	
Tl	205	2	165	0.003	ppb	0.003	222.06	120	2000	
Pb	208	2	165	0.257	ppb	0.257	17.62	2754	5000	
Th	232	2	165	0.133	ppb	0.133	6.68	1667	2000	
U	238	2	165	1.008	ppb	1.008	1.54	11062	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	330709	0.69	355078	93.14	60	120	
Sc (IS)	45	1	HMI H2	14175031	0.31	14780058	95.91	60	120	
Sc (IS)	45	2	HMI He	619320	0.86	628472	98.54	60	120	
Sc (IS)	45	3	No Gas	21397956	0.57	21982103	97.34	60	120	
Ge Internal Standard	72	1	HMI H2	5597533	0.30	5863330	95.47	60	120	
Ge Internal Standard	72	2	HMI He	710737	0.80	718381	98.94	60	120	
In Internal Standard	115	2	HMI He	2618080	0.95	2598721	100.74	60	120	
Ho-165	165	2	HMI He	12410675	0.56	12368139	100.34	60	120	

Sample Report

Sample Table

Sample Name	280-116336-E-13-B
Data File Name	280SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:10:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	8.396	ppb	8.396	86.75	53888	500000	
Li	7	2	45	-13.984	ppb	-13.984	-316.57	2640	500000	
Li	7	3	45	-2.804	ppb	-2.804	-204.46	1442941	50000	
Be	9	1	6	0.119	ppb	0.119	65.26	23	2000	
B	11	1	6	13.731	ppb	13.731	7.08	4181	2000	
Na	23	1	45	6119.603	ppb	6119.603	0.29	12824889	2000	
Na	23	2	45	5909.825	ppb	5909.825	0.90	947887	400000	
Mg	24	2	45	20961.780	ppb	20961.780	1.30	1502727	400000	
Al	27	2	45	113.151	ppb	113.151	3.95	2620	400000	
K	39	1	45	-207.559	ppb	-207.559	-9.27	5866853	400000	
K	39	2	45	1225.108	ppb	1225.108	1.83	61449	400000	
Ca	40	1	45	77362.455	ppb	77362.455	0.40	245292490	400000	
Ca	44	2	45	76513.178	ppb	76513.178	0.88	172763	400000	
Ti	47	2	45	3.023	ppb	3.023	75.55	53	4000	
V	51	2	72	-0.731	ppb	-0.731	-30.14	1273	2000	
Cr	52	2	72	0.429	ppb	0.429	35.57	560	5000	
Mn	55	2	72	334.348	ppb	334.348	0.94	130702	10000	
Fe	57	2	72	1160.836	ppb	1160.836	1.03	20482	400000	
Co	59	2	72	0.155	ppb	0.155	62.20	260	2000	
Ni	60	2	72	0.190	ppb	0.190	31.94	210	5000	
Cu	63	2	72	0.185	ppb	0.185	25.40	790	5000	
Zn	66	2	72	1.180	ppb	1.180	38.16	483	5000	
As	75	2	72	6.609	ppb	6.609	5.91	795	2000	
Se	78	1	72	-0.024	ppb	-0.024	-228.91	8	2000	
Sr	88	2	72	130.696	ppb	130.696	1.47	60764	4000	
Zr	90	2	72	35.562	ppb	35.562	25.31	267	1000	
Nb	93	2	72	-0.029	ppb	-0.029	-392.14	1747	200	
Mo	95	2	115	1.387	ppb	1.387	5.80	920	2000	
Pd	105	2	115	-0.003	ppb	-0.003	-367.93	7	100	
Ag	107	2	115	-0.002	ppb	-0.002	-515.81	10	100	
Cd	111	2	115	0.023	ppb	0.023	173.21	7	2000	
Sn	120	2	115	0.138	ppb	0.138	37.42	210	2000	
Sb	121	2	115	0.027	ppb	0.027	29.37	57	1000	
Ba	137	2	115	81.497	ppb	81.497	0.72	21454	5000	
W	182	2	165	0.179	ppb	0.179	8.34	1317	100	
Pt	195	2	165	-0.001	ppb	-0.001	-642.54	23	100	
Tl	205	2	165	0.008	ppb	0.008	52.22	147	2000	
Pb	208	2	165	0.221	ppb	0.221	7.16	2434	5000	
Th	232	2	165	0.121	ppb	0.121	14.10	1534	2000	
U	238	2	165	0.921	ppb	0.921	2.46	10054	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	330297	0.68	355078	93.02	60	120	
Sc (IS)	45	1	HMI H2	14303164	0.18	14780058	96.77	60	120	
Sc (IS)	45	2	HMI He	618300	0.79	628472	98.38	60	120	
Sc (IS)	45	3	No Gas	21185350	0.05	21982103	96.38	60	120	
Ge Internal Standard	72	1	HMI H2	5590603	0.63	5863330	95.35	60	120	
Ge Internal Standard	72	2	HMI He	704427	0.10	718381	98.06	60	120	
In Internal Standard	115	2	HMI He	2571580	0.61	2598721	98.96	60	120	
Ho-165	165	2	HMI He	12336148	0.48	12368139	99.74	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	281_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:14:13-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	505.499	ppb	0.992	141398	500	101.1	90	110	
Li	7	2	45	535.920	ppb	6.914	7302	500	107.2	90	110	
Li	7	3	45	516.562	ppb	1.353	3661346	500	103.3	90	110	
Be	9	1	6	49.167	ppb	1.805	10337	50	98.3	90	110	
B	11	1	6	49.274	ppb	1.361	12793	50	98.5	90	110	
Na	23	1	45	5100.455	ppb	0.593	11261810	5000	102.0	90	110	
Na	23	2	45	4907.488	ppb	0.534	815369	5000	98.1	90	110	
Mg	24	2	45	5114.529	ppb	0.371	378736	5000	102.3	90	110	
Al	27	2	45	5113.074	ppb	0.209	111852	5000	102.3	90	110	
K	39	1	45	5033.965	ppb	0.132	18047784	5000	100.7	90	110	
K	39	2	45	5097.086	ppb	1.876	223824	5000	101.9	90	110	
Ca	40	1	45	5200.830	ppb	0.839	17328814	5000	104.0	90	110	
Ca	44	2	45	5240.467	ppb	1.385	12212	5000	104.8	90	110	
Ti	47	2	45	44.937	ppb	16.290	817	50	89.9	90	110	>+\-10%
V	51	2	72	51.662	ppb	1.579	39749	50	103.3	90	110	
Cr	52	2	72	50.352	ppb	1.242	47642	50	100.7	90	110	
Mn	55	2	72	51.085	ppb	1.944	20746	50	102.2	90	110	
Fe	57	2	72	5058.647	ppb	1.264	92154	5000	101.2	90	110	
Co	59	2	72	51.670	ppb	2.345	82991	50	103.3	90	110	
Ni	60	2	72	52.004	ppb	1.017	23573	50	104.0	90	110	
Cu	63	2	72	51.430	ppb	0.500	63369	50	102.9	90	110	
Zn	66	2	72	51.087	ppb	1.706	9230	50	102.2	90	110	
As	75	2	72	51.439	ppb	4.081	6245	50	102.9	90	110	
Se	78	1	72	51.810	ppb	1.669	8018	50	103.6	90	110	
Sr	88	2	72	50.893	ppb	1.634	24532	50	101.8	90	110	
Zr	90	2	72	202.676	ppb	7.703	1400	50	405.4	90	110	>+\-10%
Nb	93	2	72	87.514	ppb	0.689	199788	100	87.5	90	110	>+\-10%
Mo	95	2	115	50.755	ppb	1.631	32381	50	101.5	90	110	
Pd	105	2	115	51.119	ppb	1.448	50983	50	102.2	90	110	
Ag	107	2	115	50.851	ppb	1.599	108856	50	101.7	90	110	
Cd	111	2	115	51.120	ppb	4.012	15403	50	102.2	90	110	
Sn	120	2	115	51.667	ppb	1.735	43900	50	103.3	90	110	
Sb	121	2	115	50.840	ppb	3.114	38615	50	101.7	90	110	
Ba	137	2	115	51.679	ppb	1.001	13914	50	103.4	90	110	
W	182	2	165	50.175	ppb	0.617	160266	50	100.3	90	110	
Pt	195	2	165	50.298	ppb	0.898	128039	50	100.6	90	110	
Tl	205	2	165	50.996	ppb	1.028	328245	50	102.0	90	110	
Pb	208	2	165	50.903	ppb	0.326	439101	50	101.8	90	110	
Th	232	2	165	50.515	ppb	1.017	527009	50	101.0	90	110	
U	238	2	165	50.952	ppb	0.199	565860	50	101.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	355852	0.59	355078	100.22	60	120	
Sc (IS)	45	1	HMI H2	14994302	0.21	14780058	101.45	60	120	
Sc (IS)	45	2	HMI He	637107	0.66	628472	101.37	60	120	
Sc (IS)	45	3	No Gas	22970208	1.17	21982103	104.50	60	120	
Ge Internal Standard	72	1	HMI H2	5915846	0.43	5863330	100.90	60	120	
Ge Internal Standard	72	2	HMI He	729992	0.60	718381	101.62	60	120	
In Internal Standard	115	2	HMI He	2628772	0.73	2598721	101.16	60	120	
Ho-165	165	2	HMI He	12705941	0.33	12368139	102.73	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	282_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:17:58-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-1.434	ppb	-132.0	1567730	10	
Be	9	1	6	0.139	ppb	66.4	30	0.5	
B	11	1	6	-0.614	ppb	-32.4	1190	0.5	
Na	23	1	45	-44.724	ppb	-1.4	241668	25	
Na	23	2	45	-46.738	ppb	-3.6	17942	25	
Mg	24	2	45	7.521	ppb	29.6	1764	25	
Al	27	2	45	-2.350	ppb	-146.7	180	15	
K	39	1	45	-17.952	ppb	-103.4	6582752	50	
K	39	2	45	-25.782	ppb	-23.1	11565	50	
Ca	40	1	45	14.406	ppb	4.5	92662	50	
Ca	44	2	45	11.149	ppb	159.3	47	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.178	ppb	19.0	2734	1	>RL
Cr	52	2	72	0.035	ppb	81.1	210	1	
Mn	55	2	72	0.063	ppb	193.9	87	0.5	
Fe	57	2	72	3.704	ppb	169.7	170	25	
Co	59	2	72	0.029	ppb	44.5	67	0.5	
Ni	60	2	72	0.030	ppb	250.6	147	1	
Cu	63	2	72	0.009	ppb	271.7	607	1	
Zn	66	2	72	-0.166	ppb	-311.9	267	5	
As	75	2	72	0.017	ppb	563.2	27	1	
Se	78	1	72	-0.001	ppb	-4259.6	12	1	
Sr	88	2	72	0.075	ppb	31.3	53	0.5	
Zr	90	2	72	0.384	ppb	671.1	40	1	
Nb	93	2	72	4.499	ppb	7.8	12112	2	>RL
Mo	95	2	115	0.064	ppb	83.2	100	0.5	
Pd	105	2	115	0.075	ppb	15.2	87	1	
Ag	107	2	115	0.010	ppb	50.7	37	1	
Cd	111	2	115	0.022	ppb	173.2	7	0.5	
Sn	120	2	115	0.117	ppb	49.8	200	1	
Sb	121	2	115	0.405	ppb	6.5	350	0.6	
Ba	137	2	115	-0.051	ppb	-83.2	7	0.5	
W	182	2	165	0.183	ppb	12.8	1367	1	
Pt	195	2	165	0.027	ppb	46.4	97	1	
Tl	205	2	165	0.018	ppb	28.7	217	0.1	
Pb	208	2	165	0.004	ppb	37.1	643	0.5	
Th	232	2	165	0.048	ppb	16.2	817	1	
U	238	2	165	0.071	ppb	11.9	920	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	365144	0.91	355078	102.83	60	120	
Sc (IS)	45	1	HMI H2	14999306	0.87	14780058	101.48	60	120	
Sc (IS)	45	2	HMI He	642727	0.47	628472	102.27	60	120	
Sc (IS)	45	3	No Gas	22936875	0.73	21982103	104.34	60	120	
Ge Internal Standard	72	1	HMI H2	5971331	0.64	5863330	101.84	60	120	
Ge Internal Standard	72	2	HMI He	733696	0.41	718381	102.13	60	120	
In Internal Standard	115	2	HMI He	2672034	0.12	2598721	102.82	60	120	
Ho-165	165	2	HMI He	12694096	0.45	12368139	102.64	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	283LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:21:45-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	11.301	ppb	26.326	1620269	50	22.6	70	130	>+/-30%
Be	9	1	6	0.995	ppb	23.482	213	1	99.5	70	130	
Na	23	2	45	6.177	ppb	127.109	26171	50	12.4	70	130	>+/-30%
Mg	24	2	45	63.671	ppb	7.684	5861	50	127.3	70	130	
Al	27	2	45	27.220	ppb	12.037	820	30	90.7	70	130	
K	39	2	45	91.792	ppb	10.893	16256	100	91.8	70	130	
Ca	44	2	45	60.349	ppb	28.091	160	50	120.7	70	130	
V	51	2	72	5.682	ppb	3.891	5968	5	113.6	70	130	
Cr	52	2	72	2.234	ppb	10.950	2260	2	111.7	70	130	
Mn	55	2	72	1.262	ppb	5.051	567	1	126.2	70	130	
Fe	57	2	72	64.872	ppb	6.556	1270	50	129.7	70	130	
Co	59	2	72	1.047	ppb	5.114	1687	1	104.7	70	130	
Ni	60	2	72	1.970	ppb	17.725	1010	2	98.5	70	130	
Cu	63	2	72	2.247	ppb	9.801	3304	2	112.4	70	130	
Zn	66	2	72	11.296	ppb	17.775	2250	10	113.0	70	130	
As	75	2	72	4.681	ppb	3.891	585	5	93.6	70	130	
Se	78	1	72	4.780	ppb	2.349	756	5	95.6	70	130	
Sr	88	2	72	1.236	ppb	7.043	607	1	123.6	70	130	
Zr	90	2	72	53.568	ppb	24.523	393	0.5	10713.7	70	130	>+/-30%
Nb	93	2	72	10.599	ppb	6.737	25601	2	529.9	70	130	>+/-30%
Mo	95	2	115	2.267	ppb	17.929	1487	2	113.3	70	130	
Pd	105	2	115	0.071	ppb	13.755	80	1	7.1	70	130	>+/-30%
Ag	107	2	115	5.515	ppb	3.905	11719	5	110.3	70	130	
Cd	111	2	115	0.938	ppb	22.163	280	1	93.8	70	130	
Sn	120	2	115	10.792	ppb	1.766	9170	10	107.9	70	130	
Sb	121	2	115	2.153	ppb	6.200	1657	2	107.7	70	130	
Ba	137	2	115	1.088	ppb	8.442	310	1	108.8	70	130	
W	182	2	165	4.977	ppb	6.791	16361	1	497.7	70	130	>+/-30%
Pt	195	2	165	0.028	ppb	88.239	97	1	2.8	70	130	>+/-30%
Tl	205	2	165	1.092	ppb	3.022	7022	1	109.2	70	130	
Pb	208	2	165	1.048	ppb	3.868	9495	1	104.8	70	130	
Th	232	2	165	2.119	ppb	3.245	22096	2	106.0	70	130	
U	238	2	165	1.083	ppb	5.031	11979	1	108.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	363216	0.49	355078	102.29	60	120	
Sc (IS)	45	1	HMI H2	15105992	0.86	14780058	102.21	60	120	
Sc (IS)	45	2	HMI He	633831	0.60	628472	100.85	60	120	
Sc (IS)	45	3	No Gas	22953544	0.32	21982103	104.42	60	120	
Ge Internal Standard	72	1	HMI H2	5956761	1.17	5863330	101.59	60	120	
Ge Internal Standard	72	2	HMI He	723232	0.61	718381	100.68	60	120	
In Internal Standard	115	2	HMI He	2606413	0.78	2598721	100.30	60	120	
Ho-165	165	2	HMI He	12521900	1.15	12368139	101.24	60	120	

Sample Report

Sample Table

Sample Name	280-116432-C-2-A
Data File Name	284SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:25:36-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	16.596	ppb	16.596	19.80	53727	500000	
Li	7	2	45	18.485	ppb	18.485	97.19	2807	500000	
Li	7	3	45	6.649	ppb	6.649	51.14	1437603	50000	
Be	9	1	6	0.089	ppb	0.089	91.71	17	2000	
B	11	1	6	120.885	ppb	120.885	0.61	26197	2000	
Na	23	1	45	36612.243	ppb	36612.243	1.33	73085614	2000	>LDR
Na	23	2	45	35726.419	ppb	35726.419	0.25	5422900	400000	
Mg	24	2	45	20062.368	ppb	20062.368	1.20	1391256	400000	
Al	27	2	45	0.524	ppb	0.524	307.31	227	400000	
K	39	1	45	14165.475	ppb	14165.475	0.83	35984374	400000	
K	39	2	45	15643.230	ppb	15643.230	0.68	620497	400000	
Ca	40	1	45	129738.747	ppb	129738.747	0.70	400178554	400000	
Ca	44	2	45	129738.390	ppb	129738.390	0.87	283320	400000	
Ti	47	2	45	0.391	ppb	0.391	86.61	7	4000	
V	51	2	72	2.132	ppb	2.132	5.58	3207	2000	
Cr	52	2	72	0.205	ppb	0.205	29.81	347	5000	
Mn	55	2	72	89.436	ppb	89.436	1.40	34021	10000	
Fe	57	2	72	24.101	ppb	24.101	27.46	507	400000	
Co	59	2	72	0.485	ppb	0.485	13.93	750	2000	
Ni	60	2	72	3.831	ppb	3.831	2.19	1744	5000	
Cu	63	2	72	1.334	ppb	1.334	5.21	2084	5000	
Zn	66	2	72	0.876	ppb	0.876	51.76	420	5000	
As	75	2	72	2.955	ppb	2.955	9.58	358	2000	
Se	78	1	72	1.099	ppb	1.099	13.52	168	2000	
Sr	88	2	72	586.453	ppb	586.453	0.35	264942	4000	
Zr	90	2	72	9.266	ppb	9.266	84.60	93	1000	
Nb	93	2	72	1.325	ppb	1.325	11.63	4571	200	
Mo	95	2	115	2.462	ppb	2.462	11.81	1547	2000	
Pd	105	2	115	0.025	ppb	0.025	23.20	33	100	
Ag	107	2	115	0.013	ppb	0.013	97.63	40	100	
Cd	111	2	115	0.012	ppb	0.012	173.21	3	2000	
Sn	120	2	115	0.112	ppb	0.112	24.07	183	2000	
Sb	121	2	115	0.532	ppb	0.532	40.57	420	1000	
Ba	137	2	115	370.687	ppb	370.687	0.89	94912	5000	
W	182	2	165	0.176	ppb	0.176	23.90	1280	100	
Pt	195	2	165	-0.004	ppb	-0.004	-222.46	17	100	
Tl	205	2	165	0.031	ppb	0.031	66.02	287	2000	
Pb	208	2	165	0.027	ppb	0.027	28.07	797	5000	
Th	232	2	165	0.033	ppb	0.033	7.76	633	2000	
U	238	2	165	42.900	ppb	42.900	1.26	453340	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	316109	0.16	355078	89.03	60	120	
Sc (IS)	45	1	HMI H2	13915559	0.51	14780058	94.15	60	120	
Sc (IS)	45	2	HMI He	598047	0.95	628472	95.16	60	120	
Sc (IS)	45	3	No Gas	20605841	1.26	21982103	93.74	60	120	
Ge Internal Standard	72	1	HMI H2	5463631	0.24	5863330	93.18	60	120	
Ge Internal Standard	72	2	HMI He	684634	0.27	718381	95.30	60	120	
In Internal Standard	115	2	HMI He	2503186	1.01	2598721	96.32	60	120	
Ho-165	165	2	HMI He	12089766	0.42	12368139	97.75	60	120	

Sample Report

Sample Table

Sample Name	280-116432-A-3-A
Data File Name	285SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:29:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	16.021	ppb	16.021	25.35	53526	500000	
Li	7	2	45	3.269	ppb	3.269	982.45	2694	500000	
Li	7	3	45	3.130	ppb	3.130	242.90	1411804	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	125.168	ppb	125.168	3.65	26995	2000	
Na	23	1	45	36993.340	ppb	36993.340	0.74	73692372	2000	>LDR
Na	23	2	45	35884.804	ppb	35884.804	0.61	5461300	400000	
Mg	24	2	45	19977.042	ppb	19977.042	0.41	1389049	400000	
Al	27	2	45	3.105	ppb	3.105	43.18	280	400000	
K	39	1	45	14384.045	ppb	14384.045	0.15	36369876	400000	
K	39	2	45	15750.946	ppb	15750.946	0.76	626377	400000	
Ca	40	1	45	130973.832	ppb	130973.832	0.80	403155821	400000	
Ca	44	2	45	129966.055	ppb	129966.055	0.83	284581	400000	
Ti	47	2	45	0.391	ppb	0.391	173.21	7	4000	
V	51	2	72	2.183	ppb	2.183	10.77	3217	2000	
Cr	52	2	72	0.327	ppb	0.327	38.73	450	5000	
Mn	55	2	72	89.650	ppb	89.650	1.97	33830	10000	
Fe	57	2	72	114.297	ppb	114.297	6.87	2030	400000	
Co	59	2	72	0.525	ppb	0.525	14.02	803	2000	
Ni	60	2	72	4.344	ppb	4.344	15.31	1944	5000	
Cu	63	2	72	1.215	ppb	1.215	14.75	1930	5000	
Zn	66	2	72	1.390	ppb	1.390	14.77	500	5000	
As	75	2	72	2.881	ppb	2.881	9.42	347	2000	
Se	78	1	72	1.381	ppb	1.381	11.47	207	2000	
Sr	88	2	72	592.110	ppb	592.110	1.62	265354	4000	
Zr	90	2	72	17.387	ppb	17.387	53.38	143	1000	
Nb	93	2	72	0.715	ppb	0.715	40.59	3247	200	
Mo	95	2	115	2.584	ppb	2.584	9.60	1617	2000	
Pd	105	2	115	0.008	ppb	0.008	402.89	17	100	
Ag	107	2	115	0.018	ppb	0.018	142.12	50	100	
Cd	111	2	115	0.082	ppb	0.082	173.21	23	2000	
Sn	120	2	115	0.129	ppb	0.129	96.83	197	2000	
Sb	121	2	115	0.427	ppb	0.427	2.83	343	1000	
Ba	137	2	115	378.394	ppb	378.394	1.18	96634	5000	
W	182	2	165	0.137	ppb	0.137	30.56	1163	100	
Pt	195	2	165	-0.005	ppb	-0.005	-90.61	13	100	
Tl	205	2	165	0.027	ppb	0.027	26.96	260	2000	
Pb	208	2	165	0.015	ppb	0.015	93.12	697	5000	
Th	232	2	165	0.013	ppb	0.013	37.60	440	2000	
U	238	2	165	43.241	ppb	43.241	0.71	456656	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	315094	0.59	355078	88.74	60	120	
Sc (IS)	45	1	HMI H2	13886674	0.21	14780058	93.96	60	120	
Sc (IS)	45	2	HMI He	599636	0.41	628472	95.41	60	120	
Sc (IS)	45	3	No Gas	20415463	0.13	21982103	92.87	60	120	
Ge Internal Standard	72	1	HMI H2	5421473	0.43	5863330	92.46	60	120	
Ge Internal Standard	72	2	HMI He	679193	0.71	718381	94.54	60	120	
In Internal Standard	115	2	HMI He	2496576	1.01	2598721	96.07	60	120	
Ho-165	165	2	HMI He	12082256	0.75	12368139	97.69	60	120	

Sample Report

Sample Table

Sample Name	280-116407-E-5-A
Data File Name	286SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:33:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	65.716	ppb	65.716	18.16	59836	500000	
Li	7	2	45	97.995	ppb	97.995	31.51	3337	500000	
Li	7	3	45	52.784	ppb	52.784	7.43	1595676	50000	
Be	9	1	6	0.221	ppb	0.221	24.03	40	2000	
B	11	1	6	58.730	ppb	58.730	5.28	12876	2000	
Na	23	1	45	24477.000	ppb	24477.000	0.88	47634611	2000	>LDR
Na	23	2	45	23996.535	ppb	23996.535	3.52	3548723	400000	
Mg	24	2	45	73069.795	ppb	73069.795	3.32	4923497	400000	
Al	27	2	45	1970.404	ppb	1970.404	0.85	39487	400000	
K	39	1	45	2492.954	ppb	2492.954	1.20	11086728	400000	
K	39	2	45	3877.707	ppb	3877.707	2.90	158161	400000	
Ca	40	1	45	157000.591	ppb	157000.591	0.58	471095206	400000	
Ca	44	2	45	155034.940	ppb	155034.940	2.49	329219	400000	
Ti	47	2	45	15.635	ppb	15.635	22.36	260	4000	
V	51	2	72	2.786	ppb	2.786	7.34	3561	2000	
Cr	52	2	72	3.607	ppb	3.607	4.11	3267	5000	
Mn	55	2	72	228.718	ppb	228.718	2.72	84620	10000	
Fe	57	2	72	7944.047	ppb	7944.047	2.49	132089	400000	
Co	59	2	72	3.324	ppb	3.324	5.19	4894	2000	
Ni	60	2	72	5.020	ppb	5.020	1.07	2187	5000	
Cu	63	2	72	4.650	ppb	4.650	5.68	5725	5000	
Zn	66	2	72	11.904	ppb	11.904	5.64	2170	5000	
As	75	2	72	14.841	ppb	14.841	4.43	1661	2000	
Se	78	1	72	0.075	ppb	0.075	79.74	21	2000	
Sr	88	2	72	343.138	ppb	343.138	2.51	150931	4000	
Zr	90	2	72	211.852	ppb	211.852	20.00	1337	1000	
Nb	93	2	72	0.381	ppb	0.381	47.67	2504	200	
Mo	95	2	115	2.417	ppb	2.417	8.19	1467	2000	
Pd	105	2	115	0.023	ppb	0.023	2.71	30	100	
Ag	107	2	115	0.011	ppb	0.011	70.72	33	100	
Cd	111	2	115	0.097	ppb	0.097	94.65	27	2000	
Sn	120	2	115	0.142	ppb	0.142	65.11	200	2000	
Sb	121	2	115	0.138	ppb	0.138	74.90	130	1000	
Ba	137	2	115	33.738	ppb	33.738	4.60	8356	5000	
W	182	2	165	0.093	ppb	0.093	39.04	1013	100	
Pt	195	2	165	0.003	ppb	0.003	275.56	33	100	
Tl	205	2	165	0.056	ppb	0.056	32.98	433	2000	
Pb	208	2	165	4.494	ppb	4.494	4.06	36839	5000	
Th	232	2	165	1.745	ppb	1.745	3.29	17346	2000	
U	238	2	165	4.322	ppb	4.322	3.15	45070	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	305594	1.38	355078	86.06	60	120	
Sc (IS)	45	1	HMI H2	13537165	0.42	14780058	91.59	60	120	
Sc (IS)	45	2	HMI He	581695	2.07	628472	92.56	60	120	
Sc (IS)	45	3	No Gas	20488858	0.53	21982103	93.21	60	120	
Ge Internal Standard	72	1	HMI H2	5320828	0.33	5863330	90.75	60	120	
Ge Internal Standard	72	2	HMI He	666693	1.27	718381	92.81	60	120	
In Internal Standard	115	2	HMI He	2416253	1.88	2598721	92.98	60	120	
Ho-165	165	2	HMI He	11904389	1.49	12368139	96.25	60	120	

Sample Report

Sample Table

Sample Name	280-116407-E-5-Asd@5
Data File Name	287SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:36:58-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	17.116	ppb	17.116	50.30	56541	500000	
Li	7	2	45	14.575	ppb	14.575	255.30	2924	500000	
Li	7	3	45	34.346	ppb	34.346	103.55	1408807	50000	
Be	9	1	6	0.065	ppb	0.065	113.86	13	2000	
B	11	1	6	11.035	ppb	11.035	3.67	3751	2000	
Na	23	1	45	4942.947	ppb	4942.947	1.62	10651692	2000	
Na	23	2	45	4603.299	ppb	4603.299	1.18	757931	400000	
Mg	24	2	45	14237.102	ppb	14237.102	0.52	1040500	400000	
Al	27	2	45	392.119	ppb	392.119	2.45	8693	400000	
K	39	1	45	510.421	ppb	510.421	4.56	7586268	400000	
K	39	2	45	766.489	ppb	766.489	4.30	43817	400000	
Ca	40	1	45	31677.559	ppb	31677.559	1.11	102693278	400000	
Ca	44	2	45	30124.551	ppb	30124.551	1.94	69325	400000	
Ti	47	2	45	3.709	ppb	3.709	67.41	67	4000	
V	51	2	72	0.697	ppb	0.697	39.97	2357	2000	
Cr	52	2	72	0.719	ppb	0.719	19.54	850	5000	
Mn	55	2	72	44.508	ppb	44.508	2.64	18002	10000	
Fe	57	2	72	1560.695	ppb	1560.695	0.70	28375	400000	
Co	59	2	72	0.744	ppb	0.744	8.25	1210	2000	
Ni	60	2	72	1.171	ppb	1.171	20.41	657	5000	
Cu	63	2	72	0.999	ppb	0.999	4.52	1804	5000	
Zn	66	2	72	2.106	ppb	2.106	40.62	660	5000	
As	75	2	72	2.794	ppb	2.794	5.58	361	2000	
Se	78	1	72	0.009	ppb	0.009	714.44	13	2000	
Sr	88	2	72	66.206	ppb	66.206	1.78	31764	4000	
Zr	90	2	72	35.807	ppb	35.807	23.19	277	1000	
Nb	93	2	72	-0.170	ppb	-0.170	-80.34	1487	200	
Mo	95	2	115	0.681	ppb	0.681	12.16	487	2000	
Pd	105	2	115	0.024	ppb	0.024	48.35	33	100	
Ag	107	2	115	0.011	ppb	0.011	123.05	37	100	
Cd	111	2	115	0.045	ppb	0.045	44.61	13	2000	
Sn	120	2	115	0.019	ppb	0.019	84.47	113	2000	
Sb	121	2	115	0.017	ppb	0.017	131.67	50	1000	
Ba	137	2	115	6.959	ppb	6.959	2.64	1874	5000	
W	182	2	165	-0.009	ppb	-0.009	-145.70	753	100	
Pt	195	2	165	0.017	ppb	0.017	107.43	70	100	
Tl	205	2	165	0.014	ppb	0.014	71.89	193	2000	
Pb	208	2	165	0.918	ppb	0.918	3.90	8461	5000	
Th	232	2	165	0.334	ppb	0.334	11.52	3777	2000	
U	238	2	165	0.821	ppb	0.821	5.19	9184	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	344363	1.13	355078	96.98	60	120	
Sc (IS)	45	1	HMI H2	14621186	0.79	14780058	98.93	60	120	
Sc (IS)	45	2	HMI He	630072	0.36	628472	100.25	60	120	
Sc (IS)	45	3	No Gas	19071836	18.68	21982103	86.76	60	120	
Ge Internal Standard	72	1	HMI H2	5830146	0.22	5863330	99.43	60	120	
Ge Internal Standard	72	2	HMI He	726750	0.49	718381	101.17	60	120	
In Internal Standard	115	2	HMI He	2604191	1.34	2598721	100.21	60	120	
Ho-165	165	2	HMI He	12627647	0.36	12368139	102.10	60	120	

Sample Report

Sample Table

Sample Name	280-116407-E-5-B MS
Data File Name	288SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:40:46-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	137.086	ppb	137.086	1.38	70723	500000	
Li	7	2	45	131.106	ppb	131.106	35.96	3614	500000	
Li	7	3	45	125.358	ppb	125.358	5.25	1848551	50000	
Be	9	1	6	40.976	ppb	40.976	1.02	7412	2000	
B	11	1	6	82.785	ppb	82.785	2.57	17728	2000	
Na	23	1	45	24078.722	ppb	24078.722	0.28	46783599	2000	>LDR
Na	23	2	45	23099.254	ppb	23099.254	0.40	3445844	400000	
Mg	24	2	45	70547.144	ppb	70547.144	1.31	4793633	400000	
Al	27	2	45	2312.502	ppb	2312.502	2.66	46668	400000	
K	39	1	45	2434.147	ppb	2434.147	1.21	10946981	400000	
K	39	2	45	3773.208	ppb	3773.208	1.64	155493	400000	
Ca	40	1	45	154565.651	ppb	154565.651	0.48	462982753	400000	
Ca	44	2	45	150748.871	ppb	150748.871	0.71	322775	400000	
Ti	47	2	45	14.361	ppb	14.361	22.09	240	4000	
V	51	2	72	42.164	ppb	42.164	1.52	30156	2000	
Cr	52	2	72	43.045	ppb	43.045	2.22	37486	5000	
Mn	55	2	72	263.775	ppb	263.775	2.22	98305	10000	
Fe	57	2	72	8004.816	ppb	8004.816	0.19	134083	400000	
Co	59	2	72	41.520	ppb	41.520	1.98	61351	2000	
Ni	60	2	72	42.971	ppb	42.971	3.41	17938	5000	
Cu	63	2	72	42.911	ppb	42.911	1.18	48723	5000	
Zn	66	2	72	49.967	ppb	49.967	5.95	8309	5000	
As	75	2	72	52.143	ppb	52.143	0.91	5822	2000	
Se	78	1	72	37.549	ppb	37.549	3.64	5230	2000	
Sr	88	2	72	371.846	ppb	371.846	1.68	164773	4000	
Zr	90	2	72	5589.939	ppb	5589.939	2.37	34603	1000	>LDR
Nb	93	2	72	0.032	ppb	0.032	422.85	1794	200	
Mo	95	2	115	40.026	ppb	40.026	2.72	23954	2000	
Pd	105	2	115	0.015	ppb	0.015	232.09	23	100	
Ag	107	2	115	39.814	ppb	39.814	0.85	79930	100	
Cd	111	2	115	37.817	ppb	37.817	3.60	10685	2000	
Sn	120	2	115	25.623	ppb	25.623	3.21	20463	2000	
Sb	121	2	115	32.543	ppb	32.543	0.43	23194	1000	
Ba	137	2	115	74.392	ppb	74.392	3.98	18774	5000	
W	182	2	165	9.256	ppb	9.256	1.36	28725	100	
Pt	195	2	165	-0.004	ppb	-0.004	-219.89	17	100	
Tl	205	2	165	39.262	ppb	39.262	0.34	240350	2000	
Pb	208	2	165	43.718	ppb	43.718	0.57	358708	5000	
Th	232	2	165	41.258	ppb	41.258	0.96	409367	2000	
U	238	2	165	44.209	ppb	44.209	0.33	466907	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	306160	0.53	355078	86.22	60	120	
Sc (IS)	45	1	HMI H2	13513602	0.39	14780058	91.43	60	120	
Sc (IS)	45	2	HMI He	586356	0.73	628472	93.30	60	120	
Sc (IS)	45	3	No Gas	20395805	0.65	21982103	92.78	60	120	
Ge Internal Standard	72	1	HMI H2	5322414	1.24	5863330	90.77	60	120	
Ge Internal Standard	72	2	HMI He	671482	0.32	718381	93.47	60	120	
In Internal Standard	115	2	HMI He	2465092	0.43	2598721	94.86	60	120	
Ho-165	165	2	HMI He	12082800	0.41	12368139	97.69	60	120	

Sample Report

Sample Table

Sample Name	280-116407-E-5-C MSD
Data File Name	289SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:44:32-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	133.017	ppb	133.017	3.29	70975	500000	
Li	7	2	45	151.097	ppb	151.097	6.34	3801	500000	
Li	7	3	45	129.185	ppb	129.185	3.10	1842620	50000	
Be	9	1	6	39.518	ppb	39.518	7.36	7109	2000	
B	11	1	6	91.704	ppb	91.704	3.43	19410	2000	
Na	23	1	45	24258.552	ppb	24258.552	0.46	47722099	2000	>LDR
Na	23	2	45	23812.668	ppb	23812.668	1.16	3582398	400000	
Mg	24	2	45	72253.453	ppb	72253.453	1.03	4952142	400000	
Al	27	2	45	2404.328	ppb	2404.328	1.49	48939	400000	
K	39	1	45	2455.316	ppb	2455.316	1.58	11128126	400000	
K	39	2	45	3822.449	ppb	3822.449	1.38	158757	400000	
Ca	40	1	45	156559.133	ppb	156559.133	0.94	474830953	400000	
Ca	44	2	45	155089.496	ppb	155089.496	1.19	334939	400000	
Ti	47	2	45	19.574	ppb	19.574	27.87	330	4000	
V	51	2	72	42.778	ppb	42.778	1.37	30984	2000	
Cr	52	2	72	44.670	ppb	44.670	1.12	39425	5000	
Mn	55	2	72	263.433	ppb	263.433	1.06	99509	10000	
Fe	57	2	72	8123.905	ppb	8123.905	0.62	137918	400000	
Co	59	2	72	42.654	ppb	42.654	0.18	63882	2000	
Ni	60	2	72	43.983	ppb	43.983	5.33	18609	5000	
Cu	63	2	72	42.719	ppb	42.719	0.93	49165	5000	
Zn	66	2	72	50.584	ppb	50.584	1.94	8523	5000	
As	75	2	72	54.034	ppb	54.034	1.90	6114	2000	
Se	78	1	72	38.419	ppb	38.419	4.49	5425	2000	
Sr	88	2	72	377.935	ppb	377.935	0.56	169732	4000	
Zr	90	2	72	5714.395	ppb	5714.395	1.40	35853	1000	>LDR
Nb	93	2	72	0.080	ppb	0.080	216.87	1917	200	
Mo	95	2	115	41.472	ppb	41.472	3.57	24836	2000	
Pd	105	2	115	0.015	ppb	0.015	180.93	23	100	
Ag	107	2	115	41.059	ppb	41.059	2.02	82492	100	
Cd	111	2	115	40.378	ppb	40.378	3.41	11419	2000	
Sn	120	2	115	25.914	ppb	25.914	2.46	20710	2000	
Sb	121	2	115	34.021	ppb	34.021	3.25	24262	1000	
Ba	137	2	115	74.985	ppb	74.985	3.18	18937	5000	
W	182	2	165	10.198	ppb	10.198	1.02	31515	100	
Pt	195	2	165	0.000	ppb	0.000	3246.91	27	100	
Tl	205	2	165	40.146	ppb	40.146	1.47	245303	2000	
Pb	208	2	165	44.414	ppb	44.414	1.31	363737	5000	
Th	232	2	165	42.725	ppb	42.725	0.85	423126	2000	
U	238	2	165	45.575	ppb	45.575	0.94	480440	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	304556	1.57	355078	85.77	60	120	
Sc (IS)	45	1	HMI H2	13683278	0.58	14780058	92.58	60	120	
Sc (IS)	45	2	HMI He	591463	1.12	628472	94.11	60	120	
Sc (IS)	45	3	No Gas	20180218	0.44	21982103	91.80	60	120	
Ge Internal Standard	72	1	HMI H2	5396068	0.66	5863330	92.03	60	120	
Ge Internal Standard	72	2	HMI He	680580	0.47	718381	94.74	60	120	
In Internal Standard	115	2	HMI He	2467160	0.74	2598721	94.94	60	120	
Ho-165	165	2	HMI He	12060311	0.07	12368139	97.51	60	120	

Sample Report

Sample Table

Sample Name	280-116407-E-5-A pds
Data File Name	290SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:48:19-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	58.947	ppb	58.947	17.45	58672	500000	
Li	7	2	45	22.991	ppb	22.991	13.49	2787	500000	
Li	7	3	45	41.266	ppb	41.266	8.94	1535663	50000	
Be	9	1	6	212.136	ppb	212.136	2.44	37963	2000	
B	11	1	6	53.991	ppb	53.991	4.17	11825	2000	
Na	23	1	45	24357.560	ppb	24357.560	1.23	47306954	2000	>LDR
Na	23	2	45	23644.816	ppb	23644.816	0.67	3528197	400000	
Mg	24	2	45	71409.301	ppb	71409.301	0.43	4854444	400000	
Al	27	2	45	4199.055	ppb	4199.055	1.82	84612	400000	
K	39	1	45	2564.404	ppb	2564.404	0.94	11210717	400000	
K	39	2	45	3917.960	ppb	3917.960	0.55	161089	400000	
Ca	40	1	45	157665.049	ppb	157665.049	0.77	472126926	400000	
Ca	44	2	45	153943.987	ppb	153943.987	0.91	329766	400000	
Ti	47	2	45	24.324	ppb	24.324	11.84	407	4000	
V	51	2	72	216.384	ppb	216.384	2.13	149513	2000	
Cr	52	2	72	214.160	ppb	214.160	1.40	188140	5000	
Mn	55	2	72	436.816	ppb	436.816	1.17	164751	10000	
Fe	57	2	72	9851.750	ppb	9851.750	1.14	167020	400000	
Co	59	2	72	209.131	ppb	209.131	0.25	312735	2000	
Ni	60	2	72	204.416	ppb	204.416	1.45	85914	5000	
Cu	63	2	72	207.993	ppb	207.993	0.50	236938	5000	
Zn	66	2	72	228.231	ppb	228.231	2.73	37440	5000	
As	75	2	72	221.876	ppb	221.876	0.64	25003	2000	
Se	78	1	72	212.072	ppb	212.072	2.20	29608	2000	
Sr	88	2	72	335.279	ppb	335.279	0.22	150386	4000	
Zr	90	2	72	37058.694	ppb	37058.694	1.70	232010	1000	>LDR
Nb	93	2	72	8.938	ppb	8.938	3.65	20569	200	
Mo	95	2	115	218.442	ppb	218.442	1.59	129338	2000	
Pd	105	2	115	0.011	ppb	0.011	189.20	20	100	
Ag	107	2	115	45.939	ppb	45.939	0.85	91410	100	
Cd	111	2	115	210.502	ppb	210.502	2.86	58935	2000	
Sn	120	2	115	216.049	ppb	216.049	0.99	170334	2000	
Sb	121	2	115	215.768	ppb	215.768	1.72	152206	1000	
Ba	137	2	115	253.090	ppb	253.090	2.75	63252	5000	
W	182	2	165	217.406	ppb	217.406	0.52	655070	100	
Pt	195	2	165	0.063	ppb	0.063	26.92	177	100	
Tl	205	2	165	214.071	ppb	214.071	0.45	1304486	2000	
Pb	208	2	165	213.367	ppb	213.367	0.58	1741010	5000	
Th	232	2	165	19.545	ppb	19.545	1.26	193269	2000	
U	238	2	165	257.123	ppb	257.123	0.65	2703420	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	302888	0.12	355078	85.30	60	120	
Sc (IS)	45	1	HMI H2	13509886	0.62	14780058	91.41	60	120	
Sc (IS)	45	2	HMI He	586606	0.31	628472	93.34	60	120	
Sc (IS)	45	3	No Gas	20245143	0.87	21982103	92.10	60	120	
Ge Internal Standard	72	1	HMI H2	5343424	0.64	5863330	91.13	60	120	
Ge Internal Standard	72	2	HMI He	679710	0.27	718381	94.62	60	120	
In Internal Standard	115	2	HMI He	2443221	0.73	2598721	94.02	60	120	
Ho-165	165	2	HMI He	12031539	0.68	12368139	97.28	60	120	

Sample Report

Sample Table

Sample Name	280-116407-C-6-A
Data File Name	291SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:52:05-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436131 6020a dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	430.480	ppb	430.480	2.52	108999	500000	
Li	7	2	45	451.883	ppb	451.883	9.51	5658	500000	
Li	7	3	45	384.536	ppb	384.536	3.70	2463541	50000	
Be	9	1	6	0.172	ppb	0.172	22.47	27	2000	
B	11	1	6	73.723	ppb	73.723	3.85	13683	2000	
Na	23	1	45	37334.031	ppb	37334.031	0.71	68069924	2000	>LDR
Na	23	2	45	35876.187	ppb	35876.187	0.95	4971988	400000	
Mg	24	2	45	322116.326	ppb	322116.326	0.53	20379716	400000	
Al	27	2	45	16.025	ppb	16.025	15.62	497	400000	
K	39	1	45	53045.333	ppb	53045.333	0.91	107677248	400000	
K	39	2	45	56973.021	ppb	56973.021	0.31	2035061	400000	
Ca	40	1	45	1121136.558	ppb	1121136.558	0.37	3158428006	400000	
Ca	44	2	45	1138963.934	ppb	1138963.934	0.40	2270973	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-1.899	ppb	-1.899	-10.05	397	2000	
Cr	52	2	72	0.499	ppb	0.499	14.71	553	5000	
Mn	55	2	72	2525.067	ppb	2525.067	0.32	875525	10000	
Fe	57	2	72	193.845	ppb	193.845	7.97	3107	400000	
Co	59	2	72	11.043	ppb	11.043	1.23	15202	2000	
Ni	60	2	72	14.920	ppb	14.920	2.15	5871	5000	
Cu	63	2	72	1.103	ppb	1.103	10.17	1660	5000	
Zn	66	2	72	5.794	ppb	5.794	28.66	1120	5000	
As	75	2	72	0.529	ppb	0.529	17.97	76	2000	
Se	78	1	72	0.202	ppb	0.202	110.81	36	2000	
Sr	88	2	72	2704.002	ppb	2704.002	0.25	1115215	4000	
Zr	90	2	72	69.740	ppb	69.740	6.19	433	1000	
Nb	93	2	72	-0.427	ppb	-0.427	-6.31	780	200	
Mo	95	2	115	0.509	ppb	0.509	24.88	330	2000	
Pd	105	2	115	0.110	ppb	0.110	36.25	103	100	
Ag	107	2	115	0.019	ppb	0.019	71.49	47	100	
Cd	111	2	115	0.179	ppb	0.179	33.41	47	2000	
Sn	120	2	115	0.389	ppb	0.389	21.56	370	2000	
Sb	121	2	115	0.841	ppb	0.841	18.19	583	1000	
Ba	137	2	115	273.002	ppb	273.002	0.87	63477	5000	
W	182	2	165	0.326	ppb	0.326	10.67	1617	100	
Pt	195	2	165	-0.006	ppb	-0.006	-69.19	10	100	
Tl	205	2	165	0.842	ppb	0.842	2.53	4895	2000	
Pb	208	2	165	0.233	ppb	0.233	16.12	2317	5000	
Th	232	2	165	0.015	ppb	0.015	19.65	420	2000	
U	238	2	165	24.421	ppb	24.421	0.96	240588	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	263273	1.07	355078	74.15	60	120	
Sc (IS)	45	1	HMI H2	12710416	0.16	14780058	86.00	60	120	
Sc (IS)	45	2	HMI He	546041	0.66	628472	86.88	60	120	
Sc (IS)	45	3	No Gas	18089616	0.62	21982103	82.29	60	120	
Ge Internal Standard	72	1	HMI H2	4910111	0.44	5863330	83.74	60	120	
Ge Internal Standard	72	2	HMI He	625050	0.12	718381	87.01	60	120	
In Internal Standard	115	2	HMI He	2272877	0.82	2598721	87.46	60	120	
Ho-165	165	2	HMI He	11267728	0.60	12368139	91.10	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	292_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:55:55-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	444.181	ppb	2.450	121965	500	88.8	90	110	>+\-10%
Li	7	2	45	473.179	ppb	4.275	6242	500	94.6	90	110	
Li	7	3	45	454.488	ppb	1.153	3054644	500	90.9	90	110	
Be	9	1	6	49.833	ppb	5.267	8883	50	99.7	90	110	
B	11	1	6	51.133	ppb	5.541	11208	50	102.3	90	110	
Na	23	1	45	5072.836	ppb	0.909	10436011	5000	101.5	90	110	
Na	23	2	45	4817.234	ppb	1.346	737513	5000	96.3	90	110	
Mg	24	2	45	5135.500	ppb	1.226	350195	5000	102.7	90	110	
Al	27	2	45	5219.825	ppb	1.655	105161	5000	104.4	90	110	
K	39	1	45	5154.422	ppb	0.618	17067623	5000	103.1	90	110	
K	39	2	45	5188.608	ppb	1.530	209642	5000	103.8	90	110	
Ca	40	1	45	5843.673	ppb	1.998	18133798	5000	116.9	90	110	>+\-10%
Ca	44	2	45	5706.874	ppb	0.191	12246	5000	114.1	90	110	>+\-10%
Ti	47	2	45	57.267	ppb	17.592	957	50	114.5	90	110	>+\-10%
V	51	2	72	50.615	ppb	2.743	36169	50	101.2	90	110	
Cr	52	2	72	51.765	ppb	1.562	45439	50	103.5	90	110	
Mn	55	2	72	51.688	ppb	2.536	19477	50	103.4	90	110	
Fe	57	2	72	5022.971	ppb	0.969	84905	5000	100.5	90	110	
Co	59	2	72	50.916	ppb	1.727	75889	50	101.8	90	110	
Ni	60	2	72	50.035	ppb	3.333	21049	50	100.1	90	110	
Cu	63	2	72	51.246	ppb	2.467	58589	50	102.5	90	110	
Zn	66	2	72	50.489	ppb	1.068	8466	50	101.0	90	110	
As	75	2	72	52.427	ppb	0.425	5905	50	104.9	90	110	
Se	78	1	72	54.048	ppb	1.788	7845	50	108.1	90	110	
Sr	88	2	72	51.655	ppb	3.441	23103	50	103.3	90	110	
Zr	90	2	72	98.664	ppb	18.003	650	50	197.3	90	110	>+\-10%
Nb	93	2	72	89.318	ppb	1.967	189162	100	89.3	90	110	>+\-10%
Mo	95	2	115	49.541	ppb	1.083	29999	50	99.1	90	110	
Pd	105	2	115	51.804	ppb	1.449	49043	50	103.6	90	110	
Ag	107	2	115	50.042	ppb	1.912	101680	50	100.1	90	110	
Cd	111	2	115	51.181	ppb	6.932	14635	50	102.4	90	110	
Sn	120	2	115	50.514	ppb	2.436	40744	50	101.0	90	110	
Sb	121	2	115	51.697	ppb	2.209	37268	50	103.4	90	110	
Ba	137	2	115	51.037	ppb	2.352	13043	50	102.1	90	110	
W	182	2	165	50.255	ppb	0.386	151764	50	100.5	90	110	
Pt	195	2	165	50.462	ppb	1.191	121451	50	100.9	90	110	
Tl	205	2	165	51.879	ppb	0.414	315722	50	103.8	90	110	
Pb	208	2	165	51.507	ppb	0.532	420075	50	103.0	90	110	
Th	232	2	165	51.669	ppb	0.463	509640	50	103.3	90	110	
U	238	2	165	51.218	ppb	0.702	537788	50	102.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	301653	1.08	355078	84.95	60	120	
Sc (IS)	45	1	HMI H2	13968299	0.23	14780058	94.51	60	120	
Sc (IS)	45	2	HMI He	586754	1.02	628472	93.36	60	120	
Sc (IS)	45	3	No Gas	20571296	0.47	21982103	93.58	60	120	
Ge Internal Standard	72	1	HMI H2	5549472	0.97	5863330	94.65	60	120	
Ge Internal Standard	72	2	HMI He	677321	0.36	718381	94.28	60	120	
In Internal Standard	115	2	HMI He	2495085	0.90	2598721	96.01	60	120	
Ho-165	165	2	HMI He	12012782	0.59	12368139	97.13	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	293_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T06:59:42-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-16.099	ppb	-166.1	1284059	10	
Be	9	1	6	0.159	ppb	57.6	30	0.5	
B	11	1	6	-0.753	ppb	-5.7	1013	0.5	
Na	23	1	45	-59.797	ppb	-2.4	202272	25	
Na	23	2	45	-61.384	ppb	-13.4	14688	25	
Mg	24	2	45	22.198	ppb	22.5	2694	25	
Al	27	2	45	-1.879	ppb	-308.5	177	15	
K	39	1	45	-32.569	ppb	-100.3	6327497	50	
K	39	2	45	3.660	ppb	319.5	12112	50	
Ca	40	1	45	40.960	ppb	6.7	174790	50	
Ca	44	2	45	36.539	ppb	80.2	100	25	>RL
Ti	47	2	45	0.203	ppb	173.2	3	0.5	
V	51	2	72	0.462	ppb	22.2	2117	1	
Cr	52	2	72	0.011	ppb	76.2	180	1	
Mn	55	2	72	0.052	ppb	167.4	80	0.5	
Fe	57	2	72	4.065	ppb	74.2	170	25	
Co	59	2	72	0.017	ppb	151.6	47	0.5	
Ni	60	2	72	0.060	ppb	123.8	153	1	
Cu	63	2	72	0.033	ppb	291.3	613	1	
Zn	66	2	72	-0.134	ppb	-253.3	260	5	
As	75	2	72	-0.056	ppb	-102.0	17	1	
Se	78	1	72	0.002	ppb	3480.8	12	1	
Sr	88	2	72	0.138	ppb	20.9	80	0.5	
Zr	90	2	72	2.600	ppb	112.4	53	1	>RL
Nb	93	2	72	3.883	ppb	6.0	10274	2	>RL
Mo	95	2	115	0.192	ppb	42.9	180	0.5	
Pd	105	2	115	0.067	ppb	48.4	77	1	
Ag	107	2	115	0.022	ppb	48.6	60	1	
Cd	111	2	115	0.035	ppb	173.2	10	0.5	
Sn	120	2	115	0.186	ppb	18.4	257	1	
Sb	121	2	115	0.447	ppb	4.3	377	0.6	
Ba	137	2	115	0.070	ppb	132.3	40	0.5	
W	182	2	165	0.222	ppb	9.6	1457	1	
Pt	195	2	165	0.024	ppb	83.5	87	1	
Tl	205	2	165	0.028	ppb	55.0	270	0.1	
Pb	208	2	165	0.012	ppb	148.8	697	0.5	
Th	232	2	165	0.052	ppb	11.8	847	1	
U	238	2	165	0.079	ppb	16.8	987	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	319812	0.33	355078	90.07	60	120	
Sc (IS)	45	1	HMI H2	14490872	0.58	14780058	98.04	60	120	
Sc (IS)	45	2	HMI He	608235	4.78	628472	96.78	60	120	
Sc (IS)	45	3	No Gas	19646989	13.33	21982103	89.38	60	120	
Ge Internal Standard	72	1	HMI H2	5729107	1.04	5863330	97.71	60	120	
Ge Internal Standard	72	2	HMI He	704443	4.15	718381	98.06	60	120	
In Internal Standard	115	2	HMI He	2633915	5.22	2598721	101.35	60	120	
Ho-165	165	2	HMI He	12412915	5.25	12368139	100.36	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	ccvl-5425626
Data File Name	294LCCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:03:30-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-16.760	ppb	-52.790	1386978	50	-33.5	70	130	>+/-30%
Be	9	1	6	1.195	ppb	29.928	223	1	119.5	70	130	
Na	23	2	45	-9.013	ppb	-19.164	22979	50	-18.0	70	130	>+/-30%
Mg	24	2	45	75.750	ppb	3.941	6535	50	151.5	70	130	>+/-30%
Al	27	2	45	27.052	ppb	7.966	790	30	90.2	70	130	
K	39	2	45	113.555	ppb	10.919	16607	100	113.6	70	130	
Ca	44	2	45	64.131	ppb	23.977	163	50	128.3	70	130	
V	51	2	72	5.752	ppb	3.880	5841	5	115.0	70	130	
Cr	52	2	72	1.994	ppb	7.205	1977	2	99.7	70	130	
Mn	55	2	72	1.185	ppb	18.214	520	1	118.5	70	130	
Fe	57	2	72	56.914	ppb	5.573	1093	50	113.8	70	130	
Co	59	2	72	0.963	ppb	6.925	1507	1	96.3	70	130	
Ni	60	2	72	1.892	ppb	26.920	947	2	94.6	70	130	
Cu	63	2	72	2.273	ppb	4.115	3237	2	113.6	70	130	
Zn	66	2	72	10.271	ppb	5.898	2010	10	102.7	70	130	
As	75	2	72	4.773	ppb	6.509	578	5	95.5	70	130	
Se	78	1	72	5.402	ppb	7.533	809	5	108.0	70	130	
Sr	88	2	72	1.087	ppb	19.882	520	1	108.7	70	130	
Zr	90	2	72	26.451	ppb	36.051	207	0.5	5290.2	70	130	>+/-30%
Nb	93	2	72	9.949	ppb	6.227	23440	2	497.5	70	130	>+/-30%
Mo	95	2	115	2.079	ppb	14.557	1367	2	104.0	70	130	
Pd	105	2	115	0.041	ppb	49.980	50	1	4.1	70	130	>+/-30%
Ag	107	2	115	5.445	ppb	3.723	11545	5	108.9	70	130	
Cd	111	2	115	1.040	ppb	19.403	310	1	104.0	70	130	
Sn	120	2	115	10.201	ppb	3.116	8653	10	102.0	70	130	
Sb	121	2	115	2.140	ppb	5.803	1644	2	107.0	70	130	
Ba	137	2	115	1.141	ppb	28.039	323	1	114.1	70	130	
W	182	2	165	5.064	ppb	1.341	16304	1	506.4	70	130	>+/-30%
Pt	195	2	165	0.045	ppb	18.729	137	1	4.5	70	130	>+/-30%
Tl	205	2	165	1.055	ppb	3.749	6655	1	105.5	70	130	
Pb	208	2	165	1.099	ppb	3.196	9725	1	109.9	70	130	
Th	232	2	165	2.143	ppb	1.775	21886	2	107.1	70	130	
U	238	2	165	1.083	ppb	1.726	11733	1	108.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	316084	0.77	355078	89.02	60	120	
Sc (IS)	45	1	HMI H2	14307837	0.42	14780058	96.81	60	120	
Sc (IS)	45	2	HMI He	613610	0.46	628472	97.64	60	120	
Sc (IS)	45	3	No Gas	21128018	1.13	21982103	96.11	60	120	
Ge Internal Standard	72	1	HMI H2	5654357	0.36	5863330	96.44	60	120	
Ge Internal Standard	72	2	HMI He	701880	0.28	718381	97.70	60	120	
In Internal Standard	115	2	HMI He	2600747	0.05	2598721	100.08	60	120	
Ho-165	165	2	HMI He	12270025	0.53	12368139	99.21	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436750/1-A
Data File Name	295_BLK.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:07:18-07:00
Sample Type	Blank
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-16.375	ppb	-74.89428481	48356	0.5
Li	7	2	45	-32.932	ppb	-18.18032206	2417	0.5
Li	7	3	45	-46.884	ppb	-23.58343442	1174898	10
Be	9	1	6	0.000	ppb	#DIV/0!	0	0.5
B	11	1	6	7.271	ppb	14.28026184	2567	0.5
Na	23	1	45	-25.673	ppb	-3.723301826	261257	25
Na	23	2	45	-23.646	ppb	-7.181517903	20291	25
Mg	24	2	45	42.035	ppb	10.07388834	4054	25
Al	27	2	45	19.105	ppb	45.10266705	610	15
K	39	1	45	-1351.367	ppb	-0.898482077	3288255	50
K	39	2	45	20.811	ppb	39.56537346	12643	50
Ca	40	1	45	93.599	ppb	0.235522122	329199	50
Ca	44	2	45	74.790	ppb	18.63041338	183	25
Ti	47	2	45	0.582	ppb	100.0167464	10	0.5
V	51	2	72	-0.735	ppb	-35.36842946	1247	1
Cr	52	2	72	0.153	ppb	62.96428381	303	1
Mn	55	2	72	0.641	ppb	43.48835327	303	0.5
Fe	57	2	72	23.804	ppb	26.52364134	507	25
Co	59	2	72	-0.004	ppb	-97.53104689	13	0.5
Ni	60	2	72	0.222	ppb	62.70198674	220	1
Cu	63	2	72	0.503	ppb	33.4331708	1143	1
Zn	66	2	72	1.759	ppb	48.39252382	570	5
As	75	2	72	-0.009	ppb	-1122.740671	22	1
Se	78	1	72	0.014	ppb	451.0834391	13	1
Sr	88	2	72	0.294	ppb	37.31883066	150	0.5
Zr	90	2	72	14.343	ppb	34.76844847	127	1
Nb	93	2	72	0.714	ppb	36.71825571	3307	2
Mo	95	2	115	-0.036	ppb	-25.19948627	33	0.5
Pd	105	2	115	-0.007	ppb	-88.87069756	3	1
Ag	107	2	115	0.011	ppb	149.9880378	37	1
Cd	111	2	115	0.034	ppb	173.2050808	10	0.5
Sn	120	2	115	0.246	ppb	39.80393731	297	1
Sb	121	2	115	0.101	ppb	72.3086109	110	0.6
Ba	137	2	115	0.602	ppb	53.72366257	177	0.5
W	182	2	165	0.076	ppb	31.92815163	987	1
Pt	195	2	165	-0.008	ppb	-58.42857316	7	1
Tl	205	2	165	0.012	ppb	37.6856914	173	0.1
Pb	208	2	165	0.442	ppb	3.671360645	4224	0.5
Th	232	2	165	0.009	ppb	162.133079	400	1
U	238	2	165	0.012	ppb	35.16361289	250	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	304591	0.30	355078	85.78	60	120	
Sc (IS)	45	1	HMI H2	13872219	0.48	14780058	93.86	60	120	
Sc (IS)	45	2	HMI He	601231	0.40	628472	95.67	60	120	
Sc (IS)	45	3	No Gas	19461866	3.18	21982103	88.54	60	120	
Ge Internal Standard	72	1	HMI H2	5508506	0.66	5863330	93.95	60	120	
Ge Internal Standard	72	2	HMI He	691326	0.40	718381	96.23	60	120	
In Internal Standard	115	2	HMI He	2549106	0.50	2598721	98.09	60	120	
Ho-165	165	2	HMI He	12167244	0.57	12368139	98.38	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436750/2-A
Data File Name	296LCS.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:11:06-07:00
Sample Type	LCS-s
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436750 soil 6020 dod5
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	182.412	182.412	ppb	3.043	31801	200	91.2	80	120	
Na	23	2	45	-10.414	-10.414	ppb	-46.847	22341	200	-5.2	80	120	NewName Main CR1 Failed
Mg	24	2	45	26.118	26.118	ppb	7.892	2950	200000	0.0	80	120	NewName Main CR1 Failed
Al	27	2	45	1889.653	1889.653	ppb	0.891	39216	200000	0.9	80	120	NewName Main CR1 Failed
K	39	2	45	8.330	8.330	ppb	94.339	12176	200000	0.0	80	120	NewName Main CR1 Failed
Ca	44	2	45	917.528	917.528	ppb	7.889	2037	200000	0.5	80	120	NewName Main CR1 Failed
V	51	2	72	185.014	185.014	ppb	0.747	128720	200	92.5	80	120	
Cr	52	2	72	186.651	186.651	ppb	1.771	164794	200	93.3	80	120	
(Cr)	53	2	72	183.893	183.893	ppb	3.691	19975	200	91.9	80	120	
Mn	55	2	72	191.457	191.457	ppb	1.416	72595	200	95.7	80	120	
Fe	57	2	72	1884.077	1884.077	ppb	2.750	32173	200000	0.9	80	120	NewName Main CR1 Failed
Co	59	2	72	188.567	188.567	ppb	1.747	283353	200	94.3	80	120	
Ni	60	2	72	190.338	190.338	ppb	1.497	80399	200	95.2	80	120	
Cu	63	2	72	187.540	187.540	ppb	1.392	214736	200	93.8	80	120	
Zn	66	2	72	184.691	184.691	ppb	4.594	30493	200	92.3	80	120	
As	75	2	72	179.590	179.590	ppb	2.142	20340	200	89.8	80	120	
Se	78	1	72	184.303	184.303	ppb	2.045	25639	200	92.2	80	120	
(Se)	82	1	72	163.234	163.234	ppb	1.801	11108	200	81.6	80	120	
Nb	93	2	72	1.338	1.338	ppb	6.656	4588	400	0.3	80	120	NewName Main CR1 Failed
Mo	95	2	115	179.347	179.347	ppb	1.247	111210	200	89.7	80	120	
Pd	105	2	115	0.021	0.021	ppb	99.069	30	200	0.0	80	120	NewName Main CR1 Failed
Ag	107	2	115	168.617	168.617	ppb	1.495	351274	200	84.3	80	120	
Cd	111	2	115	179.953	179.953	ppb	1.032	52764	200	90.0	80	120	
(Cd)	114	2	115	179.886	179.886	ppb	0.286	136570	200	89.9	80	120	
Sn	120	2	115	186.297	186.297	ppb	1.066	153817	200	93.1	80	120	
Sb	121	2	115	190.292	190.292	ppb	0.595	140586	200	95.1	80	110	
Ba	137	2	115	193.133	193.133	ppb	1.473	50554	200	96.6	80	120	
W	182	2	165	180.874	180.874	ppb	0.908	553084	200	90.4	80	120	
Pt	195	2	165	-0.008	-0.008	ppb	-59.401	7	200	0.0	80	120	NewName Main CR1 Failed
Tl	205	2	165	191.074	191.074	ppb	1.233	1181384	200	95.5	80	120	
(Pb)	206	2	165	191.297	191.297	ppb	1.800	385955	200	95.6	80	120	
(Pb)	207	2	165	193.000	193.000	ppb	1.874	357124	200	96.5	80	120	
Pb	208	2	165	192.437	192.437	ppb	1.153	1593233	200	96.2	80	120	
Th	232	2	165	216.540	216.540	ppb	2.572	2169207	200	108.3	80	120	
U	238	2	165	219.195	219.195	ppb	0.407	2338443	200	109.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	295131	0.95	355078	83.12	60	120	
Sc (IS)	45	1	HMI H2	13548764	0.12	14780058	91.67	60	120	
Sc (IS)	45	2	HMI He	602299	0.18	628472	95.84	60	120	
Sc (IS)	45	3	No Gas	19625558	0.50	21982103	89.28	60	120	
Ge Internal Standard	72	1	HMI H2	5323926	0.86	5863330	90.80	60	120	
Ge Internal Standard	72	2	HMI He	683071	0.81	718381	95.08	60	120	
In Internal Standard	115	2	HMI He	2558491	0.55	2598721	98.45	60	120	
Ho-165	165	2	HMI He	12207857	0.83	12368139	98.70	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-436750/3-A
Data File Name	297SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:14:55-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	371.544	ppb	371.544	2.06	107210	500000	
Li	7	2	45	349.956	ppb	349.956	1.93	5405	500000	
Li	7	3	45	372.533	ppb	372.533	2.73	2654308	50000	
Be	9	1	6	200.407	ppb	200.407	2.85	35239	2000	
B	11	1	6	174.802	ppb	174.802	1.95	35179	2000	
Na	23	1	45	-21.229	ppb	-21.229	-5.92	264063	2000	
Na	23	2	45	-25.880	ppb	-25.880	-1.98	19871	400000	
Mg	24	2	45	25.704	ppb	25.704	6.26	2904	400000	
Al	27	2	45	2048.654	ppb	2048.654	1.02	42248	400000	
K	39	1	45	-1420.932	ppb	-1420.932	-2.01	3072119	400000	
K	39	2	45	-13.255	ppb	-13.255	-138.47	11255	400000	
Ca	40	1	45	89.903	ppb	89.903	1.23	310767	400000	
Ca	44	2	45	971.323	ppb	971.323	5.60	2144	400000	
Ti	47	2	45	7.387	ppb	7.387	57.98	127	4000	
V	51	2	72	197.164	ppb	197.164	2.62	137387	2000	
Cr	52	2	72	202.043	ppb	202.043	2.62	178807	5000	
Mn	55	2	72	202.672	ppb	202.672	0.67	77041	10000	
Fe	57	2	72	2059.264	ppb	2059.264	3.16	35241	400000	
Co	59	2	72	203.485	ppb	203.485	2.41	306520	2000	
Ni	60	2	72	204.372	ppb	204.372	2.81	86525	5000	
Cu	63	2	72	205.094	ppb	205.094	2.23	235362	5000	
Zn	66	2	72	205.506	ppb	205.506	3.82	33984	5000	
As	75	2	72	192.240	ppb	192.240	1.57	21826	2000	
Se	78	1	72	191.803	ppb	191.803	1.54	26555	2000	
Sr	88	2	72	207.960	ppb	207.960	2.23	93969	4000	
Zr	90	2	72	34773.741	ppb	34773.741	1.50	219323	1000	>LDR
Nb	93	2	72	0.589	ppb	0.589	9.45	3010	200	
Mo	95	2	115	196.994	ppb	196.994	5.24	121891	2000	
Pd	105	2	115	0.014	ppb	0.014	155.96	23	100	
Ag	107	2	115	188.545	ppb	188.545	3.46	392061	100	
Cd	111	2	115	194.963	ppb	194.963	5.33	57043	2000	
Sn	120	2	115	204.442	ppb	204.442	3.75	168467	2000	
Sb	121	2	115	205.746	ppb	205.746	3.67	151707	1000	
Ba	137	2	115	208.402	ppb	208.402	4.17	54445	5000	
W	182	2	165	196.683	ppb	196.683	3.13	605851	100	
Pt	195	2	165	-0.008	ppb	-0.008	-58.19	7	100	
Tl	205	2	165	207.177	ppb	207.177	3.12	1290494	2000	
Pb	208	2	165	207.614	ppb	207.614	3.04	1731712	5000	
Th	232	2	165	237.058	ppb	237.058	2.94	2392699	2000	
U	238	2	165	236.584	ppb	236.584	2.09	2542974	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	297608	0.10	355078	83.81	60	120	
Sc (IS)	45	1	HMI H2	13564277	0.73	14780058	91.77	60	120	
Sc (IS)	45	2	HMI He	598763	1.71	628472	95.27	60	120	
Sc (IS)	45	3	No Gas	19796168	0.29	21982103	90.06	60	120	
Ge Internal Standard	72	1	HMI H2	5298181	0.37	5863330	90.36	60	120	
Ge Internal Standard	72	2	HMI He	684812	1.12	718381	95.33	60	120	
In Internal Standard	115	2	HMI He	2555114	2.58	2598721	98.32	60	120	
Ho-165	165	2	HMI He	12302337	1.54	12368139	99.47	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-D
Data File Name	298SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:18:43-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	516.281	ppb	516.281	2.25	119218	500000	
Li	7	2	45	496.811	ppb	496.811	8.34	6125	500000	
Li	7	3	45	482.719	ppb	482.719	1.52	2942826	50000	
Be	9	1	6	28.343	ppb	28.343	6.86	4044	2000	
B	11	1	6	92.592	ppb	92.592	5.39	15535	2000	
Na	23	1	45	3962.276	ppb	3962.276	1.21	7344048	2000	
Na	23	2	45	3669.337	ppb	3669.337	0.89	541049	400000	
Mg	24	2	45	278593.043	ppb	278593.043	0.20	18062576	400000	
Al	27	2	45	515872.271	ppb	515872.271	0.46	9891463	400000	
K	39	1	45	133324.669	ppb	133324.669	0.69	257387603	400000	
K	39	2	45	135254.679	ppb	135254.679	1.68	4935400	400000	
Ca	40	1	45	74898.457	ppb	74898.457	0.62	207205670	400000	
Ca	44	2	45	76031.586	ppb	76031.586	1.32	155361	400000	
Ti	47	2	45	22865.779	ppb	22865.779	0.60	364739	4000	>LDR
V	51	2	72	1323.738	ppb	1323.738	0.74	794128	2000	
Cr	52	2	72	3797.244	ppb	3797.244	0.09	2922217	5000	
Mn	55	2	72	20163.576	ppb	20163.576	0.12	6664944	10000	
Fe	57	2	72	1049079.673	ppb	1049079.673	0.75	15583331	400000	
Co	59	2	72	657.150	ppb	657.150	0.31	861494	2000	
Ni	60	2	72	4250.583	ppb	4250.583	1.03	1564072	5000	
Cu	63	2	72	1326.877	ppb	1326.877	0.59	1322559	5000	
Zn	66	2	72	1425.231	ppb	1425.231	1.88	203715	5000	
As	75	2	72	571.339	ppb	571.339	0.87	56413	2000	
Se	78	1	72	8.144	ppb	8.144	8.36	980	2000	
Sr	88	2	72	1097.512	ppb	1097.512	0.26	431543	4000	
Zr	90	2	72	18754.333	ppb	18754.333	1.47	102951	1000	>LDR
Nb	93	2	72	4.791	ppb	4.791	5.38	10378	200	
Mo	95	2	115	26.189	ppb	26.189	4.15	13767	2000	
Pd	105	2	115	0.388	ppb	0.388	9.33	327	100	
Ag	107	2	115	7.662	ppb	7.662	2.26	13504	100	
Cd	111	2	115	7.048	ppb	7.048	2.79	1747	2000	
Sn	120	2	115	8.466	ppb	8.466	5.45	5985	2000	
Sb	121	2	115	2.071	ppb	2.071	5.79	1323	1000	
Ba	137	2	115	5009.049	ppb	5009.049	0.50	1107938	5000	
W	182	2	165	11.863	ppb	11.863	1.08	33700	100	
Pt	195	2	165	0.037	ppb	0.037	18.30	107	100	
Tl	205	2	165	10.026	ppb	10.026	2.68	56576	2000	
Pb	208	2	165	491.624	ppb	491.624	0.56	3708197	5000	
Th	232	2	165	245.904	ppb	245.904	1.02	2244812	2000	
U	238	2	165	25.068	ppb	25.068	1.35	243776	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	241576	1.34	355078	68.03	60	120	
Sc (IS)	45	1	HMI H2	12479778	0.36	14780058	84.44	60	120	
Sc (IS)	45	2	HMI He	559557	0.54	628472	89.03	60	120	
Sc (IS)	45	3	No Gas	19177595	0.29	21982103	87.24	60	120	
Ge Internal Standard	72	1	HMI H2	4563450	0.32	5863330	77.83	60	120	
Ge Internal Standard	72	2	HMI He	595897	0.25	718381	82.95	60	120	
In Internal Standard	115	2	HMI He	2162679	0.39	2598721	83.22	60	120	
Ho-165	165	2	HMI He	11123973	0.74	12368139	89.94	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-Dsd@5
Data File Name	299SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:22:28-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	97.551	ppb	97.551	1.13	61961	500000	
Li	7	2	45	110.274	ppb	110.274	18.32	3217	500000	
Li	7	3	45	82.644	ppb	82.644	6.65	1639346	50000	
Be	9	1	6	6.175	ppb	6.175	18.59	977	2000	
B	11	1	6	19.282	ppb	19.282	4.40	4361	2000	
Na	23	1	45	850.474	ppb	850.474	1.60	1865030	2000	
Na	23	2	45	766.795	ppb	766.795	1.21	127485	400000	
Mg	24	2	45	65231.002	ppb	65231.002	1.20	4127548	400000	
Al	27	2	45	120275.335	ppb	120275.335	1.68	2250352	400000	
K	39	1	45	29303.517	ppb	29303.517	0.41	63182781	400000	
K	39	2	45	29863.788	ppb	29863.788	1.32	1071732	400000	
Ca	40	1	45	16665.599	ppb	16665.599	0.41	47886458	400000	
Ca	44	2	45	17253.872	ppb	17253.872	2.06	34415	400000	
Ti	47	2	45	5152.602	ppb	5152.602	2.45	80203	4000	
V	51	2	72	280.259	ppb	280.259	2.50	175101	2000	
Cr	52	2	72	803.066	ppb	803.066	1.49	639216	5000	
Mn	55	2	72	4521.016	ppb	4521.016	0.65	1545475	10000	
Fe	57	2	72	233926.274	ppb	233926.274	1.45	3593504	400000	
Co	59	2	72	147.723	ppb	147.723	2.46	200274	2000	
Ni	60	2	72	910.050	ppb	910.050	1.23	346391	5000	
Cu	63	2	72	303.705	ppb	303.705	0.81	313440	5000	
Zn	66	2	72	329.448	ppb	329.448	2.31	48887	5000	
As	75	2	72	125.271	ppb	125.271	2.02	12807	2000	
Se	78	1	72	1.898	ppb	1.898	3.47	260	2000	
Sr	88	2	72	230.476	ppb	230.476	2.78	93724	4000	
Zr	90	2	72	3847.750	ppb	3847.750	2.58	21868	1000	
Nb	93	2	72	0.712	ppb	0.712	24.43	2944	200	
Mo	95	2	115	5.807	ppb	5.807	4.40	3177	2000	
Pd	105	2	115	0.061	ppb	0.061	57.83	60	100	
Ag	107	2	115	1.908	ppb	1.908	8.69	3467	100	
Cd	111	2	115	1.753	ppb	1.753	15.06	447	2000	
Sn	120	2	115	2.068	ppb	2.068	10.71	1567	2000	
Sb	121	2	115	0.450	ppb	0.450	33.91	320	1000	
Ba	137	2	115	1061.804	ppb	1061.804	2.62	241558	5000	
W	182	2	165	2.705	ppb	2.705	8.17	8333	100	
Pt	195	2	165	0.008	ppb	0.008	122.73	43	100	
Tl	205	2	165	2.268	ppb	2.268	5.97	13050	2000	
Pb	208	2	165	105.240	ppb	105.240	2.10	805586	5000	
Th	232	2	165	47.013	ppb	47.013	1.48	435573	2000	
U	238	2	165	5.585	ppb	5.585	0.10	55182	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	267596	0.44	355078	75.36	60	120	
Sc (IS)	45	1	HMI H2	12953903	0.87	14780058	87.64	60	120	
Sc (IS)	45	2	HMI He	546012	0.61	628472	86.88	60	120	
Sc (IS)	45	3	No Gas	19720111	0.20	21982103	89.71	60	120	
Ge Internal Standard	72	1	HMI H2	5036285	0.51	5863330	85.89	60	120	
Ge Internal Standard	72	2	HMI He	616259	0.44	718381	85.78	60	120	
In Internal Standard	115	2	HMI He	2224556	0.73	2598721	85.60	60	120	
Ho-165	165	2	HMI He	11283820	0.54	12368139	91.23	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-E MS
Data File Name	300SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:26:14-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	831.947	ppb	831.947	2.45	148354	500000	
Li	7	2	45	839.451	ppb	839.451	0.52	7556	500000	
Li	7	3	45	819.238	ppb	819.238	1.61	3665347	50000	
Be	9	1	6	242.032	ppb	242.032	0.71	29577	2000	
B	11	1	6	267.506	ppb	267.506	1.41	37010	2000	
Na	23	1	45	4116.304	ppb	4116.304	0.72	6888238	2000	
Na	23	2	45	3851.680	ppb	3851.680	1.00	496064	400000	
Mg	24	2	45	283693.318	ppb	283693.318	0.06	16097052	400000	
Al	27	2	45	528830.479	ppb	528830.479	0.66	8873880	400000	
K	39	1	45	136812.633	ppb	136812.633	0.23	238663836	400000	
K	39	2	45	139074.318	ppb	139074.318	0.51	4441284	400000	
Ca	40	1	45	77495.773	ppb	77495.773	0.39	193833450	400000	
Ca	44	2	45	79442.778	ppb	79442.778	1.95	142058	400000	
Ti	47	2	45	24326.856	ppb	24326.856	0.25	339598	4000	>LDR
V	51	2	72	1527.144	ppb	1527.144	1.44	810440	2000	
Cr	52	2	72	3997.490	ppb	3997.490	1.94	2721903	5000	
Mn	55	2	72	20618.614	ppb	20618.614	1.13	6030497	10000	
Fe	57	2	72	1058935.265	ppb	1058935.265	1.59	13918076	400000	
Co	59	2	72	851.877	ppb	851.877	1.29	988159	2000	
Ni	60	2	72	4433.850	ppb	4433.850	2.71	1443498	5000	
Cu	63	2	72	1537.230	ppb	1537.230	3.19	1355555	5000	
Zn	66	2	72	1650.124	ppb	1650.124	1.38	208664	5000	
As	75	2	72	746.064	ppb	746.064	1.02	65177	2000	
Se	78	1	72	160.618	ppb	160.618	1.90	17630	2000	
Sr	88	2	72	1333.494	ppb	1333.494	0.97	463957	4000	
Zr	90	2	72	50812.721	ppb	50812.721	1.05	246775	1000	>LDR
Nb	93	2	72	5.594	ppb	5.594	5.64	10498	200	
Mo	95	2	115	181.082	ppb	181.082	2.20	84392	2000	
Pd	105	2	115	0.360	ppb	0.360	34.20	270	100	
Ag	107	2	115	203.017	ppb	203.017	1.74	317886	100	
Cd	111	2	115	198.006	ppb	198.006	1.24	43640	2000	
Sn	120	2	115	103.941	ppb	103.941	0.85	64540	2000	
Sb	121	2	115	5.059	ppb	5.059	10.30	2834	1000	
Ba	137	2	115	5280.802	ppb	5280.802	1.44	1038562	5000	
W	182	2	165	43.838	ppb	43.838	1.01	111981	100	
Pt	195	2	165	0.017	ppb	0.017	44.01	57	100	
Tl	205	2	165	204.152	ppb	204.152	0.74	1049950	2000	
Pb	208	2	165	689.579	ppb	689.579	0.36	4747948	5000	
Th	232	2	165	483.209	ppb	483.209	1.25	4026543	2000	
U	238	2	165	262.883	ppb	262.883	0.85	2332851	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	206828	0.58	355078	58.25	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11283247	0.61	14780058	76.34	60	120	
Sc (IS)	45	2	HMI He	489699	0.63	628472	77.92	60	120	
Sc (IS)	45	3	No Gas	17240097	0.25	21982103	78.43	60	120	
Ge Internal Standard	72	1	HMI H2	4200459	0.79	5863330	71.64	60	120	
Ge Internal Standard	72	2	HMI He	527312	0.96	718381	73.40	60	120	
In Internal Standard	115	2	HMI He	1923192	1.31	2598721	74.01	60	120	
Ho-165	165	2	HMI He	10154478	0.37	12368139	82.10	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-F MSD
Data File Name	301SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:29:58-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	700.126	ppb	700.126	1.74	124522	500000	
Li	7	2	45	775.788	ppb	775.788	2.26	6598	500000	
Li	7	3	45	688.257	ppb	688.257	2.28	3114095	50000	
Be	9	1	6	214.986	ppb	214.986	2.06	24791	2000	
B	11	1	6	221.792	ppb	221.792	4.38	29076	2000	
Na	23	1	45	3654.507	ppb	3654.507	0.98	5821676	2000	
Na	23	2	45	3506.103	ppb	3506.103	0.48	418478	400000	
Mg	24	2	45	251424.141	ppb	251424.141	0.43	13169796	400000	
Al	27	2	45	464555.224	ppb	464555.224	0.09	7196347	400000	
K	39	1	45	119379.075	ppb	119379.075	0.44	197936157	400000	
K	39	2	45	123220.412	ppb	123220.412	0.33	3633604	400000	
Ca	40	1	45	67278.965	ppb	67278.965	0.77	159459258	400000	
Ca	44	2	45	70025.423	ppb	70025.423	1.44	115603	400000	
Ti	47	2	45	21444.150	ppb	21444.150	0.44	276354	4000	>LDR
V	51	2	72	1339.167	ppb	1339.167	0.33	671348	2000	
Cr	52	2	72	3516.189	ppb	3516.189	0.29	2261218	5000	
Mn	55	2	72	17770.525	ppb	17770.525	0.82	4908430	10000	
Fe	57	2	72	955788.763	ppb	955788.763	0.42	11864284	400000	
Co	59	2	72	746.668	ppb	746.668	0.28	817965	2000	
Ni	60	2	72	3741.804	ppb	3741.804	0.54	1150582	5000	
Cu	63	2	72	1338.481	ppb	1338.481	0.42	1114845	5000	
Zn	66	2	72	1439.546	ppb	1439.546	0.87	171939	5000	
As	75	2	72	679.846	ppb	679.846	0.27	56091	2000	
Se	78	1	72	143.375	ppb	143.375	1.83	15100	2000	
Sr	88	2	72	1142.190	ppb	1142.190	0.58	375306	4000	
Zr	90	2	72	43502.811	ppb	43502.811	0.61	199532	1000	>LDR
Nb	93	2	72	4.756	ppb	4.756	7.82	8616	200	
Mo	95	2	115	161.415	ppb	161.415	1.35	70764	2000	
Pd	105	2	115	0.398	ppb	0.398	20.10	280	100	
Ag	107	2	115	170.758	ppb	170.758	0.15	251517	100	
Cd	111	2	115	176.569	ppb	176.569	0.63	36602	2000	
Sn	120	2	115	91.032	ppb	91.032	1.36	53170	2000	
Sb	121	2	115	4.179	ppb	4.179	4.99	2207	1000	
Ba	137	2	115	4665.425	ppb	4665.425	0.73	863081	5000	
W	182	2	165	39.572	ppb	39.572	0.50	96900	100	
Pt	195	2	165	0.044	ppb	0.044	44.71	107	100	
Tl	205	2	165	176.487	ppb	176.487	0.99	869539	2000	
Pb	208	2	165	608.896	ppb	608.896	0.93	4016230	5000	
Th	232	2	165	429.802	ppb	429.802	0.22	3431125	2000	
U	238	2	165	230.689	ppb	230.689	0.88	1961089	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	195216	1.78	355078	54.98	60	120	IS Failed
Sc (IS)	45	1	HMI H2	10691812	0.84	14780058	72.34	60	120	
Sc (IS)	45	2	HMI He	452071	0.50	628472	71.93	60	120	
Sc (IS)	45	3	No Gas	16426475	0.14	21982103	74.73	60	120	
Ge Internal Standard	72	1	HMI H2	4029665	0.55	5863330	68.73	60	120	
Ge Internal Standard	72	2	HMI He	497963	0.53	718381	69.32	60	120	
In Internal Standard	115	2	HMI He	1808832	1.13	2598721	69.60	60	120	
Ho-165	165	2	HMI He	9727826	0.38	12368139	78.65	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-D pds
Data File Name	302SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:33:43-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	451.528	ppb	451.528	3.42	90727	500000	
Li	7	2	45	515.967	ppb	515.967	6.80	4864	500000	
Li	7	3	45	408.150	ppb	408.150	5.11	2208377	50000	
Be	9	1	6	241.165	ppb	241.165	3.24	26354	2000	
B	11	1	6	91.478	ppb	91.478	3.40	11765	2000	
Na	23	1	45	3846.940	ppb	3846.940	0.69	5887242	2000	
Na	23	2	45	3661.323	ppb	3661.323	1.26	419096	400000	
Mg	24	2	45	280059.695	ppb	280059.695	0.39	14094555	400000	
Al	27	2	45	510519.157	ppb	510519.157	0.18	7598262	400000	
K	39	1	45	130860.079	ppb	130860.079	1.14	208424004	400000	
K	39	2	45	133763.824	ppb	133763.824	0.94	3788986	400000	
Ca	40	1	45	74539.166	ppb	74539.166	0.65	170066851	400000	
Ca	44	2	45	75950.679	ppb	75950.679	1.89	120464	400000	
Ti	47	2	45	23039.950	ppb	23039.950	1.41	285266	4000	>LDR
V	51	2	72	1511.525	ppb	1511.525	0.56	726870	2000	
Cr	52	2	72	4039.295	ppb	4039.295	0.87	2492238	5000	
Mn	55	2	72	20098.109	ppb	20098.109	0.65	5326365	10000	
Fe	57	2	72	1044862.174	ppb	1044862.174	0.53	12444191	400000	
Co	59	2	72	859.550	ppb	859.550	0.56	903458	2000	
Ni	60	2	72	4233.435	ppb	4233.435	0.74	1249001	5000	
Cu	63	2	72	1532.744	ppb	1532.744	0.96	1224847	5000	
Zn	66	2	72	1631.539	ppb	1631.539	0.32	186952	5000	
As	75	2	72	765.876	ppb	765.876	0.70	60626	2000	
Se	78	1	72	201.223	ppb	201.223	0.99	20320	2000	
Sr	88	2	72	1070.562	ppb	1070.562	0.71	337501	4000	
Zr	90	2	72	56965.814	ppb	56965.814	0.80	250676	1000	>LDR
Nb	93	2	72	5.123	ppb	5.123	7.14	8810	200	
Mo	95	2	115	236.647	ppb	236.647	2.68	101703	2000	
Pd	105	2	115	0.372	ppb	0.372	21.23	257	100	
Ag	107	2	115	56.636	ppb	56.636	0.72	81808	100	
Cd	111	2	115	207.875	ppb	207.875	4.32	42241	2000	
Sn	120	2	115	217.752	ppb	217.752	3.18	124599	2000	
Sb	121	2	115	210.202	ppb	210.202	1.27	107648	1000	
Ba	137	2	115	5152.650	ppb	5152.650	2.99	934462	5000	
W	182	2	165	219.554	ppb	219.554	1.30	521584	100	
Pt	195	2	165	0.070	ppb	0.070	49.91	153	100	
Tl	205	2	165	212.083	ppb	212.083	0.81	1018957	2000	
Pb	208	2	165	703.567	ppb	703.567	0.74	4525363	5000	
Th	232	2	165	272.539	ppb	272.539	1.04	2121686	2000	
U	238	2	165	276.739	ppb	276.739	1.48	2294151	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	184991	1.31	355078	52.10	60	120	IS Failed
Sc (IS)	45	1	HMI H2	10292405	0.63	14780058	69.64	60	120	
Sc (IS)	45	2	HMI He	434348	0.61	628472	69.11	60	120	
Sc (IS)	45	3	No Gas	15737053	0.61	21982103	71.59	60	120	
Ge Internal Standard	72	1	HMI H2	3864463	0.23	5863330	65.91	60	120	
Ge Internal Standard	72	2	HMI He	477788	0.91	718381	66.51	60	120	
In Internal Standard	115	2	HMI He	1773782	1.55	2598721	68.26	60	120	
Ho-165	165	2	HMI He	9486101	0.25	12368139	76.70	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	303_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:37:30-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	394.557	ppb	2.808	95996	500	78.9	90	110	>+\-10%
Li	7	2	45	423.641	ppb	6.777	4824	500	84.7	90	110	>+\-10%
Li	7	3	45	397.301	ppb	2.084	2471872	500	79.5	90	110	>+\-10%
Be	9	1	6	51.410	ppb	3.847	7152	50	102.8	90	110	
B	11	1	6	52.034	ppb	4.122	8893	50	104.1	90	110	
Na	23	1	45	4781.270	ppb	0.724	8292617	5000	95.6	90	110	
Na	23	2	45	4601.310	ppb	0.951	580601	5000	92.0	90	110	
Mg	24	2	45	4963.068	ppb	1.624	278545	5000	99.3	90	110	
Al	27	2	45	5112.842	ppb	3.136	84755	5000	102.3	90	110	
K	39	1	45	5003.794	ppb	0.720	14094876	5000	100.1	90	110	
K	39	2	45	5137.068	ppb	1.949	170904	5000	102.7	90	110	
Ca	40	1	45	5117.484	ppb	0.432	13368006	5000	102.3	90	110	
Ca	44	2	45	4869.736	ppb	2.991	8603	5000	97.4	90	110	
Ti	47	2	45	63.660	ppb	11.866	877	50	127.3	90	110	>+\-10%
V	51	2	72	51.016	ppb	3.060	30683	50	102.0	90	110	
Cr	52	2	72	51.512	ppb	0.859	38074	50	103.0	90	110	
Mn	55	2	72	59.858	ppb	3.453	18983	50	119.7	90	110	>+\-10%
Fe	57	2	72	5463.307	ppb	2.353	77745	5000	109.3	90	110	
Co	59	2	72	52.146	ppb	1.022	65438	50	104.3	90	110	
Ni	60	2	72	53.673	ppb	2.298	19003	50	107.3	90	110	
Cu	63	2	72	54.566	ppb	1.659	52496	50	109.1	90	110	
Zn	66	2	72	52.856	ppb	3.905	7452	50	105.7	90	110	
As	75	2	72	50.560	ppb	2.313	4795	50	101.1	90	110	
Se	78	1	72	53.116	ppb	2.215	6643	50	106.2	90	110	
Sr	88	2	72	53.759	ppb	1.543	20242	50	107.5	90	110	
Zr	90	2	72	609.510	ppb	7.602	3231	50	1219.0	90	110	>+\-10%
Nb	93	2	72	90.880	ppb	1.338	162027	100	90.9	90	110	
Mo	95	2	115	50.082	ppb	2.042	26309	50	100.2	90	110	
Pd	105	2	115	51.573	ppb	1.413	42362	50	103.1	90	110	
Ag	107	2	115	50.515	ppb	0.370	89058	50	101.0	90	110	
Cd	111	2	115	51.387	ppb	2.642	12750	50	102.8	90	110	
Sn	120	2	115	51.697	ppb	2.248	36171	50	103.4	90	110	
Sb	121	2	115	51.344	ppb	0.844	32118	50	102.7	90	110	
Ba	137	2	115	52.109	ppb	4.606	11552	50	104.2	90	110	
W	182	2	165	51.165	ppb	0.630	138573	50	102.3	90	110	
Pt	195	2	165	50.907	ppb	1.282	109888	50	101.8	90	110	
Tl	205	2	165	52.124	ppb	1.494	284516	50	104.2	90	110	
Pb	208	2	165	52.034	ppb	1.075	380623	50	104.1	90	110	
Th	232	2	165	51.993	ppb	0.650	459973	50	104.0	90	110	
U	238	2	165	52.778	ppb	0.191	497049	50	105.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	235500	0.56	355078	66.32	60	120	
Sc (IS)	45	1	HMI H2	11754990	0.65	14780058	79.53	60	120	
Sc (IS)	45	2	HMI He	482868	0.85	628472	76.83	60	120	
Sc (IS)	45	3	No Gas	17856103	0.50	21982103	81.23	60	120	
Ge Internal Standard	72	1	HMI H2	4780654	0.54	5863330	81.53	60	120	
Ge Internal Standard	72	2	HMI He	570290	0.22	718381	79.39	60	120	
In Internal Standard	115	2	HMI He	2164813	0.83	2598721	83.30	60	120	
Ho-165	165	2	HMI He	10774752	0.17	12368139	87.12	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	304_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:41:18-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-50.116	ppb	-19.2	1113649	10	
Be	9	1	6	0.572	ppb	30.2	83	0.5	>RL
B	11	1	6	0.721	ppb	79.2	1020	0.5	>RL
Na	23	1	45	-77.677	ppb	-0.9	138646	25	
Na	23	2	45	-76.396	ppb	-2.4	10404	25	
Mg	24	2	45	24.904	ppb	10.3	2424	25	
Al	27	2	45	55.166	ppb	6.1	1147	15	>RL
K	39	1	45	-22.064	ppb	-121.8	5327725	50	
K	39	2	45	31.793	ppb	18.0	11078	50	
Ca	40	1	45	11.927	ppb	12.4	68424	50	
Ca	44	2	45	25.315	ppb	12.6	63	25	>RL
Ti	47	2	45	2.294	ppb	34.5	33	0.5	>RL
V	51	2	72	0.654	ppb	34.0	1924	1	
Cr	52	2	72	0.385	ppb	31.1	443	1	
Mn	55	2	72	3.727	ppb	19.3	1293	0.5	>RL
Fe	57	2	72	145.955	ppb	4.3	2270	25	>RL
Co	59	2	72	0.174	ppb	47.1	247	0.5	
Ni	60	2	72	0.784	ppb	20.1	400	1	
Cu	63	2	72	0.473	ppb	13.2	963	1	
Zn	66	2	72	0.583	ppb	77.3	327	5	
As	75	2	72	0.066	ppb	77.4	27	1	
Se	78	1	72	-0.006	ppb	-287.2	9	1	
Sr	88	2	72	0.335	ppb	12.2	147	0.5	
Zr	90	2	72	8.297	ppb	65.6	77	1	>RL
Nb	93	2	72	4.473	ppb	9.9	9871	2	>RL
Mo	95	2	115	0.202	ppb	27.0	163	0.5	
Pd	105	2	115	0.051	ppb	52.9	53	1	
Ag	107	2	115	0.074	ppb	13.4	150	1	
Cd	111	2	115	0.088	ppb	107.1	23	0.5	
Sn	120	2	115	0.436	ppb	18.7	410	1	
Sb	121	2	115	0.788	ppb	15.7	557	0.6	>RL
Ba	137	2	115	0.436	ppb	55.4	120	0.5	
W	182	2	165	0.313	ppb	26.8	1574	1	
Pt	195	2	165	0.006	ppb	123.1	37	1	
Tl	205	2	165	0.065	ppb	17.0	460	0.1	
Pb	208	2	165	0.171	ppb	18.5	1840	0.5	
Th	232	2	165	0.094	ppb	18.9	1147	1	
U	238	2	165	0.144	ppb	8.7	1524	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	246718	0.10	355078	69.48	60	120	
Sc (IS)	45	1	HMI H2	12156639	0.30	14780058	82.25	60	120	
Sc (IS)	45	2	HMI He	509586	1.22	628472	81.08	60	120	
Sc (IS)	45	3	No Gas	18630041	1.68	21982103	84.75	60	120	
Ge Internal Standard	72	1	HMI H2	4953235	0.66	5863330	84.48	60	120	
Ge Internal Standard	72	2	HMI He	600961	0.61	718381	83.65	60	120	
In Internal Standard	115	2	HMI He	2303037	1.06	2598721	88.62	60	120	
Ho-165	165	2	HMI He	11223892	0.15	12368139	90.75	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-2-C
Data File Name	305SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:45:06-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	381.603	ppb	381.603	3.04	79674	500000	
Li	7	2	45	410.073	ppb	410.073	24.58	4207	500000	
Li	7	3	45	357.965	ppb	357.965	0.53	2001827	50000	
Be	9	1	6	22.716	ppb	22.716	9.72	2364	2000	
B	11	1	6	113.438	ppb	113.438	3.22	13737	2000	
Na	23	1	45	3236.090	ppb	3236.090	1.21	4816510	2000	
Na	23	2	45	3039.167	ppb	3039.167	1.53	346317	400000	
Mg	24	2	45	238028.795	ppb	238028.795	1.14	11825636	400000	
Al	27	2	45	442113.091	ppb	442113.091	0.49	6495805	400000	
K	39	1	45	124283.411	ppb	124283.411	0.81	191320217	400000	
K	39	2	45	128737.165	ppb	128737.165	1.54	3600131	400000	
Ca	40	1	45	81726.999	ppb	81726.999	0.78	180009771	400000	
Ca	44	2	45	83037.234	ppb	83037.234	1.99	130016	400000	
Ti	47	2	45	21294.697	ppb	21294.697	1.74	260281	4000	>LDR
V	51	2	72	1055.366	ppb	1055.366	1.45	510077	2000	
Cr	52	2	72	3007.390	ppb	3007.390	0.93	1863741	5000	
Mn	55	2	72	17319.163	ppb	17319.163	0.94	4609911	10000	
Fe	57	2	72	821632.680	ppb	821632.680	1.04	9828126	400000	
Co	59	2	72	527.659	ppb	527.659	2.12	557002	2000	
Ni	60	2	72	3072.277	ppb	3072.277	1.41	910365	5000	
Cu	63	2	72	1046.094	ppb	1046.094	1.07	839712	5000	
Zn	66	2	72	1371.948	ppb	1371.948	1.33	157916	5000	
As	75	2	72	450.238	ppb	450.238	0.72	35802	2000	
Se	78	1	72	6.499	ppb	6.499	14.62	651	2000	
Sr	88	2	72	977.426	ppb	977.426	1.07	309482	4000	
Zr	90	2	72	17618.713	ppb	17618.713	2.24	77883	1000	>LDR
Nb	93	2	72	14.005	ppb	14.005	3.37	22051	200	
Mo	95	2	115	23.271	ppb	23.271	0.65	10204	2000	
Pd	105	2	115	0.370	ppb	0.370	27.67	260	100	
Ag	107	2	115	9.955	ppb	9.955	1.93	14625	100	
Cd	111	2	115	7.856	ppb	7.856	10.02	1624	2000	
Sn	120	2	115	7.260	ppb	7.260	5.83	4289	2000	
Sb	121	2	115	2.000	ppb	2.000	19.06	1067	1000	
Ba	137	2	115	4268.823	ppb	4268.823	0.66	787217	5000	
W	182	2	165	11.160	ppb	11.160	4.72	26972	100	
Pt	195	2	165	0.014	ppb	0.014	21.29	47	100	
Tl	205	2	165	9.200	ppb	9.200	2.58	44102	2000	
Pb	208	2	165	466.586	ppb	466.586	1.08	2989655	5000	
Th	232	2	165	219.542	ppb	219.542	1.12	1702680	2000	
U	238	2	165	22.219	ppb	22.219	1.66	183570	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	176132	0.19	355078	49.60	60	120	IS Failed
Sc (IS)	45	1	HMI H2	9936203	0.73	14780058	67.23	60	120	
Sc (IS)	45	2	HMI He	428784	0.53	628472	68.23	60	120	
Sc (IS)	45	3	No Gas	15220328	0.12	21982103	69.24	60	120	
Ge Internal Standard	72	1	HMI H2	3784975	0.61	5863330	64.55	60	120	
Ge Internal Standard	72	2	HMI He	479869	0.60	718381	66.80	60	120	
In Internal Standard	115	2	HMI He	1803107	0.07	2598721	69.38	60	120	
Ho-165	165	2	HMI He	9449809	0.70	12368139	76.40	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-3-C
Data File Name	306SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:48:52-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	342.334	ppb	342.334	3.49	71919	500000	
Li	7	2	45	420.496	ppb	420.496	14.83	4051	500000	
Li	7	3	45	344.516	ppb	344.516	0.67	1905627	50000	
Be	9	1	6	25.497	ppb	25.497	10.73	2437	2000	
B	11	1	6	83.636	ppb	83.636	3.62	9460	2000	
Na	23	1	45	3161.364	ppb	3161.364	0.94	4503243	2000	
Na	23	2	45	3030.526	ppb	3030.526	0.56	328051	400000	
Mg	24	2	45	231673.812	ppb	231673.812	0.81	10932051	400000	
Al	27	2	45	424867.731	ppb	424867.731	1.52	5928676	400000	
K	39	1	45	114477.643	ppb	114477.643	0.58	168808517	400000	
K	39	2	45	117575.767	ppb	117575.767	1.63	3123597	400000	
Ca	40	1	45	64033.828	ppb	64033.828	0.72	134841425	400000	
Ca	44	2	45	64847.047	ppb	64847.047	1.15	96442	400000	
Ti	47	2	45	20275.149	ppb	20275.149	1.81	235367	4000	>LDR
V	51	2	72	1085.437	ppb	1085.437	1.46	494455	2000	
Cr	52	2	72	3163.142	ppb	3163.142	2.00	1847613	5000	
Mn	55	2	72	17043.605	ppb	17043.605	0.91	4276037	10000	
Fe	57	2	72	913151.987	ppb	913151.987	0.10	10295646	400000	
Co	59	2	72	542.580	ppb	542.580	0.50	539887	2000	
Ni	60	2	72	3257.341	ppb	3257.341	0.24	909786	5000	
Cu	63	2	72	1095.918	ppb	1095.918	0.68	829183	5000	
Zn	66	2	72	1248.207	ppb	1248.207	0.51	135441	5000	
As	75	2	72	484.381	ppb	484.381	1.60	36303	2000	
Se	78	1	72	7.047	ppb	7.047	11.02	671	2000	
Sr	88	2	72	913.520	ppb	913.520	1.14	272637	4000	
Zr	90	2	72	15875.419	ppb	15875.419	0.68	66151	1000	>LDR
Nb	93	2	72	6.824	ppb	6.824	4.07	10725	200	
Mo	95	2	115	21.622	ppb	21.622	2.28	9030	2000	
Pd	105	2	115	0.435	ppb	0.435	31.91	290	100	
Ag	107	2	115	7.787	ppb	7.787	4.57	10895	100	
Cd	111	2	115	7.743	ppb	7.743	4.45	1523	2000	
Sn	120	2	115	7.086	ppb	7.086	2.35	3987	2000	
Sb	121	2	115	1.410	ppb	1.410	26.72	723	1000	
Ba	137	2	115	4262.551	ppb	4262.551	0.50	748372	5000	
W	182	2	165	10.828	ppb	10.828	2.84	25475	100	
Pt	195	2	165	0.025	ppb	0.025	85.55	67	100	
Tl	205	2	165	8.942	ppb	8.942	2.63	41707	2000	
Pb	208	2	165	458.307	ppb	458.307	0.46	2857109	5000	
Th	232	2	165	226.803	ppb	226.803	1.76	1711276	2000	
U	238	2	165	23.116	ppb	23.116	1.37	185806	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	161862	1.60	355078	45.58	60	120	IS Failed
Sc (IS)	45	1	HMI H2	9499095	0.50	14780058	64.27	60	120	
Sc (IS)	45	2	HMI He	407259	0.85	628472	64.80	60	120	
Sc (IS)	45	3	No Gas	14753936	0.35	21982103	67.12	60	120	
Ge Internal Standard	72	1	HMI H2	3604153	0.96	5863330	61.47	60	120	
Ge Internal Standard	72	2	HMI He	452298	0.22	718381	62.96	60	120	
In Internal Standard	115	2	HMI He	1716680	0.52	2598721	66.06	60	120	
Ho-165	165	2	HMI He	9193757	0.63	12368139	74.33	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-4-C
Data File Name	307SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:52:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	336.520	ppb	336.520	3.79	68497	500000	
Li	7	2	45	374.046	ppb	374.046	10.18	3677	500000	
Li	7	3	45	323.192	ppb	323.192	5.39	1808638	50000	
Be	9	1	6	22.832	ppb	22.832	9.95	2070	2000	
B	11	1	6	77.557	ppb	77.557	5.61	8369	2000	
Na	23	1	45	3324.776	ppb	3324.776	0.80	4539997	2000	
Na	23	2	45	3154.688	ppb	3154.688	1.07	329415	400000	
Mg	24	2	45	233960.164	ppb	233960.164	0.75	10670637	400000	
Al	27	2	45	426654.439	ppb	426654.439	1.25	5754604	400000	
K	39	1	45	117322.262	ppb	117322.262	0.39	166130994	400000	
K	39	2	45	118834.706	ppb	118834.706	0.87	3051409	400000	
Ca	40	1	45	64106.913	ppb	64106.913	0.51	129711248	400000	
Ca	44	2	45	64812.777	ppb	64812.777	0.92	93168	400000	
Ti	47	2	45	20347.542	ppb	20347.542	1.54	228309	4000	>LDR
V	51	2	72	1097.573	ppb	1097.573	0.19	479933	2000	
Cr	52	2	72	3208.313	ppb	3208.313	1.44	1798868	5000	
Mn	55	2	72	16834.450	ppb	16834.450	0.60	4054248	10000	
Fe	57	2	72	885542.352	ppb	885542.352	0.98	9583959	400000	
Co	59	2	72	536.786	ppb	536.786	0.86	512705	2000	
Ni	60	2	72	3315.328	ppb	3315.328	0.82	888854	5000	
Cu	63	2	72	1102.328	ppb	1102.328	0.82	800591	5000	
Zn	66	2	72	1252.376	ppb	1252.376	1.77	130444	5000	
As	75	2	72	475.875	ppb	475.875	1.26	34236	2000	
Se	78	1	72	6.779	ppb	6.779	4.40	625	2000	
Sr	88	2	72	931.201	ppb	931.201	0.70	266773	4000	
Zr	90	2	72	16652.471	ppb	16652.471	0.56	66607	1000	>LDR
Nb	93	2	72	5.827	ppb	5.827	9.27	8953	200	
Mo	95	2	115	20.127	ppb	20.127	4.49	8236	2000	
Pd	105	2	115	0.319	ppb	0.319	42.15	210	100	
Ag	107	2	115	6.961	ppb	6.961	5.91	9540	100	
Cd	111	2	115	5.826	ppb	5.826	14.80	1123	2000	
Sn	120	2	115	5.890	ppb	5.890	4.88	3257	2000	
Sb	121	2	115	1.331	ppb	1.331	15.54	670	1000	
Ba	137	2	115	4164.065	ppb	4164.065	1.07	716245	5000	
W	182	2	165	10.672	ppb	10.672	3.70	24694	100	
Pt	195	2	165	0.026	ppb	0.026	13.03	67	100	
Tl	205	2	165	9.018	ppb	9.018	1.43	41363	2000	
Pb	208	2	165	399.883	ppb	399.883	0.49	2451546	5000	
Th	232	2	165	225.416	ppb	225.416	1.05	1672559	2000	
U	238	2	165	22.885	ppb	22.885	1.07	180892	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	153555	1.31	355078	43.25	60	120	IS Failed
Sc (IS)	45	1	HMI H2	9127344	0.75	14780058	61.75	60	120	
Sc (IS)	45	2	HMI He	393636	0.92	628472	62.63	60	120	
Sc (IS)	45	3	No Gas	14422982	0.61	21982103	65.61	60	120	
Ge Internal Standard	72	1	HMI H2	3491526	0.60	5863330	59.55	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	434165	0.20	718381	60.44	60	120	
In Internal Standard	115	2	HMI He	1681858	0.41	2598721	64.72	60	120	
Ho-165	165	2	HMI He	9041054	0.60	12368139	73.10	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-15-C
Data File Name	308SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T07:56:22-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	184.684	ppb	184.684	2.70	48008	500000	
Li	7	2	45	231.231	ppb	231.231	32.49	2657	500000	
Li	7	3	45	166.885	ppb	166.885	8.01	1320829	50000	
Be	9	1	6	11.186	ppb	11.186	8.44	933	2000	
B	11	1	6	61.962	ppb	61.962	7.13	6255	2000	
Na	23	1	45	3448.418	ppb	3448.418	0.55	4281607	2000	
Na	23	2	45	3270.651	ppb	3270.651	0.37	307963	400000	
Mg	24	2	45	418478.022	ppb	418478.022	0.59	17238701	400000	
Al	27	2	45	265289.933	ppb	265289.933	0.91	3231950	400000	
K	39	1	45	77753.638	ppb	77753.638	0.64	101508048	400000	
K	39	2	45	83849.906	ppb	83849.906	2.04	1946699	400000	
Ca	40	1	45	863215.148	ppb	863215.148	0.19	1590358430	400000	
Ca	44	2	45	853556.723	ppb	853556.723	1.12	1108080	400000	
Ti	47	2	45	15044.165	ppb	15044.165	0.96	152473	4000	
V	51	2	72	801.281	ppb	801.281	1.02	323258	2000	
Cr	52	2	72	1080.195	ppb	1080.195	1.21	558394	5000	
Mn	55	2	72	11025.674	ppb	11025.674	1.48	2447719	10000	
Fe	57	2	72	590719.857	ppb	590719.857	0.76	5893614	400000	
Co	59	2	72	253.728	ppb	253.728	0.72	223417	2000	
Ni	60	2	72	870.125	ppb	870.125	1.31	215098	5000	
Cu	63	2	72	10916.875	ppb	10916.875	1.09	7305960	5000	
Zn	66	2	72	6193.763	ppb	6193.763	0.73	594075	5000	
As	75	2	72	1770.399	ppb	1770.399	0.90	117377	2000	
Se	78	1	72	3.458	ppb	3.458	10.07	299	2000	
Sr	88	2	72	1610.228	ppb	1610.228	1.14	425237	4000	
Zr	90	2	72	8804.317	ppb	8804.317	1.88	32475	1000	>LDR
Nb	93	2	72	8.037	ppb	8.037	5.43	10991	200	
Mo	95	2	115	28.900	ppb	28.900	4.03	10865	2000	
Pd	105	2	115	0.177	ppb	0.177	59.61	110	100	
Ag	107	2	115	659.019	ppb	659.019	0.53	830173	100	>LDR
Cd	111	2	115	170.018	ppb	170.018	1.44	30147	2000	
Sn	120	2	115	56.909	ppb	56.909	0.76	28454	2000	
Sb	121	2	115	32.864	ppb	32.864	5.23	14698	1000	
Ba	137	2	115	4841.884	ppb	4841.884	1.07	766064	5000	
W	182	2	165	823.918	ppb	823.918	1.98	1734704	100	>LDR
Pt	195	2	165	0.037	ppb	0.037	64.61	80	100	
Tl	205	2	165	4.443	ppb	4.443	0.57	19001	2000	
Pb	208	2	165	17054.788	ppb	17054.788	0.54	97296308	5000	
Th	232	2	165	95.602	ppb	95.602	0.60	660325	2000	
U	238	2	165	11.918	ppb	11.918	1.23	87723	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	141360	1.70	355078	39.81	60	120	IS Failed
Sc (IS)	45	1	HMI H2	8312342	0.45	14780058	56.24	60	120	IS Failed
Sc (IS)	45	2	HMI He	355534	0.52	628472	56.57	60	120	IS Failed
Sc (IS)	45	3	No Gas	13487557	0.67	21982103	61.36	60	120	
Ge Internal Standard	72	1	HMI H2	3233370	1.01	5863330	55.15	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	400250	1.01	718381	55.72	60	120	IS Failed
In Internal Standard	115	2	HMI He	1547069	0.79	2598721	59.53	60	120	IS Failed
Ho-165	165	2	HMI He	8414679	0.63	12368139	68.04	60	120	

Sample Report

Sample Table

Sample Name	280-116297-B-16-C
Data File Name	309SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:00:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	141.691	ppb	141.691	3.75	43715	500000	
Li	7	2	45	168.887	ppb	168.887	56.51	2360	500000	
Li	7	3	45	124.946	ppb	124.946	3.79	1212294	50000	
Be	9	1	6	10.946	ppb	10.946	12.72	923	2000	
B	11	1	6	55.849	ppb	55.849	7.78	5751	2000	
Na	23	1	45	2826.888	ppb	2826.888	0.89	3525493	2000	
Na	23	2	45	2689.012	ppb	2689.012	0.72	255148	400000	
Mg	24	2	45	377174.461	ppb	377174.461	0.46	15503619	400000	
Al	27	2	45	232776.762	ppb	232776.762	0.60	2829730	400000	
K	39	1	45	66004.478	ppb	66004.478	0.31	86280502	400000	
K	39	2	45	70815.904	ppb	70815.904	1.17	1641647	400000	
Ca	40	1	45	766037.738	ppb	766037.738	0.16	1404099019	400000	
Ca	44	2	45	750260.095	ppb	750260.095	1.24	971848	400000	
Ti	47	2	45	12893.436	ppb	12893.436	1.62	130385	4000	
V	51	2	72	706.554	ppb	706.554	0.90	281733	2000	
Cr	52	2	72	1139.716	ppb	1139.716	0.71	582055	5000	
Mn	55	2	72	9946.169	ppb	9946.169	1.32	2181588	10000	
Fe	57	2	72	558396.997	ppb	558396.997	0.54	5504232	400000	
Co	59	2	72	229.529	ppb	229.529	0.59	199680	2000	
Ni	60	2	72	811.392	ppb	811.392	1.31	198169	5000	
Cu	63	2	72	10074.687	ppb	10074.687	0.14	6661382	5000	
Zn	66	2	72	5513.403	ppb	5513.403	0.73	522469	5000	
As	75	2	72	1548.151	ppb	1548.151	0.03	101410	2000	
Se	78	1	72	3.158	ppb	3.158	3.61	272	2000	
Sr	88	2	72	1354.151	ppb	1354.151	1.19	353306	4000	
Zr	90	2	72	7089.850	ppb	7089.850	2.86	25838	1000	>LDR
Nb	93	2	72	6.279	ppb	6.279	9.30	8706	200	
Mo	95	2	115	53.114	ppb	53.114	2.48	19898	2000	
Pd	105	2	115	0.269	ppb	0.269	13.01	163	100	
Ag	107	2	115	807.111	ppb	807.111	1.19	1014628	100	>LDR
Cd	111	2	115	162.323	ppb	162.323	0.52	28724	2000	
Sn	120	2	115	81.255	ppb	81.255	3.25	40510	2000	
Sb	121	2	115	38.531	ppb	38.531	4.10	17198	1000	
Ba	137	2	115	4056.362	ppb	4056.362	1.91	640457	5000	
W	182	2	165	761.941	ppb	761.941	0.93	1608089	100	>LDR
Pt	195	2	165	0.013	ppb	0.013	80.83	40	100	
Tl	205	2	165	4.015	ppb	4.015	7.65	17212	2000	
Pb	208	2	165	20797.608	ppb	20797.608	0.75	118927745	5000	
Th	232	2	165	86.374	ppb	86.374	1.31	597993	2000	
U	238	2	165	10.597	ppb	10.597	0.30	78193	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	142948	1.38	355078	40.26	60	120	IS Failed
Sc (IS)	45	1	HMI H2	8269754	0.43	14780058	55.95	60	120	IS Failed
Sc (IS)	45	2	HMI He	354763	0.73	628472	56.45	60	120	IS Failed
Sc (IS)	45	3	No Gas	13386189	0.38	21982103	60.90	60	120	
Ge Internal Standard	72	1	HMI H2	3218566	0.59	5863330	54.89	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	395419	0.59	718381	55.04	60	120	IS Failed
In Internal Standard	115	2	HMI He	1543977	1.15	2598721	59.41	60	120	IS Failed
Ho-165	165	2	HMI He	8434578	0.73	12368139	68.20	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-17-C
Data File Name	310SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:04:01-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	113.385	ppb	113.385	9.29	39854	500000	
Li	7	2	45	137.606	ppb	137.606	50.22	2134	500000	
Li	7	3	45	104.289	ppb	104.289	14.32	1139371	50000	
Be	9	1	6	11.198	ppb	11.198	10.80	897	2000	
B	11	1	6	58.144	ppb	58.144	6.75	5658	2000	
Na	23	1	45	2660.207	ppb	2660.207	1.34	3232144	2000	
Na	23	2	45	2539.862	ppb	2539.862	1.55	232576	400000	
Mg	24	2	45	382483.814	ppb	382483.814	0.22	15124235	400000	
Al	27	2	45	212836.974	ppb	212836.974	0.70	2488948	400000	
K	39	1	45	60084.777	ppb	60084.777	0.86	76588261	400000	
K	39	2	45	65066.670	ppb	65066.670	0.76	1451606	400000	
Ca	40	1	45	765082.212	ppb	765082.212	0.60	1361824993	400000	
Ca	44	2	45	755350.138	ppb	755350.138	0.37	941276	400000	
Ti	47	2	45	11950.669	ppb	11950.669	0.79	116266	4000	
V	51	2	72	620.262	ppb	620.262	0.15	241875	2000	
Cr	52	2	72	927.103	ppb	927.103	0.24	462829	5000	
Mn	55	2	72	9703.540	ppb	9703.540	0.54	2080397	10000	
Fe	57	2	72	458622.770	ppb	458622.770	1.01	4418778	400000	
Co	59	2	72	200.997	ppb	200.997	2.18	170912	2000	
Ni	60	2	72	688.328	ppb	688.328	1.17	164343	5000	
Cu	63	2	72	10542.894	ppb	10542.894	0.39	6813787	5000	
Zn	66	2	72	5729.132	ppb	5729.132	0.10	530673	5000	
As	75	2	72	1718.363	ppb	1718.363	0.34	110021	2000	
Se	78	1	72	2.901	ppb	2.901	9.75	245	2000	
Sr	88	2	72	1281.639	ppb	1281.639	0.74	326862	4000	
Zr	90	2	72	7522.554	ppb	7522.554	1.73	26796	1000	>LDR
Nb	93	2	72	7.135	ppb	7.135	1.20	9537	200	
Mo	95	2	115	26.337	ppb	26.337	9.56	9567	2000	
Pd	105	2	115	0.196	ppb	0.196	28.31	117	100	
Ag	107	2	115	836.518	ppb	836.518	1.13	1017340	100	>LDR
Cd	111	2	115	185.822	ppb	185.822	1.43	31807	2000	
Sn	120	2	115	32.031	ppb	32.031	0.93	15486	2000	
Sb	121	2	115	35.858	ppb	35.858	1.31	15483	1000	
Ba	137	2	115	4135.480	ppb	4135.480	0.95	631710	5000	
W	182	2	165	918.035	ppb	918.035	0.26	1881863	100	>LDR
Pt	195	2	165	0.012	ppb	0.012	80.08	37	100	
Tl	205	2	165	3.872	ppb	3.872	3.45	16131	2000	
Pb	208	2	165	19796.703	ppb	19796.703	0.17	109956149	5000	
Th	232	2	165	93.268	ppb	93.268	0.36	627192	2000	
U	238	2	165	13.632	ppb	13.632	1.95	97677	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	135562	1.76	355078	38.18	60	120	IS Failed
Sc (IS)	45	1	HMI H2	8031050	1.36	14780058	54.34	60	120	IS Failed
Sc (IS)	45	2	HMI He	341273	0.66	628472	54.30	60	120	IS Failed
Sc (IS)	45	3	No Gas	13106779	0.26	21982103	59.62	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3150371	1.27	5863330	53.73	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	386505	0.12	718381	53.80	60	120	IS Failed
In Internal Standard	115	2	HMI He	1493638	0.81	2598721	57.48	60	120	IS Failed
Ho-165	165	2	HMI He	8192319	0.30	12368139	66.24	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-18-C
Data File Name	311SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:07:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	183.851	ppb	183.851	4.59	43069	500000	
Li	7	2	45	214.612	ppb	214.612	23.57	2320	500000	
Li	7	3	45	174.030	ppb	174.030	8.39	1243225	50000	
Be	9	1	6	11.806	ppb	11.806	12.13	873	2000	
B	11	1	6	75.777	ppb	75.777	9.47	6672	2000	
Na	23	1	45	3843.347	ppb	3843.347	0.33	4268413	2000	
Na	23	2	45	3662.934	ppb	3662.934	0.07	308728	400000	
Mg	24	2	45	474818.147	ppb	474818.147	0.39	17594505	400000	
Al	27	2	45	280127.104	ppb	280127.104	0.45	3069874	400000	
K	39	1	45	80892.392	ppb	80892.392	0.40	94754375	400000	
K	39	2	45	85398.282	ppb	85398.282	0.96	1783418	400000	
Ca	40	1	45	976115.743	ppb	976115.743	0.48	1615833096	400000	
Ca	44	2	45	963965.588	ppb	963965.588	0.97	1125683	400000	
Ti	47	2	45	15102.558	ppb	15102.558	2.08	137679	4000	
V	51	2	72	846.896	ppb	846.896	0.68	305826	2000	
Cr	52	2	72	1255.481	ppb	1255.481	0.42	581014	5000	
Mn	55	2	72	12890.847	ppb	12890.847	0.92	2562141	10000	
Fe	57	2	72	681000.572	ppb	681000.572	0.26	6082646	400000	
Co	59	2	72	275.714	ppb	275.714	0.94	217342	2000	
Ni	60	2	72	1122.850	ppb	1122.850	0.84	248486	5000	
Cu	63	2	72	15537.859	ppb	15537.859	0.82	9309312	5000	
Zn	66	2	72	7872.416	ppb	7872.416	0.11	675950	5000	
As	75	2	72	2105.730	ppb	2105.730	0.67	124985	2000	
Se	78	1	72	4.101	ppb	4.101	5.64	317	2000	
Sr	88	2	72	1753.956	ppb	1753.956	0.93	414680	4000	
Zr	90	2	72	9338.659	ppb	9338.659	0.31	30835	1000	>LDR
Nb	93	2	72	6.719	ppb	6.719	4.75	8380	200	
Mo	95	2	115	51.705	ppb	51.705	7.15	16951	2000	
Pd	105	2	115	0.292	ppb	0.292	17.53	157	100	
Ag	107	2	115	802.260	ppb	802.260	6.87	882635	100	>LDR
Cd	111	2	115	227.616	ppb	227.616	5.49	35269	2000	
Sn	120	2	115	67.465	ppb	67.465	7.33	29445	2000	
Sb	121	2	115	45.665	ppb	45.665	11.79	17796	1000	
Ba	137	2	115	5948.038	ppb	5948.038	6.18	822179	5000	
W	182	2	165	1049.725	ppb	1049.725	0.90	2031222	100	>LDR
Pt	195	2	165	0.002	ppb	0.002	301.94	20	100	
Tl	205	2	165	5.139	ppb	5.139	1.78	20190	2000	
Pb	208	2	165	28882.175	ppb	28882.175	0.29	151428116	5000	>LDR
Th	232	2	165	101.466	ppb	101.466	1.16	644052	2000	
U	238	2	165	15.862	ppb	15.862	0.32	107268	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	125251	1.95	355078	35.27	60	120	IS Failed
Sc (IS)	45	1	HMI H2	7468716	0.72	14780058	50.53	60	120	IS Failed
Sc (IS)	45	2	HMI He	319815	0.63	628472	50.89	60	120	IS Failed
Sc (IS)	45	3	No Gas	12534982	0.73	21982103	57.02	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	2906000	0.97	5863330	49.56	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	358310	0.21	718381	49.88	60	120	IS Failed
In Internal Standard	115	2	HMI He	1355402	6.92	2598721	52.16	60	120	IS Failed
Ho-165	165	2	HMI He	7733236	0.60	12368139	62.53	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-19-B
Data File Name	312SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:11:39-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.176	ppb	1.176	269.24	28662	500000	
Li	7	2	45	3.366	ppb	3.366	1692.54	1510	500000	
Li	7	3	45	-7.423	ppb	-7.423	-46.97	856136	50000	
Be	9	1	6	9.536	ppb	9.536	10.17	740	2000	
B	11	1	6	18.968	ppb	18.968	7.78	2110	2000	
Na	23	1	45	1098.560	ppb	1098.560	1.10	1395400	2000	
Na	23	2	45	980.148	ppb	980.148	0.46	96539	400000	
Mg	24	2	45	578211.628	ppb	578211.628	1.21	22502112	400000	
Al	27	2	45	79276.183	ppb	79276.183	0.80	912530	400000	
K	39	1	45	21826.863	ppb	21826.863	1.10	29130845	400000	
K	39	2	45	22828.329	ppb	22828.329	1.01	505537	400000	
Ca	40	1	45	1166981.426	ppb	1166981.426	0.53	2011601197	400000	
Ca	44	2	45	1222914.245	ppb	1222914.245	3.76	1499734	400000	
Ti	47	2	45	4570.371	ppb	4570.371	2.80	43767	4000	
V	51	2	72	256.939	ppb	256.939	0.46	98833	2000	
Cr	52	2	72	314.621	ppb	314.621	0.28	154105	5000	
Mn	55	2	72	4552.657	ppb	4552.657	0.12	957313	10000	
Fe	57	2	72	172459.898	ppb	172459.898	2.65	1629682	400000	
Co	59	2	72	47.255	ppb	47.255	1.00	39418	2000	
Ni	60	2	72	159.487	ppb	159.487	1.63	37399	5000	
Cu	63	2	72	21059.127	ppb	21059.127	0.62	13348311	5000	
Zn	66	2	72	6704.689	ppb	6704.689	0.59	609064	5000	
As	75	2	72	3060.635	ppb	3060.635	0.24	192184	2000	
Se	78	1	72	2.200	ppb	2.200	22.34	183	2000	
Sr	88	2	72	1213.748	ppb	1213.748	0.76	303596	4000	
Zr	90	2	72	1030.567	ppb	1030.567	6.51	3617	1000	
Nb	93	2	72	1.756	ppb	1.756	7.85	3037	200	
Mo	95	2	115	14.553	ppb	14.553	4.08	5438	2000	
Pd	105	2	115	0.149	ppb	0.149	24.97	93	100	
Ag	107	2	115	1262.279	ppb	1262.279	1.85	1576624	100	>LDR
Cd	111	2	115	362.066	ppb	362.066	4.94	63605	2000	
Sn	120	2	115	4.103	ppb	4.103	5.51	2090	2000	
Sb	121	2	115	89.909	ppb	89.909	5.12	39802	1000	
Ba	137	2	115	3174.717	ppb	3174.717	3.50	497804	5000	
W	182	2	165	603.770	ppb	603.770	0.57	1244633	100	>LDR
Pt	195	2	165	-0.005	ppb	-0.005	-129.52	10	100	
Tl	205	2	165	2.064	ppb	2.064	9.15	8677	2000	
Pb	208	2	165	17609.464	ppb	17609.464	0.20	98346554	5000	
Th	232	2	165	41.046	ppb	41.046	0.24	277659	2000	
U	238	2	165	12.068	ppb	12.068	0.94	86959	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	131223	1.54	355078	36.96	60	120	IS Failed
Sc (IS)	45	1	HMI H2	7777356	0.61	14780058	52.62	60	120	IS Failed
Sc (IS)	45	2	HMI He	335893	0.60	628472	53.45	60	120	IS Failed
Sc (IS)	45	3	No Gas	12721852	0.44	21982103	57.87	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3063076	1.75	5863330	52.24	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	379072	0.13	718381	52.77	60	120	IS Failed
In Internal Standard	115	2	HMI He	1534430	3.57	2598721	59.05	60	120	IS Failed
Ho-165	165	2	HMI He	8237416	0.47	12368139	66.60	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-20-B
Data File Name	313SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:15:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.741	ppb	1.741	310.76	27520	500000	
Li	7	2	45	-24.183	ppb	-24.183	-125.59	1313	500000	
Li	7	3	45	-14.020	ppb	-14.020	-16.38	813705	50000	
Be	9	1	6	9.764	ppb	9.764	7.13	720	2000	
B	11	1	6	19.453	ppb	19.453	7.73	2047	2000	
Na	23	1	45	1122.120	ppb	1122.120	0.44	1362482	2000	
Na	23	2	45	1004.564	ppb	1004.564	0.54	93272	400000	
Mg	24	2	45	545761.049	ppb	545761.049	0.59	20090468	400000	
Al	27	2	45	80980.334	ppb	80980.334	0.76	881705	400000	
K	39	1	45	20792.642	ppb	20792.642	0.88	26751449	400000	
K	39	2	45	21905.983	ppb	21905.983	0.30	459124	400000	
Ca	40	1	45	1105933.370	ppb	1105933.370	0.44	1827024346	400000	
Ca	44	2	45	1144907.991	ppb	1144907.991	0.37	1328230	400000	
Ti	47	2	45	5128.430	ppb	5128.430	1.02	46448	4000	
V	51	2	72	255.240	ppb	255.240	1.39	94314	2000	
Cr	52	2	72	288.034	ppb	288.034	0.71	135537	5000	
Mn	55	2	72	4432.790	ppb	4432.790	0.51	895377	10000	
Fe	57	2	72	169605.057	ppb	169605.057	1.00	1539655	400000	
Co	59	2	72	50.532	ppb	50.532	3.65	40491	2000	
Ni	60	2	72	165.406	ppb	165.406	1.50	37256	5000	
Cu	63	2	72	21334.645	ppb	21334.645	0.07	12990287	5000	
Zn	66	2	72	6288.966	ppb	6288.966	0.86	548789	5000	
As	75	2	72	3029.818	ppb	3029.818	0.77	182750	2000	
Se	78	1	72	1.697	ppb	1.697	21.15	137	2000	
Sr	88	2	72	1171.666	ppb	1171.666	0.55	281520	4000	
Zr	90	2	72	1102.866	ppb	1102.866	2.59	3717	1000	
Nb	93	2	72	2.284	ppb	2.284	11.18	3514	200	
Mo	95	2	115	18.500	ppb	18.500	3.38	6108	2000	
Pd	105	2	115	0.171	ppb	0.171	22.03	93	100	
Ag	107	2	115	1685.876	ppb	1685.876	3.40	1861809	100	>LDR
Cd	111	2	115	368.054	ppb	368.054	0.38	57241	2000	
Sn	120	2	115	4.922	ppb	4.922	3.37	2204	2000	
Sb	121	2	115	101.360	ppb	101.360	2.95	39708	1000	
Ba	137	2	115	3421.158	ppb	3421.158	2.32	474644	5000	
W	182	2	165	548.538	ppb	548.538	0.50	1088659	100	>LDR
Pt	195	2	165	-0.007	ppb	-0.007	-109.52	7	100	
Tl	205	2	165	1.960	ppb	1.960	6.59	7933	2000	
Pb	208	2	165	16866.540	ppb	16866.540	0.59	90685787	5000	
Th	232	2	165	39.150	ppb	39.150	0.43	254974	2000	
U	238	2	165	9.798	ppb	9.798	1.97	67979	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	124859	2.46	355078	35.16	60	120	IS Failed
Sc (IS)	45	1	HMI H2	7453710	0.95	14780058	50.43	60	120	IS Failed
Sc (IS)	45	2	HMI He	317711	0.21	628472	50.55	60	120	IS Failed
Sc (IS)	45	3	No Gas	12303091	0.56	21982103	55.97	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	2959250	0.51	5863330	50.47	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	364141	0.64	718381	50.69	60	120	IS Failed
In Internal Standard	115	2	HMI He	1357118	2.83	2598721	52.22	60	120	IS Failed
Ho-165	165	2	HMI He	7930349	0.64	12368139	64.12	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	314_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:19:35-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	292.907	ppb	1.479	56534	500	58.6	90	110	>+\-10%
Li	7	2	45	392.203	ppb	11.676	3150	500	78.4	90	110	>+\-10%
Li	7	3	45	317.785	ppb	6.155	1566317	500	63.6	90	110	>+\-10%
Be	9	1	6	52.541	ppb	6.316	4374	50	105.1	90	110	
B	11	1	6	47.727	ppb	2.606	4924	50	95.5	90	110	
Na	23	1	45	4557.474	ppb	0.609	5432763	5000	91.1	90	110	
Na	23	2	45	4360.900	ppb	1.458	375566	5000	87.2	90	110	>+\-10%
Mg	24	2	45	5014.194	ppb	0.942	191715	5000	100.3	90	110	
Al	27	2	45	4834.520	ppb	0.377	54608	5000	96.7	90	110	
K	39	1	45	4960.867	ppb	1.883	9619353	5000	99.2	90	110	
K	39	2	45	5133.270	ppb	2.415	116334	5000	102.7	90	110	
Ca	40	1	45	6159.201	ppb	0.945	11036500	5000	123.2	90	110	>+\-10%
Ca	44	2	45	6034.407	ppb	1.328	7259	5000	120.7	90	110	>+\-10%
Ti	47	2	45	73.924	ppb	7.312	693	50	147.8	90	110	>+\-10%
V	51	2	72	47.293	ppb	4.057	20442	50	94.6	90	110	
Cr	52	2	72	48.856	ppb	1.087	25854	50	97.7	90	110	
Mn	55	2	72	54.470	ppb	2.313	12369	50	108.9	90	110	
Fe	57	2	72	5138.465	ppb	2.083	52349	5000	102.8	90	110	
Co	59	2	72	49.520	ppb	1.237	44486	50	99.0	90	110	
Ni	60	2	72	48.525	ppb	4.772	12306	50	97.0	90	110	
Cu	63	2	72	74.176	ppb	5.664	50978	50	148.4	90	110	>+\-10%
Zn	66	2	72	54.571	ppb	2.649	5501	50	109.1	90	110	
As	75	2	72	52.370	ppb	3.646	3555	50	104.7	90	110	
Se	78	1	72	53.180	ppb	3.915	4782	50	106.4	90	110	
Sr	88	2	72	55.232	ppb	2.002	14888	50	110.5	90	110	>+\-10%
Zr	90	2	72	255.000	ppb	14.902	980	50	510.0	90	110	>+\-10%
Nb	93	2	72	94.888	ppb	1.385	121059	100	94.9	90	110	
Mo	95	2	115	47.402	ppb	4.007	19257	50	94.8	90	110	
Pd	105	2	115	48.939	ppb	2.904	31082	50	97.9	90	110	
Ag	107	2	115	52.918	ppb	1.136	72142	50	105.8	90	110	
Cd	111	2	115	49.150	ppb	1.306	9430	50	98.3	90	110	
Sn	120	2	115	50.324	ppb	3.306	27231	50	100.6	90	110	
Sb	121	2	115	50.316	ppb	2.320	24339	50	100.6	90	110	
Ba	137	2	115	55.385	ppb	3.636	9494	50	110.8	90	110	>+\-10%
W	182	2	165	53.348	ppb	1.494	114661	50	106.7	90	110	
Pt	195	2	165	50.046	ppb	0.644	85753	50	100.1	90	110	
Tl	205	2	165	53.400	ppb	0.305	231370	50	106.8	90	110	
Pb	208	2	165	70.254	ppb	2.282	407855	50	140.5	90	110	>+\-10%
Th	232	2	165	54.261	ppb	0.687	381058	50	108.5	90	110	
U	238	2	165	54.705	ppb	0.319	408946	50	109.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	140941	0.68	355078	39.69	60	120	IS Failed
Sc (IS)	45	1	HMI H2	8066714	1.12	14780058	54.58	60	120	IS Failed
Sc (IS)	45	2	HMI He	328934	0.74	628472	52.34	60	120	IS Failed
Sc (IS)	45	3	No Gas	12586616	1.00	21982103	57.26	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3437677	0.82	5863330	58.63	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	408230	0.78	718381	56.83	60	120	IS Failed
In Internal Standard	115	2	HMI He	1674056	0.72	2598721	64.42	60	120	
Ho-165	165	2	HMI He	8552912	1.03	12368139	69.15	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	315_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:23:23-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-73.932	ppb	-1.4	731808	10	
Be	9	1	6	0.235	ppb	99.4	20	0.5	
B	11	1	6	-0.981	ppb	-34.7	433	0.5	
Na	23	1	45	-79.849	ppb	-2.0	87999	25	
Na	23	2	45	-82.420	ppb	-2.4	6452	25	
Mg	24	2	45	60.634	ppb	19.5	3040	25	>RL
Al	27	2	45	33.643	ppb	34.7	517	15	>RL
K	39	1	45	62.074	ppb	80.9	3577008	50	>RL
K	39	2	45	49.204	ppb	14.8	7809	50	
Ca	40	1	45	193.207	ppb	2.0	363310	50	>RL
Ca	44	2	45	172.865	ppb	29.1	227	25	>RL
Ti	47	2	45	0.345	ppb	173.2	3	0.5	
V	51	2	72	-0.434	ppb	-66.2	887	1	
Cr	52	2	72	0.175	ppb	51.4	197	1	
Mn	55	2	72	2.234	ppb	15.8	557	0.5	>RL
Fe	57	2	72	106.803	ppb	4.5	1180	25	>RL
Co	59	2	72	0.152	ppb	34.8	153	0.5	
Ni	60	2	72	0.373	ppb	58.0	173	1	
Cu	63	2	72	6.137	ppb	4.9	4661	1	>RL
Zn	66	2	72	1.393	ppb	65.2	310	5	
As	75	2	72	0.378	ppb	19.3	41	1	
Se	78	1	72	-0.004	ppb	-674.3	7	1	
Sr	88	2	72	0.180	ppb	51.8	60	0.5	
Zr	90	2	72	8.273	ppb	192.8	53	1	>RL
Nb	93	2	72	5.230	ppb	6.4	7903	2	>RL
Mo	95	2	115	0.090	ppb	168.4	77	0.5	
Pd	105	2	115	0.075	ppb	42.5	57	1	
Ag	107	2	115	2.978	ppb	5.3	4268	1	>RL
Cd	111	2	115	0.182	ppb	32.1	37	0.5	
Sn	120	2	115	0.179	ppb	40.0	167	1	
Sb	121	2	115	0.398	ppb	27.6	227	0.6	
Ba	137	2	115	0.871	ppb	33.0	170	0.5	>RL
W	182	2	165	1.273	ppb	2.6	3334	1	>RL
Pt	195	2	165	0.027	ppb	66.7	67	1	
Tl	205	2	165	0.030	ppb	31.5	203	0.1	
Pb	208	2	165	4.021	ppb	6.6	24323	0.5	>RL
Th	232	2	165	0.123	ppb	12.9	1110	1	
U	238	2	165	0.091	ppb	7.7	783	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	143567	0.97	355078	40.43	60	120	IS Failed
Sc (IS)	45	1	HMI H2	7932148	0.98	14780058	53.67	60	120	IS Failed
Sc (IS)	45	2	HMI He	341434	0.79	628472	54.33	60	120	IS Failed
Sc (IS)	45	3	No Gas	13160186	0.09	21982103	59.87	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	3434482	1.35	5863330	58.58	60	120	IS Failed
Ge Internal Standard	72	2	HMI He	421089	1.26	718381	58.62	60	120	IS Failed
In Internal Standard	115	2	HMI He	1755449	0.89	2598721	67.55	60	120	
Ho-165	165	2	HMI He	8760308	2.14	12368139	70.83	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	316WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:27:11-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.229	ppb	45.25977042	20	0.5
Na	23	2	45	-82.119	ppb	-5.626038499	6785	25
Mg	24	2	45	6.451	ppb	40.77219024	937	25
Al	27	2	45	1.443	ppb	486.9395166	147	15
K	39	2	45	47.318	ppb	20.84613647	8136	50
Ca	44	2	45	34.685	ppb	25.84932207	57	25
V	51	2	72	-0.396	ppb	-13.90757725	947	1
Cr	52	2	72	0.012	ppb	1230.117022	113	1
Mn	55	2	72	1.306	ppb	12.72240971	357	0.5
Fe	57	2	72	47.735	ppb	11.67672622	587	25
Co	59	2	72	0.066	ppb	71.65824221	77	0.5
Ni	60	2	72	0.269	ppb	8.009599559	153	1
Cu	63	2	72	3.236	ppb	4.309045424	2747	1
Zn	66	2	72	0.617	ppb	49.58674073	243	5
As	75	2	72	0.110	ppb	115.8056816	23	1
Se	78	1	72	0.016	ppb	621.2274933	9	1
Nb	93	2	72	2.580	ppb	15.50094254	4664	2
Mo	95	2	115	-0.053	ppb	-24.6298363	17	0.5
Pd	105	2	115	0.038	ppb	109.9155894	33	1
Ag	107	2	115	2.254	ppb	4.675487708	3397	1
Cd	111	2	115	0.031	ppb	173.2050808	7	0.5
Sn	120	2	115	0.182	ppb	29.77301978	177	1
Sb	121	2	115	0.164	ppb	24.6354189	113	0.6
Ba	137	2	115	0.172	ppb	88.30770722	47	0.5
W	182	2	165	0.898	ppb	8.855509128	2597	1
Pt	195	2	165	0.006	ppb	97.16642236	30	1
Tl	205	2	165	0.010	ppb	106.4570534	120	0.1
Pb	208	2	165	1.341	ppb	1.021627831	8668	0.5
Th	232	2	165	0.057	ppb	16.21463059	653	1
U	238	2	165	0.021	ppb	36.65692029	260	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	147258	10.41	355078	41.47	60	120	IS Failed
Sc (IS)	45	1	HMI H2	8226795	13.45	14780058	55.66	60	120	IS Failed
Sc (IS)	45	2	HMI He	357587	0.25	628472	56.90	60	120	IS Failed
Sc (IS)	45	3	No Gas	13246108	0.30	21982103	60.26	60	120	
Ge Internal Standard	72	1	HMI H2	3523953	11.09	5863330	60.10	60	120	
Ge Internal Standard	72	2	HMI He	441454	0.08	718381	61.45	60	120	
In Internal Standard	115	2	HMI He	1846450	0.92	2598721	71.05	60	120	
Ho-165	165	2	HMI He	9061600	0.75	12368139	73.27	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	317WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:31:02-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.297	ppb	77.09941376	27	0.5
Na	23	2	45	-78.390	ppb	-1.558375	7119	25
Mg	24	2	45	-2.542	ppb	-103.7665646	563	25
Al	27	2	45	-5.356	ppb	-77.22815758	63	15
K	39	2	45	32.700	ppb	54.15733949	7789	50
Ca	44	2	45	16.771	ppb	95.06489042	33	25
V	51	2	72	-0.531	ppb	-36.39054121	897	1
Cr	52	2	72	-0.025	ppb	-84.22626999	93	1
Mn	55	2	72	1.047	ppb	28.42863415	297	0.5
Fe	57	2	72	23.161	ppb	19.82176182	320	25
Co	59	2	72	0.045	ppb	64.47995173	57	0.5
Ni	60	2	72	0.226	ppb	146.7718321	143	1
Cu	63	2	72	2.176	ppb	3.769748989	1987	1
Zn	66	2	72	0.124	ppb	49.13723387	193	5
As	75	2	72	-0.026	ppb	-453.6705276	13	1
Se	78	1	72	-0.022	ppb	-298.1454827	5	1
Nb	93	2	72	1.347	ppb	15.92767069	3010	2
Mo	95	2	115	-0.017	ppb	-298.4663262	33	0.5
Pd	105	2	115	0.013	ppb	61.35678711	17	1
Ag	107	2	115	1.524	ppb	5.727690615	2337	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.132	ppb	43.43832332	150	1
Sb	121	2	115	0.031	ppb	151.4532986	43	0.6
Ba	137	2	115	0.117	ppb	144.2545558	37	0.5
W	182	2	165	0.507	ppb	9.661293987	1720	1
Pt	195	2	165	0.013	ppb	48.21515492	43	1
Tl	205	2	165	0.006	ppb	49.04857076	103	0.1
Pb	208	2	165	0.695	ppb	5.658244401	4731	0.5
Th	232	2	165	0.044	ppb	18.21059487	560	1
U	238	2	165	0.013	ppb	33.72392943	200	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	151332	1.32	355078	42.62	60	120	IS Failed
Sc (IS)	45	1	HMI H2	8354426	0.53	14780058	56.52	60	120	IS Failed
Sc (IS)	45	2	HMI He	357403	1.17	628472	56.87	60	120	IS Failed
Sc (IS)	45	3	No Gas	13533621	0.32	21982103	61.57	60	120	
Ge Internal Standard	72	1	HMI H2	3603520	0.26	5863330	61.46	60	120	
Ge Internal Standard	72	2	HMI He	446396	0.55	718381	62.14	60	120	
In Internal Standard	115	2	HMI He	1875893	0.98	2598721	72.19	60	120	
Ho-165	165	2	HMI He	9116510	0.77	12368139	73.71	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	318WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:34:51-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.037	ppb	173.2050808	3	0.5
Na	23	2	45	-79.089	ppb	-1.132888548	7325	25
Mg	24	2	45	-4.069	ppb	-45.31473222	520	25
Al	27	2	45	-8.168	ppb	-9.645527233	30	15
K	39	2	45	-0.341	ppb	-1624.189996	7292	50
Ca	44	2	45	15.862	ppb	70.82721313	33	25
V	51	2	72	-0.741	ppb	-7.589893978	827	1
Cr	52	2	72	-0.080	ppb	-73.59781869	63	1
Mn	55	2	72	1.077	ppb	47.14693794	313	0.5
Fe	57	2	72	36.886	ppb	14.91210553	487	25
Co	59	2	72	0.083	ppb	34.37142654	97	0.5
Ni	60	2	72	0.212	ppb	42.10046558	143	1
Cu	63	2	72	1.600	ppb	16.66940569	1604	1
Zn	66	2	72	0.798	ppb	58.54270483	273	5
As	75	2	72	0.097	ppb	132.6634322	23	1
Se	78	1	72	-0.036	ppb	-116.4979699	4	1
Nb	93	2	72	0.670	ppb	16.55811768	2137	2
Mo	95	2	115	-0.040	ppb	-168.9422918	23	0.5
Pd	105	2	115	0.058	ppb	71.03701202	50	1
Ag	107	2	115	1.220	ppb	5.546280325	1940	1
Cd	111	2	115	0.015	ppb	173.2050808	3	0.5
Sn	120	2	115	0.103	ppb	80.93306957	137	1
Sb	121	2	115	0.070	ppb	38.23012604	67	0.6
Ba	137	2	115	-0.008	ppb	-702.050494	13	0.5
W	182	2	165	0.442	ppb	16.12623668	1640	1
Pt	195	2	165	0.001	ppb	841.2867751	23	1
Tl	205	2	165	0.008	ppb	119.2031948	117	0.1
Pb	208	2	165	0.459	ppb	7.233495158	3414	0.5
Th	232	2	165	0.029	ppb	16.96893922	463	1
U	238	2	165	0.005	ppb	81.06305562	137	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	152844	0.17	355078	43.05	60	120	IS Failed
Sc (IS)	45	1	HMI H2	8344563	1.60	14780058	56.46	60	120	IS Failed
Sc (IS)	45	2	HMI He	371089	0.14	628472	59.05	60	120	IS Failed
Sc (IS)	45	3	No Gas	14576365	0.61	21982103	66.31	60	120	
Ge Internal Standard	72	1	HMI H2	3589014	1.80	5863330	61.21	60	120	
Ge Internal Standard	72	2	HMI He	459904	0.43	718381	64.02	60	120	
In Internal Standard	115	2	HMI He	1943928	0.82	2598721	74.80	60	120	
Ho-165	165	2	HMI He	9507280	0.62	12368139	76.87	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	319WASH.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:38:41-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	267CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.034	ppb	173.2050808	3	0.5
Na	23	2	45	-82.442	ppb	-2.722325007	7149	25
Mg	24	2	45	-6.202	ppb	-5.391139011	437	25
Al	27	2	45	-6.411	ppb	-30.48263891	53	15
K	39	2	45	-4.066	ppb	-379.0283002	7342	50
Ca	44	2	45	10.584	ppb	79.42389914	27	25
V	51	2	72	-0.827	ppb	-13.04871265	807	1
Cr	52	2	72	-0.083	ppb	-12.43147279	63	1
Mn	55	2	72	1.265	ppb	16.4744302	370	0.5
Fe	57	2	72	24.775	ppb	4.875513803	357	25
Co	59	2	72	0.039	ppb	88.09211141	53	0.5
Ni	60	2	72	0.016	ppb	758.7307692	90	1
Cu	63	2	72	1.181	ppb	7.350334536	1313	1
Zn	66	2	72	0.059	ppb	846.1675259	197	5
As	75	2	72	0.065	ppb	163.4734245	21	1
Se	78	1	72	-0.024	ppb	-93.68726472	5	1
Nb	93	2	72	0.280	ppb	58.00209293	1620	2
Mo	95	2	115	-0.055	ppb	-22.46559461	17	0.5
Pd	105	2	115	0.017	ppb	80.36240471	20	1
Ag	107	2	115	1.195	ppb	5.001308498	1900	1
Cd	111	2	115	0.015	ppb	173.2050808	3	0.5
Sn	120	2	115	0.114	ppb	50.48606212	143	1
Sb	121	2	115	0.028	ppb	95.63325686	43	0.6
Ba	137	2	115	-0.025	ppb	-1.086990697	10	0.5
W	182	2	165	0.411	ppb	14.34441734	1590	1
Pt	195	2	165	-0.001	ppb	-1747.133713	20	1
Tl	205	2	165	0.011	ppb	30.58727576	130	0.1
Pb	208	2	165	0.338	ppb	9.260868857	2677	0.5
Th	232	2	165	0.023	ppb	27.58747159	430	1
U	238	2	165	0.008	ppb	25.78993101	167	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	165130	3.25	355078	46.51	60	120	IS Failed
Sc (IS)	45	1	HMI H2	8662131	6.96	14780058	58.61	60	120	IS Failed
Sc (IS)	45	2	HMI He	378375	0.57	628472	60.21	60	120	
Sc (IS)	45	3	No Gas	14657582	0.30	21982103	66.68	60	120	
Ge Internal Standard	72	1	HMI H2	3720844	4.75	5863330	63.46	60	120	
Ge Internal Standard	72	2	HMI He	471444	0.76	718381	65.63	60	120	
In Internal Standard	115	2	HMI He	1942932	0.53	2598721	74.76	60	120	
Ho-165	165	2	HMI He	9659578	1.43	12368139	78.10	60	120	

Calibration Blank Report

Sample Table

Sample Name	icis-5425622
Data File Name	320CALB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:42:29-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	26634	0.01
Li	7	2	HMI He	1387	0.50
Li	7	3	No Gas	873968	0.00
Be	9	1	HMI H2	7	1299.04
B	11	1	HMI H2	247	5.02
Na	23	1	HMI H2	99830	0.00
Na	23	2	HMI He	7799	0.01
Mg	24	2	HMI He	337	5.39
Al	27	2	HMI He	163	22.59
K	39	2	HMI He	7786	0.02
Ca	44	2	HMI He	23	106.04
Ti	47	2	HMI He	13	1299.04
V	51	2	HMI He	797	1.58
Cr	52	2	HMI He	120	60.54
Mn	55	2	HMI He	313	15.32
Fe	57	2	HMI He	353	7.22
Co	59	2	HMI He	77	42.82
Ni	60	2	HMI He	163	5.73
Cu	63	2	HMI He	1187	0.35
Zn	66	2	HMI He	247	6.64
As	75	2	HMI He	11	510.60
Se	78	1	HMI H2	4	2500.00
Sr	88	2	HMI He	30	192.45
Zr	90	2	HMI He	23	106.04
Nb	93	2	HMI He	1213	0.61
Mo	95	2	HMI He	13	859.23
Pd	105	2	HMI He	10	1732.05
Ag	107	2	HMI He	1437	0.57
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	67	115.46
Sb	121	2	HMI He	30	192.45
Ba	137	2	HMI He	7	1299.04
W	182	2	HMI He	1453	0.48
Pt	195	2	HMI He	30	293.97
Tl	205	2	HMI He	100	40.00
Pb	208	2	HMI He	1877	0.78
Th	232	2	HMI He	457	2.41
U	238	2	HMI He	67	34.38

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	170571	2.07
Sc (IS)	45	1	HMI H2	8896882	1.36
Sc (IS)	45	2	HMI He	395354	6.25
Sc (IS)	45	3	No Gas	14807391	0.49
Ge Internal Standard	72	1	HMI H2	3821114	1.28
Ge Internal Standard	72	2	HMI He	488193	4.79
In Internal Standard	115	2	HMI He	2033009	6.26
Ho-165	165	2	HMI He	10165339	5.85

Calibration Standard Report

Sample Table

Sample Name	ic-5425623
Data File Name	321CALS.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:46:17-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	320CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	93722	0.00
Li	7	2	HMI He	4858	0.14
Li	7	3	No Gas	2763587	0.00
Be	9	1	HMI H2	8129	0.09
B	11	1	HMI H2	9360	0.06
Na	23	1	HMI H2	10090387	0.00
Na	23	2	HMI He	712773	0.00
Mg	24	2	HMI He	338903	0.00
Al	27	2	HMI He	103468	0.00
K	39	1	HMI H2	15213779	0.00
K	39	2	HMI He	214382	0.00
Ca	40	1	HMI H2	16875363	0.00
Ca	44	2	HMI He	12509	0.02
Ti	47	2	HMI He	1130	0.56
V	51	2	HMI He	37540	0.00
Cr	52	2	HMI He	48733	0.00
Mn	55	2	HMI He	21667	0.02
Fe	57	2	HMI He	95129	0.00
Co	59	2	HMI He	83670	0.00
Ni	60	2	HMI He	23754	0.01
Cu	63	2	HMI He	66387	0.00
Zn	66	2	HMI He	9881	0.01
As	75	2	HMI He	6834	0.01
Se	78	1	HMI H2	8473	0.11
Sr	88	2	HMI He	29054	0.00
Zr	90	2	HMI He	1090	1.31
Nb	93	2	HMI He	261397	0.00
Mo	95	2	HMI He	36632	0.01
Pd	105	2	HMI He	57613	0.00
Ag	107	2	HMI He	125221	0.00
Cd	111	2	HMI He	18216	0.00
Sn	120	2	HMI He	52310	0.00
Sb	121	2	HMI He	47034	0.00
Ba	137	2	HMI He	18136	0.02
Nd	146	2	HMI He	62122	0.00
Sm	147	2	HMI He	53955	0.00
Sm	150	2	HMI He	50947	0.00
Gd	156	1	HMI H2	164820	0.01
Gd	157	1	HMI H2	123995	0.01
W	182	2	HMI He	206247	0.00
Pt	195	2	HMI He	162773	0.00
Tl	205	2	HMI He	436887	0.00
Pb	208	2	HMI He	589800	0.00
Th	232	2	HMI He	729987	0.00
U	238	2	HMI He	773588	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	158626	6.82	170571	93.00	60	120	
Sc (IS)	45	1	HMI H2	8749532	9.61	8896882	98.34	60	120	
Sc (IS)	45	2	HMI He	383342	1.17	395354	96.96	60	120	
Sc (IS)	45	3	No Gas	14158799	0.80	14807391	95.62	60	120	
Ge Internal Standard	72	1	HMI H2	3759289	7.18	3821114	98.38	60	120	
Ge Internal Standard	72	2	HMI He	473043	1.39	488193	96.90	60	120	
In Internal Standard	115	2	HMI He	1931227	0.36	2033009	94.99	60	120	
Ho-165	165	2	HMI He	9853140	1.79	10165339	96.93	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	322_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:50:05-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	484.312	ppb	0.392	59968	500	96.9	90	110	
Li	7	2	45	569.623	ppb	25.669	3271	500	113.9	90	110	>+\-10%
Li	7	3	45	501.137	ppb	1.338	1864073	500	100.2	90	110	
Be	9	1	6	51.928	ppb	11.129	4404	50	103.9	90	110	
B	11	1	6	49.913	ppb	1.774	4998	50	99.8	90	110	
Na	23	1	45	4964.036	ppb	0.228	5164810	5000	99.3	90	110	
Na	23	2	45	5280.063	ppb	1.022	371930	5000	105.6	90	110	
Mg	24	2	45	5331.425	ppb	1.572	177004	5000	106.6	90	110	
Al	27	2	45	5229.022	ppb	2.477	53026	5000	104.6	90	110	
K	39	1	45	4843.278	ppb	1.478	9400354	5000	96.9	90	110	
K	39	2	45	5278.700	ppb	2.401	114250	5000	105.6	90	110	
Ca	40	1	45	4927.414	ppb	0.178	8520486	5000	98.5	90	110	
Ca	44	2	45	5376.157	ppb	2.732	6595	5000	107.5	90	110	
Ti	47	2	45	45.103	ppb	18.298	507	50	90.2	90	110	
V	51	2	72	53.029	ppb	2.860	19881	50	106.1	90	110	
Cr	52	2	72	51.740	ppb	1.512	24789	50	103.5	90	110	
Mn	55	2	72	52.794	ppb	1.638	11365	50	105.6	90	110	
Fe	57	2	72	5296.837	ppb	1.095	49579	5000	105.9	90	110	
Co	59	2	72	52.546	ppb	3.228	43159	50	105.1	90	110	
Ni	60	2	72	51.619	ppb	5.033	12102	50	103.2	90	110	
Cu	63	2	72	52.090	ppb	2.232	34455	50	104.2	90	110	
Zn	66	2	72	52.662	ppb	5.745	5215	50	105.3	90	110	
As	75	2	72	49.633	ppb	8.155	3330	50	99.3	90	110	
Se	78	1	72	50.980	ppb	2.269	4369	50	102.0	90	110	
Sr	88	2	72	51.949	ppb	3.554	14818	50	103.9	90	110	
Zr	90	2	72	27.481	ppb	18.802	310	50	55.0	90	110	>+\-10%
Nb	93	2	72	107.920	ppb	1.252	138892	100	107.9	90	110	
Mo	95	2	115	51.459	ppb	2.712	18586	50	102.9	90	110	
Pd	105	2	115	54.149	ppb	1.597	30751	50	108.3	90	110	
Ag	107	2	115	52.526	ppb	2.587	65474	50	105.1	90	110	
Cd	111	2	115	53.639	ppb	2.316	9630	50	107.3	90	110	
Sn	120	2	115	52.059	ppb	2.290	26870	50	104.1	90	110	
Sb	121	2	115	52.890	ppb	0.910	24533	50	105.8	90	110	
Ba	137	2	115	50.684	ppb	7.786	9060	50	101.4	90	110	
W	182	2	165	53.140	ppb	1.321	108385	50	106.3	90	110	
Pt	195	2	165	52.159	ppb	0.876	83476	50	104.3	90	110	
Tl	205	2	165	53.488	ppb	0.854	229780	50	107.0	90	110	
Pb	208	2	165	52.754	ppb	1.352	306732	50	105.5	90	110	
Th	232	2	165	52.230	ppb	0.636	375016	50	104.5	90	110	
U	238	2	165	52.937	ppb	1.050	402599	50	105.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	164726	0.93	170571	96.57	60	120	
Sc (IS)	45	1	HMI H2	8843255	0.46	8896882	99.40	60	120	
Sc (IS)	45	2	HMI He	375263	1.79	395354	94.92	60	120	
Sc (IS)	45	3	No Gas	14648465	0.91	14807391	98.93	60	120	
Ge Internal Standard	72	1	HMI H2	3770450	0.30	3821114	98.67	60	120	
Ge Internal Standard	72	2	HMI He	464038	1.56	488193	95.05	60	120	
In Internal Standard	115	2	HMI He	1903369	0.68	2033009	93.62	60	120	
Ho-165	165	2	HMI He	9684410	0.92	10165339	95.27	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	323_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:53:53-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	12.465	ppb	27.4	884299	10	>RL
Be	9	1	6	0.116	ppb	59.4	17	0.5	
B	11	1	6	2.104	ppb	53.2	450	0.5	>RL
Na	23	1	45	36.522	ppb	6.5	136771	25	>RL
Na	23	2	45	46.161	ppb	10.0	10915	25	>RL
Mg	24	2	45	8.331	ppb	39.6	613	25	
Al	27	2	45	-2.745	ppb	-38.2	133	15	
K	39	1	45	-15.846	ppb	-224.2	3659331	50	
K	39	2	45	2.883	ppb	509.5	7679	50	
Ca	40	1	45	4.999	ppb	5.1	46063	50	
Ca	44	2	45	21.517	ppb	38.2	50	25	
Ti	47	2	45	-1.079	ppb	0.0	0	0.5	
V	51	2	72	0.569	ppb	63.8	993	1	
Cr	52	2	72	0.027	ppb	218.3	133	1	
Mn	55	2	72	0.022	ppb	2069.9	317	0.5	
Fe	57	2	72	14.360	ppb	51.1	483	25	
Co	59	2	72	0.085	ppb	75.3	147	0.5	
Ni	60	2	72	-0.027	ppb	-246.2	153	1	
Cu	63	2	72	-0.325	ppb	-49.0	950	1	
Zn	66	2	72	-0.581	ppb	-85.0	187	5	
As	75	2	72	0.227	ppb	56.7	27	1	
Se	78	1	72	0.183	ppb	132.0	20	1	
Sr	88	2	72	0.012	ppb	175.7	33	0.5	
Zr	90	2	72	1.284	ppb	220.1	37	1	>RL
Nb	93	2	72	6.784	ppb	5.9	10124	2	>RL
Mo	95	2	115	0.343	ppb	37.2	143	0.5	
Pd	105	2	115	0.145	ppb	30.2	97	1	
Ag	107	2	115	-0.285	ppb	-12.6	1053	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.201	ppb	35.8	173	1	
Sb	121	2	115	0.363	ppb	15.5	207	0.6	
Ba	137	2	115	0.001	ppb	2713.1	7	0.5	
W	182	2	165	0.144	ppb	44.8	1724	1	
Pt	195	2	165	0.029	ppb	83.4	77	1	
Tl	205	2	165	0.037	ppb	9.8	263	0.1	
Pb	208	2	165	-0.060	ppb	-27.5	1483	0.5	
Th	232	2	165	0.050	ppb	35.9	820	1	
U	238	2	165	0.101	ppb	3.8	850	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	169050	1.60	170571	99.11	60	120	
Sc (IS)	45	1	HMI H2	8860691	1.09	8896882	99.59	60	120	
Sc (IS)	45	2	HMI He	386047	0.92	395354	97.65	60	120	
Sc (IS)	45	3	No Gas	14563744	0.28	14807391	98.35	60	120	
Ge Internal Standard	72	1	HMI H2	3814867	0.83	3821114	99.84	60	120	
Ge Internal Standard	72	2	HMI He	478751	0.57	488193	98.07	60	120	
In Internal Standard	115	2	HMI He	2002884	1.05	2033009	98.52	60	120	
Ho-165	165	2	HMI He	9938811	0.57	10165339	97.77	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-21-B
Data File Name	324SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T08:57:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	78.287	ppb	78.287	12.04	28111	500000	
Li	7	2	45	155.672	ppb	155.672	35.96	1700	500000	
Li	7	3	45	50.866	ppb	50.866	14.19	863398	50000	
Be	9	1	6	10.115	ppb	10.115	2.19	727	2000	
B	11	1	6	20.974	ppb	20.974	5.00	1884	2000	
Na	23	1	45	1284.927	ppb	1284.927	3.97	1243339	2000	
Na	23	2	45	1313.408	ppb	1313.408	1.27	90190	400000	
Mg	24	2	45	640983.002	ppb	640983.002	2.48	19527385	400000	
Al	27	2	45	87186.299	ppb	87186.299	2.13	810596	400000	
K	39	1	45	20299.443	ppb	20299.443	0.47	24405444	400000	
K	39	2	45	23616.559	ppb	23616.559	1.43	446322	400000	
Ca	40	1	45	1117648.250	ppb	1117648.250	0.63	1696284881	400000	
Ca	44	2	45	1173448.012	ppb	1173448.012	2.93	1318558	400000	
Ti	47	2	45	4292.520	ppb	4292.520	2.20	43209	4000	
V	51	2	72	283.221	ppb	283.221	3.59	89065	2000	
Cr	52	2	72	304.252	ppb	304.252	1.41	125706	5000	
Mn	55	2	72	4908.937	ppb	4908.937	2.17	890454	10000	
Fe	57	2	72	181099.462	ppb	181099.462	2.77	1457536	400000	
Co	59	2	72	49.139	ppb	49.139	1.56	34957	2000	
Ni	60	2	72	169.338	ppb	169.338	4.69	34065	5000	
Cu	63	2	72	22079.778	ppb	22079.778	2.55	12230611	5000	
Zn	66	2	72	6976.939	ppb	6976.939	1.73	571383	5000	
As	75	2	72	3185.720	ppb	3185.720	1.90	184603	2000	
Se	78	1	72	1.764	ppb	1.764	7.75	129	2000	
Sr	88	2	72	1186.493	ppb	1186.493	2.85	292456	4000	
Zr	90	2	72	381.701	ppb	381.701	8.59	3484	1000	
Nb	93	2	72	8.408	ppb	8.408	4.14	10294	200	
Mo	95	2	115	15.234	ppb	15.234	4.79	4721	2000	
Pd	105	2	115	0.229	ppb	0.229	23.92	120	100	
Ag	107	2	115	1829.097	ppb	1829.097	1.55	1914058	100	>LDR
Cd	111	2	115	403.608	ppb	403.608	3.05	62075	2000	
Sn	120	2	115	4.788	ppb	4.788	14.27	2167	2000	
Sb	121	2	115	117.892	ppb	117.892	4.95	46809	1000	
Ba	137	2	115	3337.268	ppb	3337.268	0.82	510928	5000	
W	182	2	165	617.742	ppb	617.742	1.06	1130381	100	>LDR
Pt	195	2	165	-0.004	ppb	-0.004	-184.70	20	100	
Tl	205	2	165	2.037	ppb	2.037	5.43	8026	2000	
Pb	208	2	165	17675.906	ppb	17675.906	1.48	92751517	5000	
Th	232	2	165	38.042	ppb	38.042	2.77	248032	2000	
U	238	2	165	9.055	ppb	9.055	4.10	62552	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	138628	1.62	170571	81.27	60	120	
Sc (IS)	45	1	HMI H2	7795862	0.25	8896882	87.62	60	120	
Sc (IS)	45	2	HMI He	345002	1.80	395354	87.26	60	120	
Sc (IS)	45	3	No Gas	13091855	0.42	14807391	88.41	60	120	
Ge Internal Standard	72	1	HMI H2	3146415	0.64	3821114	82.34	60	120	
Ge Internal Standard	72	2	HMI He	401760	1.85	488193	82.30	60	120	
In Internal Standard	115	2	HMI He	1630894	1.13	2033009	80.22	60	120	
Ho-165	165	2	HMI He	8791404	0.99	10165339	86.48	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-22-C
Data File Name	325SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:01:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	66.236	ppb	66.236	7.02	27109	500000	
Li	7	2	45	118.746	ppb	118.746	25.41	1560	500000	
Li	7	3	45	63.994	ppb	63.994	6.51	851225	50000	
Be	9	1	6	10.936	ppb	10.936	5.99	750	2000	
B	11	1	6	26.482	ppb	26.482	13.62	2224	2000	
Na	23	1	45	1360.710	ppb	1360.710	1.91	1298814	2000	
Na	23	2	45	1363.618	ppb	1363.618	0.06	91883	400000	
Mg	24	2	45	695736.226	ppb	695736.226	0.28	20861441	400000	
Al	27	2	45	91903.215	ppb	91903.215	0.16	840946	400000	
K	39	1	45	22245.126	ppb	22245.126	0.32	26177053	400000	
K	39	2	45	25316.363	ppb	25316.363	1.02	470355	400000	
Ca	40	1	45	1245185.726	ppb	1245185.726	0.14	1871459012	400000	
Ca	44	2	45	1311220.877	ppb	1311220.877	0.78	1450245	400000	
Ti	47	2	45	4620.663	ppb	4620.663	1.78	45776	4000	
V	51	2	72	300.827	ppb	300.827	2.55	94072	2000	
Cr	52	2	72	340.212	ppb	340.212	0.71	139794	5000	
Mn	55	2	72	5336.401	ppb	5336.401	0.26	962807	10000	
Fe	57	2	72	203760.801	ppb	203760.801	0.26	1631315	400000	
Co	59	2	72	55.130	ppb	55.130	0.89	38994	2000	
Ni	60	2	72	178.336	ppb	178.336	1.10	35685	5000	
Cu	63	2	72	27037.400	ppb	27037.400	0.73	14897566	5000	>LDR
Zn	66	2	72	7531.527	ppb	7531.527	0.90	613460	5000	
As	75	2	72	3653.846	ppb	3653.846	0.68	210592	2000	
Se	78	1	72	2.241	ppb	2.241	20.55	163	2000	
Sr	88	2	72	1300.018	ppb	1300.018	0.60	318765	4000	
Zr	90	2	72	440.015	ppb	440.015	1.32	3991	1000	
Nb	93	2	72	6.358	ppb	6.358	8.46	7983	200	
Mo	95	2	115	17.901	ppb	17.901	4.89	5535	2000	
Pd	105	2	115	0.189	ppb	0.189	18.99	100	100	
Ag	107	2	115	2211.189	ppb	2211.189	2.97	2308757	100	>LDR
Cd	111	2	115	467.226	ppb	467.226	0.88	71717	2000	
Sn	120	2	115	6.524	ppb	6.524	7.57	2924	2000	
Sb	121	2	115	171.518	ppb	171.518	1.57	67960	1000	
Ba	137	2	115	3570.378	ppb	3570.378	0.52	545439	5000	
W	182	2	165	714.652	ppb	714.652	0.32	1292410	100	>LDR
Pt	195	2	165	-0.013	ppb	-0.013	-31.48	7	100	
Tl	205	2	165	2.289	ppb	2.289	4.71	8903	2000	
Pb	208	2	165	20148.242	ppb	20148.242	0.33	104505838	5000	
Th	232	2	165	38.309	ppb	38.309	0.41	246909	2000	
U	238	2	165	11.228	ppb	11.228	1.48	76667	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	132253	2.46	170571	77.54	60	120	
Sc (IS)	45	1	HMI H2	7719931	0.21	8896882	86.77	60	120	
Sc (IS)	45	2	HMI He	339467	0.36	395354	85.86	60	120	
Sc (IS)	45	3	No Gas	12567085	0.82	14807391	84.87	60	120	
Ge Internal Standard	72	1	HMI H2	3129787	0.74	3821114	81.91	60	120	
Ge Internal Standard	72	2	HMI He	399522	0.52	488193	81.84	60	120	
In Internal Standard	115	2	HMI He	1627276	0.28	2033009	80.04	60	120	
Ho-165	165	2	HMI He	8689355	0.63	10165339	85.48	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-23-E
Data File Name	326SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:05:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	305.218	ppb	305.218	6.83	37053	500000	
Li	7	2	45	378.201	ppb	378.201	35.33	2054	500000	
Li	7	3	45	306.074	ppb	306.074	5.26	1147857	50000	
Be	9	1	6	13.437	ppb	13.437	4.05	780	2000	
B	11	1	6	87.316	ppb	87.316	9.72	5831	2000	
Na	23	1	45	4536.313	ppb	4536.313	0.55	3682208	2000	
Na	23	2	45	4796.636	ppb	4796.636	1.28	265901	400000	
Mg	24	2	45	528505.116	ppb	528505.116	0.39	13757632	400000	
Al	27	2	45	353295.403	ppb	353295.403	1.79	2805921	400000	
K	39	1	45	91388.161	ppb	91388.161	0.55	87053685	400000	
K	39	2	45	104882.592	ppb	104882.592	1.64	1673315	400000	
Ca	40	1	45	1063525.015	ppb	1063525.015	0.28	1425936459	400000	
Ca	44	2	45	1062412.036	ppb	1062412.036	0.16	1020099	400000	
Ti	47	2	45	16248.332	ppb	16248.332	0.94	139718	4000	
V	51	2	72	978.784	ppb	978.784	0.14	263883	2000	
Cr	52	2	72	1066.799	ppb	1066.799	0.87	379523	5000	
Mn	55	2	72	13366.370	ppb	13366.370	1.90	2088552	10000	
Fe	57	2	72	665701.100	ppb	665701.100	0.30	4616208	400000	
Co	59	2	72	307.897	ppb	307.897	0.55	188422	2000	
Ni	60	2	72	940.422	ppb	940.422	1.29	162508	5000	
Cu	63	2	72	4023.461	ppb	4023.461	1.95	1920877	5000	
Zn	66	2	72	4071.157	ppb	4071.157	0.92	287329	5000	
As	75	2	72	1052.801	ppb	1052.801	1.30	52565	2000	
Se	78	1	72	5.104	ppb	5.104	13.25	325	2000	
Sr	88	2	72	1949.601	ppb	1949.601	0.95	414066	4000	
Zr	90	2	72	3270.692	ppb	3270.692	3.12	25584	1000	
Nb	93	2	72	13.828	ppb	13.828	3.79	14021	200	
Mo	95	2	115	20.613	ppb	20.613	6.54	5078	2000	
Pd	105	2	115	0.474	ppb	0.474	24.47	190	100	
Ag	107	2	115	487.350	ppb	487.350	7.76	406079	100	
Cd	111	2	115	89.361	ppb	89.361	4.28	10928	2000	
Sn	120	2	115	8.120	ppb	8.120	1.79	2890	2000	
Sb	121	2	115	12.966	ppb	12.966	6.10	4111	1000	
Ba	137	2	115	3141.782	ppb	3141.782	0.92	382455	5000	
W	182	2	165	462.475	ppb	462.475	0.47	738282	100	
Pt	195	2	165	0.022	ppb	0.022	144.06	50	100	
Tl	205	2	165	5.492	ppb	5.492	1.88	18744	2000	
Pb	208	2	165	25127.265	ppb	25127.265	0.57	114988448	5000	>LDR
Th	232	2	165	120.076	ppb	120.076	0.16	682078	2000	
U	238	2	165	13.523	ppb	13.523	0.58	81463	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	112246	1.55	170571	65.81	60	120	
Sc (IS)	45	1	HMI H2	6886932	1.13	8896882	77.41	60	120	
Sc (IS)	45	2	HMI He	294704	0.72	395354	74.54	60	120	
Sc (IS)	45	3	No Gas	11399850	0.63	14807391	76.99	60	120	
Ge Internal Standard	72	1	HMI H2	2781797	0.24	3821114	72.80	60	120	
Ge Internal Standard	72	2	HMI He	346093	1.29	488193	70.89	60	120	
In Internal Standard	115	2	HMI He	1296744	0.81	2033009	63.78	60	120	
Ho-165	165	2	HMI He	7666411	0.84	10165339	75.42	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-24-E
Data File Name	327SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:09:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	323.628	ppb	323.628	2.18	36034	500000	
Li	7	2	45	382.871	ppb	382.871	6.78	1994	500000	
Li	7	3	45	319.941	ppb	319.941	5.28	1105214	50000	
Be	9	1	6	17.792	ppb	17.792	16.05	947	2000	
B	11	1	6	93.044	ppb	93.044	4.58	5695	2000	
Na	23	1	45	4893.717	ppb	4893.717	0.97	3756489	2000	
Na	23	2	45	5110.448	ppb	5110.448	0.89	272744	400000	
Mg	24	2	45	582179.493	ppb	582179.493	0.99	14609114	400000	
Al	27	2	45	386074.214	ppb	386074.214	0.85	2956029	400000	
K	39	1	45	100707.409	ppb	100707.409	1.46	90571719	400000	
K	39	2	45	116024.655	ppb	116024.655	3.23	1783967	400000	
Ca	40	1	45	1185365.762	ppb	1185365.762	1.55	1505145738	400000	
Ca	44	2	45	1191618.765	ppb	1191618.765	0.59	1102992	400000	
Ti	47	2	45	17783.396	ppb	17783.396	0.93	147412	4000	
V	51	2	72	1052.915	ppb	1052.915	0.68	274041	2000	
Cr	52	2	72	1135.195	ppb	1135.195	0.49	389938	5000	
Mn	55	2	72	14926.234	ppb	14926.234	0.53	2252141	10000	
Fe	57	2	72	739315.589	ppb	739315.589	1.33	4950271	400000	
Co	59	2	72	332.131	ppb	332.131	0.53	196237	2000	
Ni	60	2	72	1026.605	ppb	1026.605	1.47	171284	5000	
Cu	63	2	72	4427.532	ppb	4427.532	1.01	2041230	5000	
Zn	66	2	72	4491.941	ppb	4491.941	0.89	306111	5000	
As	75	2	72	1073.739	ppb	1073.739	0.27	51769	2000	
Se	78	1	72	5.511	ppb	5.511	0.54	332	2000	
Sr	88	2	72	2254.324	ppb	2254.324	0.57	462306	4000	
Zr	90	2	72	3673.256	ppb	3673.256	2.42	27748	1000	
Nb	93	2	72	14.648	ppb	14.648	3.15	14295	200	
Mo	95	2	115	19.265	ppb	19.265	5.31	4644	2000	
Pd	105	2	115	0.387	ppb	0.387	54.65	153	100	
Ag	107	2	115	539.127	ppb	539.127	1.90	439614	100	>LDR
Cd	111	2	115	93.338	ppb	93.338	2.55	11172	2000	
Sn	120	2	115	8.341	ppb	8.341	5.92	2904	2000	
Sb	121	2	115	12.125	ppb	12.125	7.22	3764	1000	
Ba	137	2	115	3539.350	ppb	3539.350	1.02	421612	5000	
W	182	2	165	571.086	ppb	571.086	0.35	891453	100	>LDR
Pt	195	2	165	0.034	ppb	0.034	90.29	63	100	
Tl	205	2	165	6.187	ppb	6.187	5.27	20644	2000	
Pb	208	2	165	24060.362	ppb	24060.362	0.70	107686325	5000	
Th	232	2	165	132.800	ppb	132.800	0.59	737750	2000	
U	238	2	165	15.506	ppb	15.506	1.31	91341	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	102942	0.50	170571	60.35	60	120	
Sc (IS)	45	1	HMI H2	6522900	1.13	8896882	73.32	60	120	
Sc (IS)	45	2	HMI He	284094	0.41	395354	71.86	60	120	
Sc (IS)	45	3	No Gas	10774458	0.64	14807391	72.76	60	120	
Ge Internal Standard	72	1	HMI H2	2630968	0.87	3821114	68.85	60	120	
Ge Internal Standard	72	2	HMI He	334164	0.67	488193	68.45	60	120	
In Internal Standard	115	2	HMI He	1268917	0.43	2033009	62.42	60	120	
Ho-165	165	2	HMI He	7498230	1.20	10165339	73.76	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-25-E
Data File Name	328SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:13:02-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	216.105	ppb	216.105	4.41	29650	500000	
Li	7	2	45	315.023	ppb	315.023	6.52	1727	500000	
Li	7	3	45	188.727	ppb	188.727	17.88	886005	50000	
Be	9	1	6	12.819	ppb	12.819	10.38	650	2000	
B	11	1	6	73.386	ppb	73.386	12.19	4301	2000	
Na	23	1	45	3379.386	ppb	3379.386	0.65	2539772	2000	
Na	23	2	45	3521.080	ppb	3521.080	0.73	180260	400000	
Mg	24	2	45	519752.027	ppb	519752.027	0.52	12395660	400000	
Al	27	2	45	284275.985	ppb	284275.985	1.76	2068777	400000	
K	39	1	45	73690.040	ppb	73690.040	0.19	65034591	400000	
K	39	2	45	86571.331	ppb	86571.331	0.65	1266443	400000	
Ca	40	1	45	947948.897	ppb	947948.897	0.89	1168321956	400000	
Ca	44	2	45	966952.230	ppb	966952.230	0.25	850656	400000	
Ti	47	2	45	12553.712	ppb	12553.712	0.79	98903	4000	
V	51	2	72	801.532	ppb	801.532	0.69	200571	2000	
Cr	52	2	72	869.154	ppb	869.154	1.85	286894	5000	
Mn	55	2	72	11423.747	ppb	11423.747	0.16	1656182	10000	
Fe	57	2	72	558682.027	ppb	558682.027	1.28	3594247	400000	
Co	59	2	72	235.406	ppb	235.406	1.23	133650	2000	
Ni	60	2	72	742.134	ppb	742.134	0.83	119011	5000	
Cu	63	2	72	9437.489	ppb	9437.489	0.81	4179643	5000	
Zn	66	2	72	5880.191	ppb	5880.191	1.21	384955	5000	
As	75	2	72	1609.362	ppb	1609.362	0.16	74550	2000	
Se	78	1	72	3.899	ppb	3.899	25.10	231	2000	
Sr	88	2	72	1581.164	ppb	1581.164	0.82	311576	4000	
Zr	90	2	72	2296.454	ppb	2296.454	0.17	16674	1000	
Nb	93	2	72	14.177	ppb	14.177	2.55	13320	200	
Mo	95	2	115	20.648	ppb	20.648	1.74	4794	2000	
Pd	105	2	115	0.321	ppb	0.321	26.28	123	100	
Ag	107	2	115	678.241	ppb	678.241	1.74	532629	100	>LDR
Cd	111	2	115	198.327	ppb	198.327	3.08	22869	2000	
Sn	120	2	115	6.605	ppb	6.605	6.29	2224	2000	
Sb	121	2	115	32.529	ppb	32.529	2.85	9697	1000	
Ba	137	2	115	3561.547	ppb	3561.547	0.68	408752	5000	
W	182	2	165	1050.179	ppb	1050.179	2.62	1589534	100	>LDR
Pt	195	2	165	0.010	ppb	0.010	168.25	33	100	
Tl	205	2	165	4.667	ppb	4.667	0.70	15126	2000	
Pb	208	2	165	28020.407	ppb	28020.407	1.04	121671771	5000	>LDR
Th	232	2	165	96.747	ppb	96.747	1.19	521514	2000	
U	238	2	165	13.644	ppb	13.644	1.10	77988	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	97928	1.29	170571	57.41	60	120	IS Failed
Sc (IS)	45	1	HMI H2	6330953	1.11	8896882	71.16	60	120	
Sc (IS)	45	2	HMI He	270008	0.71	395354	68.30	60	120	
Sc (IS)	45	3	No Gas	10459316	0.45	14807391	70.64	60	120	
Ge Internal Standard	72	1	HMI H2	2573214	1.09	3821114	67.34	60	120	
Ge Internal Standard	72	2	HMI He	321077	0.31	488193	65.77	60	120	
In Internal Standard	115	2	HMI He	1222516	0.24	2033009	60.13	60	120	
Ho-165	165	2	HMI He	7275197	1.66	10165339	71.57	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-26-E
Data File Name	329SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:16:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	214.138	ppb	214.138	8.29	27092	500000	
Li	7	2	45	275.823	ppb	275.823	18.60	1503	500000	
Li	7	3	45	207.653	ppb	207.653	11.37	887732	50000	
Be	9	1	6	14.478	ppb	14.478	13.14	677	2000	
B	11	1	6	72.728	ppb	72.728	4.51	3937	2000	
Na	23	1	45	3888.739	ppb	3888.739	0.31	2669552	2000	
Na	23	2	45	4080.951	ppb	4080.951	1.77	191896	400000	
Mg	24	2	45	553938.248	ppb	553938.248	1.01	12184666	400000	
Al	27	2	45	310608.367	ppb	310608.367	0.92	2084717	400000	
K	39	1	45	79009.277	ppb	79009.277	1.24	63750574	400000	
K	39	2	45	92281.989	ppb	92281.989	2.36	1244709	400000	
Ca	40	1	45	1026886.700	ppb	1026886.700	0.54	1160312036	400000	
Ca	44	2	45	1048088.817	ppb	1048088.817	0.41	850399	400000	
Ti	47	2	45	14077.490	ppb	14077.490	2.21	102289	4000	
V	51	2	72	837.089	ppb	837.089	0.55	194459	2000	
Cr	52	2	72	927.734	ppb	927.734	0.98	284307	5000	
Mn	55	2	72	11913.209	ppb	11913.209	0.88	1603560	10000	
Fe	57	2	72	560439.365	ppb	560439.365	0.49	3347538	400000	
Co	59	2	72	249.348	ppb	249.348	2.27	131439	2000	
Ni	60	2	72	771.243	ppb	771.243	0.41	114825	5000	
Cu	63	2	72	8925.297	ppb	8925.297	0.65	3670006	5000	
Zn	66	2	72	5305.286	ppb	5305.286	0.86	322490	5000	
As	75	2	72	1552.064	ppb	1552.064	0.98	66752	2000	
Se	78	1	72	3.699	ppb	3.699	23.10	204	2000	
Sr	88	2	72	1751.182	ppb	1751.182	0.76	320384	4000	
Zr	90	2	72	2634.077	ppb	2634.077	6.42	17755	1000	
Nb	93	2	72	19.587	ppb	19.587	7.52	16804	200	
Mo	95	2	115	19.522	ppb	19.522	1.31	4254	2000	
Pd	105	2	115	0.392	ppb	0.392	46.46	140	100	
Ag	107	2	115	582.127	ppb	582.127	0.51	429120	100	>LDR
Cd	111	2	115	187.578	ppb	187.578	1.11	20299	2000	
Sn	120	2	115	8.625	ppb	8.625	5.29	2714	2000	
Sb	121	2	115	43.134	ppb	43.134	3.23	12063	1000	
Ba	137	2	115	3637.964	ppb	3637.964	0.47	391820	5000	
W	182	2	165	930.206	ppb	930.206	0.78	1326951	100	>LDR
Pt	195	2	165	-0.006	ppb	-0.006	-184.49	13	100	
Tl	205	2	165	4.890	ppb	4.890	1.20	14936	2000	
Pb	208	2	165	30548.145	ppb	30548.145	0.73	125013055	5000	>LDR
Th	232	2	165	105.719	ppb	105.719	1.21	537042	2000	
U	238	2	165	13.297	ppb	13.297	1.00	71625	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	90395	0.55	170571	53.00	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5803847	0.33	8896882	65.23	60	120	
Sc (IS)	45	2	HMI He	249037	0.74	395354	62.99	60	120	
Sc (IS)	45	3	No Gas	10171019	0.83	14807391	68.69	60	120	
Ge Internal Standard	72	1	HMI H2	2399945	0.32	3821114	62.81	60	120	
Ge Internal Standard	72	2	HMI He	298107	0.14	488193	61.06	60	120	
In Internal Standard	115	2	HMI He	1147252	0.13	2033009	56.43	60	120	IS Failed
Ho-165	165	2	HMI He	6856134	1.42	10165339	67.45	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-7-C
Data File Name	330SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:20:41-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	392.263	ppb	392.263	8.72	35453	500000	
Li	7	2	45	444.828	ppb	444.828	30.66	1924	500000	
Li	7	3	45	406.730	ppb	406.730	1.86	1115352	50000	
Be	9	1	6	18.977	ppb	18.977	16.34	837	2000	
B	11	1	6	122.306	ppb	122.306	4.09	6168	2000	
Na	23	1	45	3842.055	ppb	3842.055	0.50	2659403	2000	
Na	23	2	45	3939.633	ppb	3939.633	1.19	188967	400000	
Mg	24	2	45	558037.456	ppb	558037.456	1.41	12508836	400000	
Al	27	2	45	430107.481	ppb	430107.481	0.95	2941830	400000	
K	39	1	45	91472.726	ppb	91472.726	0.67	74010956	400000	
K	39	2	45	106304.299	ppb	106304.299	1.73	1460465	400000	
Ca	40	1	45	704705.802	ppb	704705.802	0.44	802620708	400000	
Ca	44	2	45	713833.938	ppb	713833.938	1.44	590222	400000	
Ti	47	2	45	16269.562	ppb	16269.562	0.73	120479	4000	
V	51	2	72	1422.712	ppb	1422.712	0.69	333097	2000	
Cr	52	2	72	4082.193	ppb	4082.193	0.66	1261893	5000	
Mn	55	2	72	22952.937	ppb	22952.937	0.65	3116900	10000	
Fe	57	2	72	977063.018	ppb	977063.018	0.49	5887865	400000	
Co	59	2	72	655.680	ppb	655.680	0.30	348626	2000	
Ni	60	2	72	4050.994	ppb	4050.994	0.08	608073	5000	
Cu	63	2	72	5470.240	ppb	5470.240	0.95	2269621	5000	
Zn	66	2	72	4252.252	ppb	4252.252	1.83	260802	5000	
As	75	2	72	1065.438	ppb	1065.438	0.53	46234	2000	
Se	78	1	72	6.774	ppb	6.774	9.88	373	2000	
Sr	88	2	72	1468.225	ppb	1468.225	0.47	271011	4000	
Zr	90	2	72	6164.040	ppb	6164.040	2.29	41899	1000	>LDR
Nb	93	2	72	17.822	ppb	17.822	2.82	15493	200	
Mo	95	2	115	39.290	ppb	39.290	3.04	8720	2000	
Pd	105	2	115	0.632	ppb	0.632	24.79	227	100	
Ag	107	2	115	688.518	ppb	688.518	2.06	517234	100	>LDR
Cd	111	2	115	130.851	ppb	130.851	1.31	14435	2000	
Sn	120	2	115	19.441	ppb	19.441	2.95	6188	2000	
Sb	121	2	115	29.071	ppb	29.071	1.41	8293	1000	
Ba	137	2	115	14181.987	ppb	14181.987	1.28	1557100	5000	
W	182	2	165	382.894	ppb	382.894	0.08	554250	100	
Pt	195	2	165	0.020	ppb	0.020	211.41	43	100	
Tl	205	2	165	12.757	ppb	12.757	1.33	39380	2000	
Pb	208	2	165	7086.949	ppb	7086.949	0.41	29398528	5000	
Th	232	2	165	140.481	ppb	140.481	0.65	723273	2000	
U	238	2	165	16.896	ppb	16.896	1.34	92248	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	85378	0.26	170571	50.05	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5850232	0.76	8896882	65.76	60	120	
Sc (IS)	45	2	HMI He	253791	0.70	395354	64.19	60	120	
Sc (IS)	45	3	No Gas	9749464	0.48	14807391	65.84	60	120	
Ge Internal Standard	72	1	HMI H2	2410363	0.84	3821114	63.08	60	120	
Ge Internal Standard	72	2	HMI He	300764	0.41	488193	61.61	60	120	
In Internal Standard	115	2	HMI He	1169521	0.31	2033009	57.53	60	120	IS Failed
Ho-165	165	2	HMI He	6949289	0.76	10165339	68.36	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-8-C
Data File Name	331SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:24:28-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	304.374	ppb	304.374	0.32	29817	500000	
Li	7	2	45	385.529	ppb	385.529	24.42	1687	500000	
Li	7	3	45	335.854	ppb	335.854	1.85	1010266	50000	
Be	9	1	6	18.071	ppb	18.071	9.25	757	2000	
B	11	1	6	119.244	ppb	119.244	4.59	5701	2000	
Na	23	1	45	3427.868	ppb	3427.868	1.18	2256921	2000	
Na	23	2	45	3547.198	ppb	3547.198	2.23	161192	400000	
Mg	24	2	45	544587.884	ppb	544587.884	1.62	11532045	400000	
Al	27	2	45	374109.827	ppb	374109.827	1.77	2417298	400000	
K	39	1	45	81618.261	ppb	81618.261	0.98	62880207	400000	
K	39	2	45	95202.237	ppb	95202.237	2.92	1235902	400000	
Ca	40	1	45	741860.585	ppb	741860.585	0.88	801353481	400000	
Ca	44	2	45	754519.621	ppb	754519.621	1.86	589329	400000	
Ti	47	2	45	13775.438	ppb	13775.438	0.92	96369	4000	
V	51	2	72	1189.943	ppb	1189.943	0.87	268059	2000	
Cr	52	2	72	3094.157	ppb	3094.157	0.44	920041	5000	
Mn	55	2	72	21570.475	ppb	21570.475	0.90	2817534	10000	
Fe	57	2	72	839131.253	ppb	839131.253	1.36	4864102	400000	
Co	59	2	72	560.417	ppb	560.417	0.48	286629	2000	
Ni	60	2	72	3321.442	ppb	3321.442	0.51	479579	5000	
Cu	63	2	72	4500.878	ppb	4500.878	1.95	1796415	5000	
Zn	66	2	72	4187.940	ppb	4187.940	1.39	247090	5000	
As	75	2	72	1103.945	ppb	1103.945	0.37	46079	2000	
Se	78	1	72	5.105	ppb	5.105	9.27	269	2000	
Sr	88	2	72	1436.458	ppb	1436.458	0.48	255044	4000	
Zr	90	2	72	5361.339	ppb	5361.339	2.32	35054	1000	>LDR
Nb	93	2	72	17.973	ppb	17.973	5.10	15022	200	
Mo	95	2	115	35.043	ppb	35.043	6.97	7489	2000	
Pd	105	2	115	0.469	ppb	0.469	29.34	163	100	
Ag	107	2	115	514.125	ppb	514.125	0.46	372051	100	>LDR
Cd	111	2	115	114.674	ppb	114.674	4.67	12179	2000	
Sn	120	2	115	217.911	ppb	217.911	1.37	66416	2000	
Sb	121	2	115	286.037	ppb	286.037	1.91	78411	1000	
Ba	137	2	115	12762.324	ppb	12762.324	3.50	1349021	5000	
W	182	2	165	363.405	ppb	363.405	1.57	505309	100	
Pt	195	2	165	0.031	ppb	0.031	72.32	53	100	
Tl	205	2	165	11.535	ppb	11.535	1.42	34209	2000	
Pb	208	2	165	18981.320	ppb	18981.320	1.32	75632394	5000	
Th	232	2	165	129.350	ppb	129.350	1.17	639731	2000	
U	238	2	165	16.085	ppb	16.085	2.32	84355	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	80929	2.60	170571	47.45	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5548498	0.52	8896882	62.36	60	120	
Sc (IS)	45	2	HMI He	239782	1.82	395354	60.65	60	120	
Sc (IS)	45	3	No Gas	9644329	0.30	14807391	65.13	60	120	
Ge Internal Standard	72	1	HMI H2	2302348	0.27	3821114	60.25	60	120	
Ge Internal Standard	72	2	HMI He	289303	0.43	488193	59.26	60	120	IS Failed
In Internal Standard	115	2	HMI He	1125962	0.05	2033009	55.38	60	120	IS Failed
Ho-165	165	2	HMI He	6675563	1.10	10165339	65.67	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-12-C
Data File Name	332SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:28:13-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	320.699	ppb	320.699	6.78	30689	500000	
Li	7	2	45	430.802	ppb	430.802	29.40	1830	500000	
Li	7	3	45	310.147	ppb	310.147	6.60	1003500	50000	
Be	9	1	6	23.448	ppb	23.448	2.86	950	2000	
B	11	1	6	611.255	ppb	611.255	3.67	27893	2000	
Na	23	1	45	15249.059	ppb	15249.059	0.28	9876134	2000	>LDR
Na	23	2	45	16070.960	ppb	16070.960	0.49	730804	400000	
Mg	24	2	45	310798.392	ppb	310798.392	1.06	6739930	400000	
Al	27	2	45	437613.820	ppb	437613.820	1.19	2895545	400000	
K	39	1	45	94085.899	ppb	94085.899	1.26	72501512	400000	
K	39	2	45	106839.595	ppb	106839.595	0.60	1420056	400000	
Ca	40	1	45	405206.991	ppb	405206.991	1.24	439944073	400000	
Ca	44	2	45	411147.437	ppb	411147.437	1.03	328883	400000	
Ti	47	2	45	15741.127	ppb	15741.127	1.22	112758	4000	
V	51	2	72	1637.186	ppb	1637.186	0.41	386564	2000	
Cr	52	2	72	4834.283	ppb	4834.283	0.97	1507297	5000	
Mn	55	2	72	16108.334	ppb	16108.334	0.96	2206491	10000	
Fe	57	2	72	1196489.317	ppb	1196489.317	0.10	7272600	400000	
Co	59	2	72	576.615	ppb	576.615	0.65	309252	2000	
Ni	60	2	72	4272.590	ppb	4272.590	0.17	646882	5000	
Cu	63	2	72	10235.000	ppb	10235.000	0.53	4282779	5000	
Zn	66	2	72	6673.840	ppb	6673.840	0.45	412805	5000	
As	75	2	72	10025.410	ppb	10025.410	0.59	438743	2000	>LDR
Se	78	1	72	10.468	ppb	10.468	8.13	567	2000	
Sr	88	2	72	1754.753	ppb	1754.753	0.69	326698	4000	
Zr	90	2	72	6213.836	ppb	6213.836	1.30	42605	1000	>LDR
Nb	93	2	72	11.858	ppb	11.858	7.91	10648	200	
Mo	95	2	115	113.547	ppb	113.547	2.20	25233	2000	
Pd	105	2	115	0.345	ppb	0.345	20.88	127	100	
Ag	107	2	115	607.191	ppb	607.191	1.46	457100	100	>LDR
Cd	111	2	115	338.074	ppb	338.074	1.28	37364	2000	
Sn	120	2	115	90.781	ppb	90.781	2.95	28814	2000	
Sb	121	2	115	70.959	ppb	70.959	5.52	20255	1000	
Ba	137	2	115	8718.970	ppb	8718.970	0.39	959068	5000	
W	182	2	165	184.023	ppb	184.023	1.28	262888	100	
Pt	195	2	165	0.006	ppb	0.006	166.53	27	100	
Tl	205	2	165	12.963	ppb	12.963	1.79	39413	2000	
Pb	208	2	165	41437.914	ppb	41437.914	0.42	169311793	5000	>LDR
Th	232	2	165	121.009	ppb	121.009	0.13	613723	2000	
U	238	2	165	17.022	ppb	17.022	0.72	91539	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	78511	0.79	170571	46.03	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5577089	1.01	8896882	62.69	60	120	
Sc (IS)	45	2	HMI He	245525	1.10	395354	62.10	60	120	
Sc (IS)	45	3	No Gas	9911575	0.84	14807391	66.94	60	120	
Ge Internal Standard	72	1	HMI H2	2373321	0.87	3821114	62.11	60	120	
Ge Internal Standard	72	2	HMI He	303368	0.42	488193	62.14	60	120	
In Internal Standard	115	2	HMI He	1171709	0.18	2033009	57.63	60	120	IS Failed
Ho-165	165	2	HMI He	6844961	0.12	10165339	67.34	60	120	

Sample Report

Sample Table

Sample Name	280-116306-B-13-B
Data File Name	333SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:32:01-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	353.105	ppb	353.105	1.54	32797	500000	
Li	7	2	45	421.453	ppb	421.453	13.74	1804	500000	
Li	7	3	45	365.148	ppb	365.148	6.11	1088109	50000	
Be	9	1	6	24.154	ppb	24.154	11.05	953	2000	
B	11	1	6	680.364	ppb	680.364	0.64	30221	2000	
Na	23	1	45	15581.214	ppb	15581.214	0.06	10310214	2000	>LDR
Na	23	2	45	16819.481	ppb	16819.481	2.94	762213	400000	
Mg	24	2	45	318797.043	ppb	318797.043	3.41	6891487	400000	
Al	27	2	45	475367.159	ppb	475367.159	3.93	3135233	400000	
K	39	1	45	99329.504	ppb	99329.504	0.43	78086996	400000	
K	39	2	45	115266.362	ppb	115266.362	2.75	1526930	400000	
Ca	40	1	45	317054.979	ppb	317054.979	0.44	351782128	400000	
Ca	44	2	45	331736.988	ppb	331736.988	3.75	264512	400000	
Ti	47	2	45	18815.707	ppb	18815.707	4.54	134337	4000	
V	51	2	72	1888.725	ppb	1888.725	2.78	444970	2000	
Cr	52	2	72	5376.592	ppb	5376.592	1.62	1673175	5000	
Mn	55	2	72	15627.952	ppb	15627.952	2.07	2136507	10000	
Fe	57	2	72	1554432.750	ppb	1554432.750	2.59	9429473	400000	
Co	59	2	72	611.115	ppb	611.115	2.85	327078	2000	
Ni	60	2	72	4172.029	ppb	4172.029	2.20	630413	5000	
Cu	63	2	72	10904.648	ppb	10904.648	2.27	4553821	5000	
Zn	66	2	72	7442.246	ppb	7442.246	2.38	459403	5000	
As	75	2	72	12590.768	ppb	12590.768	2.60	549908	2000	>LDR
Se	78	1	72	13.125	ppb	13.125	6.46	725	2000	
Sr	88	2	72	1844.022	ppb	1844.022	2.05	342648	4000	
Zr	90	2	72	6723.835	ppb	6723.835	3.28	46006	1000	>LDR
Nb	93	2	72	16.259	ppb	16.259	3.24	14295	200	
Mo	95	2	115	56.179	ppb	56.179	4.60	12449	2000	
Pd	105	2	115	0.393	ppb	0.393	31.73	143	100	
Ag	107	2	115	378.196	ppb	378.196	3.06	284099	100	
Cd	111	2	115	379.236	ppb	379.236	2.30	41783	2000	
Sn	120	2	115	89.896	ppb	89.896	1.65	28440	2000	
Sb	121	2	115	84.192	ppb	84.192	6.67	23945	1000	
Ba	137	2	115	9576.230	ppb	9576.230	2.38	1049811	5000	
W	182	2	165	281.849	ppb	281.849	2.85	401682	100	
Pt	195	2	165	0.009	ppb	0.009	168.21	30	100	
Tl	205	2	165	14.899	ppb	14.899	4.32	45238	2000	
Pb	208	2	165	56701.944	ppb	56701.944	2.32	231439875	5000	>LDR
Th	232	2	165	133.111	ppb	133.111	2.47	674379	2000	
U	238	2	165	17.562	ppb	17.562	1.44	94350	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	76452	0.56	170571	44.82	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5698769	0.25	8896882	64.05	60	120	
Sc (IS)	45	2	HMI He	244837	1.93	395354	61.93	60	120	
Sc (IS)	45	3	No Gas	10005657	0.36	14807391	67.57	60	120	
Ge Internal Standard	72	1	HMI H2	2424517	0.83	3821114	63.45	60	120	
Ge Internal Standard	72	2	HMI He	302835	1.54	488193	62.03	60	120	
In Internal Standard	115	2	HMI He	1167958	1.12	2033009	57.45	60	120	IS Failed
Ho-165	165	2	HMI He	6839493	1.51	10165339	67.28	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	334_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:35:46-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	316.186	ppb	5.337	37925	500	63.2	90	110	>+\-10%
Li	7	2	45	399.326	ppb	13.053	2040	500	79.9	90	110	>+\-10%
Li	7	3	45	330.647	ppb	7.301	1217935	500	66.1	90	110	>+\-10%
Be	9	1	6	47.710	ppb	12.198	2600	50	95.4	90	110	
B	11	1	6	64.631	ppb	11.469	4114	50	129.3	90	110	>+\-10%
Na	23	1	45	4381.767	ppb	2.228	3585713	5000	87.6	90	110	>+\-10%
Na	23	2	45	4703.208	ppb	1.804	251974	5000	94.1	90	110	
Mg	24	2	45	4762.150	ppb	1.881	119991	5000	95.2	90	110	
Al	27	2	45	4950.748	ppb	1.279	38107	5000	99.0	90	110	
K	39	1	45	4479.023	ppb	2.808	7037457	5000	89.6	90	110	>+\-10%
K	39	2	45	5107.239	ppb	0.762	84066	5000	102.1	90	110	
Ca	40	1	45	4737.289	ppb	2.659	6427093	5000	94.7	90	110	
Ca	44	2	45	4996.553	ppb	8.499	4651	5000	99.9	90	110	
Ti	47	2	45	64.718	ppb	20.273	547	50	129.4	90	110	>+\-10%
V	51	2	72	50.654	ppb	1.356	15299	50	101.3	90	110	
Cr	52	2	72	50.353	ppb	1.788	19401	50	100.7	90	110	
Mn	55	2	72	54.059	ppb	3.092	9347	50	108.1	90	110	
Fe	57	2	72	5225.617	ppb	0.663	39328	5000	104.5	90	110	
Co	59	2	72	51.365	ppb	3.072	33931	50	102.7	90	110	
Ni	60	2	72	52.505	ppb	4.351	9897	50	105.0	90	110	
Cu	63	2	72	53.059	ppb	0.634	28205	50	106.1	90	110	
Zn	66	2	72	51.086	ppb	5.895	4074	50	102.2	90	110	
As	75	2	72	52.049	ppb	6.056	2811	50	104.1	90	110	
Se	78	1	72	50.146	ppb	1.049	3574	50	100.3	90	110	
Sr	88	2	72	51.373	ppb	2.935	11785	50	102.7	90	110	
Zr	90	2	72	85.705	ppb	9.569	740	50	171.4	90	110	>+\-10%
Nb	93	2	72	91.152	ppb	0.672	94470	100	91.2	90	110	
Mo	95	2	115	50.048	ppb	3.634	15245	50	100.1	90	110	
Pd	105	2	115	50.850	ppb	1.524	24365	50	101.7	90	110	
Ag	107	2	115	101.256	ppb	1.151	105409	50	202.5	90	110	>+\-10%
Cd	111	2	115	49.250	ppb	3.592	7459	50	98.5	90	110	
Sn	120	2	115	51.749	ppb	1.646	22536	50	103.5	90	110	
Sb	121	2	115	49.911	ppb	1.718	19531	50	99.8	90	110	
Ba	137	2	115	51.064	ppb	1.649	7702	50	102.1	90	110	
W	182	2	165	51.958	ppb	1.616	90095	50	103.9	90	110	
Pt	195	2	165	51.187	ppb	1.000	69626	50	102.4	90	110	
Tl	205	2	165	52.441	ppb	1.228	191484	50	104.9	90	110	
Pb	208	2	165	61.835	ppb	2.604	305370	50	123.7	90	110	>+\-10%
Th	232	2	165	51.298	ppb	1.296	313031	50	102.6	90	110	
U	238	2	165	51.657	ppb	0.123	333909	50	103.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	105862	1.06	170571	62.06	60	120	
Sc (IS)	45	1	HMI H2	6940069	2.48	8896882	78.01	60	120	
Sc (IS)	45	2	HMI He	284705	0.63	395354	72.01	60	120	
Sc (IS)	45	3	No Gas	11707743	0.85	14807391	79.07	60	120	
Ge Internal Standard	72	1	HMI H2	3135965	2.34	3821114	82.07	60	120	
Ge Internal Standard	72	2	HMI He	373050	0.95	488193	76.41	60	120	
In Internal Standard	115	2	HMI He	1605815	1.19	2033009	78.99	60	120	
Ho-165	165	2	HMI He	8230608	1.04	10165339	80.97	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	335_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:39:32-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-74.436	ppb	-5.1	588934	10	
Be	9	1	6	0.040	ppb	253.2	7	0.5	
B	11	1	6	6.441	ppb	9.8	577	0.5	>RL
Na	23	1	45	-6.524	ppb	-27.7	74848	25	
Na	23	2	45	-12.671	ppb	-48.1	5391	25	
Mg	24	2	45	26.024	ppb	104.8	950	25	>RL
Al	27	2	45	9.972	ppb	272.6	207	15	
K	39	1	45	-66.767	ppb	-23.2	2903798	50	
K	39	2	45	21.163	ppb	128.3	6445	50	
Ca	40	1	45	16.807	ppb	4.4	53593	50	
Ca	44	2	45	49.623	ppb	149.7	67	25	>RL
Ti	47	2	45	-0.729	ppb	-83.3	3	0.5	
V	51	2	72	-0.420	ppb	-85.5	533	1	
Cr	52	2	72	0.166	ppb	101.9	170	1	
Mn	55	2	72	1.510	ppb	42.3	540	0.5	>RL
Fe	57	2	72	78.589	ppb	57.8	927	25	>RL
Co	59	2	72	0.145	ppb	44.0	167	0.5	
Ni	60	2	72	0.777	ppb	20.5	293	1	
Cu	63	2	72	0.264	ppb	157.4	1133	1	
Zn	66	2	72	1.857	ppb	98.1	357	5	
As	75	2	72	0.963	ppb	44.1	65	1	
Se	78	1	72	-0.028	ppb	-110.9	1	1	
Sr	88	2	72	0.119	ppb	237.7	53	0.5	
Zr	90	2	72	3.137	ppb	202.9	47	1	>RL
Nb	93	2	72	4.644	ppb	17.8	6202	2	>RL
Mo	95	2	115	0.230	ppb	23.6	90	0.5	
Pd	105	2	115	0.046	ppb	71.1	33	1	
Ag	107	2	115	55.277	ppb	13.6	64257	1	>RL
Cd	111	2	115	0.102	ppb	90.2	17	0.5	
Sn	120	2	115	0.406	ppb	39.7	250	1	
Sb	121	2	115	0.392	ppb	64.8	193	0.6	
Ba	137	2	115	0.355	ppb	92.0	63	0.5	
W	182	2	165	0.171	ppb	93.4	1574	1	
Pt	195	2	165	0.022	ppb	25.8	57	1	
Tl	205	2	165	0.038	ppb	24.4	237	0.1	
Pb	208	2	165	2.919	ppb	49.2	16822	0.5	>RL
Th	232	2	165	0.063	ppb	41.1	810	1	
U	238	2	165	0.075	ppb	12.0	580	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	111376	0.25	170571	65.30	60	120	
Sc (IS)	45	1	HMI H2	7148689	0.55	8896882	80.35	60	120	
Sc (IS)	45	2	HMI He	309414	5.53	395354	78.26	60	120	
Sc (IS)	45	3	No Gas	12047093	0.44	14807391	81.36	60	120	
Ge Internal Standard	72	1	HMI H2	3268680	0.83	3821114	85.54	60	120	
Ge Internal Standard	72	2	HMI He	407725	5.00	488193	83.52	60	120	
In Internal Standard	115	2	HMI He	1787875	6.82	2033009	87.94	60	120	
Ho-165	165	2	HMI He	8842977	4.81	10165339	86.99	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-14-B
Data File Name	336SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:43:21-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	332.193	ppb	332.193	8.40	33311	500000	
Li	7	2	45	369.220	ppb	369.220	29.40	1834	500000	
Li	7	3	45	331.272	ppb	331.272	2.88	1049765	50000	
Be	9	1	6	20.161	ppb	20.161	12.55	840	2000	
B	11	1	6	556.767	ppb	556.767	0.07	26104	2000	
Na	23	1	45	13834.856	ppb	13834.856	0.20	9577318	2000	>LDR
Na	23	2	45	14472.240	ppb	14472.240	0.68	713838	400000	
Mg	24	2	45	323004.806	ppb	323004.806	0.58	7592479	400000	
Al	27	2	45	471612.822	ppb	471612.822	1.52	3382367	400000	
K	39	1	45	99726.213	ppb	99726.213	0.69	81942297	400000	
K	39	2	45	113233.807	ppb	113233.807	0.66	1630995	400000	
Ca	40	1	45	317436.908	ppb	317436.908	0.83	368166155	400000	
Ca	44	2	45	325078.555	ppb	325078.555	0.59	281861	400000	
Ti	47	2	45	17737.269	ppb	17737.269	1.94	137716	4000	
V	51	2	72	1747.220	ppb	1747.220	0.72	442644	2000	
Cr	52	2	72	4938.298	ppb	4938.298	1.41	1652247	5000	
Mn	55	2	72	17702.773	ppb	17702.773	0.13	2601903	10000	
Fe	57	2	72	1179546.096	ppb	1179546.096	0.22	7693226	400000	
Co	59	2	72	626.412	ppb	626.412	0.85	360487	2000	
Ni	60	2	72	4250.382	ppb	4250.382	0.31	690517	5000	
Cu	63	2	72	8905.683	ppb	8905.683	0.56	3998731	5000	
Zn	66	2	72	5708.907	ppb	5708.907	0.30	378927	5000	
As	75	2	72	8037.564	ppb	8037.564	0.21	377444	2000	
Se	78	1	72	9.689	ppb	9.689	9.55	561	2000	
Sr	88	2	72	1546.469	ppb	1546.469	0.57	308953	4000	
Zr	90	2	72	6555.950	ppb	6555.950	1.17	48230	1000	>LDR
Nb	93	2	72	17.704	ppb	17.704	6.64	16661	200	
Mo	95	2	115	74.077	ppb	74.077	2.49	17915	2000	
Pd	105	2	115	0.588	ppb	0.588	22.63	230	100	
Ag	107	2	115	459.107	ppb	459.107	2.11	376267	100	
Cd	111	2	115	275.806	ppb	275.806	1.08	33167	2000	
Sn	120	2	115	74.314	ppb	74.314	1.82	25671	2000	
Sb	121	2	115	51.328	ppb	51.328	1.97	15946	1000	
Ba	137	2	115	9318.248	ppb	9318.248	0.58	1115234	5000	
W	182	2	165	151.124	ppb	151.124	0.49	235086	100	
Pt	195	2	165	0.026	ppb	0.026	35.40	53	100	
Tl	205	2	165	13.841	ppb	13.841	2.93	45777	2000	
Pb	208	2	165	34425.827	ppb	34425.827	0.13	153045041	5000	>LDR
Th	232	2	165	131.623	ppb	131.623	0.37	726289	2000	
U	238	2	165	17.614	ppb	17.614	0.41	103059	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	80629	1.52	170571	47.27	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5957274	0.69	8896882	66.96	60	120	
Sc (IS)	45	2	HMI He	266118	0.60	395354	67.31	60	120	
Sc (IS)	45	3	No Gas	10080446	1.07	14807391	68.08	60	120	
Ge Internal Standard	72	1	HMI H2	2539604	0.92	3821114	66.46	60	120	
Ge Internal Standard	72	2	HMI He	325523	0.37	488193	66.68	60	120	
In Internal Standard	115	2	HMI He	1274882	0.25	2033009	62.71	60	120	
Ho-165	165	2	HMI He	7447576	0.81	10165339	73.26	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-C
Data File Name	337SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:47:07-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	341.943	ppb	341.943	5.08	33432	500000	
Li	7	2	45	488.543	ppb	488.543	6.44	2094	500000	
Li	7	3	45	352.888	ppb	352.888	8.28	1124247	50000	
Be	9	1	6	17.649	ppb	17.649	7.23	723	2000	
B	11	1	6	429.905	ppb	429.905	4.76	19844	2000	
Na	23	1	45	11816.987	ppb	11816.987	0.43	8110267	2000	>LDR
Na	23	2	45	12352.173	ppb	12352.173	1.48	600769	400000	
Mg	24	2	45	304920.330	ppb	304920.330	1.18	7058735	400000	
Al	27	2	45	440988.482	ppb	440988.482	1.17	3114863	400000	
K	39	1	45	98749.820	ppb	98749.820	0.40	80372909	400000	
K	39	2	45	111510.336	ppb	111510.336	1.42	1581849	400000	
Ca	40	1	45	237059.462	ppb	237059.462	0.30	272270189	400000	
Ca	44	2	45	243072.206	ppb	243072.206	1.61	207559	400000	
Ti	47	2	45	18447.079	ppb	18447.079	0.79	141066	4000	
V	51	2	72	1746.758	ppb	1746.758	0.64	438891	2000	
Cr	52	2	72	5019.396	ppb	5019.396	1.63	1665584	5000	
Mn	55	2	72	14524.987	ppb	14524.987	1.02	2117410	10000	
Fe	57	2	72	1441348.798	ppb	1441348.798	0.10	9323640	400000	
Co	59	2	72	566.321	ppb	566.321	0.84	323238	2000	
Ni	60	2	72	4009.484	ppb	4009.484	0.31	646050	5000	
Cu	63	2	72	9205.985	ppb	9205.985	1.10	4099683	5000	
Zn	66	2	72	5441.104	ppb	5441.104	0.31	358202	5000	
As	75	2	72	10992.588	ppb	10992.588	0.14	511981	2000	>LDR
Se	78	1	72	12.954	ppb	12.954	9.61	749	2000	
Sr	88	2	72	1286.197	ppb	1286.197	0.38	254856	4000	
Zr	90	2	72	6371.611	ppb	6371.611	2.30	46491	1000	>LDR
Nb	93	2	72	19.648	ppb	19.648	2.81	18252	200	
Mo	95	2	115	45.766	ppb	45.766	3.29	10921	2000	
Pd	105	2	115	0.436	ppb	0.436	36.92	170	100	
Ag	107	2	115	863.801	ppb	863.801	0.91	697623	100	>LDR
Cd	111	2	115	334.834	ppb	334.834	1.79	39721	2000	
Sn	120	2	115	128.632	ppb	128.632	2.54	43807	2000	
Sb	121	2	115	140.438	ppb	140.438	0.32	43011	1000	
Ba	137	2	115	9119.908	ppb	9119.908	0.22	1076774	5000	
W	182	2	165	478.047	ppb	478.047	1.08	727780	100	
Pt	195	2	165	0.032	ppb	0.032	50.68	60	100	
Tl	205	2	165	13.163	ppb	13.163	1.92	42750	2000	
Pb	208	2	165	59744.033	ppb	59744.033	0.18	260748618	5000	>LDR
Th	232	2	165	136.611	ppb	136.611	1.11	740013	2000	
U	238	2	165	18.056	ppb	18.056	1.34	103707	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	79299	0.94	170571	46.49	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5899044	0.51	8896882	66.30	60	120	
Sc (IS)	45	2	HMI He	262104	1.30	395354	66.30	60	120	
Sc (IS)	45	3	No Gas	10498692	0.67	14807391	70.90	60	120	
Ge Internal Standard	72	1	HMI H2	2539796	0.98	3821114	66.47	60	120	
Ge Internal Standard	72	2	HMI He	322856	0.11	488193	66.13	60	120	
In Internal Standard	115	2	HMI He	1257673	0.31	2033009	61.86	60	120	
Ho-165	165	2	HMI He	7311593	0.53	10165339	71.93	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-Csd@5
Data File Name	338SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:50:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	9.064	ppb	9.064	282.60	21059	500000	
Li	7	2	45	71.292	ppb	71.292	123.95	1190	500000	
Li	7	3	45	4.928	ppb	4.928	75.00	693757	50000	
Be	9	1	6	3.676	ppb	3.676	32.50	187	2000	
B	11	1	6	94.658	ppb	94.658	6.95	5461	2000	
Na	23	1	45	2475.123	ppb	2475.123	5.43	2039643	2000	
Na	23	2	45	2605.084	ppb	2605.084	1.12	142451	400000	
Mg	24	2	45	67742.886	ppb	67742.886	0.93	1708452	400000	
Al	27	2	45	89347.310	ppb	89347.310	1.71	687373	400000	
K	39	1	45	19475.342	ppb	19475.342	5.88	20754318	400000	
K	39	2	45	22107.301	ppb	22107.301	1.60	346055	400000	
Ca	40	1	45	46816.555	ppb	46816.555	7.56	62614727	400000	
Ca	44	2	45	50378.910	ppb	50378.910	2.87	46859	400000	
Ti	47	2	45	3881.092	ppb	3881.092	2.37	32327	4000	
V	51	2	72	349.760	ppb	349.760	0.71	100656	2000	
Cr	52	2	72	953.245	ppb	953.245	0.60	360638	5000	
Mn	55	2	72	2775.055	ppb	2775.055	0.43	461320	10000	
Fe	57	2	72	306753.969	ppb	306753.969	1.02	2262080	400000	
Co	59	2	72	116.316	ppb	116.316	0.81	75721	2000	
Ni	60	2	72	846.798	ppb	846.798	2.22	155627	5000	
Cu	63	2	72	1948.446	ppb	1948.446	0.28	989789	5000	
Zn	66	2	72	1144.323	ppb	1144.323	1.79	86016	5000	
As	75	2	72	2218.512	ppb	2218.512	0.52	117789	2000	
Se	78	1	72	2.132	ppb	2.132	25.35	153	2000	
Sr	88	2	72	254.466	ppb	254.466	0.67	57494	4000	
Zr	90	2	72	1269.757	ppb	1269.757	3.41	10574	1000	
Nb	93	2	72	3.505	ppb	3.505	1.70	4464	200	
Mo	95	2	115	8.610	ppb	8.610	16.87	2530	2000	
Pd	105	2	115	0.127	ppb	0.127	10.57	67	100	
Ag	107	2	115	190.141	ppb	190.141	1.04	189457	100	
Cd	111	2	115	62.454	ppb	62.454	1.27	9100	2000	
Sn	120	2	115	24.602	ppb	24.602	4.58	10331	2000	
Sb	121	2	115	26.280	ppb	26.280	3.14	9904	1000	
Ba	137	2	115	1683.487	ppb	1683.487	1.70	244125	5000	
W	182	2	165	95.103	ppb	95.103	0.76	165389	100	
Pt	195	2	165	0.000	ppb	0.000	-3809.96	23	100	
Tl	205	2	165	2.548	ppb	2.548	0.88	9464	2000	
Pb	208	2	165	12243.915	ppb	12243.915	0.30	60689740	5000	
Th	232	2	165	26.671	ppb	26.671	0.64	164382	2000	
U	238	2	165	3.601	ppb	3.601	1.01	23536	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	97143	2.50	170571	56.95	60	120	IS Failed
Sc (IS)	45	1	HMI H2	6881210	4.18	8896882	77.34	60	120	
Sc (IS)	45	2	HMI He	285460	1.58	395354	72.20	60	120	
Sc (IS)	45	3	No Gas	11621841	0.24	14807391	78.49	60	120	
Ge Internal Standard	72	1	HMI H2	3081111	3.62	3821114	80.63	60	120	
Ge Internal Standard	72	2	HMI He	368019	0.36	488193	75.38	60	120	
In Internal Standard	115	2	HMI He	1544768	0.69	2033009	75.98	60	120	
Ho-165	165	2	HMI He	8303712	0.67	10165339	81.69	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-D MS
Data File Name	339SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:54:41-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	557.821	ppb	557.821	5.93	44073	500000	
Li	7	2	45	583.626	ppb	583.626	5.36	2327	500000	
Li	7	3	45	600.265	ppb	600.265	4.74	1452044	50000	
Be	9	1	6	229.281	ppb	229.281	6.17	9247	2000	
B	11	1	6	515.772	ppb	515.772	2.83	23520	2000	
Na	23	1	45	10618.000	ppb	10618.000	1.32	7408860	2000	>LDR
Na	23	2	45	11147.496	ppb	11147.496	0.65	544008	400000	
Mg	24	2	45	269253.695	ppb	269253.695	0.34	6248162	400000	
Al	27	2	45	396835.870	ppb	396835.870	0.17	2809773	400000	
K	39	1	45	86743.378	ppb	86743.378	1.87	72011812	400000	
K	39	2	45	99617.671	ppb	99617.671	1.34	1417123	400000	
Ca	40	1	45	209949.438	ppb	209949.438	2.21	244914730	400000	
Ca	44	2	45	215279.987	ppb	215279.987	1.22	184278	400000	
Ti	47	2	45	16597.274	ppb	16597.274	0.58	127224	4000	
V	51	2	72	1748.993	ppb	1748.993	0.97	442571	2000	
Cr	52	2	72	4531.090	ppb	4531.090	0.90	1514198	5000	
Mn	55	2	72	12893.490	ppb	12893.490	0.60	1893007	10000	
Fe	57	2	72	1255562.299	ppb	1255562.299	0.53	8179564	400000	
Co	59	2	72	675.381	ppb	675.381	1.25	388205	2000	
Ni	60	2	72	3540.080	ppb	3540.080	1.11	574465	5000	
Cu	63	2	72	8473.758	ppb	8473.758	0.83	3800453	5000	
Zn	66	2	72	6863.863	ppb	6863.863	0.43	455036	5000	
As	75	2	72	9838.543	ppb	9838.543	0.78	461482	2000	
Se	78	1	72	149.188	ppb	149.188	1.25	8707	2000	
Sr	88	2	72	1359.554	ppb	1359.554	1.64	271291	4000	
Zr	90	2	72	16976.264	ppb	16976.264	0.87	124727	1000	>LDR
Nb	93	2	72	15.443	ppb	15.443	5.55	14618	200	
Mo	95	2	115	235.833	ppb	235.833	3.34	56456	2000	
Pd	105	2	115	0.417	ppb	0.417	16.37	163	100	
Ag	107	2	115	667.690	ppb	667.690	1.09	541489	100	>LDR
Cd	111	2	115	543.700	ppb	543.700	0.54	64744	2000	
Sn	120	2	115	227.901	ppb	227.901	2.12	77878	2000	
Sb	121	2	115	142.277	ppb	142.277	3.62	43737	1000	
Ba	137	2	115	9301.292	ppb	9301.292	0.39	1102351	5000	
W	182	2	165	513.453	ppb	513.453	1.32	792144	100	>LDR
Pt	195	2	165	0.045	ppb	0.045	91.52	77	100	
Tl	205	2	165	205.180	ppb	205.180	0.53	674256	2000	
Pb	208	2	165	43811.951	ppb	43811.951	0.60	193793316	5000	>LDR
Th	232	2	165	383.035	ppb	383.035	0.97	2102307	2000	
U	238	2	165	216.573	ppb	216.573	1.09	1260188	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	78389	1.85	170571	45.96	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5992579	1.33	8896882	67.36	60	120	
Sc (IS)	45	2	HMI He	262710	0.09	395354	66.45	60	120	
Sc (IS)	45	3	No Gas	10315915	0.30	14807391	69.67	60	120	
Ge Internal Standard	72	1	HMI H2	2569295	0.29	3821114	67.24	60	120	
Ge Internal Standard	72	2	HMI He	325157	0.67	488193	66.60	60	120	
In Internal Standard	115	2	HMI He	1262447	0.33	2033009	62.10	60	120	
Ho-165	165	2	HMI He	7410231	0.61	10165339	72.90	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-E MSD
Data File Name	340SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T09:58:28-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	606.692	ppb	606.692	2.92	45185	500000	
Li	7	2	45	742.382	ppb	742.382	5.86	2600	500000	
Li	7	3	45	626.377	ppb	626.377	4.40	1486254	50000	
Be	9	1	6	229.727	ppb	229.727	2.84	9146	2000	
B	11	1	6	538.026	ppb	538.026	2.77	24207	2000	
Na	23	1	45	11423.508	ppb	11423.508	0.72	7763231	2000	>LDR
Na	23	2	45	12314.854	ppb	12314.854	0.90	576175	400000	
Mg	24	2	45	285993.280	ppb	285993.280	1.67	6368439	400000	
Al	27	2	45	415648.609	ppb	415648.609	1.65	2823984	400000	
K	39	1	45	90491.054	ppb	90491.054	1.05	73110196	400000	
K	39	2	45	105538.463	ppb	105538.463	1.17	1440397	400000	
Ca	40	1	45	211650.074	ppb	211650.074	1.08	240634456	400000	
Ca	44	2	45	219300.813	ppb	219300.813	0.44	180143	400000	
Ti	47	2	45	18031.769	ppb	18031.769	1.30	132635	4000	
V	51	2	72	1855.610	ppb	1855.610	0.71	454613	2000	
Cr	52	2	72	4818.779	ppb	4818.779	2.26	1559131	5000	
Mn	55	2	72	13835.798	ppb	13835.798	0.39	1966754	10000	
Fe	57	2	72	1362183.447	ppb	1362183.447	1.33	8592034	400000	
Co	59	2	72	724.748	ppb	724.748	1.09	403352	2000	
Ni	60	2	72	3920.080	ppb	3920.080	0.60	615923	5000	
Cu	63	2	72	9213.381	ppb	9213.381	1.23	4000768	5000	
Zn	66	2	72	5449.893	ppb	5449.893	0.31	349853	5000	
As	75	2	72	10182.096	ppb	10182.096	0.72	462425	2000	>LDR
Se	78	1	72	161.356	ppb	161.356	3.49	9086	2000	
Sr	88	2	72	1412.823	ppb	1412.823	0.44	272978	4000	
Zr	90	2	72	18586.044	ppb	18586.044	0.65	132210	1000	>LDR
Nb	93	2	72	15.776	ppb	15.776	7.38	14445	200	
Mo	95	2	115	257.783	ppb	257.783	2.42	59556	2000	
Pd	105	2	115	0.533	ppb	0.533	15.19	200	100	
Ag	107	2	115	655.030	ppb	655.030	0.60	512694	100	>LDR
Cd	111	2	115	540.458	ppb	540.458	1.47	62108	2000	
Sn	120	2	115	249.298	ppb	249.298	1.38	82209	2000	
Sb	121	2	115	159.630	ppb	159.630	3.98	47352	1000	
Ba	137	2	115	9904.251	ppb	9904.251	0.73	1132806	5000	
W	182	2	165	588.856	ppb	588.856	1.25	888522	100	>LDR
Pt	195	2	165	0.019	ppb	0.019	93.63	43	100	
Tl	205	2	165	216.460	ppb	216.460	1.09	695819	2000	
Pb	208	2	165	45346.441	ppb	45346.441	0.78	196210835	5000	>LDR
Th	232	2	165	401.310	ppb	401.310	0.76	2154627	2000	
U	238	2	165	229.288	ppb	229.288	0.85	1305133	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	77393	2.53	170571	45.37	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5839748	0.81	8896882	65.64	60	120	
Sc (IS)	45	2	HMI He	252108	0.76	395354	63.77	60	120	
Sc (IS)	45	3	No Gas	10300154	0.73	14807391	69.56	60	120	
Ge Internal Standard	72	1	HMI H2	2479393	0.94	3821114	64.89	60	120	
Ge Internal Standard	72	2	HMI He	314824	0.49	488193	64.49	60	120	
In Internal Standard	115	2	HMI He	1218384	0.72	2033009	59.93	60	120	IS Failed
Ho-165	165	2	HMI He	7248995	0.90	10165339	71.31	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-C pds
Data File Name	341SMPL.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T10:02:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	338.525	ppb	338.525	10.88	32049	500000	
Li	7	2	45	491.086	ppb	491.086	22.32	1990	500000	
Li	7	3	45	347.891	ppb	347.891	8.50	1090421	50000	
Be	9	1	6	240.071	ppb	240.071	7.84	9240	2000	
B	11	1	6	447.004	ppb	447.004	3.13	19473	2000	
Na	23	1	45	11766.384	ppb	11766.384	2.77	7779369	2000	>LDR
Na	23	2	45	12438.951	ppb	12438.951	0.61	573771	400000	
Mg	24	2	45	304435.792	ppb	304435.792	0.89	6684251	400000	
Al	27	2	45	436753.139	ppb	436753.139	1.75	2925596	400000	
K	39	1	45	95731.557	ppb	95731.557	2.85	75128981	400000	
K	39	2	45	109962.348	ppb	109962.348	1.88	1479500	400000	
Ca	40	1	45	233485.418	ppb	233485.418	2.66	258327476	400000	
Ca	44	2	45	239289.645	ppb	239289.645	0.30	193804	400000	
Ti	47	2	45	18176.334	ppb	18176.334	2.33	131805	4000	
V	51	2	72	1955.643	ppb	1955.643	0.23	467800	2000	
Cr	52	2	72	5184.485	ppb	5184.485	1.37	1638022	5000	
Mn	55	2	72	14420.963	ppb	14420.963	0.62	2001614	10000	
Fe	57	2	72	1437779.768	ppb	1437779.768	0.65	8855391	400000	
Co	59	2	72	760.492	ppb	760.492	1.23	413277	2000	
Ni	60	2	72	4180.261	ppb	4180.261	0.54	641329	5000	
Cu	63	2	72	9385.488	ppb	9385.488	0.47	3979579	5000	
Zn	66	2	72	5592.588	ppb	5592.588	0.50	350547	5000	
As	75	2	72	10925.901	ppb	10925.901	0.24	484520	2000	>LDR
Se	78	1	72	206.490	ppb	206.490	0.72	11430	2000	
Sr	88	2	72	1260.202	ppb	1260.202	0.99	237751	4000	
Zr	90	2	72	20388.889	ppb	20388.889	1.38	141617	1000	>LDR
Nb	93	2	72	17.654	ppb	17.654	3.20	15693	200	
Mo	95	2	115	289.430	ppb	289.430	0.64	65007	2000	
Pd	105	2	115	0.379	ppb	0.379	19.31	140	100	
Ag	107	2	115	907.830	ppb	907.830	1.21	690426	100	>LDR
Cd	111	2	115	558.996	ppb	558.996	3.14	62447	2000	
Sn	120	2	115	365.318	ppb	365.318	0.04	117099	2000	
Sb	121	2	115	368.212	ppb	368.212	0.50	106175	1000	
Ba	137	2	115	9110.517	ppb	9110.517	0.77	1013003	5000	
W	182	2	165	693.539	ppb	693.539	0.61	1026610	100	>LDR
Pt	195	2	165	0.122	ppb	0.122	36.78	163	100	
Tl	205	2	165	228.290	ppb	228.290	1.03	720006	2000	
Pb	208	2	165	58666.018	ppb	58666.018	0.38	249061731	5000	>LDR
Th	232	2	165	151.092	ppb	151.092	1.20	796100	2000	
U	238	2	165	242.353	ppb	242.353	0.86	1353492	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	74869	2.84	170571	43.89	60	120	IS Failed
Sc (IS)	45	1	HMI H2	5684429	1.85	8896882	63.89	60	120	
Sc (IS)	45	2	HMI He	248574	1.21	395354	62.87	60	120	
Sc (IS)	45	3	No Gas	10248724	0.12	14807391	69.21	60	120	
Ge Internal Standard	72	1	HMI H2	2437079	0.84	3821114	63.78	60	120	
Ge Internal Standard	72	2	HMI He	307404	0.19	488193	62.97	60	120	
In Internal Standard	115	2	HMI He	1184436	0.44	2033009	58.26	60	120	IS Failed
Ho-165	165	2	HMI He	7112329	0.84	10165339	69.97	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	ccv-5425624
Data File Name	342_CCV.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T10:05:57-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	290.684	ppb	11.684	36629	500	58.1	90	110	>+\-10%
Li	7	2	45	375.032	ppb	5.450	1924	500	75.0	90	110	>+\-10%
Li	7	3	45	349.255	ppb	7.301	1210646	500	69.9	90	110	>+\-10%
Be	9	1	6	47.508	ppb	17.122	2480	50	95.0	90	110	
B	11	1	6	58.920	ppb	11.064	3607	50	117.8	90	110	>+\-10%
Na	23	1	45	4189.951	ppb	9.079	3434642	5000	83.8	90	110	>+\-10%
Na	23	2	45	4842.652	ppb	0.784	252279	5000	96.9	90	110	
Mg	24	2	45	4869.843	ppb	0.788	119395	5000	97.4	90	110	
Al	27	2	45	4979.934	ppb	1.699	37292	5000	99.6	90	110	
K	39	1	45	4063.035	ppb	11.746	6661806	5000	81.3	90	110	>+\-10%
K	39	2	45	5185.263	ppb	0.966	82961	5000	103.7	90	110	
Ca	40	1	45	4531.366	ppb	11.704	6146684	5000	90.6	90	110	
Ca	44	2	45	5399.397	ppb	6.067	4888	5000	108.0	90	110	
Ti	47	2	45	52.926	ppb	14.924	437	50	105.9	90	110	
V	51	2	72	50.044	ppb	3.659	14821	50	100.1	90	110	
Cr	52	2	72	52.998	ppb	4.423	20011	50	106.0	90	110	
Mn	55	2	72	54.956	ppb	5.706	9310	50	109.9	90	110	
Fe	57	2	72	5568.637	ppb	4.253	41059	5000	111.4	90	110	>+\-10%
Co	59	2	72	51.908	ppb	1.611	33610	50	103.8	90	110	
Ni	60	2	72	55.402	ppb	6.437	10231	50	110.8	90	110	>+\-10%
Cu	63	2	72	55.527	ppb	5.855	28893	50	111.1	90	110	>+\-10%
Zn	66	2	72	50.611	ppb	5.084	3957	50	101.2	90	110	
As	75	2	72	52.287	ppb	1.399	2767	50	104.6	90	110	
Se	78	1	72	44.917	ppb	6.971	3244	50	89.8	90	110	>+\-10%
Sr	88	2	72	52.366	ppb	1.273	11775	50	104.7	90	110	
Zr	90	2	72	115.758	ppb	10.962	973	50	231.5	90	110	>+\-10%
Nb	93	2	72	91.929	ppb	2.274	93376	100	91.9	90	110	
Mo	95	2	115	52.661	ppb	3.946	15516	50	105.3	90	110	
Pd	105	2	115	54.040	ppb	2.738	25037	50	108.1	90	110	
Ag	107	2	115	108.604	ppb	1.199	109262	50	217.2	90	110	>+\-10%
Cd	111	2	115	50.381	ppb	4.331	7379	50	100.8	90	110	
Sn	120	2	115	52.186	ppb	3.704	21972	50	104.4	90	110	
Sb	121	2	115	51.568	ppb	6.579	19508	50	103.1	90	110	
Ba	137	2	115	52.074	ppb	2.860	7596	50	104.1	90	110	
W	182	2	165	54.664	ppb	1.702	94042	50	109.3	90	110	
Pt	195	2	165	53.231	ppb	0.322	71888	50	106.5	90	110	
Tl	205	2	165	53.572	ppb	1.523	194185	50	107.1	90	110	
Pb	208	2	165	71.312	ppb	7.233	349418	50	142.6	90	110	>+\-10%
Th	232	2	165	53.193	ppb	2.038	322251	50	106.4	90	110	
U	238	2	165	54.225	ppb	1.829	347978	50	108.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	101878	6.00	170571	59.73	60	120	IS Failed
Sc (IS)	45	1	HMI H2	6967949	6.21	8896882	78.32	60	120	
Sc (IS)	45	2	HMI He	277013	1.03	395354	70.07	60	120	
Sc (IS)	45	3	No Gas	11361098	0.76	14807391	76.73	60	120	
Ge Internal Standard	72	1	HMI H2	3184800	4.89	3821114	83.35	60	120	
Ge Internal Standard	72	2	HMI He	365690	0.59	488193	74.91	60	120	
In Internal Standard	115	2	HMI He	1553046	1.07	2033009	76.39	60	120	
Ho-165	165	2	HMI He	8171703	0.95	10165339	80.39	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	ccb-5425622
Data File Name	343_CCB.d
Data Path Name	D:\MassHunter Data\li111218.b
Acq Date Time	2018-11-14T10:09:44-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	320CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

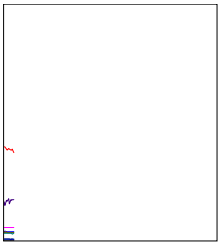
Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-70.356	ppb	-4.6	579759	10	
Be	9	1	6	0.287	ppb	167.1	20	0.5	
B	11	1	6	8.068	ppb	11.5	647	0.5	>RL
Na	23	1	45	33.208	ppb	2.2	104736	25	>RL
Na	23	2	45	33.740	ppb	27.9	7869	25	>RL
Mg	24	2	45	25.418	ppb	8.5	940	25	>RL
Al	27	2	45	-2.704	ppb	-326.2	103	15	
K	39	1	45	-133.844	ppb	-19.7	2763326	50	
K	39	2	45	9.510	ppb	147.5	6135	50	
Ca	40	1	45	11.416	ppb	23.5	44857	50	
Ca	44	2	45	15.961	ppb	213.0	33	25	
Ti	47	2	45	-1.079	ppb	0.0	0	0.5	
V	51	2	72	-0.936	ppb	-26.6	360	1	
Cr	52	2	72	0.209	ppb	74.9	183	1	
Mn	55	2	72	1.482	ppb	6.7	523	0.5	>RL
Fe	57	2	72	91.142	ppb	34.6	1003	25	>RL
Co	59	2	72	0.190	ppb	73.2	193	0.5	
Ni	60	2	72	0.751	ppb	24.5	280	1	
Cu	63	2	72	0.036	ppb	826.8	980	1	
Zn	66	2	72	1.500	ppb	94.5	320	5	
As	75	2	72	0.666	ppb	18.2	47	1	
Se	78	1	72	0.123	ppb	137.5	12	1	
Sr	88	2	72	0.079	ppb	155.0	43	0.5	
Zr	90	2	72	2.715	ppb	57.4	43	1	>RL
Nb	93	2	72	4.883	ppb	8.1	6298	2	>RL
Mo	95	2	115	0.193	ppb	37.5	73	0.5	
Pd	105	2	115	0.035	ppb	68.4	27	1	
Ag	107	2	115	61.805	ppb	5.8	68838	1	>RL
Cd	111	2	115	0.061	ppb	97.5	10	0.5	
Sn	120	2	115	0.430	ppb	10.8	253	1	
Sb	121	2	115	0.388	ppb	17.6	187	0.6	
Ba	137	2	115	0.254	ppb	57.8	47	0.5	
W	182	2	165	0.300	ppb	11.4	1817	1	
Pt	195	2	165	0.034	ppb	106.5	77	1	
Tl	205	2	165	0.047	ppb	19.9	273	0.1	
Pb	208	2	165	2.345	ppb	7.7	13969	0.5	>RL
Th	232	2	165	0.048	ppb	22.3	710	1	
U	238	2	165	0.123	ppb	20.0	910	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	105618	1.48	170571	61.92	60	120	
Sc (IS)	45	1	HMI H2	6956643	0.67	8896882	78.19	60	120	
Sc (IS)	45	2	HMI He	303236	4.73	395354	76.70	60	120	
Sc (IS)	45	3	No Gas	11726012	0.32	14807391	79.19	60	120	
Ge Internal Standard	72	1	HMI H2	3142276	0.76	3821114	82.23	60	120	
Ge Internal Standard	72	2	HMI He	395912	3.16	488193	81.10	60	120	
In Internal Standard	115	2	HMI He	1709070	4.38	2033009	84.07	60	120	
Ho-165	165	2	HMI He	8825199	3.75	10165339	86.82	60	120	

Current Signal

[No Gas]



Mass	Range	Count	Avg. Count	RSD [%]
7	50000	18551	19288.8	1.92
9	1000000	31651	31416.3	1.09
59	500000	17472	17966.9	2.05
66	500000	887	917.0	4.14
70	200000	481	519.8	5.29
75	500000	1360	1485.8	4.94
89	500000	25517	25924.4	1.02
105	500000	487	503.0	8.77
118	500000	378	401.1	10.18
137	100000	3194	3294.3	1.73
140	500	28346	28293.2	0.79
205	1000000	26333	27121.9	2.32
6	1000000	2001	2011.2	2.49
70/140	1000	1.697 %	1.837 %	5.61
156/140	10	1.715 %	1.654 %	5.38

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.00
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-65	V	Cell Entrance	-32	V	Deflect	15.4	V
Extract 2	-130.0	V	Omega Lens	7.1	V	Cell Exit	-60	V	Plate Bias	-50	V

Cell Parameters

Use Gas	false		H2 Flow	0.0	mL/min	OctP Bias	-8.0	V	Energy Discrimination	3.0
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	190	V		

Qpole Parameters

Mass Gain	129	Axis Gain	0.9999	QP Bias	-5.0	V
Mass Offset	124	Axis Offset	-0.02			

Torch Axis Parameters

Torch H	-1.0	mm	Torch V	-0.2	mm

EM Parameters

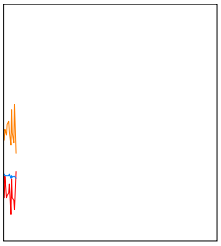
Discriminator	4.5	mV	Analog HV	1921	V	Pulse HV	1064	V

Meters

IF/BK Press	2.18E+2	Pa	Carrier Gas(BP)	3.38E+2	kPa	Reflected Power	7	W
Analyzer Press	1.51E-4	Pa	Carrier Gas	0.90	L/min			

Current Signal

[HMI He]



Mass	Range	Count	Avg. Count	RSD [%]
7	100	29	20.0	27.55
51	500	90	91.6	14.53
59	5000	2424	2482.6	3.13
66	200	74	92.8	12.94
70	200	66	69.8	12.04
75	20	3	3.3	72.01
78	20	0	0.0	0.00
115	5000	1794	1808.4	2.25
118	50	22	25.5	25.72
137	500	295	293.9	6.38
140	10000	5931	5759.1	2.76
205	20000	8419	8602.5	2.22
238	50000	13165	13596.3	2.05
70/140	2	1.113 %	1.213 %	13.10
156/140	1	0.371 %	0.234 %	39.08

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.23
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-75	V	Cell Entrance	-36	V	Deflect	1.2	V
Extract 2	-140.0	V	Omega Lens	7.5	V	Cell Exit	-64	V	Plate Bias	-60	V

Cell Parameters

Use Gas	true		H2 Flow	0.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0
He Flow	5.0	mL/min	3rd Gas Flow	0	%	OctP RF	190	V		

Qpole Parameters

Mass Gain	129		Axis Gain	0.9999		QP Bias	-15.0	V			
Mass Offset	124		Axis Offset	-0.02							

Torch Axis Parameters

Torch H	-1.0	mm	Torch V	-0.2	mm						

EM Parameters

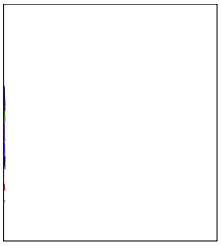
Discriminator	4.5	mV	Analog HV	1921	V	Pulse HV	1064	V			

Meters

IF/BK Press	2.17E+2	Pa	Carrier Gas(BP)	2.26E+2	kPa	Reflected Power	6	W			
Analyzer Press	2.52E-4	Pa	Carrier Gas	0.66	L/min						

Current Signal

[HMI H2]



Mass	Range	Count	Avg. Count	RSD [%]
7	2000	419	446.6	8.71
9	5000	1680	1719.5	3.25
59	10000	3803	3794.9	0.30
63	2000	334	329.0	2.15
70	500	252	271.0	9.92
78	20	6	8.0	35.36
89	50000	21441	21033.4	2.74
115	50000	21153	20967.0	1.26
118	500	178	168.0	8.42
137	5000	2803	2778.8	1.22
140	50000	22093	22163.7	0.45
205	50000	15712	15607.7	0.95
238	50000	18473	18481.4	0.07
70/140	2	1.141 %	1.223 %	9.47
156/140	2	1.105 %	1.182 %	9.27

Integration Time [sec] 0.10

Tune Parameters

Plasma Parameters

Plasma Mode	HMI		Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Makeup/Dilution Gas		0.14
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	℃	Plasma Gas		15.0
RF Matching	1.67	V	Option Gas	0.0	%	Gas Switch	Dilution Gas		Auxiliary Gas		0.9

Lenses Parameters

Extract 1	0.0	V	Omega Bias	-65	V	Cell Entrance	-40	V	Deflect	1.8	V
Extract 2	-140.0	V	Omega Lens	7.7	V	Cell Exit	-58	V	Plate Bias	-61	V

Cell Parameters

Use Gas	true		H2 Flow	4.0	mL/min	OctP Bias	-18.0	V	Energy Discrimination	3.0
He Flow	0.0	mL/min	3rd Gas Flow	0	%	OctP RF	190	V		

Qpole Parameters

Mass Gain	129	Axis Gain	0.9999	QP Bias	-15.0	V	
Mass Offset	124	Axis Offset	-0.02				

Torch Axis Parameters

Torch H	-1.0	mm	Torch V	-0.2	mm

EM Parameters

Discriminator	4.5	mV	Analog HV	1921	V	Pulse HV	1064	V

Meters

IF/BK Press	2.25E+2	Pa	Carrier Gas(BP)	2.68E+2	kPa	Reflected Power	7	W
Analyzer Press	6.96E-4	Pa	Carrier Gas	0.75	L/min			

US EPA Tune Check Sample Report

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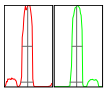
Report Comment
Instrument Name G3281A JP09320047

[HMI H2]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	2567	2.03	5.00	
9	10721	0.66	5.00	

Mas	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	2567	2498	2563	2645	2562
9	10664	10698	10814	10777	10653

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	427	7.00	6.9 - 7.1		0.763	0.750	[F]
9	1750	8.95	8.9 - 9.1		0.776	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 60.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.14	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.7	V	Deflect	1.8	V
Extract 2	-140.0	V	Cell Entrance	-40	V	Plate Bias	-61	V
Omega Bias	-65	V	Cell Exit	-58	V			

 # # Cell Parameters # #

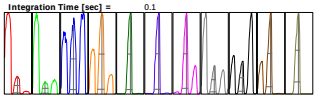
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	4.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[HMI He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
24	5030	4.59	5.00	
25	720	5.86	5.00	[F]
26	842	5.73	5.00	[F]
59	14928	1.03	5.00	
103	36334	1.05	5.00	
115	10809	2.37	5.00	
205	37510	0.57	5.00	
206	12973	1.15	5.00	
207	11319	1.46	5.00	
208	27054	0.70	5.00	
238	65220	0.97	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
24	5365	5009	5034	5028	4713
25	778	722	697	736	666
26	893	888	838	808	783
59	14674	14901	15043	15043	14978
103	35758	36325	36427	36828	36334
115	10439	10733	10832	11140	10902
205	37374	37392	37513	37880	37391
206	12841	12937	12837	13078	13174
207	11063	11243	11397	11458	11433
208	26805	27155	27306	27022	26982
238	64231	64996	65733	65760	65380

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
24	848	24.000	23.9 - 24.1		0.763	0.750	[F]
25	122	24.900	24.9 - 25.1		0.770	0.750	[F]
26	146	25.950	25.9 - 26.1		0.741	0.750	
59	2772	59.000	58.9 - 59.1		0.708	0.750	
103	7498	103.050	102.9 - 103.1		0.684	0.750	
115	2210	115.050	114.9 - 115.1		0.686	0.750	
205	8074	205.000	204.9 - 205.1		0.677	0.750	
206	2827	206.000	205.9 - 206.1		0.684	0.750	
207	2374	207.000	206.9 - 207.1		0.681	0.750	
208	5919	208.000	207.9 - 208.1		0.682	0.750	
238	13495	237.950	237.9 - 238.1		0.678	0.750	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 283 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.5	V	Deflect	1.2	V
Extract 2	-140.0	V	Cell Entrance	-36	V	Plate Bias	-60	V
Omega Bias	-75	V	Cell Exit	-64	V			

 # # Cell Parameters # #

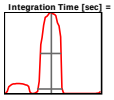
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	5.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	0.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	93942	2.78	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	97814	92478	91246	92910	95259

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
7	15912	7.000	6.9 - 7.1		0.747	0.750	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 36.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.00	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.1	V	Deflect	15.4	V
Extract 2	-130.0	V	Cell Entrance	-32	V	Plate Bias	-50	V
Omega Bias	-65	V	Cell Exit	-60	V			

 # # Cell Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-8.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	0.0	mL/min			
Use Gas	false		3rd Gas Flow	0	%			

US EPA Tune Check Sample Report

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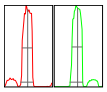
Report Comment
Instrument Name G3281A JP09320047

[HMI H2]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	2355	1.52	5.00	
9	10010	1.88	5.00	

Mas	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	2353	2294	2374	2372	2383
9	9777	10013	9899	10273	10089

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	393	7.00	6.9 - 7.1		0.766	0.750	[F]
9	1635	9.00	8.9 - 9.1		0.781	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 60.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.14	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.7	V	Deflect	1.8	V
Extract 2	-140.0	V	Cell Entrance	-40	V	Plate Bias	-61	V
Omega Bias	-65	V	Cell Exit	-58	V			

 # # Cell Parameters # #

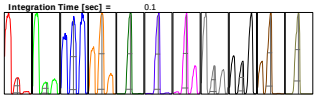
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	4.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[HMI He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
24	4166	2.55	5.00	
25	575	5.46	5.00	[F]
26	721	3.02	5.00	
59	13705	2.35	5.00	
103	33697	1.72	5.00	
115	9697	4.36	5.00	
205	35133	1.94	5.00	
206	12255	2.18	5.00	
207	10784	2.17	5.00	
208	25528	2.44	5.00	
238	61435	1.96	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
24	4021	4108	4190	4210	4301
25	557	533	587	585	615
26	694	706	722	738	747
59	13149	13703	13877	13912	13884
103	32850	33338	34069	34199	34030
115	9085	9612	9612	9889	10189
205	34270	34604	35243	35711	35836
206	11891	12069	12356	12539	12419
207	10466	10685	10754	10945	11068
208	24839	25095	25465	25822	26421
238	59717	61240	61101	62248	62866

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
24	889	24.000	23.9 - 24.1		0.770	0.750	[F]
25	95	25.100	24.9 - 25.1		0.771	0.750	[F]
26	122	25.950	25.9 - 26.1		0.742	0.750	
59	2513	59.000	58.9 - 59.1		0.717	0.750	
103	6817	103.050	102.9 - 103.1		0.693	0.750	
115	1920	115.000	114.9 - 115.1		0.691	0.750	
205	7400	205.000	204.9 - 205.1		0.685	0.750	
206	2587	206.000	205.9 - 206.1		0.690	0.750	
207	2190	207.000	206.9 - 207.1		0.685	0.750	
208	5450	208.000	207.9 - 208.1		0.690	0.750	
238	12482	237.950	237.9 - 238.1		0.677	0.750	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 283 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.5	V	Deflect	1.2	V
Extract 2	-140.0	V	Cell Entrance	-36	V	Plate Bias	-60	V
Omega Bias	-75	V	Cell Exit	-64	V			

 # # Cell Parameters # #

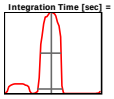
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	5.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	0.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	97140	3.16	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	102482	96981	95366	95175	95698

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
7	16289	7.000	6.9 - 7.1		0.763	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 36.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.00	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.1	V	Deflect	15.4	V
Extract 2	-130.0	V	Cell Entrance	-32	V	Plate Bias	-50	V
Omega Bias	-65	V	Cell Exit	-60	V			

 # # Cell Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-8.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	190	V	H2 Flow	0.0	mL/min			
Use Gas	false		3rd Gas Flow	0	%			

US EPA Tune Check Sample Report

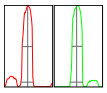
Batch Folder D:\MassHunter Data\li111418.b
Report Comment
Instrument Name G3281A JP09320047

[HMI H2]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	3595	1.53	5.00	
9	12375	0.52	5.00	

Mas	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	3526	3574	3644	3658	3573
9	12346	12400	12433	12420	12277

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width-X% (Flag)
7	611	7.00	6.9 - 7.1		0.762	0.750	[F]
9	2029	8.95	8.9 - 9.1		0.775	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 60.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.75	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.14	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.7	V	Deflect	1.8	V
Extract 2	-140.0	V	Cell Entrance	-40	V	Plate Bias	-61	V
Omega Bias	-65	V	Cell Exit	-58	V			

 # # Cell Parameters # #

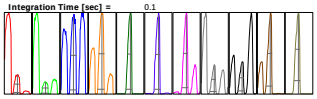
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	150	V	H2 Flow	4.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[HMI He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
24	3996	1.59	5.00	
25	571	4.18	5.00	
26	693	2.77	5.00	
59	13046	1.15	5.00	
103	30935	1.49	5.00	
115	9179	2.36	5.00	
205	32211	1.01	5.00	
206	11254	1.21	5.00	
207	9832	1.16	5.00	
208	23319	1.83	5.00	
238	57201	1.10	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
24	3931	3931	4028	4014	4075
25	591	571	599	554	542
26	686	674	680	721	703
59	12856	13148	13009	12977	13239
103	30558	30342	31409	31103	31263
115	8997	8907	9254	9328	9409
205	31718	32097	32295	32355	32591
206	11051	11258	11225	11423	11314
207	9641	9866	9845	9862	9946
208	22620	23499	23296	23417	23762
238	56406	57043	57440	57003	58115

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
24	874	24.000	23.9 - 24.1		0.758	0.750	[F]
25	97	25.000	24.9 - 25.1		0.750	0.750	[F]
26	119	25.950	25.9 - 26.1		0.742	0.750	
59	2425	59.000	58.9 - 59.1		0.712	0.750	
103	6400	103.050	102.9 - 103.1		0.689	0.750	
115	1874	115.050	114.9 - 115.1		0.686	0.750	
205	6890	205.000	204.9 - 205.1		0.683	0.750	
206	2420	206.000	205.9 - 206.1		0.688	0.750	
207	2021	206.950	206.9 - 207.1		0.681	0.750	
208	5025	207.950	207.9 - 208.1		0.686	0.750	
238	11761	237.950	237.9 - 238.1		0.674	0.750	

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 283 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.66	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.23	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.6	V	Deflect	1.8	V
Extract 2	-160.0	V	Cell Entrance	-26	V	Plate Bias	-60	V
Omega Bias	-80	V	Cell Exit	-66	V			

 # # Cell Parameters # #

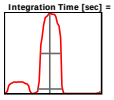
ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-18.0	V	He Flow	5.0	mL/min	Energy Discrimination	3.0	V
OctP RF	150	V	H2 Flow	0.0	mL/min			
Use Gas	true		3rd Gas Flow	0	%			

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	121170	2.36	5.00	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
7	126136	121007	119369	119357	119979

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	W-X% (Flag)
7	20490	6.950	6.9 - 7.1		0.757	0.750	[F]

X% = 5 **Integration Time [sec] =** 0.1 **Acquisition Time [sec] =** 36.9 **Y Axis =** Linear

Tune Parameters

 # # Plasma Paramters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1550	W	Carrier Gas	0.90	L/min	S/C Temp	2	°C
RF Matching	1.67	V	Option Gas	0.0	%	Makeup/Dilution Gas	0.00	L/min
Smpl Depth	8.0	mm	Nebulizer Pump	0.10	rps	Gas Switch	Dilution Gas	

 # # Lenses Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	7.1	V	Deflect	15.4	V
Extract 2	-130.0	V	Cell Entrance	-32	V	Plate Bias	-50	V
Omega Bias	-65	V	Cell Exit	-60	V			

 # # Cell Parameters # #

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
OctP Bias	-8.0	V	He Flow	0.0	mL/min	Energy Discrimination	3.0	V
OctP RF	150	V	H2 Flow	0.0	mL/min			
Use Gas	false		3rd Gas Flow	0	%			

	Mass	Element Name	Current Value
	9		0.102629716043387
	23		0.110744390597682
	24		0.114833585429184
	27		0.117033100078915
	39		0.119343919800518
	45		0.12044729034057
	51		0.124674913709158
	55		0.127167345519493
	56		0.117132145376283
	59		0.130154543215741
	60		0.129263478378504
	63		0.130927815204633
	66		0.13095115279297
	72		Signal too low
	75		Signal too low
	77		Signal too low
	82		Signal too low
	95		0.129881333478878
	100		0.13274086389707
	101		0.132771842247031
	102		0.135184027843412
	104		0.135629459700054
	105		0.135827765741399
	106		0.137463390683222
	111		0.137332150043643
	114		0.139789509950866

	Mass	Element Name	Current Value
	115		0.140444385732768
	118		0.138990652813282
	121		0.137834174090132
	137		Signal too low
	175		0.147175062180061
	193		0.146026194222879
	208		0.149668168576194
	209		0.147492184545614
	232		0.155122950334605
	238		0.155470543125455

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	001WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T12:28:15-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	002WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T12:32:03-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	003WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T12:35:51-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	004WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T12:39:40-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	005WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T12:43:29-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

Calibration Blank Report

Sample Table

Sample Name	ICIS-5427681
Data File Name	006CALB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T12:47:17-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	190323	0.00
Li	7	2	HMI He	12662	0.01
Li	7	3	No Gas	6221225	0.00
Be	9	1	HMI H2	17	549.91
B	11	1	HMI H2	810	1.73
Na	23	1	HMI H2	230053	0.00
Na	23	2	HMI He	17701	0.00
Mg	24	2	HMI He	70	35.36
Al	27	2	HMI He	63	51.90
K	39	2	HMI He	14638	0.02
Ca	44	2	HMI He	33	289.31
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	1867	0.31
Cr	52	2	HMI He	310	6.82
Mn	55	2	HMI He	63	112.42
Fe	57	2	HMI He	140	36.79
Co	59	2	HMI He	33	374.70
Ni	60	2	HMI He	167	10.39
Cu	63	2	HMI He	1433	0.35
Zn	66	2	HMI He	220	7.45
As	75	2	HMI He	16	153.02
Se	78	1	HMI H2	36	81.66
Sr	88	2	HMI He	20	866.03
Zr	90	2	HMI He	40	62.50
Nb	93	2	HMI He	720	0.51
Mo	95	2	HMI He	37	171.77
Pd	105	2	HMI He	33	207.85
Ag	107	2	HMI He	4761	0.07
Cd	111	2	HMI He	3	5196.15
Sn	120	2	HMI He	110	36.03
Sb	121	2	HMI He	17	415.69
Ba	137	2	HMI He	0	#VALUE!
W	182	2	HMI He	777	2.35
Pt	195	2	HMI He	17	549.91
Tl	205	2	HMI He	250	5.77
Pb	208	2	HMI He	2257	0.40
Th	232	2	HMI He	627	2.41
U	238	2	HMI He	317	4.92

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	1454508	0.33
Sc (IS)	45	1	HMI H2	26285642	0.58
Sc (IS)	45	2	HMI He	903775	1.01
Sc (IS)	45	3	No Gas	48040283	0.31
Ge Internal Standard	72	1	HMI H2	9879865	0.60
Ge Internal Standard	72	2	HMI He	957593	0.49
In Internal Standard	115	2	HMI He	2903780	1.18
Ho-165	165	2	HMI He	14207049	0.43

Calibration Standard Report

Sample Table

Sample Name	IC-5427682
Data File Name	007CALS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T12:51:06-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	700452	0.00
Li	7	2	HMI He	46610	0.01
Li	7	3	No Gas	22390058	0.00
Be	9	1	HMI H2	47329	0.01
B	11	1	HMI H2	49644	0.00
Na	23	1	HMI H2	35282399	0.00
Na	23	2	HMI He	2464587	0.00
Mg	24	2	HMI He	1086256	0.00
Al	27	2	HMI He	274323	0.00
K	39	1	HMI H2	42159651	0.00
K	39	2	HMI He	536223	0.00
Ca	40	1	HMI H2	49712321	0.00
Ca	44	2	HMI He	28485	0.01
Ti	47	2	HMI He	2677	0.23
V	51	2	HMI He	102441	0.00
Cr	52	2	HMI He	132079	0.00
Mn	55	2	HMI He	49275	0.00
Fe	57	2	HMI He	239500	0.00
Co	59	2	HMI He	227179	0.00
Ni	60	2	HMI He	64132	0.00
Cu	63	2	HMI He	177979	0.00
Zn	66	2	HMI He	22579	0.02
As	75	2	HMI He	15147	0.00
Se	78	1	HMI H2	23624	0.00
Sr	88	2	HMI He	50019	0.00
Zr	90	2	HMI He	1470	0.62
Nb	93	2	HMI He	529849	0.00
Mo	95	2	HMI He	79413	0.00
Pd	105	2	HMI He	122223	0.00
Ag	107	2	HMI He	263879	0.00
Cd	111	2	HMI He	33351	0.00
Sn	120	2	HMI He	88071	0.00
Sb	121	2	HMI He	77017	0.00
Ba	137	2	HMI He	26680	0.01
Nd	146	2	HMI He	101186	0.00
Sm	147	2	HMI He	85631	0.00
Sm	150	2	HMI He	83811	0.00
Gd	156	1	HMI H2	468631	0.00
Gd	157	1	HMI H2	353571	0.00
W	182	2	HMI He	381087	0.00
Pt	195	2	HMI He	313166	0.00
Tl	205	2	HMI He	684095	0.00
Pb	208	2	HMI He	911435	0.00
Th	232	2	HMI He	1079315	0.00
U	238	2	HMI He	1169285	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1361335	1.44	1454508	93.59	60	120	
Sc (IS)	45	1	HMI H2	25995176	0.27	26285642	98.89	60	120	
Sc (IS)	45	2	HMI He	895687	0.99	903775	99.11	60	120	
Sc (IS)	45	3	No Gas	46562609	1.32	48040283	96.92	60	120	
Ge Internal Standard	72	1	HMI H2	9775828	1.37	9879865	98.95	60	120	
Ge Internal Standard	72	2	HMI He	949882	0.46	957593	99.19	60	120	
In Internal Standard	115	2	HMI He	2816647	1.63	2903780	97.00	60	120	
Ho-165	165	2	HMI He	14185312	0.11	14207049	99.85	60	120	

Initial Calibration Verification (ICV) Report

Sample Table

Sample Name	ICV-5427684
Data File Name	008_ICV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T12:54:54-07:00
Sample Type	ICV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	479.281	ppb	0.340	434071	400	119.8	90	110	>+\-10%
Li	7	2	45	439.181	ppb	3.424	27807	400	109.8	90	110	
Li	7	3	45	464.548	ppb	2.175	13635121	400	116.1	90	110	>+\-10%
Be	9	1	6	38.452	ppb	1.504	18455	40	96.1	90	110	
B	11	1	6	36.326	ppb	2.926	18766	40	90.8	90	110	
Na	23	1	45	4014.600	ppb	0.900	14312263	4000	100.4	90	110	>+\-10%
Na	23	2	45	3933.384	ppb	0.211	990878	4000	98.3	90	110	
Mg	24	2	45	3987.041	ppb	0.969	437901	4000	99.7	90	110	
Al	27	2	45	8109.132	ppb	0.682	224927	4000	202.7	90	110	>+\-10%
K	39	1	45	4081.206	ppb	1.802	22870642	4000	102.0	90	110	
K	39	2	45	4017.318	ppb	0.337	226577	4000	100.4	90	110	
Ca	40	1	45	4049.238	ppb	0.274	20172275	4000	101.2	90	110	
Ca	44	2	45	3988.452	ppb	3.223	11505	4000	99.7	90	110	
Ti	47	2	45	36.072	ppb	0.958	977	40	90.2	90	110	
V	51	2	72	40.831	ppb	1.150	43202	40	102.1	90	110	
Cr	52	2	72	40.510	ppb	3.036	54025	40	101.3	90	110	
Mn	55	2	72	42.015	ppb	0.903	20872	40	105.0	90	110	
Fe	57	2	72	8078.189	ppb	0.611	194723	4000	202.0	90	110	>+\-10%
Co	59	2	72	40.451	ppb	0.397	92500	40	101.1	90	110	
Ni	60	2	72	40.506	ppb	4.017	26245	40	101.3	90	110	
Cu	63	2	72	40.439	ppb	0.887	73286	40	101.1	90	110	
Zn	66	2	72	40.830	ppb	4.402	9410	40	102.1	90	110	
As	75	2	72	38.841	ppb	2.752	5929	40	97.1	90	110	
Se	78	1	72	39.798	ppb	1.869	9381	40	99.5	90	110	
Sr	88	2	72	43.256	ppb	0.531	21784	40	108.1	90	110	
Zr	90	2	72	6.704	ppb	28.407	137	40	16.8	90	110	>+\-10%
Nb	93	2	72	74.790	ppb	1.642	199829	80	93.5	90	110	
Mo	95	2	115	38.671	ppb	0.041	32011	40	96.7	90	110	
Pd	105	2	115	39.856	ppb	0.675	50753	40	99.6	90	110	
Ag	107	2	115	38.270	ppb	2.150	108138	40	95.7	90	110	
Cd	111	2	115	38.302	ppb	3.493	13307	40	95.8	90	110	
Sn	120	2	115	39.309	ppb	1.967	36118	40	98.3	90	110	
Sb	121	2	115	41.218	ppb	1.585	33067	40	103.0	90	110	
Ba	137	2	115	38.072	ppb	6.164	10578	40	95.2	90	110	
W	182	2	165	79.554	ppb	1.193	305812	40	198.9	90	110	>+\-10%
Pt	195	2	165	39.143	ppb	1.853	123597	40	97.9	90	110	
Tl	205	2	165	39.935	ppb	0.328	275582	40	99.8	90	110	
Pb	208	2	165	39.822	ppb	0.851	367288	40	99.6	90	110	
Th	232	2	165	39.591	ppb	0.794	431192	40	99.0	90	110	
U	238	2	165	39.695	ppb	0.560	468148	40	99.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1380004	0.92	1454508	94.88	60	120	
Sc (IS)	45	1	HMI H2	26016109	0.55	26285642	98.97	60	120	
Sc (IS)	45	2	HMI He	905526	0.82	903775	100.19	60	120	
Sc (IS)	45	3	No Gas	46576656	0.29	48040283	96.95	60	120	
Ge Internal Standard	72	1	HMI H2	9731232	0.49	9879865	98.50	60	120	
Ge Internal Standard	72	2	HMI He	955933	1.08	957593	99.83	60	120	
In Internal Standard	115	2	HMI He	2933297	0.37	2903780	101.02	60	120	
Ho-165	165	2	HMI He	14301531	0.18	14207049	100.67	60	120	

Initial Calibration Blank (ICB) Report

Sample Table

Sample Name	ICB-5427681
Data File Name	009_ICB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T12:58:43-07:00
Sample Type	ICB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	-1.385	ppb	-139.6	6096109	10	
Be	9	1	0.014	ppb	360.4	23	0.5	
B	11	1	1.508	ppb	16.5	1580	0.5	>RL
Na	23	1	5.932	ppb	6.5	253546	25	
Na	23	2	6.044	ppb	18.2	19667	25	
Mg	24	2	0.789	ppb	61.5	160	25	
Al	27	2	1.369	ppb	99.5	103	15	
K	39	1	17.035	ppb	60.1	9797897	50	
K	39	2	3.728	ppb	168.8	15205	50	
Ca	40	1	2.268	ppb	6.4	57125	50	
Ca	44	2	11.143	ppb	48.8	67	25	
Ti	47	2	0.122	ppb	173.2	3	0.5	
V	51	2	0.762	ppb	17.8	2707	1	
Cr	52	2	0.018	ppb	13.7	343	1	
Mn	55	2	0.023	ppb	355.4	77	0.5	
Fe	57	2	1.072	ppb	95.1	170	25	
Co	59	2	0.005	ppb	49.0	47	0.5	
Ni	60	2	-0.042	ppb	-232.2	143	1	
Cu	63	2	0.018	ppb	440.3	1503	1	
Zn	66	2	0.062	ppb	327.2	240	5	
As	75	2	0.014	ppb	359.1	19	1	
Se	78	1	-0.006	ppb	-2146.1	35	1	
Sr	88	2	0.044	ppb	102.4	43	0.5	
Zr	90	2	1.505	ppb	182.1	63	1	>RL
Nb	93	2	8.603	ppb	9.6	24282	2	>RL
Mo	95	2	0.033	ppb	39.2	67	0.5	
Pd	105	2	0.062	ppb	85.2	117	1	
Ag	107	2	-0.535	ppb	-25.8	3481	1	
Cd	111	2	-0.010	ppb	0.0	0	0.5	
Sn	120	2	0.111	ppb	47.5	220	1	
Sb	121	2	0.324	ppb	11.4	287	0.6	
Ba	137	2	0.209	ppb	15.4	60	0.5	
W	182	2	0.333	ppb	8.8	2094	1	
Pt	195	2	0.005	ppb	197.1	33	1	
Tl	205	2	0.018	ppb	66.9	383	0.1	
Pb	208	2	-0.035	ppb	-46.9	1987	0.5	
Th	232	2	0.054	ppb	21.0	1243	1	
U	238	2	0.046	ppb	35.2	880	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1439878	2.37	1454508	98.99	60	120	
Sc (IS)	45	1	HMI H2	26543145	0.38	26285642	100.98	60	120	
Sc (IS)	45	2	HMI He	926091	1.15	903775	102.47	60	120	
Sc (IS)	45	3	No Gas	47251993	0.65	48040283	98.36	60	120	
Ge Internal Standard	72	1	HMI H2	9955502	0.30	9879865	100.77	60	120	
Ge Internal Standard	72	2	HMI He	982248	0.67	957593	102.57	60	120	
In Internal Standard	115	2	HMI He	3031320	1.76	2903780	104.39	60	120	
Ho-165	165	2	HMI He	14542865	0.12	14207049	102.36	60	120	

Low Level Initial Calibration Verification (LLICV) Report

Sample Table

Sample Name	ICVL-5427685
Data File Name	010LICV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:02:33-07:00
Sample Type	LLICV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	4.658	ppb	54.150	6356564	50	9.3	70	130	>+/-30%
Be	9	1	6	0.991	ppb	15.387	517	1	99.1	70	130	
Na	23	2	45	53.028	ppb	2.805	31945	50	106.1	70	130	>+/-30%
Mg	24	2	45	51.440	ppb	3.667	5922	50	102.9	70	130	
Al	27	2	45	32.798	ppb	13.127	1007	30	109.3	70	130	
K	39	2	45	116.637	ppb	9.848	21553	100	116.6	70	130	
Ca	44	2	45	53.131	ppb	72.661	193	50	106.3	70	130	
V	51	2	72	5.211	ppb	6.926	7422	5	104.2	70	130	
Cr	52	2	72	1.964	ppb	5.090	3030	2	98.2	70	130	
Mn	55	2	72	1.050	ppb	27.262	607	1	105.0	70	130	
Fe	57	2	72	53.591	ppb	11.639	1487	50	107.2	70	130	
Co	59	2	72	0.978	ppb	5.134	2360	1	97.8	70	130	
Ni	60	2	72	2.002	ppb	4.123	1513	2	100.1	70	130	
Cu	63	2	72	2.083	ppb	2.248	5338	2	104.2	70	130	
Zn	66	2	72	10.784	ppb	16.819	2754	10	107.8	70	130	
As	75	2	72	4.388	ppb	1.408	712	5	87.8	70	130	
Se	78	1	72	4.782	ppb	9.370	1195	5	95.6	70	130	
Sr	88	2	72	1.043	ppb	30.154	567	1	104.3	70	130	
Zr	90	2	72	12.126	ppb	21.405	223	0.5	2425.2	70	130	>+/-30%
Nb	93	2	72	16.903	ppb	4.713	47561	2	845.2	70	130	>+/-30%
Mo	95	2	115	1.610	ppb	4.546	1410	2	80.5	70	130	
Pd	105	2	115	0.012	ppb	303.291	50	1	1.2	70	130	>+/-30%
Ag	107	2	115	4.227	ppb	1.821	16717	5	84.5	70	130	
Cd	111	2	115	0.875	ppb	26.783	317	1	87.5	70	130	
Sn	120	2	115	9.286	ppb	3.312	8880	10	92.9	70	130	
Sb	121	2	115	2.335	ppb	8.223	1947	2	116.7	70	130	
Ba	137	2	115	0.861	ppb	18.297	247	1	86.1	70	130	
W	182	2	165	4.668	ppb	1.689	19141	1	466.8	70	130	>+/-30%
Pt	195	2	165	0.025	ppb	39.899	97	1	2.5	70	130	>+/-30%
Tl	205	2	165	0.991	ppb	4.374	7259	1	99.1	70	130	
Pb	208	2	165	0.955	ppb	1.878	11296	1	95.5	70	130	
Th	232	2	165	2.142	ppb	0.389	24517	2	107.1	70	130	
U	238	2	165	0.980	ppb	1.606	12160	1	98.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1452309	1.17	1454508	99.85	60	120	
Sc (IS)	45	1	HMI H2	26738580	0.82	26285642	101.72	60	120	
Sc (IS)	45	2	HMI He	937522	1.00	903775	103.73	60	120	
Sc (IS)	45	3	No Gas	48473554	0.34	48040283	100.90	60	120	
Ge Internal Standard	72	1	HMI H2	10037450	0.22	9879865	101.60	60	120	
Ge Internal Standard	72	2	HMI He	994144	0.81	957593	103.82	60	120	
In Internal Standard	115	2	HMI He	3022801	0.02	2903780	104.10	60	120	
Ho-165	165	2	HMI He	14652988	0.60	14207049	103.14	60	120	

CRI Report

Sample Table

Sample Name	CRI5427686
Data File Name	011RLST.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:07:31-07:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	9.410	ppb	65.395	200162	10	94.1	80	120	
Li	7	2	45	5.633	ppb	244.636	13623	10	56.3	80	120	>+\-20%
Li	7	3	45	4.323	ppb	31.373	6284644	10	43.2	80	120	>+\-20%
Be	9	1	6	0.880	ppb	15.070	463	1	88.0	80	120	
B	11	1	6	1.219	ppb	27.449	1453	1	121.9	80	120	>+\-20%
Na	23	1	45	100.992	ppb	2.133	602982	100	101.0	80	120	
Na	23	2	45	96.295	ppb	3.424	43963	100	96.3	80	120	
Mg	24	2	45	101.097	ppb	2.812	11819	100	101.1	80	120	
Al	27	2	45	105.738	ppb	9.135	3167	100	105.7	80	120	
K	39	2	45	113.388	ppb	4.673	21844	100	113.4	80	120	
Ca	40	1	45	100.720	ppb	0.886	565036	100	100.7	80	120	
Ca	44	2	45	106.805	ppb	8.834	360	100	106.8	80	120	
Ti	47	2	45	0.813	ppb	64.778	23	1	81.3	80	120	
V	51	2	72	1.281	ppb	5.933	3337	1	128.1	80	120	>+\-20%
Cr	52	2	72	0.952	ppb	13.635	1660	1	95.2	80	120	
Mn	55	2	72	0.981	ppb	30.005	580	1	98.1	80	120	
Fe	57	2	72	100.379	ppb	7.780	2700	100	100.4	80	120	
Co	59	2	72	0.959	ppb	8.842	2350	1	95.9	80	120	
Ni	60	2	72	0.968	ppb	17.727	833	1	96.8	80	120	
Cu	63	2	72	1.041	ppb	5.583	3464	1	104.1	80	120	
Zn	66	2	72	1.169	ppb	40.578	510	1	116.9	80	120	
As	75	2	72	1.064	ppb	16.326	188	1	106.4	80	120	
Se	78	1	72	0.991	ppb	17.332	280	1	99.1	80	120	
Sr	88	2	72	1.134	ppb	21.100	623	1	113.4	80	120	
Zr	90	2	72	2.490	ppb	70.452	80	1	249.0	80	120	>+\-20%
Nb	93	2	72	3.309	ppb	3.505	10064	2	165.5	80	120	>+\-20%
Mo	95	2	115	0.782	ppb	14.185	717	1	78.2	80	120	>+\-20%
Pd	105	2	115	1.135	ppb	18.851	1550	1	113.5	80	120	
Ag	107	2	115	0.110	ppb	59.201	5348	1	11.0	80	120	>+\-20%
Cd	111	2	115	1.025	ppb	7.107	377	1	102.5	80	120	
Sn	120	2	115	1.032	ppb	22.676	1107	1	103.2	80	120	
Sb	121	2	115	1.011	ppb	23.846	867	1	101.1	80	120	
Ba	137	2	115	0.905	ppb	18.017	263	1	90.5	80	120	
W	182	2	165	1.064	ppb	4.840	5045	1	106.4	80	120	
Pt	195	2	165	0.958	ppb	3.855	3157	1	95.8	80	120	
Tl	205	2	165	0.987	ppb	6.384	7326	1	98.7	80	120	
Pb	208	2	165	0.898	ppb	4.079	10902	1	89.8	80	120	
Th	232	2	165	0.828	ppb	4.364	10004	1	82.8	80	120	
U	238	2	165	0.957	ppb	2.377	12039	1	95.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1462170	1.30	1454508	100.53	60	120	
Sc (IS)	45	1	HMI H2	26955196	0.83	26285642	102.55	60	120	
Sc (IS)	45	2	HMI He	957846	0.79	903775	105.98	60	120	
Sc (IS)	45	3	No Gas	47968146	0.34	48040283	99.85	60	120	
Ge Internal Standard	72	1	HMI H2	10155843	0.10	9879865	102.79	60	120	
Ge Internal Standard	72	2	HMI He	1009458	0.31	957593	105.42	60	120	
In Internal Standard	115	2	HMI He	3073091	1.05	2903780	105.83	60	120	
Ho-165	165	2	HMI He	14843235	0.31	14207049	104.48	60	120	

CRI Report

Sample Table

Sample Name	CRI
Data File Name	012RLST.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:16:04-07:00
Sample Type	CRI
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	-6.824	ppb	-40.688	193507	10	-68.2	80	120	>+\-20%
Li	7	2	45	-33.178	ppb	-16.696	12589	10	-331.8	80	120	>+\-20%
Li	7	3	45	-3.476	ppb	-153.197	6125531	10	-34.8	80	120	>+\-20%
Be	9	1	6	-0.013	ppb	-258.425	10	1	-1.3	80	120	>+\-20%
B	11	1	6	0.107	ppb	200.722	863	1	10.7	80	120	>+\-20%
Na	23	1	45	-1.204	ppb	-43.849	233899	100	-1.2	80	120	>+\-20%
Na	23	2	45	-2.458	ppb	-97.493	18679	100	-2.5	80	120	>+\-20%
Mg	24	2	45	0.112	ppb	73.059	90	100	0.1	80	120	>+\-20%
Al	27	2	45	1.576	ppb	13.509	117	100	1.6	80	120	>+\-20%
K	39	2	45	7.437	ppb	150.855	16423	100	7.4	80	120	>+\-20%
Ca	40	1	45	1.462	ppb	10.053	54413	100	1.5	80	120	>+\-20%
Ca	44	2	45	-3.046	ppb	-161.322	27	100	-3.0	80	120	>+\-20%
Ti	47	2	45	0.450	ppb	86.603	13	1	45.0	80	120	>+\-20%
V	51	2	72	5.454	ppb	3.263	8006	1	545.4	80	120	>+\-20%
Cr	52	2	72	-0.032	ppb	-188.057	290	1	-3.2	80	120	>+\-20%
Mn	55	2	72	0.033	ppb	354.561	87	1	3.3	80	120	>+\-20%
Fe	57	2	72	1.225	ppb	97.343	183	100	1.2	80	120	>+\-20%
Co	59	2	72	0.004	ppb	363.309	47	1	0.4	80	120	>+\-20%
Ni	60	2	72	-0.125	ppb	-16.981	93	1	-12.5	80	120	>+\-20%
Cu	63	2	72	0.070	ppb	21.575	1687	1	7.0	80	120	>+\-20%
Zn	66	2	72	0.185	ppb	88.749	283	1	18.5	80	120	>+\-20%
As	75	2	72	0.055	ppb	13.819	27	1	5.5	80	120	>+\-20%
Se	78	1	72	-0.005	ppb	-982.356	36	1	-0.5	80	120	>+\-20%
Sr	88	2	72	-0.021	ppb	-148.371	10	1	-2.1	80	120	>+\-20%
Zr	90	2	72	8.989	ppb	115.848	183	1	898.9	80	120	>+\-20%
Nb	93	2	72	0.762	ppb	7.680	2980	2	38.1	80	120	>+\-20%
Mo	95	2	115	2.345	ppb	3.867	2137	1	234.5	80	120	>+\-20%
Pd	105	2	115	-0.007	ppb	-289.377	27	1	-0.7	80	120	>+\-20%
Ag	107	2	115	3.477	ppb	1.438	15349	1	347.7	80	120	>+\-20%
Cd	111	2	115	-0.010	ppb	0.000	0	1	-1.0	80	120	>+\-20%
Sn	120	2	115	0.050	ppb	128.741	170	1	5.0	80	120	>+\-20%
Sb	121	2	115	0.041	ppb	60.632	53	1	4.1	80	120	>+\-20%
Ba	137	2	115	0.022	ppb	86.608	7	1	2.2	80	120	>+\-20%
W	182	2	165	0.095	ppb	39.371	1177	1	9.5	80	120	>+\-20%
Pt	195	2	165	0.004	ppb	79.540	30	1	0.4	80	120	>+\-20%
Tl	205	2	165	-0.008	ppb	-42.837	200	1	-0.8	80	120	>+\-20%
Pb	208	2	165	-0.057	ppb	-44.892	1797	1	-5.7	80	120	>+\-20%
Th	232	2	165	-0.005	ppb	-37.958	587	1	-0.5	80	120	>+\-20%
U	238	2	165	-0.014	ppb	-42.626	153	1	-1.4	80	120	>+\-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1451720	0.68	1454508	99.81	60	120	
Sc (IS)	45	1	HMI H2	27231165	1.42	26285642	103.60	60	120	
Sc (IS)	45	2	HMI He	987433	0.75	903775	109.26	60	120	
Sc (IS)	45	3	No Gas	47755144	0.62	48040283	99.41	60	120	
Ge Internal Standard	72	1	HMI H2	10220471	1.74	9879865	103.45	60	120	
Ge Internal Standard	72	2	HMI He	1036261	0.51	957593	108.22	60	120	
In Internal Standard	115	2	HMI He	3171312	1.16	2903780	109.21	60	120	
Ho-165	165	2	HMI He	14690687	0.78	14207049	103.40	60	120	

CRI Report

Sample Table

Sample Name	CRI
Data File Name	013_CRI.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:20:39-07:00
Sample Type	AFCRI
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Be	9	1	6	0.138	ppb	53.699	87	0.2	68.9	80	120	AFCRI Main CR1 Failed
Na	23	2	45	21.182	ppb	7.806	24688	20	105.9	80	120	
Mg	24	2	45	21.274	ppb	23.815	2587	20	106.4	80	120	
Al	27	2	45	22.649	ppb	17.917	743	20	113.2	80	120	
K	39	2	45	51.282	ppb	4.847	18669	20	256.4	80	120	AFCRI Main CR1 Failed
Ca	44	2	45	22.921	ppb	20.165	107	20	114.6	80	120	
V	51	2	72	0.753	ppb	33.108	2810	0.2	376.5	80	120	AFCRI Main CR1 Failed
Cr	52	2	72	0.171	ppb	8.109	573	0.2	85.3	80	120	
(Cr)	53	2	72	1.939	ppb	37.141	1010	0.2	969.4	80	120	AFCRI Main CR1 Failed
Mn	55	2	72	0.520	ppb	14.141	343	0.2	260.1	80	120	AFCRI Main CR1 Failed
Fe	57	2	72	13.087	ppb	44.095	487	20	65.4	80	120	AFCRI Main CR1 Failed
Co	59	2	72	0.204	ppb	13.067	533	0.2	101.8	80	120	
Ni	60	2	72	0.153	ppb	39.057	283	0.2	76.5	80	120	AFCRI Main CR1 Failed
Cu	63	2	72	0.394	ppb	25.436	2280	0.2	197.2	80	120	AFCRI Main CR1 Failed
Zn	66	2	72	0.715	ppb	54.187	407	0.2	357.3	80	120	AFCRI Main CR1 Failed
As	75	2	72	0.238	ppb	22.422	56	0.2	118.9	80	120	
Se	78	1	72	0.172	ppb	38.190	80	0.2	85.9	80	120	
(Se)	82	1	72	0.417	ppb	47.543	390	0.2	208.7	80	120	AFCRI Main CR1 Failed
Nb	93	2	72	1.018	ppb	16.081	3667	0.4	254.5	80	120	AFCRI Main CR1 Failed
Mo	95	2	115	0.216	ppb	10.349	227	0.2	108.0	80	120	
Pd	105	2	115	0.168	ppb	30.154	260	0.2	84.1	80	120	
Ag	107	2	115	-0.778	ppb	-8.495	2844	0.2	-389.1	80	120	AFCRI Main CR1 Failed
Cd	111	2	115	0.273	ppb	40.084	103	0.2	136.7	80	120	AFCRI Main CR1 Failed
(Cd)	114	2	115	0.161	ppb	11.418	170	0.2	80.6	80	120	
Sn	120	2	115	0.163	ppb	66.257	273	0.2	81.4	80	120	
Sb	121	2	115	0.248	ppb	9.811	227	0.2	124.0	80	120	AFCRI Main CR1 Failed
Ba	137	2	115	0.513	ppb	45.855	150	0.2	256.3	80	120	AFCRI Main CR1 Failed
W	182	2	165	0.260	ppb	35.920	1827	0.2	129.8	80	120	AFCRI Main CR1 Failed
Pt	195	2	165	0.191	ppb	16.243	637	0.2	95.5	80	120	
Tl	205	2	165	0.181	ppb	17.134	1544	0.2	90.7	80	120	
(Pb)	206	2	165	0.137	ppb	34.300	907	0.2	68.5	80	120	AFCRI Main CR1 Failed
(Pb)	207	2	165	0.055	ppb	65.504	743	0.2	27.6	80	120	AFCRI Main CR1 Failed
Pb	208	2	165	0.119	ppb	13.882	3450	0.2	59.3	80	120	AFCRI Main CR1 Failed
Th	232	2	165	0.157	ppb	16.904	2400	0.2	78.4	80	120	AFCRI Main CR1 Failed
U	238	2	165	0.206	ppb	8.518	2827	0.2	103.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1460410	0.47	1454508	100.41	60	120	
Sc (IS)	45	1	HMI H2	27494155	0.34	26285642	104.60	60	120	
Sc (IS)	45	2	HMI He	973056	1.05	903775	107.67	60	120	
Sc (IS)	45	3	No Gas	48049151	1.15	48040283	100.02	60	120	
Ge Internal Standard	72	1	HMI H2	10271085	0.62	9879865	103.96	60	120	
Ge Internal Standard	72	2	HMI He	1022724	0.73	957593	106.80	60	120	
In Internal Standard	115	2	HMI He	3081692	0.83	2903780	106.13	60	120	
Ho-165	165	2	HMI He	14696358	0.09	14207049	103.44	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5425629
Data File Name	014ICSA.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:24:27-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-8.659	ppb	-28.5	5570288	1	
Be	9	1	6	0.017	ppb	144.7	23	1	
B	11	1	6	0.260	ppb	105.5	873	1	
Na	23	1	45	97430.523	ppb	1.0	329558035	100000	
K	39	1	45	97793.532	ppb	0.6	316807949	100000	
Ca	40	1	45	97313.666	ppb	1.0	466109620	100000	
Ti	47	2	45	1768.794	ppb	2.4	46381	1	>RL or LOD
V	51	2	72	1.098	ppb	21.8	2847	1	>RL or LOD
Cr	52	2	72	0.211	ppb	26.4	563	1	
Mn	55	2	72	0.804	ppb	21.9	440	1	
Co	59	2	72	0.007	ppb	156.2	47	1	
Ni	60	2	72	0.153	ppb	56.9	253	1	
Cu	63	2	72	0.858	ppb	6.4	2824	1	
Zn	66	2	72	0.867	ppb	10.4	397	1	
As	75	2	72	0.112	ppb	54.5	32	1	
Se	78	1	72	-0.048	ppb	-42.9	23	1	
Sr	88	2	72	0.764	ppb	6.6	387	1	
Zr	90	2	72	6.609	ppb	65.0	130	1	>RL or LOD
Nb	93	2	72	1.266	ppb	18.4	3901	1	>RL or LOD
Mo	95	2	115	1981.525	ppb	1.0	1523038	2000	
Pd	105	2	115	-0.018	ppb	-80.3	10	1	
Ag	107	2	115	-1.016	ppb	-14.4	1920	1	
Cd	111	2	115	0.383	ppb	28.4	127	1	
Sn	120	2	115	0.079	ppb	83.6	170	1	
Sb	121	2	115	0.068	ppb	49.2	67	1	
Ba	137	2	115	0.155	ppb	43.5	40	1	
W	182	2	165	0.250	ppb	35.3	1680	1	
Pt	195	2	165	0.000	ppb	1121.9	17	1	
Tl	205	2	165	-0.003	ppb	-147.0	223	1	
Pb	208	2	165	0.133	ppb	20.7	3374	1	
Th	232	2	165	0.021	ppb	70.2	830	1	
U	238	2	165	-0.013	ppb	-48.1	160	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1343967	0.44	1454508	92.40	60	120	
Sc (IS)	45	1	HMI H2	25067265	0.59	26285642	95.36	60	120	
Sc (IS)	45	2	HMI He	877039	1.01	903775	97.04	60	120	
Sc (IS)	45	3	No Gas	44049408	0.33	48040283	91.69	60	120	
Ge Internal Standard	72	1	HMI H2	9086359	0.86	9879865	91.97	60	120	
Ge Internal Standard	72	2	HMI He	913935	2.16	957593	95.44	60	120	
In Internal Standard	115	2	HMI He	2726806	0.28	2903780	93.91	60	120	
Ho-165	165	2	HMI He	13826160	1.10	14207049	97.32	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5425630
Data File Name	015ICSB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:28:15-07:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	904.495	ppb	0.457	627275	100	904.5	80	120	
Li	7	2	45	903.675	ppb	4.230	41919	100	903.7	80	120	
Li	7	3	45	890.283	ppb	1.162	19812449	100	890.3	80	120	
Be	9	1	6	90.956	ppb	2.815	40927	100	91.0	80	120	
B	11	1	6	72.265	ppb	0.284	34310	100	72.3	80	120	>+\-20%
Na	23	1	45	101430.224	ppb	1.195	342533995	100	101430.2	80	120	>+\-20%
K	39	1	45	102225.477	ppb	0.680	330226242	100	102225.5	80	120	>+\-20%
Ca	40	1	45	101673.040	ppb	1.088	486211233	100	101673.0	80	120	>+\-20%
V	51	2	72	92.406	ppb	1.011	90722	100	92.4	80	120	
Cr	52	2	72	90.098	ppb	1.121	113901	100	90.1	80	120	
Mn	55	2	72	92.626	ppb	0.918	43683	100	92.6	80	120	
Co	59	2	72	90.280	ppb	1.223	196255	100	90.3	80	120	
Ni	60	2	72	90.246	ppb	1.203	55401	100	90.2	80	120	
Cu	63	2	72	89.181	ppb	2.245	152027	100	89.2	80	120	
Zn	66	2	72	90.715	ppb	1.507	19621	100	90.7	80	120	
As	75	2	72	87.700	ppb	0.851	12714	100	87.7	80	120	
Se	78	1	72	91.669	ppb	2.935	20449	100	91.7	80	120	
Sr	88	2	72	94.341	ppb	2.216	45156	100	94.3	80	120	
Zr	90	2	72	9.639	ppb	7.084	170	100	9.6	80	120	>+\-20%
Nb	93	2	72	182.530	ppb	1.519	462780	100	182.5	80	120	
Mo	95	2	115	2026.797	ppb	1.836	1532047	100	2026.8	80	120	>+\-20%
Pd	105	2	115	91.169	ppb	1.179	106104	100	91.2	80	120	
Ag	107	2	115	85.785	ppb	1.169	216162	100	85.8	80	120	
Cd	111	2	115	87.249	ppb	0.975	27712	100	87.2	80	120	
Sn	120	2	115	92.611	ppb	0.733	77663	100	92.6	80	120	
Sb	121	2	115	99.866	ppb	1.689	73223	100	99.9	80	120	
Ba	137	2	115	91.742	ppb	3.176	23304	100	91.7	80	120	
W	182	2	165	92.323	ppb	0.399	338016	100	92.3	80	120	
Pt	195	2	165	90.109	ppb	1.354	271056	100	90.1	80	120	
Tl	205	2	165	86.944	ppb	0.210	571354	100	86.9	80	120	
Pb	208	2	165	87.098	ppb	0.067	762813	100	87.1	80	120	
Th	232	2	165	89.944	ppb	0.734	932543	100	89.9	80	120	
U	238	2	165	89.013	ppb	0.655	999799	100	89.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1294471	0.71	1454508	89.00	60	120	
Sc (IS)	45	1	HMI H2	25027750	0.66	26285642	95.21	60	120	
Sc (IS)	45	2	HMI He	866777	0.90	903775	95.91	60	120	
Sc (IS)	45	3	No Gas	44787383	0.77	48040283	93.23	60	120	
Ge Internal Standard	72	1	HMI H2	9230050	0.38	9879865	93.42	60	120	
Ge Internal Standard	72	2	HMI He	908991	0.79	957593	94.92	60	120	
In Internal Standard	115	2	HMI He	2682067	1.64	2903780	92.36	60	120	
Ho-165	165	2	HMI He	13625841	0.45	14207049	95.91	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	016SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:32:01-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-6.079	ppb	-6.079	-58.23	187350	500000	
Li	7	2	45	-14.721	ppb	-14.721	-77.49	12342	500000	
Li	7	3	45	-6.616	ppb	-6.616	-70.46	6056955	50000	
Be	9	1	6	-0.005	ppb	-0.005	-605.30	13	2000	
B	11	1	6	0.839	ppb	0.839	24.54	1197	2000	
Na	23	1	45	96.215	ppb	96.215	2.06	571659	2000	
Na	23	2	45	76.838	ppb	76.838	3.09	37238	400000	
Mg	24	2	45	11.517	ppb	11.517	9.46	1353	400000	
Al	27	2	45	14.206	ppb	14.206	22.76	463	400000	
K	39	1	45	123.066	ppb	123.066	18.87	10062025	400000	
K	39	2	45	22.003	ppb	22.003	94.11	16036	400000	
Ca	40	1	45	12.716	ppb	12.716	2.46	109157	400000	
Ca	44	2	45	0.982	ppb	0.982	715.05	37	400000	
Ti	47	2	45	0.975	ppb	0.975	94.24	27	4000	
V	51	2	72	1.054	ppb	1.054	20.49	3004	2000	
Cr	52	2	72	-0.045	ppb	-0.045	-39.12	257	5000	
Mn	55	2	72	-0.003	ppb	-0.003	-2868.74	63	10000	
Fe	57	2	72	21.644	ppb	21.644	26.22	677	400000	
Co	59	2	72	0.002	ppb	0.002	304.02	40	2000	
Ni	60	2	72	0.005	ppb	0.005	2169.05	173	5000	
Cu	63	2	72	0.171	ppb	0.171	115.00	1780	5000	
Zn	66	2	72	0.076	ppb	0.076	426.76	243	5000	
As	75	2	72	0.031	ppb	0.031	161.04	22	2000	
Se	78	1	72	-0.018	ppb	-0.018	-478.66	32	2000	
Sr	88	2	72	-0.014	ppb	-0.014	-210.31	13	4000	
Zr	90	2	72	-0.745	ppb	-0.745	-90.09	30	1000	
Nb	93	2	72	4.991	ppb	4.991	4.42	14368	200	
Mo	95	2	115	2.675	ppb	2.675	5.28	2264	2000	
Pd	105	2	115	0.067	ppb	0.067	45.34	120	100	
Ag	107	2	115	-1.037	ppb	-1.037	-7.45	2017	100	
Cd	111	2	115	0.000	ppb	0.000	14422.30	3	2000	
Sn	120	2	115	0.088	ppb	0.088	90.40	193	2000	
Sb	121	2	115	0.075	ppb	0.075	123.20	77	1000	
Ba	137	2	115	0.012	ppb	0.012	173.21	3	5000	
W	182	2	165	0.124	ppb	0.124	25.10	1263	100	
Pt	195	2	165	0.005	ppb	0.005	35.58	33	100	
Tl	205	2	165	0.029	ppb	0.029	25.94	450	2000	
Pb	208	2	165	-0.053	ppb	-0.053	-18.03	1797	5000	
Th	232	2	165	0.030	ppb	0.030	28.90	967	2000	
U	238	2	165	0.064	ppb	0.064	30.73	1080	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1394635	0.85	1454508	95.88	60	120	
Sc (IS)	45	1	HMI H2	26310819	0.59	26285642	100.10	60	120	
Sc (IS)	45	2	HMI He	917670	0.76	903775	101.54	60	120	
Sc (IS)	45	3	No Gas	47631828	1.00	48040283	99.15	60	120	
Ge Internal Standard	72	1	HMI H2	9990902	0.37	9879865	101.12	60	120	
Ge Internal Standard	72	2	HMI He	980135	1.18	957593	102.35	60	120	
In Internal Standard	115	2	HMI He	2950200	1.98	2903780	101.60	60	120	
Ho-165	165	2	HMI He	14363009	0.41	14207049	101.10	60	120	

Linear Range Sample (LRS) Report

Sample Table

Sample Name	LRA-5347646
Data File Name	017_LR.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:35:50-07:00
Sample Type	LR
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	1971.253	ppb	2.140	909970	2000	98.6	90	110	
V	51	2	72	2023.741	ppb	2.112	2001734	2000	101.2	90	110	
Cr	52	2	72	4792.602	ppb	0.709	6204954	5000	95.9	90	110	
(Cr)	53	2	72	5113.774	ppb	0.623	770929	5000	102.3	90	110	
Mn	55	2	72	9856.729	ppb	0.708	4765804	10000	98.6	90	110	
Co	59	2	72	1977.492	ppb	1.187	4412899	2000	98.9	90	110	
Ni	60	2	72	4958.609	ppb	1.018	3116413	5000	99.2	90	110	
Cu	63	2	72	4785.505	ppb	0.517	8302766	5000	95.7	90	110	
Zn	66	2	72	4991.940	ppb	0.577	1096851	5000	99.8	90	110	
As	75	2	72	1863.292	ppb	0.803	277001	2000	93.2	90	110	
Se	78	1	72	1989.860	ppb	0.790	450961	2000	99.5	90	110	
(Se)	82	1	72	1807.923	ppb	1.087	186900	2000	90.4	90	110	
Mo	95	2	115	1954.364	ppb	0.356	1535826	2000	97.7	90	110	
Cd	111	2	115	1972.607	ppb	1.108	651110	2000	98.6	90	110	
(Cd)	114	2	115	2035.898	ppb	1.821	1740232	2000	101.8	90	110	
Sn	120	2	115	2040.187	ppb	1.485	1776162	2000	102.0	90	110	
Sb	121	2	115	998.895	ppb	1.175	761242	1000	99.9	90	110	
Ba	137	2	115	4854.571	ppb	1.472	1281998	5000	97.1	90	110	
Tl	205	2	165	1019.691	ppb	1.952	6783175	2000	51.0	90	110	LRS Main CR1 Failed
(Pb)	206	2	165	4947.234	ppb	1.170	10634634	5000	98.9	90	110	
(Pb)	207	2	165	4991.981	ppb	1.358	9822314	5000	99.8	90	110	
Pb	208	2	165	4998.155	ppb	1.241	44206103	5000	100.0	90	110	
Th	232	2	165	1035.733	ppb	0.124	10868866	2000	51.8	90	110	LRS Main CR1 Failed
U	238	2	165	2100.361	ppb	0.659	23884261	2000	105.0	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1328587	1.52	1454508	91.34	60	120	
Sc (IS)	45	1	HMI H2	24903911	0.34	26285642	94.74	60	120	
Sc (IS)	45	2	HMI He	873264	0.47	903775	96.62	60	120	
Sc (IS)	45	3	No Gas	45149964	0.83	48040283	93.98	60	120	
Ge Internal Standard	72	1	HMI H2	9390795	0.51	9879865	95.05	60	120	
Ge Internal Standard	72	2	HMI He	933288	1.03	957593	97.46	60	120	
In Internal Standard	115	2	HMI He	2787877	0.86	2903780	96.01	60	120	
Ho-165	165	2	HMI He	13799200	0.57	14207049	97.13	60	120	

Sample Report

Sample Table

Sample Name	RINSE
Data File Name	018SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:39:36-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.204	ppb	1.204	610.48	187699	500000	
Li	7	2	45	-1.677	ppb	-1.677	-881.31	12406	500000	
Li	7	3	45	-0.866	ppb	-0.866	-316.26	5989879	50000	
Be	9	1	6	0.334	ppb	0.334	18.57	180	2000	
B	11	1	6	0.013	ppb	0.013	932.98	793	2000	
Na	23	1	45	2.239	ppb	2.239	51.59	233952	2000	
Na	23	2	45	2.410	ppb	2.410	171.10	17998	400000	
Mg	24	2	45	1.251	ppb	1.251	46.59	203	400000	
Al	27	2	45	3.085	ppb	3.085	64.98	147	400000	
K	39	1	45	79.682	ppb	79.682	32.32	9741487	400000	
K	39	2	45	21.424	ppb	21.424	88.59	15506	400000	
Ca	40	1	45	1.024	ppb	1.024	10.08	49474	400000	
Ca	44	2	45	4.877	ppb	4.877	230.49	47	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.550	ppb	0.550	12.97	2394	2000	
Cr	52	2	72	0.237	ppb	0.237	14.84	617	5000	
Mn	55	2	72	0.648	ppb	0.648	2.49	380	10000	
Fe	57	2	72	-0.482	ppb	-0.482	-530.79	127	400000	
Co	59	2	72	0.133	ppb	0.133	27.87	333	2000	
Ni	60	2	72	0.129	ppb	0.129	28.90	247	5000	
Cu	63	2	72	0.192	ppb	0.192	17.26	1754	5000	
Zn	66	2	72	0.820	ppb	0.820	41.83	400	5000	
As	75	2	72	0.232	ppb	0.232	35.30	51	2000	
Se	78	1	72	0.375	ppb	0.375	12.23	124	2000	
Sr	88	2	72	-0.007	ppb	-0.007	-468.40	17	4000	
Zr	90	2	72	0.015	ppb	0.015	20484.43	40	1000	
Nb	93	2	72	1.267	ppb	1.267	7.22	4047	200	
Mo	95	2	115	3.329	ppb	3.329	2.79	2737	2000	
Pd	105	2	115	-0.019	ppb	-0.019	-43.09	10	100	
Ag	107	2	115	-1.246	ppb	-1.246	-4.35	1417	100	
Cd	111	2	115	0.118	ppb	0.118	38.46	43	2000	
Sn	120	2	115	5.609	ppb	5.609	6.09	5151	2000	
Sb	121	2	115	4.419	ppb	4.419	0.82	3494	1000	
Ba	137	2	115	0.269	ppb	0.269	90.83	73	5000	
W	182	2	165	0.037	ppb	0.037	30.42	907	100	
Pt	195	2	165	-0.003	ppb	-0.003	-58.71	7	100	
Tl	205	2	165	0.137	ppb	0.137	26.03	1170	2000	
Pb	208	2	165	0.333	ppb	0.333	12.02	5227	5000	
Th	232	2	165	0.594	ppb	0.594	0.22	6966	2000	
U	238	2	165	1.173	ppb	1.173	4.37	13898	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1413624	0.57	1454508	97.19	60	120	
Sc (IS)	45	1	HMI H2	25841677	1.06	26285642	98.31	60	120	
Sc (IS)	45	2	HMI He	889236	1.37	903775	98.39	60	120	
Sc (IS)	45	3	No Gas	46365543	1.04	48040283	96.51	60	120	
Ge Internal Standard	72	1	HMI H2	9762236	0.23	9879865	98.81	60	120	
Ge Internal Standard	72	2	HMI He	945200	0.99	957593	98.71	60	120	
In Internal Standard	115	2	HMI He	2878417	0.38	2903780	99.13	60	120	
Ho-165	165	2	HMI He	14053967	1.42	14207049	98.92	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	019_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:43:24-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	488.049	ppb	1.652	443843	500	97.6	90	110	
Li	7	2	45	473.667	ppb	1.858	29182	500	94.7	90	110	
Li	7	3	45	501.541	ppb	2.209	14411788	500	100.3	90	110	
Be	9	1	6	49.212	ppb	2.307	23887	50	98.4	90	110	
B	11	1	6	49.137	ppb	1.605	25406	50	98.3	90	110	
Na	23	1	45	5045.172	ppb	0.363	18143759	5000	100.9	90	110	
Na	23	2	45	5114.043	ppb	1.284	1291195	5000	102.3	90	110	
Mg	24	2	45	4998.330	ppb	0.576	552534	5000	100.0	90	110	
Al	27	2	45	5040.626	ppb	0.736	140728	5000	100.8	90	110	
K	39	1	45	5067.186	ppb	0.805	26404474	5000	101.3	90	110	
K	39	2	45	5052.812	ppb	0.175	283004	5000	101.1	90	110	
Ca	40	1	45	5008.553	ppb	0.367	25241200	5000	100.2	90	110	
Ca	44	2	45	5132.821	ppb	2.755	14892	5000	102.7	90	110	
Ti	47	2	45	45.521	ppb	8.251	1240	50	91.0	90	110	
V	51	2	72	51.480	ppb	1.210	54339	50	103.0	90	110	
Cr	52	2	72	49.827	ppb	0.912	66830	50	99.7	90	110	
Mn	55	2	72	52.119	ppb	1.706	26051	50	104.2	90	110	
Fe	57	2	72	5030.703	ppb	0.764	122133	5000	100.6	90	110	
Co	59	2	72	50.583	ppb	1.354	116433	50	101.2	90	110	
Ni	60	2	72	50.834	ppb	0.538	33112	50	101.7	90	110	
Cu	63	2	72	50.898	ppb	1.000	92484	50	101.8	90	110	
Zn	66	2	72	49.436	ppb	2.970	11418	50	98.9	90	110	
As	75	2	72	50.663	ppb	2.037	7782	50	101.3	90	110	
Se	78	1	72	49.646	ppb	4.094	11805	50	99.3	90	110	
Sr	88	2	72	49.364	ppb	2.693	25026	50	98.7	90	110	
Zr	90	2	72	36.107	ppb	14.012	563	50	72.2	90	110	>+\-10%
Nb	93	2	72	93.953	ppb	1.601	252544	100	94.0	90	110	
Mo	95	2	115	49.619	ppb	0.692	40242	50	99.2	90	110	
Pd	105	2	115	51.283	ppb	2.468	63987	50	102.6	90	110	
Ag	107	2	115	48.405	ppb	1.501	132802	50	96.8	90	110	
Cd	111	2	115	49.686	ppb	3.460	16914	50	99.4	90	110	
Sn	120	2	115	50.410	ppb	1.602	45362	50	100.8	90	110	
Sb	121	2	115	50.527	ppb	1.751	39721	50	101.1	90	110	
Ba	137	2	115	47.110	ppb	2.713	12830	50	94.2	90	110	
W	182	2	165	50.224	ppb	0.621	189045	50	100.4	90	110	
Pt	195	2	165	51.744	ppb	0.704	159738	50	103.5	90	110	
Tl	205	2	165	50.391	ppb	1.283	339923	50	100.8	90	110	
Pb	208	2	165	50.309	ppb	0.533	453090	50	100.6	90	110	
Th	232	2	165	51.751	ppb	0.471	550900	50	103.5	90	110	
U	238	2	165	50.150	ppb	0.823	578188	50	100.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1396152	1.88	1454508	95.99	60	120	
Sc (IS)	45	1	HMI H2	26329372	0.20	26285642	100.17	60	120	
Sc (IS)	45	2	HMI He	911355	0.84	903775	100.84	60	120	
Sc (IS)	45	3	No Gas	47135383	0.43	48040283	98.12	60	120	
Ge Internal Standard	72	1	HMI H2	9824846	0.54	9879865	99.44	60	120	
Ge Internal Standard	72	2	HMI He	962359	0.81	957593	100.50	60	120	
In Internal Standard	115	2	HMI He	2874707	0.46	2903780	99.00	60	120	
Ho-165	165	2	HMI He	13982946	0.35	14207049	98.42	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	020_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:47:10-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-4.932	ppb	-83.0	6177162	10	
Be	9	1	6	0.038	ppb	30.6	37	0.5	
B	11	1	6	1.195	ppb	2.0	1477	0.5	>RL
Na	23	1	45	-4.082	ppb	-60.1	229580	25	
Na	23	2	45	-3.635	ppb	-96.7	17131	25	
Mg	24	2	45	0.971	ppb	8.3	180	25	
Al	27	2	45	1.144	ppb	94.5	97	15	
K	39	1	45	-66.309	ppb	-179.0	10038634	50	
K	39	2	45	22.684	ppb	4.6	16139	50	
Ca	40	1	45	-0.023	ppb	-2663.3	48058	50	
Ca	44	2	45	0.965	ppb	406.0	37	25	
Ti	47	2	45	0.122	ppb	173.2	3	0.5	
V	51	2	72	1.160	ppb	18.9	3094	1	>RL
Cr	52	2	72	0.051	ppb	148.1	383	1	
Mn	55	2	72	0.110	ppb	47.7	120	0.5	
Fe	57	2	72	0.999	ppb	141.2	167	25	
Co	59	2	72	0.013	ppb	86.5	63	0.5	
Ni	60	2	72	-0.009	ppb	-769.8	163	1	
Cu	63	2	72	-0.091	ppb	-60.5	1293	1	
Zn	66	2	72	-0.089	ppb	-362.9	203	5	
As	75	2	72	0.087	ppb	135.2	30	1	
Se	78	1	72	0.065	ppb	283.7	53	1	
Sr	88	2	72	-0.027	ppb	-83.5	7	0.5	
Zr	90	2	72	0.636	ppb	109.0	50	1	
Nb	93	2	72	5.241	ppb	8.5	14945	2	>RL
Mo	95	2	115	0.409	ppb	12.9	377	0.5	
Pd	105	2	115	0.028	ppb	194.2	70	1	
Ag	107	2	115	-1.252	ppb	-6.1	1433	1	
Cd	111	2	115	0.010	ppb	345.9	7	0.5	
Sn	120	2	115	0.898	ppb	13.9	937	1	
Sb	121	2	115	0.956	ppb	9.3	787	0.6	>RL
Ba	137	2	115	0.132	ppb	84.0	37	0.5	
W	182	2	165	0.127	ppb	11.3	1253	1	
Pt	195	2	165	0.011	ppb	78.6	50	1	
Tl	205	2	165	0.025	ppb	35.2	420	0.1	
Pb	208	2	165	-0.009	ppb	-128.6	2167	0.5	
Th	232	2	165	0.038	ppb	8.9	1030	1	
U	238	2	165	0.125	ppb	14.3	1774	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1498082	3.82	1454508	103.00	60	120	
Sc (IS)	45	1	HMI H2	28016096	3.57	26285642	106.58	60	120	
Sc (IS)	45	2	HMI He	921192	0.59	903775	101.93	60	120	
Sc (IS)	45	3	No Gas	48349383	0.37	48040283	100.64	60	120	
Ge Internal Standard	72	1	HMI H2	10426842	3.57	9879865	105.54	60	120	
Ge Internal Standard	72	2	HMI He	973454	0.36	957593	101.66	60	120	
In Internal Standard	115	2	HMI He	2944168	0.85	2903780	101.39	60	120	
Ho-165	165	2	HMI He	14135623	0.48	14207049	99.50	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	021LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:50:59-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	3.540	ppb	23.166	6358921	50	7.1	70	130	>+/-30%
Be	9	1	6	1.008	ppb	13.061	517	1	100.8	70	130	
Na	23	2	45	42.665	ppb	9.236	29160	50	85.3	70	130	
Mg	24	2	45	51.492	ppb	2.345	5901	50	103.0	70	130	
Al	27	2	45	31.554	ppb	19.718	967	30	105.2	70	130	
K	39	2	45	116.640	ppb	11.315	21460	100	116.6	70	130	
Ca	44	2	45	43.611	ppb	64.746	163	50	87.2	70	130	
V	51	2	72	5.819	ppb	6.449	7953	5	116.4	70	130	
Cr	52	2	72	1.990	ppb	2.881	3024	2	99.5	70	130	
Mn	55	2	72	0.962	ppb	6.591	553	1	96.2	70	130	
Fe	57	2	72	51.155	ppb	11.150	1407	50	102.3	70	130	
Co	59	2	72	1.042	ppb	3.952	2477	1	104.2	70	130	
Ni	60	2	72	1.666	ppb	9.515	1270	2	83.3	70	130	
Cu	63	2	72	2.036	ppb	3.682	5178	2	101.8	70	130	
Zn	66	2	72	11.348	ppb	3.926	2844	10	113.5	70	130	
As	75	2	72	4.355	ppb	3.920	697	5	87.1	70	130	
Se	78	1	72	4.698	ppb	5.125	1175	5	94.0	70	130	
Sr	88	2	72	1.129	ppb	22.750	603	1	112.9	70	130	
Zr	90	2	72	6.029	ppb	51.490	130	0.5	1205.7	70	130	>+/-30%
Nb	93	2	72	11.404	ppb	6.402	31874	2	570.2	70	130	>+/-30%
Mo	95	2	115	2.163	ppb	7.436	1827	2	108.1	70	130	
Pd	105	2	115	-0.011	ppb	-1.922	20	1	-1.1	70	130	>+/-30%
Ag	107	2	115	3.824	ppb	2.632	15142	5	76.5	70	130	
Cd	111	2	115	0.852	ppb	27.570	300	1	85.2	70	130	
Sn	120	2	115	9.689	ppb	4.470	8993	10	96.9	70	130	
Sb	121	2	115	2.419	ppb	3.197	1957	2	120.9	70	130	
Ba	137	2	115	1.031	ppb	11.293	287	1	103.1	70	130	
W	182	2	165	4.649	ppb	3.134	18604	1	464.9	70	130	>+/-30%
Pt	195	2	165	0.038	ppb	40.627	137	1	3.8	70	130	>+/-30%
Tl	205	2	165	0.970	ppb	3.957	6939	1	97.0	70	130	
Pb	208	2	165	0.931	ppb	2.111	10799	1	93.1	70	130	
Th	232	2	165	2.283	ppb	1.225	25446	2	114.1	70	130	
U	238	2	165	1.001	ppb	1.947	12113	1	100.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1428560	0.68	1454508	98.22	60	120	
Sc (IS)	45	1	HMI H2	26822780	0.98	26285642	102.04	60	120	
Sc (IS)	45	2	HMI He	933381	0.50	903775	103.28	60	120	
Sc (IS)	45	3	No Gas	48637724	0.86	48040283	101.24	60	120	
Ge Internal Standard	72	1	HMI H2	10038370	0.67	9879865	101.60	60	120	
Ge Internal Standard	72	2	HMI He	980273	0.09	957593	102.37	60	120	
In Internal Standard	115	2	HMI He	2934819	1.33	2903780	101.07	60	120	
Ho-165	165	2	HMI He	14297216	1.02	14207049	100.63	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-9-B
Data File Name	022SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:54:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-13.603	ppb	-13.603	-24.17	191804	500000	
Li	7	2	45	-27.098	ppb	-27.098	-12.57	12673	500000	
Li	7	3	45	-12.234	ppb	-12.234	-19.36	6493236	50000	
Be	9	1	6	0.013	ppb	0.013	229.45	23	2000	
B	11	1	6	0.498	ppb	0.498	35.00	1073	2000	
Na	23	1	45	-1.118	ppb	-1.118	-40.46	236604	2000	
Na	23	2	45	-2.026	ppb	-2.026	-193.74	18592	400000	
Mg	24	2	45	2.567	ppb	2.567	26.74	380	400000	
Al	27	2	45	8.532	ppb	8.532	2.55	323	400000	
K	39	1	45	-1157.119	ppb	-1157.119	-2.49	6100594	400000	
K	39	2	45	3.776	ppb	3.776	401.75	16016	400000	
Ca	40	1	45	6.944	ppb	6.944	4.45	83782	400000	
Ca	44	2	45	3.537	ppb	3.537	367.62	47	400000	
Ti	47	2	45	0.224	ppb	0.224	173.21	7	4000	
V	51	2	72	-0.125	ppb	-0.125	-89.45	1847	2000	
Cr	52	2	72	0.488	ppb	0.488	8.03	1017	5000	
Mn	55	2	72	0.126	ppb	0.126	31.98	133	10000	
Fe	57	2	72	3.700	ppb	3.700	48.86	243	400000	
Co	59	2	72	0.011	ppb	0.011	146.29	63	2000	
Ni	60	2	72	-0.015	ppb	-0.015	-377.55	167	5000	
Cu	63	2	72	0.858	ppb	0.858	7.48	3141	5000	
Zn	66	2	72	1.877	ppb	1.877	34.15	683	5000	
As	75	2	72	0.091	ppb	0.091	38.45	32	2000	
Se	78	1	72	-0.043	ppb	-0.043	-130.74	27	2000	
Sr	88	2	72	0.004	ppb	0.004	1144.04	23	4000	
Zr	90	2	72	1.373	ppb	1.373	101.32	63	1000	
Nb	93	2	72	2.502	ppb	2.502	6.48	7846	200	
Mo	95	2	115	0.415	ppb	0.415	11.03	390	2000	
Pd	105	2	115	-0.003	ppb	-0.003	-864.84	30	100	
Ag	107	2	115	-1.406	ppb	-1.406	-3.67	1037	100	
Cd	111	2	115	0.037	ppb	0.037	156.12	17	2000	
Sn	120	2	115	0.573	ppb	0.573	22.61	650	2000	
Sb	121	2	115	0.706	ppb	0.706	14.44	597	1000	
Ba	137	2	115	0.071	ppb	0.071	50.86	20	5000	
W	182	2	165	0.546	ppb	0.546	13.55	2927	100	
Pt	195	2	165	0.005	ppb	0.005	154.45	33	100	
Tl	205	2	165	0.038	ppb	0.038	8.72	520	2000	
Pb	208	2	165	0.206	ppb	0.206	4.33	4231	5000	
Th	232	2	165	0.557	ppb	0.557	6.07	6809	2000	
U	238	2	165	0.097	ppb	0.097	20.14	1490	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1460394	1.12	1454508	100.40	60	120	
Sc (IS)	45	1	HMI H2	27507219	0.45	26285642	104.65	60	120	
Sc (IS)	45	2	HMI He	976128	1.91	903775	108.01	60	120	
Sc (IS)	45	3	No Gas	51862273	1.01	48040283	107.96	60	120	
Ge Internal Standard	72	1	HMI H2	10253031	0.26	9879865	103.78	60	120	
Ge Internal Standard	72	2	HMI He	1015820	1.20	957593	106.08	60	120	
In Internal Standard	115	2	HMI He	3004162	2.09	2903780	103.46	60	120	
Ho-165	165	2	HMI He	14551514	0.66	14207049	102.42	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-10-B
Data File Name	023SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T13:58:38-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-3.746	ppb	-3.746	-145.32	197664	500000	
Li	7	2	45	-19.228	ppb	-19.228	-68.82	12819	500000	
Li	7	3	45	-3.650	ppb	-3.650	-121.58	6555226	50000	
Be	9	1	6	-0.019	ppb	-0.019	-120.14	7	2000	
B	11	1	6	18.882	ppb	18.882	1.34	10461	2000	
Na	23	1	45	39402.629	ppb	39402.629	0.65	146787971	2000	>LDR
Na	23	2	45	38995.061	ppb	38995.061	0.25	10305677	400000	
Mg	24	2	45	6413.875	ppb	6413.875	0.22	751106	400000	
Al	27	2	45	15.221	ppb	15.221	33.18	517	400000	
K	39	1	45	5558.797	ppb	5558.797	1.13	29359584	400000	
K	39	2	45	6799.102	ppb	6799.102	0.78	398025	400000	
Ca	40	1	45	20372.213	ppb	20372.213	0.57	107401488	400000	
Ca	44	2	45	19962.986	ppb	19962.986	2.25	61259	400000	
Ti	47	2	45	1.497	ppb	1.497	57.26	43	4000	
V	51	2	72	0.013	ppb	0.013	95.07	1974	2000	
Cr	52	2	72	0.617	ppb	0.617	30.44	1187	5000	
Mn	55	2	72	42.378	ppb	42.378	3.25	22124	10000	
Fe	57	2	72	392.726	ppb	392.726	3.85	10094	400000	
Co	59	2	72	0.055	ppb	0.055	43.53	167	2000	
Ni	60	2	72	0.214	ppb	0.214	56.58	320	5000	
Cu	63	2	72	0.401	ppb	0.401	32.23	2254	5000	
Zn	66	2	72	5.281	ppb	5.281	2.48	1480	5000	
As	75	2	72	1.465	ppb	1.465	12.14	252	2000	
Se	78	1	72	0.027	ppb	0.027	179.53	44	2000	
Sr	88	2	72	110.560	ppb	110.560	1.21	58499	4000	
Zr	90	2	72	4.263	ppb	4.263	46.39	107	1000	
Nb	93	2	72	1.762	ppb	1.762	3.89	5688	200	
Mo	95	2	115	9.994	ppb	9.994	5.36	8463	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-54.91	13	100	
Ag	107	2	115	-1.346	ppb	-1.346	-5.81	1200	100	
Cd	111	2	115	0.018	ppb	0.018	151.96	10	2000	
Sn	120	2	115	0.409	ppb	0.409	49.37	497	2000	
Sb	121	2	115	0.329	ppb	0.329	8.78	287	1000	
Ba	137	2	115	38.383	ppb	38.383	2.15	10878	5000	
W	182	2	165	0.887	ppb	0.887	2.09	4198	100	
Pt	195	2	165	0.006	ppb	0.006	127.32	37	100	
Tl	205	2	165	-0.005	ppb	-0.005	-88.67	220	2000	
Pb	208	2	165	0.117	ppb	0.117	15.34	3357	5000	
Th	232	2	165	0.266	ppb	0.266	12.69	3537	2000	
U	238	2	165	0.088	ppb	0.088	6.74	1363	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1425814	0.49	1454508	98.03	60	120	
Sc (IS)	45	1	HMI H2	27580458	0.59	26285642	104.93	60	120	
Sc (IS)	45	2	HMI He	965528	0.97	903775	106.83	60	120	
Sc (IS)	45	3	No Gas	51127698	0.26	48040283	106.43	60	120	
Ge Internal Standard	72	1	HMI H2	10228088	0.29	9879865	103.52	60	120	
Ge Internal Standard	72	2	HMI He	1004885	1.23	957593	104.94	60	120	
In Internal Standard	115	2	HMI He	2991741	1.05	2903780	103.03	60	120	
Ho-165	165	2	HMI He	14350824	1.05	14207049	101.01	60	120	

Sample Report

Sample Table

Sample Name	280-115895-A-11-B
Data File Name	024SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:02:25-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434680 6020b
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-6.005	ppb	-6.005	-18.62	197348	500000	
Li	7	2	45	-9.689	ppb	-9.689	-47.26	13403	500000	
Li	7	3	45	-9.478	ppb	-9.478	-48.68	6603461	50000	
Be	9	1	6	0.035	ppb	0.035	33.46	33	2000	
B	11	1	6	20.333	ppb	20.333	3.69	11138	2000	
Na	23	1	45	40082.799	ppb	40082.799	1.19	150005338	2000	>LDR
Na	23	2	45	38929.510	ppb	38929.510	1.38	10469055	400000	
Mg	24	2	45	6380.170	ppb	6380.170	0.68	760258	400000	
Al	27	2	45	12.110	ppb	12.110	24.93	433	400000	
K	39	1	45	5573.159	ppb	5573.159	1.20	29545947	400000	
K	39	2	45	6804.988	ppb	6804.988	2.26	405336	400000	
Ca	40	1	45	20653.739	ppb	20653.739	0.98	109385885	400000	
Ca	44	2	45	20177.159	ppb	20177.159	1.84	63006	400000	
Ti	47	2	45	0.908	ppb	0.908	57.08	27	4000	
V	51	2	72	0.167	ppb	0.167	130.31	2157	2000	
Cr	52	2	72	0.479	ppb	0.479	29.71	1003	5000	
Mn	55	2	72	36.377	ppb	36.377	2.19	19177	10000	
Fe	57	2	72	193.697	ppb	193.697	5.96	5098	400000	
Co	59	2	72	0.288	ppb	0.288	12.56	733	2000	
Ni	60	2	72	0.171	ppb	0.171	32.22	293	5000	
Cu	63	2	72	-0.022	ppb	-0.022	-434.39	1477	5000	
Zn	66	2	72	3.492	ppb	3.492	6.61	1067	5000	
As	75	2	72	1.536	ppb	1.536	5.87	265	2000	
Se	78	1	72	-0.048	ppb	-0.048	-136.23	25	2000	
Sr	88	2	72	107.774	ppb	107.774	1.49	57544	4000	
Zr	90	2	72	3.780	ppb	3.780	70.11	100	1000	
Nb	93	2	72	1.255	ppb	1.255	4.10	4308	200	
Mo	95	2	115	10.596	ppb	10.596	3.34	9003	2000	
Pd	105	2	115	-0.021	ppb	-0.021	-20.74	7	100	
Ag	107	2	115	-1.420	ppb	-1.420	-1.68	997	100	
Cd	111	2	115	0.038	ppb	0.038	157.14	17	2000	
Sn	120	2	115	0.327	ppb	0.327	9.63	420	2000	
Sb	121	2	115	0.373	ppb	0.373	17.46	323	1000	
Ba	137	2	115	35.836	ppb	35.836	1.24	10191	5000	
W	182	2	165	0.908	ppb	0.908	5.54	4298	100	
Pt	195	2	165	-0.003	ppb	-0.003	-114.06	7	100	
Tl	205	2	165	-0.006	ppb	-0.006	-277.82	213	2000	
Pb	208	2	165	0.019	ppb	0.019	57.96	2460	5000	
Th	232	2	165	0.119	ppb	0.119	26.12	1940	2000	
U	238	2	165	0.074	ppb	0.074	22.31	1200	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1417377	0.33	1454508	97.45	60	120	
Sc (IS)	45	1	HMI H2	27708538	0.81	26285642	105.41	60	120	
Sc (IS)	45	2	HMI He	982471	0.66	903775	108.71	60	120	
Sc (IS)	45	3	No Gas	52339096	0.96	48040283	108.95	60	120	
Ge Internal Standard	72	1	HMI H2	10199225	0.28	9879865	103.23	60	120	
Ge Internal Standard	72	2	HMI He	1014043	0.48	957593	105.89	60	120	
In Internal Standard	115	2	HMI He	3001845	0.76	2903780	103.38	60	120	
Ho-165	165	2	HMI He	14410929	0.71	14207049	101.44	60	120	

Sample Report

Sample Table

Sample Name	280-116317-e-4-a@50
Data File Name	025SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:06:13-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435646 6020A Zn
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.548	ppb	-10.548	-19.47	193637	500000	
Li	7	2	45	-8.918	ppb	-8.918	-126.86	13073	500000	
Li	7	3	45	-11.220	ppb	-11.220	-25.79	6282992	50000	
Be	9	1	6	-0.026	ppb	-0.026	-42.03	3	2000	
B	11	1	6	0.646	ppb	0.646	50.19	1163	2000	
Na	23	1	45	945.446	ppb	945.446	1.55	3751075	2000	
Na	23	2	45	888.255	ppb	888.255	2.14	250792	400000	
Mg	24	2	45	55.490	ppb	55.490	4.64	6508	400000	
Al	27	2	45	135.740	ppb	135.740	4.40	4041	400000	
K	39	1	45	325.693	ppb	325.693	6.07	11229666	400000	
K	39	2	45	311.700	ppb	311.700	3.87	32861	400000	
Ca	40	1	45	660.676	ppb	660.676	0.68	3522921	400000	
Ca	44	2	45	627.712	ppb	627.712	11.44	1940	400000	
Ti	47	2	45	4.522	ppb	4.522	53.99	130	4000	
V	51	2	72	1.193	ppb	1.193	15.15	3211	2000	
Cr	52	2	72	0.498	ppb	0.498	40.15	1013	5000	
Mn	55	2	72	21.679	ppb	21.679	1.39	11292	10000	
Fe	57	2	72	334.159	ppb	334.159	3.98	8563	400000	
Co	59	2	72	0.268	ppb	0.268	24.50	673	2000	
Ni	60	2	72	0.226	ppb	0.226	57.72	327	5000	
Cu	63	2	72	2.462	ppb	2.462	5.22	6072	5000	
Zn	66	2	72	232.560	ppb	232.560	1.20	54939	5000	
As	75	2	72	0.193	ppb	0.193	19.12	48	2000	
Se	78	1	72	-0.076	ppb	-0.076	-80.80	19	2000	
Sr	88	2	72	3.300	ppb	3.300	3.19	1757	4000	
Zr	90	2	72	6.507	ppb	6.507	45.75	140	1000	
Nb	93	2	72	0.518	ppb	0.518	3.73	2194	200	
Mo	95	2	115	0.380	ppb	0.380	42.53	357	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-1961.08	33	100	
Ag	107	2	115	-1.324	ppb	-1.324	-7.62	1253	100	
Cd	111	2	115	0.321	ppb	0.321	35.21	117	2000	
Sn	120	2	115	0.212	ppb	0.212	35.49	310	2000	
Sb	121	2	115	0.130	ppb	0.130	13.84	123	1000	
Ba	137	2	115	1.714	ppb	1.714	14.50	483	5000	
W	182	2	165	0.081	ppb	0.081	37.35	1083	100	
Pt	195	2	165	0.015	ppb	0.015	12.17	63	100	
Tl	205	2	165	0.013	ppb	0.013	131.51	337	2000	
Pb	208	2	165	36.666	ppb	36.666	0.38	335688	5000	
Th	232	2	165	0.003	ppb	0.003	331.63	657	2000	
U	238	2	165	0.013	ppb	0.013	85.49	470	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1475791	1.09	1454508	101.46	60	120	
Sc (IS)	45	1	HMI H2	27534316	1.24	26285642	104.75	60	120	
Sc (IS)	45	2	HMI He	956398	1.49	903775	105.82	60	120	
Sc (IS)	45	3	No Gas	50045419	1.35	48040283	104.17	60	120	
Ge Internal Standard	72	1	HMI H2	10366033	1.00	9879865	104.92	60	120	
Ge Internal Standard	72	2	HMI He	999461	0.93	957593	104.37	60	120	
In Internal Standard	115	2	HMI He	2977450	0.46	2903780	102.54	60	120	
Ho-165	165	2	HMI He	14188581	0.45	14207049	99.87	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	026_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:10:00-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	474.701	ppb	2.183	455016	500	94.9	90	110	
Li	7	2	45	482.270	ppb	1.751	30579	500	96.5	90	110	
Li	7	3	45	490.246	ppb	0.876	14868334	500	98.0	90	110	
Be	9	1	6	49.492	ppb	0.544	24551	50	99.0	90	110	
B	11	1	6	50.181	ppb	1.834	26491	50	100.4	90	110	
Na	23	1	45	5035.641	ppb	0.720	18860707	5000	100.7	90	110	
Na	23	2	45	5180.585	ppb	1.055	1356513	5000	103.6	90	110	
Mg	24	2	45	5014.452	ppb	1.411	574922	5000	100.3	90	110	
Al	27	2	45	4992.543	ppb	0.468	144588	5000	99.9	90	110	
K	39	1	45	5036.302	ppb	1.058	27392720	5000	100.7	90	110	
K	39	2	45	5079.208	ppb	1.033	295004	5000	101.6	90	110	
Ca	40	1	45	5036.944	ppb	0.786	26436195	5000	100.7	90	110	
Ca	44	2	45	5004.297	ppb	2.920	15065	5000	100.1	90	110	
Ti	47	2	45	42.404	ppb	21.519	1197	50	84.8	90	110	>+\-10%
V	51	2	72	51.104	ppb	1.930	55242	50	102.2	90	110	
Cr	52	2	72	50.516	ppb	0.860	69366	50	101.0	90	110	
Mn	55	2	72	51.726	ppb	0.969	26468	50	103.5	90	110	
Fe	57	2	72	5036.690	ppb	0.515	125195	5000	100.7	90	110	
Co	59	2	72	50.512	ppb	0.673	119038	50	101.0	90	110	
Ni	60	2	72	50.924	ppb	1.945	33958	50	101.8	90	110	
Cu	63	2	72	49.677	ppb	1.221	92453	50	99.4	90	110	
Zn	66	2	72	52.363	ppb	4.401	12369	50	104.7	90	110	
As	75	2	72	50.805	ppb	1.112	7990	50	101.6	90	110	
Se	78	1	72	49.069	ppb	4.319	12119	50	98.1	90	110	
Sr	88	2	72	48.193	ppb	1.677	25013	50	96.4	90	110	
Zr	90	2	72	39.237	ppb	12.727	623	50	78.5	90	110	>+\-10%
Nb	93	2	72	85.016	ppb	1.333	234036	100	85.0	90	110	>+\-10%
Mo	95	2	115	49.469	ppb	2.581	40640	50	98.9	90	110	
Pd	105	2	115	52.287	ppb	0.597	66096	50	104.6	90	110	
Ag	107	2	115	47.392	ppb	1.428	131806	50	94.8	90	110	
Cd	111	2	115	48.499	ppb	2.339	16724	50	97.0	90	110	
Sn	120	2	115	48.815	ppb	0.088	44502	50	97.6	90	110	
Sb	121	2	115	47.702	ppb	0.995	37993	50	95.4	90	110	
Ba	137	2	115	47.679	ppb	2.960	13150	50	95.4	90	110	
W	182	2	165	49.077	ppb	1.479	185687	50	98.2	90	110	
Pt	195	2	165	50.173	ppb	1.563	155651	50	100.3	90	110	
Tl	205	2	165	49.408	ppb	0.726	334956	50	98.8	90	110	
Pb	208	2	165	48.774	ppb	1.181	441511	50	97.5	90	110	
Th	232	2	165	48.254	ppb	0.786	516274	50	96.5	90	110	
U	238	2	165	48.555	ppb	0.706	562596	50	97.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1426421	1.67	1454508	98.07	60	120	
Sc (IS)	45	1	HMI H2	27422207	1.13	26285642	104.32	60	120	
Sc (IS)	45	2	HMI He	945364	1.14	903775	104.60	60	120	
Sc (IS)	45	3	No Gas	49270153	0.79	48040283	102.56	60	120	
Ge Internal Standard	72	1	HMI H2	10202318	0.65	9879865	103.26	60	120	
Ge Internal Standard	72	2	HMI He	985259	0.47	957593	102.89	60	120	
In Internal Standard	115	2	HMI He	2912170	1.25	2903780	100.29	60	120	
Ho-165	165	2	HMI He	14052907	0.91	14207049	98.92	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	027_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:13:48-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-4.902	ppb	-37.3	6335962	10	
Be	9	1	6	-0.013	ppb	-149.9	10	0.5	
B	11	1	6	1.345	ppb	43.5	1520	0.5	>RL
Na	23	1	45	2.819	ppb	31.0	249405	25	
Na	23	2	45	2.206	ppb	149.7	19063	25	
Mg	24	2	45	1.047	ppb	22.9	193	25	
Al	27	2	45	1.746	ppb	90.0	117	15	
K	39	1	45	60.375	ppb	36.5	10229270	50	>RL
K	39	2	45	30.955	ppb	46.8	16997	50	
Ca	40	1	45	-0.055	ppb	-424.2	46659	50	
Ca	44	2	45	-0.443	ppb	-1562.2	33	25	
Ti	47	2	45	0.118	ppb	173.2	3	0.5	
V	51	2	72	1.991	ppb	17.1	4007	1	>RL
Cr	52	2	72	0.037	ppb	32.8	370	1	
Mn	55	2	72	-0.023	ppb	-51.9	53	0.5	
Fe	57	2	72	-0.842	ppb	-317.4	123	25	
Co	59	2	72	-0.002	ppb	-427.1	30	0.5	
Ni	60	2	72	-0.093	ppb	-43.3	110	1	
Cu	63	2	72	-0.199	ppb	-6.4	1113	1	
Zn	66	2	72	0.303	ppb	159.0	297	5	
As	75	2	72	0.125	ppb	47.8	37	1	
Se	78	1	72	-0.059	ppb	-63.0	23	1	
Sr	88	2	72	-0.008	ppb	-273.0	17	0.5	
Zr	90	2	72	-0.314	ppb	-321.5	37	1	
Nb	93	2	72	6.454	ppb	7.4	18500	2	>RL
Mo	95	2	115	0.192	ppb	43.9	197	0.5	
Pd	105	2	115	0.026	ppb	77.0	67	1	
Ag	107	2	115	-1.390	ppb	-1.0	1057	1	
Cd	111	2	115	0.029	ppb	115.6	13	0.5	
Sn	120	2	115	0.210	ppb	38.6	303	1	
Sb	121	2	115	0.498	ppb	4.2	417	0.6	
Ba	137	2	115	0.048	ppb	173.2	13	0.5	
W	182	2	165	0.151	ppb	13.6	1337	1	
Pt	195	2	165	0.000	ppb	4736.5	17	1	
Tl	205	2	165	0.000	ppb	-24823.8	247	0.1	
Pb	208	2	165	-0.038	ppb	-54.2	1890	0.5	
Th	232	2	165	0.022	ppb	8.4	857	1	
U	238	2	165	0.031	ppb	29.7	670	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1463158	0.98	1454508	100.59	60	120	
Sc (IS)	45	1	HMI H2	27310100	0.45	26285642	103.90	60	120	
Sc (IS)	45	2	HMI He	944380	0.83	903775	104.49	60	120	
Sc (IS)	45	3	No Gas	49587186	0.42	48040283	103.22	60	120	
Ge Internal Standard	72	1	HMI H2	10240964	0.19	9879865	103.65	60	120	
Ge Internal Standard	72	2	HMI He	987340	1.03	957593	103.11	60	120	
In Internal Standard	115	2	HMI He	2936477	0.63	2903780	101.13	60	120	
Ho-165	165	2	HMI He	14031466	0.13	14207049	98.76	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	028LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:17:36-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	4.848	ppb	182.248	6728882	50	9.7	70	130	>+/-30%
Be	9	1	6	1.005	ppb	18.364	530	1	100.5	70	130	
Na	23	2	45	48.055	ppb	4.257	31164	50	96.1	70	130	
Mg	24	2	45	51.674	ppb	4.093	6042	50	103.3	70	130	
Al	27	2	45	34.629	ppb	4.239	1077	30	115.4	70	130	
K	39	2	45	124.824	ppb	12.106	22355	100	124.8	70	130	
Ca	44	2	45	51.315	ppb	34.323	190	50	102.6	70	130	
V	51	2	72	6.597	ppb	6.167	8860	5	131.9	70	130	>+/-30%
Cr	52	2	72	1.995	ppb	4.072	3064	2	99.7	70	130	
Mn	55	2	72	0.962	ppb	14.754	560	1	96.2	70	130	
Fe	57	2	72	57.618	ppb	9.966	1584	50	115.2	70	130	
Co	59	2	72	1.027	ppb	4.510	2470	1	102.7	70	130	
Ni	60	2	72	1.814	ppb	3.889	1383	2	90.7	70	130	
Cu	63	2	72	1.709	ppb	7.214	4631	2	85.4	70	130	
Zn	66	2	72	11.618	ppb	9.715	2937	10	116.2	70	130	
As	75	2	72	4.904	ppb	5.671	792	5	98.1	70	130	
Se	78	1	72	4.927	ppb	3.956	1264	5	98.5	70	130	
Sr	88	2	72	1.072	ppb	26.230	580	1	107.2	70	130	
Zr	90	2	72	5.921	ppb	70.287	130	0.5	1184.2	70	130	>+/-30%
Nb	93	2	72	12.105	ppb	3.180	34176	2	605.3	70	130	>+/-30%
Mo	95	2	115	1.798	ppb	12.896	1530	2	89.9	70	130	
Pd	105	2	115	0.007	ppb	123.301	43	1	0.7	70	130	>+/-30%
Ag	107	2	115	3.529	ppb	6.296	14405	5	70.6	70	130	
Cd	111	2	115	1.192	ppb	29.780	420	1	119.2	70	130	
Sn	120	2	115	9.219	ppb	7.868	8593	10	92.2	70	130	
Sb	121	2	115	2.043	ppb	3.138	1664	2	102.2	70	130	
Ba	137	2	115	1.088	ppb	28.933	303	1	108.8	70	130	
W	182	2	165	4.807	ppb	0.665	18811	1	480.7	70	130	>+/-30%
Pt	195	2	165	0.031	ppb	32.142	113	1	3.1	70	130	>+/-30%
Tl	205	2	165	0.900	ppb	10.958	6329	1	90.0	70	130	
Pb	208	2	165	0.931	ppb	8.181	10576	1	93.1	70	130	
Th	232	2	165	1.944	ppb	2.870	21312	2	97.2	70	130	
U	238	2	165	0.969	ppb	1.367	11499	1	96.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1471293	0.98	1454508	101.15	60	120	
Sc (IS)	45	1	HMI H2	27402197	0.10	26285642	104.25	60	120	
Sc (IS)	45	2	HMI He	952450	0.89	903775	105.39	60	120	
Sc (IS)	45	3	No Gas	51290736	0.53	48040283	106.77	60	120	
Ge Internal Standard	72	1	HMI H2	10316752	0.74	9879865	104.42	60	120	
Ge Internal Standard	72	2	HMI He	991295	1.20	957593	103.52	60	120	
In Internal Standard	115	2	HMI He	2947689	1.07	2903780	101.51	60	120	
Ho-165	165	2	HMI He	14003313	0.90	14207049	98.57	60	120	

Blank Report

Sample Table

Sample Name	MB 280-434124/1-A
Data File Name	029_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:21:23-07:00
Sample Type	Blank
Dilution	1
Comment	434124 6020b
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-15.186	ppb	-33.22137324	196679	0.5
Li	7	2	45	-4.608	ppb	-128.4694944	13680	0.5
Li	7	3	45	-13.173	ppb	-17.37127742	6776983	10
Be	9	1	6	-0.001	ppb	-6393.86539	17	0.5
B	11	1	6	0.410	ppb	65.45439988	1047	0.5
Na	23	1	45	-4.014	ppb	-23.32182799	232641	25
Na	23	2	45	-5.259	ppb	-11.10552043	17948	25
Mg	24	2	45	1.779	ppb	16.17301778	290	25
Al	27	2	45	2.197	ppb	150.5595775	137	15
K	39	1	45	-1233.453	ppb	-1.870282272	6012503	50
K	39	2	45	31.654	ppb	27.48600089	17841	50
Ca	40	1	45	6.551	ppb	5.071933173	84161	50
Ca	44	2	45	0.188	ppb	5005.928388	37	25
Ti	47	2	45	0.113	ppb	173.2050808	3	0.5
V	51	2	72	0.319	ppb	9.86125861	2350	1
Cr	52	2	72	0.178	ppb	15.25710101	587	1
Mn	55	2	72	0.130	ppb	127.4132554	137	0.5
Fe	57	2	72	1.288	ppb	164.9707142	183	25
Co	59	2	72	-0.004	ppb	-319.070538	27	0.5
Ni	60	2	72	-0.070	ppb	-116.0472057	130	1
Cu	63	2	72	0.134	ppb	0.336720782	1794	1
Zn	66	2	72	1.862	ppb	11.40943711	687	5
As	75	2	72	0.077	ppb	65.833515	30	1
Se	78	1	72	-0.062	ppb	-63.92559781	23	1
Sr	88	2	72	-0.009	ppb	-410.122007	17	0.5
Zr	90	2	72	-0.410	ppb	-176.5221837	37	1
Nb	93	2	72	1.771	ppb	14.25529186	5845	2
Mo	95	2	115	0.046	ppb	83.96139266	77	0.5
Pd	105	2	115	-0.016	ppb	-53.05336818	13	1
Ag	107	2	115	-1.448	ppb	-2.502362813	917	1
Cd	111	2	115	0.000	ppb	-3871.598513	3	0.5
Sn	120	2	115	0.141	ppb	77.49890352	247	1
Sb	121	2	115	0.183	ppb	22.24329362	167	0.6
Ba	137	2	115	0.176	ppb	33.51561138	50	0.5
W	182	2	165	0.258	ppb	24.24234739	1764	1
Pt	195	2	165	0.001	ppb	588.3120218	20	1
Tl	205	2	165	-0.002	ppb	-165.0470883	240	0.1
Pb	208	2	165	-0.036	ppb	-47.06278843	1933	0.5
Th	232	2	165	0.041	ppb	6.332923335	1070	1
U	238	2	165	-0.009	ppb	-89.39959368	213	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1487586	0.79	1454508	102.27	60	120	
Sc (IS)	45	1	HMI H2	28335592	1.26	26285642	107.80	60	120	
Sc (IS)	45	2	HMI He	988875	1.48	903775	109.42	60	120	
Sc (IS)	45	3	No Gas	54273403	0.25	48040283	112.97	60	120	
Ge Internal Standard	72	1	HMI H2	10505808	0.75	9879865	106.34	60	120	
Ge Internal Standard	72	2	HMI He	1027459	0.83	957593	107.30	60	120	
In Internal Standard	115	2	HMI He	2993615	2.75	2903780	103.09	60	120	
Ho-165	165	2	HMI He	14245923	0.75	14207049	100.27	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-434124/2-A
Data File Name	030_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:25:12-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	434124 6020b
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	65.388	65.388	ppb	4.018	240900	400	16.3	80	120	>+/-20%
Li	7	2	45	82.086	82.086	ppb	8.633	17084	400	20.5	80	120	>+/-20%
Li	7	3	45	65.339	65.339	ppb	6.269	8361445	400	16.3	80	120	>+/-20%
Be	9	1	6	37.861	37.861	ppb	2.922	19407	40	94.7	80	120	
Na	23	2	45	-6.717	-6.717	ppb	-47.475	17704	40	-16.8	80	120	>+/-20%
Mg	24	2	45	1.925	1.925	ppb	17.679	310	40	4.8	80	120	>+/-20%
Al	27	2	45	411.129	411.129	ppb	3.182	12619	40	1027.8	80	120	>+/-20%
K	39	2	45	13.181	13.181	ppb	165.899	16907	40	33.0	80	120	>+/-20%
Ca	44	2	45	196.147	196.147	ppb	28.276	657	40	490.4	80	120	>+/-20%
V	51	2	72	40.540	40.540	ppb	1.776	46144	40	101.3	80	120	
Cr	52	2	72	41.339	41.339	ppb	1.466	59291	40	103.3	80	120	
Mn	55	2	72	42.774	42.774	ppb	3.015	22849	40	106.9	80	120	
Fe	57	2	72	437.724	437.724	ppb	3.809	11488	40	1094.3	80	120	>+/-20%
Co	59	2	72	41.254	41.254	ppb	3.039	101444	40	103.1	80	120	
Ni	60	2	72	41.548	41.548	ppb	1.937	28943	40	103.9	80	120	
Cu	63	2	72	40.935	40.935	ppb	1.277	79777	40	102.3	80	120	
Zn	66	2	72	40.847	40.847	ppb	6.502	10124	40	102.1	80	120	
As	75	2	72	37.495	37.495	ppb	1.135	6158	40	93.7	80	120	
Se	78	1	72	37.600	37.600	ppb	3.919	9595	40	94.0	80	120	
Nb	93	2	72	1.511	1.511	ppb	10.925	5105	40	3.8	80	120	>+/-20%
Mo	95	2	115	39.303	39.303	ppb	1.796	33411	40	98.3	80	120	
Pd	105	2	115	-0.006	-0.006	ppb	-146.406	27	40	0.0	80	120	>+/-20%
Ag	107	2	115	40.605	40.605	ppb	2.243	117531	40	101.5	80	120	
Cd	111	2	115	38.347	38.347	ppb	2.595	13681	40	95.9	80	120	
Sn	120	2	115	38.806	38.806	ppb	1.269	36619	40	97.0	80	120	
Sb	121	2	115	38.159	38.159	ppb	1.130	31443	40	95.4	80	120	
Ba	137	2	115	39.726	39.726	ppb	4.497	11335	40	99.3	80	120	
W	182	2	165	36.810	36.810	ppb	1.999	142154	40	92.0	80	120	
Pt	195	2	165	0.005	0.005	ppb	138.908	33	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.655	39.655	ppb	0.987	274104	40	99.1	80	120	
Pb	208	2	165	39.353	39.353	ppb	0.454	363581	40	98.4	80	120	
Th	232	2	165	37.591	37.591	ppb	0.392	410116	40	94.0	80	120	
U	238	2	165	38.224	38.224	ppb	1.024	451530	40	95.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1473900	0.72	1454508	101.33	60	120	
Sc (IS)	45	1	HMI H2	28244171	0.15	26285642	107.45	60	120	
Sc (IS)	45	2	HMI He	997032	1.17	903775	110.32	60	120	
Sc (IS)	45	3	No Gas	54845013	0.44	48040283	114.16	60	120	
Ge Internal Standard	72	1	HMI H2	10535346	1.01	9879865	106.63	60	120	
Ge Internal Standard	72	2	HMI He	1028185	1.01	957593	107.37	60	120	
In Internal Standard	115	2	HMI He	3012644	0.77	2903780	103.75	60	120	
Ho-165	165	2	HMI He	14324953	0.42	14207049	100.83	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-1-A
Data File Name	031SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:28:59-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-5.415	ppb	-5.415	-73.07	197430	500000	
Li	7	2	45	0.396	ppb	0.396	2798.57	13463	500000	
Li	7	3	45	-0.184	ppb	-0.184	-1901.12	6855034	50000	
Be	9	1	6	-0.007	ppb	-0.007	-452.18	13	2000	
B	11	1	6	23.501	ppb	23.501	1.54	12980	2000	
Na	23	1	45	77506.978	ppb	77506.978	1.25	289485736	2000	>LDR
Na	23	2	45	78377.813	ppb	78377.813	0.60	20573782	400000	
Mg	24	2	45	12891.051	ppb	12891.051	0.60	1500700	400000	
Al	27	2	45	15.542	ppb	15.542	16.55	523	400000	
K	39	1	45	23490.923	ppb	23490.923	0.56	91736262	400000	
K	39	2	45	26089.119	ppb	26089.119	0.39	1474237	400000	
Ca	40	1	45	40053.869	ppb	40053.869	0.98	211840470	400000	
Ca	44	2	45	39626.563	ppb	39626.563	0.28	120851	400000	
Ti	47	2	45	1.962	ppb	1.962	87.88	57	4000	
V	51	2	72	21.352	ppb	21.352	2.42	24391	2000	
Cr	52	2	72	2.638	ppb	2.638	3.46	3954	5000	
Mn	55	2	72	5.113	ppb	5.113	12.27	2697	10000	
Fe	57	2	72	17.398	ppb	17.398	20.87	580	400000	
Co	59	2	72	0.165	ppb	0.165	45.02	427	2000	
Ni	60	2	72	0.913	ppb	0.913	25.20	783	5000	
Cu	63	2	72	1.781	ppb	1.781	11.66	4774	5000	
Zn	66	2	72	5.953	ppb	5.953	7.03	1620	5000	
As	75	2	72	18.720	ppb	18.720	1.55	2978	2000	
Se	78	1	72	2.583	ppb	2.583	17.86	673	2000	
Sr	88	2	72	179.054	ppb	179.054	2.07	93618	4000	
Zr	90	2	72	126.447	ppb	126.447	4.59	1934	1000	
Nb	93	2	72	1.177	ppb	1.177	4.69	4004	200	
Mo	95	2	115	7.739	ppb	7.739	0.63	6378	2000	
Pd	105	2	115	-0.011	ppb	-0.011	-1.66	20	100	
Ag	107	2	115	-1.463	ppb	-1.463	-1.14	850	100	
Cd	111	2	115	0.049	ppb	0.049	60.83	20	2000	
Sn	120	2	115	0.374	ppb	0.374	26.48	450	2000	
Sb	121	2	115	1.157	ppb	1.157	11.29	937	1000	
Ba	137	2	115	27.285	ppb	27.285	2.30	7516	5000	
W	182	2	165	1.280	ppb	1.280	4.12	5551	100	
Pt	195	2	165	0.000	ppb	0.000	3783.33	17	100	
Tl	205	2	165	0.015	ppb	0.015	100.82	343	2000	
Pb	208	2	165	-0.043	ppb	-0.043	-35.38	1833	5000	
Th	232	2	165	0.137	ppb	0.137	9.77	2064	2000	
U	238	2	165	9.835	ppb	9.835	1.13	113402	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1443067	1.88	1454508	99.21	60	120	
Sc (IS)	45	1	HMI H2	27675959	1.07	26285642	105.29	60	120	
Sc (IS)	45	2	HMI He	959845	1.21	903775	106.20	60	120	
Sc (IS)	45	3	No Gas	52959854	0.71	48040283	110.24	60	120	
Ge Internal Standard	72	1	HMI H2	10204474	0.82	9879865	103.29	60	120	
Ge Internal Standard	72	2	HMI He	992950	1.22	957593	103.69	60	120	
In Internal Standard	115	2	HMI He	2907232	1.13	2903780	100.12	60	120	
Ho-165	165	2	HMI He	13953333	0.55	14207049	98.21	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-2-A
Data File Name	032SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:32:45-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-4.780	ppb	-4.780	-40.21	199144	500000	
Li	7	2	45	-7.561	ppb	-7.561	-308.70	13407	500000	
Li	7	3	45	-0.758	ppb	-0.758	-397.12	6802037	50000	
Be	9	1	6	0.073	ppb	0.073	41.06	53	2000	
B	11	1	6	21.866	ppb	21.866	9.04	12129	2000	
Na	23	1	45	76849.324	ppb	76849.324	0.94	289032762	2000	>LDR
Na	23	2	45	76371.112	ppb	76371.112	0.47	20399316	400000	
Mg	24	2	45	13296.117	ppb	13296.117	0.64	1575054	400000	
Al	27	2	45	1390.009	ppb	1390.009	2.81	41647	400000	
K	39	1	45	24115.681	ppb	24115.681	1.03	94551985	400000	
K	39	2	45	26828.453	ppb	26828.453	0.74	1542281	400000	
Ca	40	1	45	42520.538	ppb	42520.538	0.21	226437283	400000	
Ca	44	2	45	41734.181	ppb	41734.181	2.24	129530	400000	
Ti	47	2	45	93.168	ppb	93.168	6.73	2720	4000	
V	51	2	72	24.099	ppb	24.099	1.98	27343	2000	
Cr	52	2	72	8.051	ppb	8.051	1.96	11438	5000	
Mn	55	2	72	54.471	ppb	54.471	2.14	28155	10000	
Fe	57	2	72	1602.300	ppb	1602.300	2.70	40317	400000	
Co	59	2	72	1.215	ppb	1.215	9.06	2924	2000	
Ni	60	2	72	4.968	ppb	4.968	9.06	3501	5000	
Cu	63	2	72	13.970	ppb	13.970	2.77	27330	5000	
Zn	66	2	72	24.313	ppb	24.313	6.91	5922	5000	
As	75	2	72	19.105	ppb	19.105	2.60	3045	2000	
Se	78	1	72	2.832	ppb	2.832	5.47	733	2000	
Sr	88	2	72	213.256	ppb	213.256	0.94	111736	4000	
Zr	90	2	72	1512.590	ppb	1512.590	2.38	22712	1000	
Nb	93	2	72	1.080	ppb	1.080	15.92	3744	200	
Mo	95	2	115	8.123	ppb	8.123	4.77	6575	2000	
Pd	105	2	115	0.008	ppb	0.008	244.93	43	100	
Ag	107	2	115	-0.051	ppb	-0.051	-248.44	4548	100	
Cd	111	2	115	0.169	ppb	0.169	36.90	60	2000	
Sn	120	2	115	0.481	ppb	0.481	5.41	537	2000	
Sb	121	2	115	1.717	ppb	1.717	16.88	1357	1000	
Ba	137	2	115	94.438	ppb	94.438	3.42	25525	5000	
W	182	2	165	1.714	ppb	1.714	6.07	7099	100	
Pt	195	2	165	0.000	ppb	0.000	4211.51	17	100	
Tl	205	2	165	0.020	ppb	0.020	78.67	373	2000	
Pb	208	2	165	0.981	ppb	0.981	1.48	10869	5000	
Th	232	2	165	0.411	ppb	0.411	2.83	4926	2000	
U	238	2	165	20.607	ppb	20.607	1.84	234630	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1442131	0.67	1454508	99.15	60	120	
Sc (IS)	45	1	HMI H2	27866385	0.51	26285642	106.01	60	120	
Sc (IS)	45	2	HMI He	976733	0.57	903775	108.07	60	120	
Sc (IS)	45	3	No Gas	52634181	0.20	48040283	109.56	60	120	
Ge Internal Standard	72	1	HMI H2	10192279	1.06	9879865	103.16	60	120	
Ge Internal Standard	72	2	HMI He	995171	1.33	957593	103.92	60	120	
In Internal Standard	115	2	HMI He	2854254	1.84	2903780	98.29	60	120	
Ho-165	165	2	HMI He	13800012	0.88	14207049	97.13	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-2-Asd@5
Data File Name	033SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:36:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-7.604	ppb	-7.604	-54.33	197444	500000	
Li	7	2	45	1.985	ppb	1.985	714.47	13313	500000	
Li	7	3	45	2.947	ppb	2.947	91.65	6701560	50000	
Be	9	1	6	0.013	ppb	0.013	233.71	23	2000	
B	11	1	6	4.458	ppb	4.458	9.02	3171	2000	
Na	23	1	45	15441.462	ppb	15441.462	0.58	58226201	2000	>LDR
Na	23	2	45	15476.116	ppb	15476.116	1.04	4014780	400000	
Mg	24	2	45	2549.850	ppb	2549.850	1.19	292338	400000	
Al	27	2	45	281.433	ppb	281.433	4.16	8213	400000	
K	39	1	45	4732.201	ppb	4732.201	0.56	26754166	400000	
K	39	2	45	5078.252	ppb	5078.252	0.99	294903	400000	
Ca	40	1	45	8407.179	ppb	8407.179	0.95	44775454	400000	
Ca	44	2	45	8104.098	ppb	8104.098	1.20	24368	400000	
Ti	47	2	45	19.341	ppb	19.341	6.58	547	4000	
V	51	2	72	5.910	ppb	5.910	10.54	8049	2000	
Cr	52	2	72	1.494	ppb	1.494	5.45	2350	5000	
Mn	55	2	72	10.518	ppb	10.518	5.69	5408	10000	
Fe	57	2	72	302.866	ppb	302.866	1.52	7626	400000	
Co	59	2	72	0.221	ppb	0.221	16.23	553	2000	
Ni	60	2	72	0.822	ppb	0.822	15.64	713	5000	
Cu	63	2	72	2.709	ppb	2.709	9.33	6402	5000	
Zn	66	2	72	6.632	ppb	6.632	17.22	1757	5000	
As	75	2	72	3.702	ppb	3.702	7.24	595	2000	
Se	78	1	72	0.518	ppb	0.518	23.38	168	2000	
Sr	88	2	72	41.067	ppb	41.067	1.43	21213	4000	
Zr	90	2	72	302.738	ppb	302.738	6.09	4511	1000	
Nb	93	2	72	0.454	ppb	0.454	18.29	1977	200	
Mo	95	2	115	1.814	ppb	1.814	21.02	1497	2000	
Pd	105	2	115	-0.002	ppb	-0.002	-333.58	30	100	
Ag	107	2	115	-1.204	ppb	-1.204	-2.40	1517	100	
Cd	111	2	115	0.010	ppb	0.010	337.71	7	2000	
Sn	120	2	115	0.166	ppb	0.166	21.24	257	2000	
Sb	121	2	115	0.329	ppb	0.329	13.65	273	1000	
Ba	137	2	115	18.705	ppb	18.705	12.84	5065	5000	
W	182	2	165	0.339	ppb	0.339	10.91	1990	100	
Pt	195	2	165	0.062	ppb	0.062	3.31	203	100	
Tl	205	2	165	-0.013	ppb	-0.013	-92.25	153	2000	
Pb	208	2	165	0.128	ppb	0.128	26.18	3290	5000	
Th	232	2	165	0.051	ppb	0.051	22.11	1133	2000	
U	238	2	165	4.133	ppb	4.133	0.81	46843	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1469620	1.21	1454508	101.04	60	120	
Sc (IS)	45	1	HMI H2	27845665	0.46	26285642	105.93	60	120	
Sc (IS)	45	2	HMI He	945184	1.16	903775	104.58	60	120	
Sc (IS)	45	3	No Gas	51343898	1.64	48040283	106.88	60	120	
Ge Internal Standard	72	1	HMI H2	10400406	0.25	9879865	105.27	60	120	
Ge Internal Standard	72	2	HMI He	980383	0.55	957593	102.38	60	120	
In Internal Standard	115	2	HMI He	2858055	0.54	2903780	98.43	60	120	
Ho-165	165	2	HMI He	13663589	0.23	14207049	96.17	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-2-B MS
Data File Name	034SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:45:29-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	69.916	ppb	69.916	2.74	236864	500000	
Li	7	2	45	64.300	ppb	64.300	35.04	16109	500000	
Li	7	3	45	80.463	ppb	80.463	4.84	8104361	50000	
Be	9	1	6	38.259	ppb	38.259	2.17	19096	2000	
B	11	1	6	49.619	ppb	49.619	1.91	26367	2000	
Na	23	1	45	74372.074	ppb	74372.074	1.05	275874643	2000	>LDR
Na	23	2	45	73470.804	ppb	73470.804	0.11	19667391	400000	
Mg	24	2	45	12941.304	ppb	12941.304	0.38	1536292	400000	
Al	27	2	45	1700.768	ppb	1700.768	2.45	51053	400000	
K	39	1	45	23141.016	ppb	23141.016	1.48	89892092	400000	
K	39	2	45	25776.888	ppb	25776.888	0.35	1485556	400000	
Ca	40	1	45	41153.742	ppb	41153.742	1.11	216146823	400000	
Ca	44	2	45	40271.784	ppb	40271.784	2.06	125258	400000	
Ti	47	2	45	87.420	ppb	87.420	11.28	2560	4000	
V	51	2	72	64.205	ppb	64.205	2.67	69513	2000	
Cr	52	2	72	47.733	ppb	47.733	1.86	66138	5000	
Mn	55	2	72	92.047	ppb	92.047	0.19	47469	10000	
Fe	57	2	72	1880.490	ppb	1880.490	3.47	47251	400000	
Co	59	2	72	41.568	ppb	41.568	1.56	98829	2000	
Ni	60	2	72	44.424	ppb	44.424	0.92	29912	5000	
Cu	63	2	72	52.801	ppb	52.801	0.13	99044	5000	
Zn	66	2	72	63.215	ppb	63.215	5.25	15025	5000	
As	75	2	72	54.884	ppb	54.884	0.93	8707	2000	
Se	78	1	72	38.798	ppb	38.798	1.77	9467	2000	
Sr	88	2	72	246.171	ppb	246.171	0.76	128821	4000	
Zr	90	2	72	3703.638	ppb	3703.638	2.13	55489	1000	
Nb	93	2	72	0.765	ppb	0.765	10.02	2867	200	
Mo	95	2	115	45.685	ppb	45.685	2.14	38109	2000	
Pd	105	2	115	-0.011	ppb	-0.011	-69.64	20	100	
Ag	107	2	115	38.851	ppb	38.851	0.56	110602	100	
Cd	111	2	115	38.792	ppb	38.792	0.83	13584	2000	
Sn	120	2	115	33.518	ppb	33.518	0.53	31063	2000	
Sb	121	2	115	38.153	ppb	38.153	1.30	30862	1000	
Ba	137	2	115	130.499	ppb	130.499	0.94	36557	5000	
W	182	2	165	37.339	ppb	37.339	0.89	138964	100	
Pt	195	2	165	0.001	ppb	0.001	260.49	20	100	
Tl	205	2	165	38.161	ppb	38.161	0.67	254228	2000	
Pb	208	2	165	39.305	ppb	39.305	0.73	349981	5000	
Th	232	2	165	37.560	ppb	37.560	1.02	394927	2000	
U	238	2	165	57.978	ppb	57.978	0.80	659902	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1435054	1.01	1454508	98.66	60	120	
Sc (IS)	45	1	HMI H2	27483784	0.37	26285642	104.56	60	120	
Sc (IS)	45	2	HMI He	978801	1.11	903775	108.30	60	120	
Sc (IS)	45	3	No Gas	51369671	0.89	48040283	106.93	60	120	
Ge Internal Standard	72	1	HMI H2	10072712	0.38	9879865	101.95	60	120	
Ge Internal Standard	72	2	HMI He	994008	1.17	957593	103.80	60	120	
In Internal Standard	115	2	HMI He	2956994	1.68	2903780	101.83	60	120	
Ho-165	165	2	HMI He	13805935	0.81	14207049	97.18	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-2-C MSD
Data File Name	035SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:49:14-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	72.337	ppb	72.337	5.55	237991	500000	
Li	7	2	45	91.334	ppb	91.334	13.48	16580	500000	
Li	7	3	45	79.635	ppb	79.635	0.76	8255478	50000	
Be	9	1	6	37.176	ppb	37.176	3.40	18265	2000	
B	11	1	6	53.349	ppb	53.349	4.20	27844	2000	
Na	23	1	45	76273.756	ppb	76273.756	0.67	282707822	2000	>LDR
Na	23	2	45	76097.147	ppb	76097.147	0.31	19734115	400000	
Mg	24	2	45	13407.420	ppb	13407.420	1.14	1541972	400000	
Al	27	2	45	1718.306	ppb	1718.306	1.87	49962	400000	
K	39	1	45	23860.778	ppb	23860.778	0.89	92305009	400000	
K	39	2	45	26682.609	ppb	26682.609	0.91	1489233	400000	
Ca	40	1	45	42327.614	ppb	42327.614	0.36	222143803	400000	
Ca	44	2	45	41901.985	ppb	41901.985	2.53	126253	400000	
Ti	47	2	45	99.690	ppb	99.690	11.61	2827	4000	
V	51	2	72	64.615	ppb	64.615	1.14	68602	2000	
Cr	52	2	72	46.733	ppb	46.733	1.65	63506	5000	
Mn	55	2	72	92.663	ppb	92.663	1.83	46856	10000	
Fe	57	2	72	1913.657	ppb	1913.657	1.78	47144	400000	
Co	59	2	72	41.073	ppb	41.073	1.43	95768	2000	
Ni	60	2	72	44.717	ppb	44.717	3.66	29518	5000	
Cu	63	2	72	53.623	ppb	53.623	0.30	98612	5000	
Zn	66	2	72	62.175	ppb	62.175	3.34	14491	5000	
As	75	2	72	55.119	ppb	55.119	3.32	8575	2000	
Se	78	1	72	39.725	ppb	39.725	2.00	9662	2000	
Sr	88	2	72	251.756	ppb	251.756	1.97	129179	4000	
Zr	90	2	72	3829.911	ppb	3829.911	2.02	56273	1000	
Nb	93	2	72	0.741	ppb	0.741	5.88	2744	200	
Mo	95	2	115	46.372	ppb	46.372	1.66	37304	2000	
Pd	105	2	115	-0.027	ppb	-0.027	0.00	0	100	
Ag	107	2	115	38.709	ppb	38.709	1.13	106265	100	
Cd	111	2	115	39.372	ppb	39.372	1.45	13297	2000	
Sn	120	2	115	32.819	ppb	32.819	1.02	29328	2000	
Sb	121	2	115	38.708	ppb	38.708	1.08	30187	1000	
Ba	137	2	115	130.916	ppb	130.916	3.57	35350	5000	
W	182	2	165	37.894	ppb	37.894	1.01	140536	100	
Pt	195	2	165	0.000	ppb	0.000	2961.19	17	100	
Tl	205	2	165	37.989	ppb	37.989	1.18	252222	2000	
Pb	208	2	165	39.312	ppb	39.312	0.06	348873	5000	
Th	232	2	165	37.236	ppb	37.236	0.93	390206	2000	
U	238	2	165	58.523	ppb	58.523	0.72	663863	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1412850	1.24	1454508	97.14	60	120	
Sc (IS)	45	1	HMI H2	27462456	0.20	26285642	104.48	60	120	
Sc (IS)	45	2	HMI He	948262	0.16	903775	104.92	60	120	
Sc (IS)	45	3	No Gas	52421509	0.80	48040283	109.12	60	120	
Ge Internal Standard	72	1	HMI H2	10042054	0.80	9879865	101.64	60	120	
Ge Internal Standard	72	2	HMI He	974729	0.55	957593	101.79	60	120	
In Internal Standard	115	2	HMI He	2851303	1.44	2903780	98.19	60	120	
Ho-165	165	2	HMI He	13759354	0.52	14207049	96.85	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-2-A pds
Data File Name	036SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:53:01-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	204.100	ppb	204.100	1.24	304211	500000	
Li	7	2	45	220.160	ppb	220.160	9.85	20772	500000	
Li	7	3	45	214.259	ppb	214.259	5.83	10455635	50000	
Be	9	1	6	206.336	ppb	206.336	3.19	101170	2000	
B	11	1	6	22.636	ppb	22.636	5.63	12246	2000	
Na	23	1	45	74468.696	ppb	74468.696	1.08	271481316	2000	>LDR
Na	23	2	45	74635.076	ppb	74635.076	0.52	18942500	400000	
Mg	24	2	45	13133.416	ppb	13133.416	0.91	1478156	400000	
Al	27	2	45	3612.031	ppb	3612.031	1.56	102715	400000	
K	39	1	45	23200.285	ppb	23200.285	0.69	88549575	400000	
K	39	2	45	26064.809	ppb	26064.809	0.19	1424104	400000	
Ca	40	1	45	41150.643	ppb	41150.643	1.03	212413884	400000	
Ca	44	2	45	41754.312	ppb	41754.312	0.96	123121	400000	
Ti	47	2	45	107.369	ppb	107.369	3.72	2980	4000	
V	51	2	72	237.183	ppb	237.183	0.86	241289	2000	
Cr	52	2	72	220.988	ppb	220.988	0.11	292542	5000	
Mn	55	2	72	264.883	ppb	264.883	0.72	130884	10000	
Fe	57	2	72	3662.778	ppb	3662.778	0.11	88124	400000	
Co	59	2	72	213.675	ppb	213.675	0.74	487092	2000	
Ni	60	2	72	218.624	ppb	218.624	0.60	140510	5000	
Cu	63	2	72	230.205	ppb	230.205	0.41	409318	5000	
Zn	66	2	72	246.023	ppb	246.023	2.91	55431	5000	
As	75	2	72	216.679	ppb	216.679	1.19	32918	2000	
Se	78	1	72	199.369	ppb	199.369	1.08	47437	2000	
Sr	88	2	72	409.445	ppb	409.445	0.54	205465	4000	
Zr	90	2	72	21578.808	ppb	21578.808	0.42	309908	1000	>LDR
Nb	93	2	72	9.839	ppb	9.839	6.09	26846	200	
Mo	95	2	115	215.162	ppb	215.162	2.01	168744	2000	
Pd	105	2	115	0.012	ppb	0.012	171.86	47	100	
Ag	107	2	115	43.378	ppb	43.378	1.89	115635	100	
Cd	111	2	115	211.156	ppb	211.156	0.47	69560	2000	
Sn	120	2	115	206.543	ppb	206.543	1.78	179523	2000	
Sb	121	2	115	212.083	ppb	212.083	1.20	161302	1000	
Ba	137	2	115	296.180	ppb	296.180	2.20	78048	5000	
W	182	2	165	205.911	ppb	205.911	0.89	747234	100	
Pt	195	2	165	0.073	ppb	0.073	36.48	233	100	
Tl	205	2	165	204.385	ppb	204.385	0.21	1332618	2000	
Pb	208	2	165	203.120	ppb	203.120	0.62	1762559	5000	
Th	232	2	165	250.263	ppb	250.263	0.87	2573950	2000	
U	238	2	165	248.723	ppb	248.723	0.43	2771931	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1410941	1.83	1454508	97.00	60	120	
Sc (IS)	45	1	HMI H2	27011336	0.51	26285642	102.76	60	120	
Sc (IS)	45	2	HMI He	928043	1.21	903775	102.69	60	120	
Sc (IS)	45	3	No Gas	51056049	0.46	48040283	106.28	60	120	
Ge Internal Standard	72	1	HMI H2	9853154	0.63	9879865	99.73	60	120	
Ge Internal Standard	72	2	HMI He	953255	0.63	957593	99.55	60	120	
In Internal Standard	115	2	HMI He	2782270	1.57	2903780	95.82	60	120	
Ho-165	165	2	HMI He	13522716	0.88	14207049	95.18	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-5-A
Data File Name	037SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T14:56:48-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.873	ppb	-0.873	-102.09	195170	500000	
Li	7	2	45	-2.453	ppb	-2.453	-282.14	12976	500000	
Li	7	3	45	0.809	ppb	0.809	385.93	6697546	50000	
Be	9	1	6	0.075	ppb	0.075	133.52	53	2000	
B	11	1	6	20.676	ppb	20.676	3.86	11355	2000	
Na	23	1	45	107507.677	ppb	107507.677	1.12	391913727	2000	>LDR
Na	23	2	45	106649.082	ppb	106649.082	1.39	27172064	400000	
Mg	24	2	45	9313.484	ppb	9313.484	1.70	1052611	400000	
Al	27	2	45	13.717	ppb	13.717	12.41	457	400000	
K	39	1	45	6088.946	ppb	6088.946	0.45	30559067	400000	
K	39	2	45	7384.551	ppb	7384.551	2.13	415924	400000	
Ca	40	1	45	35922.050	ppb	35922.050	0.14	185485491	400000	
Ca	44	2	45	34716.942	ppb	34716.942	1.68	102796	400000	
Ti	47	2	45	1.795	ppb	1.795	2.17	50	4000	
V	51	2	72	29.648	ppb	29.648	3.28	31886	2000	
Cr	52	2	72	2.897	ppb	2.897	2.97	4151	5000	
Mn	55	2	72	1.462	ppb	1.462	17.07	787	10000	
Fe	57	2	72	111.951	ppb	111.951	7.76	2837	400000	
Co	59	2	72	0.165	ppb	0.165	11.82	410	2000	
Ni	60	2	72	0.571	ppb	0.571	25.02	533	5000	
Cu	63	2	72	0.213	ppb	0.213	9.91	1810	5000	
Zn	66	2	72	2.284	ppb	2.284	10.67	733	5000	
As	75	2	72	25.329	ppb	25.329	3.02	3874	2000	
Se	78	1	72	3.024	ppb	3.024	21.98	759	2000	
Sr	88	2	72	159.849	ppb	159.849	1.34	80464	4000	
Zr	90	2	72	21.989	ppb	21.989	20.33	357	1000	
Nb	93	2	72	0.062	ppb	0.062	75.65	883	200	
Mo	95	2	115	7.236	ppb	7.236	3.48	5698	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-65.48	23	100	
Ag	107	2	115	-1.534	ppb	-1.534	-2.29	630	100	
Cd	111	2	115	0.051	ppb	0.051	118.77	20	2000	
Sn	120	2	115	0.436	ppb	0.436	1.24	483	2000	
Sb	121	2	115	1.648	ppb	1.648	14.30	1267	1000	
Ba	137	2	115	51.213	ppb	51.213	2.16	13471	5000	
W	182	2	165	0.939	ppb	0.939	14.27	4138	100	
Pt	195	2	165	-0.003	ppb	-0.003	-124.20	7	100	
Tl	205	2	165	0.011	ppb	0.011	109.26	307	2000	
Pb	208	2	165	-0.003	ppb	-0.003	-1115.07	2117	5000	
Th	232	2	165	0.102	ppb	0.102	2.77	1640	2000	
U	238	2	165	5.071	ppb	5.071	1.04	56696	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1422872	0.49	1454508	97.82	60	120	
Sc (IS)	45	1	HMI H2	27018455	0.96	26285642	102.79	60	120	
Sc (IS)	45	2	HMI He	932073	2.19	903775	103.13	60	120	
Sc (IS)	45	3	No Gas	51607208	0.94	48040283	107.42	60	120	
Ge Internal Standard	72	1	HMI H2	9911808	0.56	9879865	100.32	60	120	
Ge Internal Standard	72	2	HMI He	956031	0.73	957593	99.84	60	120	
In Internal Standard	115	2	HMI He	2776553	0.23	2903780	95.62	60	120	
Ho-165	165	2	HMI He	13496449	1.17	14207049	95.00	60	120	

Sample Report

Sample Table

Sample Name	280-115729-A-9-A
Data File Name	038SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:02:10-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	434124 6020b
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-4.696	ppb	-4.696	-66.39	194821	500000	
Li	7	2	45	-0.134	ppb	-0.134	-11897.60	13173	500000	
Li	7	3	45	4.141	ppb	4.141	57.23	6739866	50000	
Be	9	1	6	-0.020	ppb	-0.020	-118.79	7	2000	
B	11	1	6	17.410	ppb	17.410	4.26	9700	2000	
Na	23	1	45	22661.685	ppb	22661.685	1.01	83525124	2000	>LDR
Na	23	2	45	22769.198	ppb	22769.198	1.00	5868257	400000	
Mg	24	2	45	13462.928	ppb	13462.928	1.62	1535318	400000	
Al	27	2	45	33.832	ppb	33.832	17.08	1040	400000	
K	39	1	45	3558.184	ppb	3558.184	1.89	22170425	400000	
K	39	2	45	4894.898	ppb	4894.898	0.64	283348	400000	
Ca	40	1	45	52203.120	ppb	52203.120	1.29	271876429	400000	
Ca	44	2	45	51019.896	ppb	51019.896	1.20	152418	400000	
Ti	47	2	45	2.733	ppb	2.733	50.18	77	4000	
V	51	2	72	7.329	ppb	7.329	4.90	9373	2000	
Cr	52	2	72	3.891	ppb	3.891	4.46	5525	5000	
Mn	55	2	72	1.197	ppb	1.197	30.07	663	10000	
Fe	57	2	72	42.570	ppb	42.570	5.43	1177	400000	
Co	59	2	72	0.059	ppb	0.059	36.20	170	2000	
Ni	60	2	72	0.690	ppb	0.690	22.13	617	5000	
Cu	63	2	72	0.142	ppb	0.142	86.10	1700	5000	
Zn	66	2	72	40.609	ppb	40.609	6.83	9454	5000	
As	75	2	72	3.100	ppb	3.100	13.42	493	2000	
Se	78	1	72	3.143	ppb	3.143	5.15	800	2000	
Sr	88	2	72	238.207	ppb	238.207	1.39	121051	4000	
Zr	90	2	72	24.314	ppb	24.314	31.24	393	1000	
Nb	93	2	72	0.012	ppb	0.012	311.28	760	200	
Mo	95	2	115	4.620	ppb	4.620	5.26	3734	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-77.11	13	100	
Ag	107	2	115	-1.495	ppb	-1.495	-1.87	747	100	
Cd	111	2	115	-0.010	ppb	-0.010	0.00	0	2000	
Sn	120	2	115	0.206	ppb	0.206	28.68	290	2000	
Sb	121	2	115	0.480	ppb	0.480	39.37	390	1000	
Ba	137	2	115	78.047	ppb	78.047	0.66	20994	5000	
W	182	2	165	0.497	ppb	0.497	7.32	2564	100	
Pt	195	2	165	0.001	ppb	0.001	250.04	20	100	
Tl	205	2	165	-0.005	ppb	-0.005	-235.22	207	2000	
Pb	208	2	165	-0.034	ppb	-0.034	-31.01	1873	5000	
Th	232	2	165	0.031	ppb	0.031	24.38	920	2000	
U	238	2	165	52.913	ppb	52.913	0.76	595403	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1424631	0.51	1454508	97.95	60	120	
Sc (IS)	45	1	HMI H2	27254721	0.68	26285642	103.69	60	120	
Sc (IS)	45	2	HMI He	940292	0.81	903775	104.04	60	120	
Sc (IS)	45	3	No Gas	51468559	0.51	48040283	107.14	60	120	
Ge Internal Standard	72	1	HMI H2	10061308	0.87	9879865	101.84	60	120	
Ge Internal Standard	72	2	HMI He	965344	0.93	957593	100.81	60	120	
In Internal Standard	115	2	HMI He	2839529	1.07	2903780	97.79	60	120	
Ho-165	165	2	HMI He	13648314	1.05	14207049	96.07	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	039_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:06:21-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	497.106	ppb	0.598	450922	500	99.4	90	110	
Li	7	2	45	538.441	ppb	3.949	30502	500	107.7	90	110	
Li	7	3	45	527.063	ppb	0.503	15378856	500	105.4	90	110	
Be	9	1	6	46.653	ppb	1.052	23346	50	93.3	90	110	
B	11	1	6	47.945	ppb	1.442	25573	50	95.9	90	110	
Na	23	1	45	5101.531	ppb	0.316	18441278	5000	102.0	90	110	
Na	23	2	45	5433.114	ppb	0.747	1330353	5000	108.7	90	110	
Mg	24	2	45	5156.008	ppb	0.537	553168	5000	103.1	90	110	
Al	27	2	45	5056.355	ppb	1.546	137014	5000	101.1	90	110	
K	39	1	45	4886.909	ppb	2.255	25944896	5000	97.7	90	110	
K	39	2	45	5093.070	ppb	0.705	276750	5000	101.9	90	110	
Ca	40	1	45	5000.846	ppb	0.303	25336395	5000	100.0	90	110	
Ca	44	2	45	5153.944	ppb	4.829	14515	5000	103.1	90	110	
Ti	47	2	45	42.478	ppb	3.903	1123	50	85.0	90	110	>+\-10%
V	51	2	72	51.649	ppb	2.159	51853	50	103.3	90	110	
Cr	52	2	72	51.222	ppb	2.939	65334	50	102.4	90	110	
Mn	55	2	72	50.569	ppb	2.385	24038	50	101.1	90	110	
Fe	57	2	72	5131.682	ppb	1.225	118494	5000	102.6	90	110	
Co	59	2	72	49.547	ppb	0.989	108476	50	99.1	90	110	
Ni	60	2	72	50.177	ppb	1.738	31088	50	100.4	90	110	
Cu	63	2	72	50.802	ppb	1.063	87803	50	101.6	90	110	
Zn	66	2	72	50.733	ppb	2.925	11142	50	101.5	90	110	
As	75	2	72	49.785	ppb	3.017	7273	50	99.6	90	110	
Se	78	1	72	49.418	ppb	3.202	11702	50	98.8	90	110	
Sr	88	2	72	47.680	ppb	1.947	22989	50	95.4	90	110	
Zr	90	2	72	55.968	ppb	3.775	810	50	111.9	90	110	>+\-10%
Nb	93	2	72	82.100	ppb	0.884	209983	100	82.1	90	110	>+\-10%
Mo	95	2	115	48.427	ppb	3.284	36408	50	96.9	90	110	
Pd	105	2	115	52.618	ppb	2.675	60866	50	105.2	90	110	
Ag	107	2	115	48.960	ppb	0.744	124481	50	97.9	90	110	
Cd	111	2	115	49.506	ppb	3.230	15623	50	99.0	90	110	
Sn	120	2	115	49.122	ppb	1.284	40982	50	98.2	90	110	
Sb	121	2	115	49.290	ppb	2.301	35931	50	98.6	90	110	
Ba	137	2	115	49.661	ppb	3.176	12540	50	99.3	90	110	
W	182	2	165	50.107	ppb	1.566	177892	50	100.2	90	110	
Pt	195	2	165	51.597	ppb	2.311	150235	50	103.2	90	110	
Tl	205	2	165	50.027	ppb	1.050	318286	50	100.1	90	110	
Pb	208	2	165	49.792	ppb	0.413	422958	50	99.6	90	110	
Th	232	2	165	48.688	ppb	0.300	488834	50	97.4	90	110	
U	238	2	165	49.103	ppb	0.855	533921	50	98.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1439006	0.84	1454508	98.93	60	120	
Sc (IS)	45	1	HMI H2	26469171	0.52	26285642	100.70	60	120	
Sc (IS)	45	2	HMI He	884535	0.31	903775	97.87	60	120	
Sc (IS)	45	3	No Gas	48866374	0.33	48040283	101.72	60	120	
Ge Internal Standard	72	1	HMI H2	9784379	0.57	9879865	99.03	60	120	
Ge Internal Standard	72	2	HMI He	915299	0.75	957593	95.58	60	120	
In Internal Standard	115	2	HMI He	2665160	0.76	2903780	91.78	60	120	
Ho-165	165	2	HMI He	13187716	0.42	14207049	92.83	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	040_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:10:08-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	5.832	ppb	54.5	6479838	10	
Be	9	1	6	0.054	ppb	167.6	43	0.5	
B	11	1	6	1.604	ppb	2.4	1640	0.5	>RL
Na	23	1	45	14.866	ppb	2.4	281157	25	
Na	23	2	45	13.146	ppb	18.0	20221	25	
Mg	24	2	45	2.133	ppb	8.6	293	25	
Al	27	2	45	1.580	ppb	81.8	103	15	
K	39	1	45	-33.796	ppb	-53.5	9480912	50	
K	39	2	45	7.062	ppb	207.5	14488	50	
Ca	40	1	45	1.059	ppb	24.3	50220	50	
Ca	44	2	45	-4.351	ppb	-82.2	20	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	2.525	ppb	4.5	4194	1	>RL
Cr	52	2	72	-0.064	ppb	-90.3	213	1	
Mn	55	2	72	0.064	ppb	119.4	90	0.5	
Fe	57	2	72	1.786	ppb	148.0	173	25	
Co	59	2	72	0.010	ppb	54.3	53	0.5	
Ni	60	2	72	-0.073	ppb	-93.2	113	1	
Cu	63	2	72	-0.289	ppb	-20.4	870	1	
Zn	66	2	72	0.070	ppb	370.9	223	5	
As	75	2	72	0.042	ppb	142.0	22	1	
Se	78	1	72	-0.037	ppb	-165.2	27	1	
Sr	88	2	72	-0.012	ppb	-203.8	13	0.5	
Zr	90	2	72	3.319	ppb	32.6	83	1	>RL
Nb	93	2	72	6.112	ppb	8.0	16130	2	>RL
Mo	95	2	115	0.087	ppb	84.5	100	0.5	
Pd	105	2	115	0.051	ppb	30.2	90	1	
Ag	107	2	115	-1.525	ppb	-0.3	633	1	
Cd	111	2	115	-0.010	ppb	0.0	0	0.5	
Sn	120	2	115	0.169	ppb	23.1	243	1	
Sb	121	2	115	0.537	ppb	17.8	410	0.6	
Ba	137	2	115	0.013	ppb	173.2	3	0.5	
W	182	2	165	0.229	ppb	17.9	1550	1	
Pt	195	2	165	0.006	ppb	130.8	33	1	
Tl	205	2	165	-0.007	ppb	-124.9	190	0.1	
Pb	208	2	165	-0.101	ppb	-13.8	1257	0.5	
Th	232	2	165	0.019	ppb	55.5	780	1	
U	238	2	165	0.048	ppb	26.2	827	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1448107	0.97	1454508	99.56	60	120	
Sc (IS)	45	1	HMI H2	26136535	0.42	26285642	99.43	60	120	
Sc (IS)	45	2	HMI He	872347	0.53	903775	96.52	60	120	
Sc (IS)	45	3	No Gas	49261516	1.04	48040283	102.54	60	120	
Ge Internal Standard	72	1	HMI H2	9658950	0.33	9879865	97.76	60	120	
Ge Internal Standard	72	2	HMI He	907174	0.68	957593	94.73	60	120	
In Internal Standard	115	2	HMI He	2687606	0.65	2903780	92.56	60	120	
Ho-165	165	2	HMI He	13352598	0.37	14207049	93.99	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	041LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:14:59-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	24.435	ppb	7.646	6789499	50	48.9	70	130	>+/-30%
Be	9	1	6	0.789	ppb	8.160	410	1	78.9	70	130	
Na	23	2	45	59.223	ppb	4.632	31314	50	118.4	70	130	
Mg	24	2	45	54.397	ppb	7.759	5845	50	108.8	70	130	
Al	27	2	45	32.524	ppb	8.832	933	30	108.4	70	130	
K	39	2	45	123.793	ppb	13.508	20492	100	123.8	70	130	
Ca	44	2	45	40.020	ppb	44.661	143	50	80.0	70	130	
V	51	2	72	6.894	ppb	1.344	8446	5	137.9	70	130	>+/-30%
Cr	52	2	72	1.970	ppb	7.139	2790	2	98.5	70	130	
Mn	55	2	72	1.070	ppb	24.352	567	1	107.0	70	130	
Fe	57	2	72	43.182	ppb	0.840	1127	50	86.4	70	130	
Co	59	2	72	1.018	ppb	7.208	2254	1	101.8	70	130	
Ni	60	2	72	1.922	ppb	5.563	1340	2	96.1	70	130	
Cu	63	2	72	1.699	ppb	2.836	4251	2	85.0	70	130	
Zn	66	2	72	9.541	ppb	3.573	2260	10	95.4	70	130	
As	75	2	72	4.765	ppb	2.727	709	5	95.3	70	130	
Se	78	1	72	4.837	ppb	15.847	1163	5	96.7	70	130	
Sr	88	2	72	0.986	ppb	41.464	493	1	98.6	70	130	
Zr	90	2	72	8.369	ppb	17.396	153	0.5	1673.8	70	130	>+/-30%
Nb	93	2	72	9.431	ppb	6.890	24666	2	471.6	70	130	>+/-30%
Mo	95	2	115	2.053	ppb	20.247	1610	2	102.6	70	130	
Pd	105	2	115	-0.012	ppb	-142.855	17	1	-1.2	70	130	>+/-30%
Ag	107	2	115	3.573	ppb	2.104	13444	5	71.5	70	130	
Cd	111	2	115	1.052	ppb	24.366	343	1	105.2	70	130	
Sn	120	2	115	9.545	ppb	4.757	8229	10	95.4	70	130	
Sb	121	2	115	2.290	ppb	8.130	1724	2	114.5	70	130	
Ba	137	2	115	1.021	ppb	28.775	263	1	102.1	70	130	
W	182	2	165	5.004	ppb	4.640	18497	1	500.4	70	130	>+/-30%
Pt	195	2	165	0.039	ppb	39.778	130	1	3.9	70	130	>+/-30%
Tl	205	2	165	0.987	ppb	10.307	6532	1	98.7	70	130	
Pb	208	2	165	0.865	ppb	7.577	9448	1	86.5	70	130	
Th	232	2	165	1.970	ppb	3.590	20424	2	98.5	70	130	
U	238	2	165	0.995	ppb	3.758	11152	1	99.5	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1435686	2.11	1454508	98.71	60	120	
Sc (IS)	45	1	HMI H2	26251929	1.60	26285642	99.87	60	120	
Sc (IS)	45	2	HMI He	875392	0.75	903775	96.86	60	120	
Sc (IS)	45	3	No Gas	49168491	0.47	48040283	102.35	60	120	
Ge Internal Standard	72	1	HMI H2	9655835	0.54	9879865	97.73	60	120	
Ge Internal Standard	72	2	HMI He	913015	0.55	957593	95.34	60	120	
In Internal Standard	115	2	HMI He	2727353	1.14	2903780	93.92	60	120	
Ho-165	165	2	HMI He	13246517	0.25	14207049	93.24	60	120	

Sample Report

Sample Table

Sample Name	280-116511-A-1-B
Data File Name	042SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:18:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	67.035	ppb	67.035	2.74	223373	500000	
Li	7	2	45	98.580	ppb	98.580	25.64	15115	500000	
Li	7	3	45	78.886	ppb	78.886	5.39	7605394	50000	
Be	9	1	6	31.561	ppb	31.561	1.41	15629	2000	
B	11	1	6	32.306	ppb	32.306	4.35	17307	2000	
Na	23	1	45	27731.855	ppb	27731.855	1.41	97795472	2000	>LDR
Na	23	2	45	28579.554	ppb	28579.554	0.40	6660773	400000	
Mg	24	2	45	16242.158	ppb	16242.158	1.31	1676016	400000	
Al	27	2	45	393.472	ppb	393.472	1.39	10311	400000	
K	39	1	45	1682.786	ppb	1682.786	0.88	15084102	400000	
K	39	2	45	1826.648	ppb	1826.648	2.04	104311	400000	
Ca	40	1	45	39639.836	ppb	39639.836	0.95	197643030	400000	
Ca	44	2	45	38932.504	ppb	38932.504	1.37	105253	400000	
Ti	47	2	45	1.317	ppb	1.317	97.20	33	4000	
V	51	2	72	35.628	ppb	35.628	1.75	35428	2000	
Cr	52	2	72	34.578	ppb	34.578	2.20	43115	5000	
Mn	55	2	72	50.675	ppb	50.675	1.97	23503	10000	
Fe	57	2	72	439.289	ppb	439.289	1.25	10014	400000	
Co	59	2	72	33.822	ppb	33.822	1.14	72244	2000	
Ni	60	2	72	34.361	ppb	34.361	5.34	20813	5000	
Cu	63	2	72	33.881	ppb	33.881	3.40	57562	5000	
Zn	66	2	72	40.830	ppb	40.830	1.35	8786	5000	
As	75	2	72	33.217	ppb	33.217	3.12	4739	2000	
Se	78	1	72	31.783	ppb	31.783	2.74	7502	2000	
Sr	88	2	72	109.591	ppb	109.591	2.53	51524	4000	
Zr	90	2	72	2668.076	ppb	2668.076	2.87	35920	1000	
Nb	93	2	72	1.467	ppb	1.467	7.89	4321	200	
Mo	95	2	115	396.861	ppb	396.861	1.82	291774	2000	
Pd	105	2	115	0.000	ppb	0.000	-34967.45	30	100	
Ag	107	2	115	34.003	ppb	34.003	0.83	85919	100	
Cd	111	2	115	34.844	ppb	34.844	3.11	10768	2000	
Sn	120	2	115	33.234	ppb	33.234	2.23	27164	2000	
Sb	121	2	115	35.395	ppb	35.395	3.07	25247	1000	
Ba	137	2	115	68.575	ppb	68.575	3.01	16951	5000	
W	182	2	165	32.309	ppb	32.309	2.05	113673	100	
Pt	195	2	165	-0.003	ppb	-0.003	-67.51	7	100	
Tl	205	2	165	33.646	ppb	33.646	0.48	211748	2000	
Pb	208	2	165	32.997	ppb	32.997	1.76	277850	5000	
Th	232	2	165	32.108	ppb	32.108	1.73	318958	2000	
U	238	2	165	34.270	ppb	34.270	1.41	368554	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1423308	0.94	1454508	97.85	60	120	
Sc (IS)	45	1	HMI H2	26090148	0.24	26285642	99.26	60	120	
Sc (IS)	45	2	HMI He	850887	0.83	903775	94.15	60	120	
Sc (IS)	45	3	No Gas	48377588	1.02	48040283	100.70	60	120	
Ge Internal Standard	72	1	HMI H2	9735942	0.27	9879865	98.54	60	120	
Ge Internal Standard	72	2	HMI He	892890	0.75	957593	93.24	60	120	
In Internal Standard	115	2	HMI He	2608694	2.29	2903780	89.84	60	120	
Ho-165	165	2	HMI He	13040839	0.81	14207049	91.79	60	120	

Sample Report

Sample Table

Sample Name	280-116511-A-2-B
Data File Name	043SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:22:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-4.818	ppb	-4.818	-84.67	184685	500000	
Li	7	2	45	22.305	ppb	22.305	70.64	12699	500000	
Li	7	3	45	12.531	ppb	12.531	30.47	6385781	50000	
Be	9	1	6	0.001	ppb	0.001	2307.87	17	2000	
B	11	1	6	11.169	ppb	11.169	7.84	6438	2000	
Na	23	1	45	27634.616	ppb	27634.616	0.69	96542449	2000	>LDR
Na	23	2	45	27980.711	ppb	27980.711	1.84	6551018	400000	
Mg	24	2	45	15910.880	ppb	15910.880	1.32	1649551	400000	
Al	27	2	45	77.759	ppb	77.759	10.37	2094	400000	
K	39	1	45	1704.545	ppb	1704.545	0.53	15013437	400000	
K	39	2	45	1756.307	ppb	1756.307	1.59	101310	400000	
Ca	40	1	45	39850.274	ppb	39850.274	0.78	196833624	400000	
Ca	44	2	45	38328.683	ppb	38328.683	1.36	104115	400000	
Ti	47	2	45	0.391	ppb	0.391	1.12	10	4000	
V	51	2	72	1.156	ppb	1.156	2.50	2850	2000	
Cr	52	2	72	0.120	ppb	0.120	24.27	440	5000	
Mn	55	2	72	17.025	ppb	17.025	3.69	7979	10000	
Fe	57	2	72	126.923	ppb	126.923	13.30	3004	400000	
Co	59	2	72	0.110	ppb	0.110	34.79	267	2000	
Ni	60	2	72	0.607	ppb	0.607	18.23	523	5000	
Cu	63	2	72	0.567	ppb	0.567	18.44	2290	5000	
Zn	66	2	72	9.127	ppb	9.127	18.38	2137	5000	
As	75	2	72	0.575	ppb	0.575	23.48	97	2000	
Se	78	1	72	0.037	ppb	0.037	121.59	44	2000	
Sr	88	2	72	76.595	ppb	76.595	0.12	36224	4000	
Zr	90	2	72	109.328	ppb	109.328	6.10	1517	1000	
Nb	93	2	72	0.603	ppb	0.603	12.35	2184	200	
Mo	95	2	115	350.230	ppb	350.230	2.14	262506	2000	
Pd	105	2	115	-0.015	ppb	-0.015	-87.63	13	100	
Ag	107	2	115	-1.608	ppb	-1.608	-0.73	423	100	
Cd	111	2	115	0.065	ppb	0.065	125.00	23	2000	
Sn	120	2	115	0.193	ppb	0.193	37.27	260	2000	
Sb	121	2	115	1.195	ppb	1.195	11.30	883	1000	
Ba	137	2	115	38.275	ppb	38.275	3.00	9644	5000	
W	182	2	165	0.180	ppb	0.180	21.32	1360	100	
Pt	195	2	165	-0.001	ppb	-0.001	-285.27	13	100	
Tl	205	2	165	-0.004	ppb	-0.004	-332.95	207	2000	
Pb	208	2	165	-0.036	ppb	-0.036	-36.56	1790	5000	
Th	232	2	165	0.112	ppb	0.112	8.94	1707	2000	
U	238	2	165	1.071	ppb	1.071	3.79	11939	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1409732	1.20	1454508	96.92	60	120	
Sc (IS)	45	1	HMI H2	25845764	0.17	26285642	98.33	60	120	
Sc (IS)	45	2	HMI He	854838	1.12	903775	94.59	60	120	
Sc (IS)	45	3	No Gas	47689561	0.70	48040283	99.27	60	120	
Ge Internal Standard	72	1	HMI H2	9681791	0.26	9879865	98.00	60	120	
Ge Internal Standard	72	2	HMI He	898016	0.88	957593	93.78	60	120	
In Internal Standard	115	2	HMI He	2659255	1.42	2903780	91.58	60	120	
Ho-165	165	2	HMI He	13203659	1.15	14207049	92.94	60	120	

Sample Report

Sample Table

Sample Name	280-116511-A-3-B
Data File Name	044SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:26:20-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.245	ppb	-0.245	-1171.27	187119	500000	
Li	7	2	45	21.461	ppb	21.461	49.87	12609	500000	
Li	7	3	45	9.477	ppb	9.477	47.05	6312051	50000	
Be	9	1	6	-0.019	ppb	-0.019	-61.66	7	2000	
B	11	1	6	13.633	ppb	13.633	6.94	7659	2000	
Na	23	1	45	42398.139	ppb	42398.139	1.22	148076338	2000	>LDR
Na	23	2	45	43404.248	ppb	43404.248	0.95	10100003	400000	
Mg	24	2	45	13686.504	ppb	13686.504	1.31	1411377	400000	
Al	27	2	45	29.831	ppb	29.831	22.08	837	400000	
K	39	1	45	2012.359	ppb	2012.359	1.20	16020594	400000	
K	39	2	45	1948.849	ppb	1948.849	2.45	110302	400000	
Ca	40	1	45	33389.644	ppb	33389.644	1.12	165017031	400000	
Ca	44	2	45	32283.987	ppb	32283.987	2.74	87223	400000	
Ti	47	2	45	0.131	ppb	0.131	173.21	3	4000	
V	51	2	72	1.601	ppb	1.601	3.35	3247	2000	
Cr	52	2	72	0.098	ppb	0.098	61.87	410	5000	
Mn	55	2	72	37.436	ppb	37.436	1.39	17331	10000	
Fe	57	2	72	157.507	ppb	157.507	4.20	3664	400000	
Co	59	2	72	0.114	ppb	0.114	15.52	273	2000	
Ni	60	2	72	1.213	ppb	1.213	22.59	883	5000	
Cu	63	2	72	0.831	ppb	0.831	17.84	2710	5000	
Zn	66	2	72	11.339	ppb	11.339	10.66	2580	5000	
As	75	2	72	0.487	ppb	0.487	18.38	84	2000	
Se	78	1	72	0.091	ppb	0.091	32.28	56	2000	
Sr	88	2	72	89.812	ppb	89.812	0.86	42117	4000	
Zr	90	2	72	35.488	ppb	35.488	2.13	513	1000	
Nb	93	2	72	0.496	ppb	0.496	18.31	1900	200	
Mo	95	2	115	162.070	ppb	162.070	2.13	121285	2000	
Pd	105	2	115	-0.009	ppb	-0.009	-91.39	20	100	
Ag	107	2	115	-1.535	ppb	-1.535	-0.89	600	100	
Cd	111	2	115	0.022	ppb	0.022	143.20	10	2000	
Sn	120	2	115	0.096	ppb	0.096	28.04	180	2000	
Sb	121	2	115	0.508	ppb	0.508	32.68	383	1000	
Ba	137	2	115	29.237	ppb	29.237	6.24	7356	5000	
W	182	2	165	0.035	ppb	0.035	36.64	840	100	
Pt	195	2	165	-0.003	ppb	-0.003	-65.79	7	100	
Tl	205	2	165	-0.014	ppb	-0.014	-43.30	143	2000	
Pb	208	2	165	-0.026	ppb	-0.026	-67.03	1867	5000	
Th	232	2	165	0.010	ppb	0.010	154.07	680	2000	
U	238	2	165	1.115	ppb	1.115	3.45	12353	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1405441	1.09	1454508	96.63	60	120	
Sc (IS)	45	1	HMI H2	25860430	0.54	26285642	98.38	60	120	
Sc (IS)	45	2	HMI He	850305	0.59	903775	94.08	60	120	
Sc (IS)	45	3	No Gas	47524223	1.08	48040283	98.93	60	120	
Ge Internal Standard	72	1	HMI H2	9594567	0.28	9879865	97.11	60	120	
Ge Internal Standard	72	2	HMI He	890551	1.00	957593	93.00	60	120	
In Internal Standard	115	2	HMI He	2654678	1.35	2903780	91.42	60	120	
Ho-165	165	2	HMI He	13128284	1.16	14207049	92.41	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-2-B
Data File Name	045SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:30:08-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	19.397	ppb	19.397	5.74	194010	500000	
Li	7	2	45	19.545	ppb	19.545	90.92	12556	500000	
Li	7	3	45	21.675	ppb	21.675	8.47	6420369	50000	
Be	9	1	6	0.009	ppb	0.009	3.08	20	2000	
B	11	1	6	111.916	ppb	111.916	0.70	55838	2000	
Na	23	1	45	90650.635	ppb	90650.635	0.59	311347055	2000	>LDR
Na	23	2	45	90679.104	ppb	90679.104	0.79	21097261	400000	
Mg	24	2	45	18497.765	ppb	18497.765	1.25	1908810	400000	
Al	27	2	45	139.581	ppb	139.581	8.94	3697	400000	
K	39	1	45	7409.422	ppb	7409.422	1.44	33002891	400000	
K	39	2	45	7406.864	ppb	7406.864	0.68	380920	400000	
Ca	40	1	45	80041.009	ppb	80041.009	0.28	389263901	400000	
Ca	44	2	45	79896.084	ppb	79896.084	0.79	215989	400000	
Ti	47	2	45	3.796	ppb	3.796	29.29	97	4000	
V	51	2	72	2.711	ppb	2.711	2.21	4264	2000	
Cr	52	2	72	0.326	ppb	0.326	10.30	687	5000	
Mn	55	2	72	72.793	ppb	72.793	1.15	33416	10000	
Fe	57	2	72	239.548	ppb	239.548	3.19	5468	400000	
Co	59	2	72	0.356	ppb	0.356	4.83	783	2000	
Ni	60	2	72	1.627	ppb	1.627	10.94	1123	5000	
Cu	63	2	72	2.597	ppb	2.597	8.21	5595	5000	
Zn	66	2	72	16.185	ppb	16.185	8.47	3574	5000	
As	75	2	72	0.816	ppb	0.816	15.20	130	2000	
Se	78	1	72	1.572	ppb	1.572	18.33	391	2000	
Sr	88	2	72	632.969	ppb	632.969	1.21	294716	4000	
Zr	90	2	72	73.069	ppb	73.069	19.25	1010	1000	
Nb	93	2	72	0.397	ppb	0.397	27.90	1644	200	
Mo	95	2	115	7.809	ppb	7.809	1.99	5811	2000	
Pd	105	2	115	-0.021	ppb	-0.021	-24.40	7	100	
Ag	107	2	115	-1.602	ppb	-1.602	-1.41	433	100	
Cd	111	2	115	0.098	ppb	0.098	68.62	33	2000	
Sn	120	2	115	0.224	ppb	0.224	39.80	283	2000	
Sb	121	2	115	0.230	ppb	0.230	10.36	180	1000	
Ba	137	2	115	63.212	ppb	63.212	3.39	15720	5000	
W	182	2	165	0.118	ppb	0.118	18.18	1123	100	
Pt	195	2	165	0.006	ppb	0.006	168.44	33	100	
Tl	205	2	165	-0.021	ppb	-0.021	-49.51	97	2000	
Pb	208	2	165	0.325	ppb	0.325	11.46	4781	5000	
Th	232	2	165	0.041	ppb	0.041	34.66	983	2000	
U	238	2	165	13.448	ppb	13.448	0.40	144619	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1370552	0.67	1454508	94.23	60	120	
Sc (IS)	45	1	HMI H2	25451070	0.49	26285642	96.82	60	120	
Sc (IS)	45	2	HMI He	850893	0.93	903775	94.15	60	120	
Sc (IS)	45	3	No Gas	46826641	1.56	48040283	97.47	60	120	
Ge Internal Standard	72	1	HMI H2	9397648	0.05	9879865	95.12	60	120	
Ge Internal Standard	72	2	HMI He	884473	0.67	957593	92.36	60	120	
In Internal Standard	115	2	HMI He	2625024	0.23	2903780	90.40	60	120	
Ho-165	165	2	HMI He	13023240	0.47	14207049	91.67	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-3-D
Data File Name	046SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:33:55-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	78.997	ppb	78.997	2.17	224394	500000	
Li	7	2	45	77.386	ppb	77.386	10.00	14614	500000	
Li	7	3	45	78.024	ppb	78.024	4.41	7395707	50000	
Be	9	1	6	32.013	ppb	32.013	3.10	15122	2000	
B	11	1	6	138.749	ppb	138.749	5.26	68390	2000	
Na	23	1	45	88157.309	ppb	88157.309	0.54	303450395	2000	>LDR
Na	23	2	45	86859.621	ppb	86859.621	0.35	20473817	400000	
Mg	24	2	45	17606.597	ppb	17606.597	1.64	1840763	400000	
Al	27	2	45	479.131	ppb	479.131	3.78	12709	400000	
K	39	1	45	7257.994	ppb	7257.994	1.28	32590650	400000	
K	39	2	45	7225.611	ppb	7225.611	1.17	376793	400000	
Ca	40	1	45	78010.634	ppb	78010.634	0.67	380217434	400000	
Ca	44	2	45	77226.660	ppb	77226.660	0.81	211495	400000	
Ti	47	2	45	3.235	ppb	3.235	25.27	83	4000	
V	51	2	72	35.925	ppb	35.925	3.07	35848	2000	
Cr	52	2	72	32.859	ppb	32.859	2.42	41149	5000	
Mn	55	2	72	102.470	ppb	102.470	1.69	47653	10000	
Fe	57	2	72	557.796	ppb	557.796	1.65	12733	400000	
Co	59	2	72	31.761	ppb	31.761	0.18	68117	2000	
Ni	60	2	72	34.546	ppb	34.546	2.11	21013	5000	
Cu	63	2	72	34.002	ppb	34.002	2.46	57994	5000	
Zn	66	2	72	46.461	ppb	46.461	6.95	10007	5000	
As	75	2	72	31.894	ppb	31.894	3.87	4571	2000	
Se	78	1	72	32.045	ppb	32.045	0.47	7281	2000	
Sr	88	2	72	646.536	ppb	646.536	1.49	305106	4000	
Zr	90	2	72	2640.715	ppb	2640.715	2.48	35693	1000	
Nb	93	2	72	0.348	ppb	0.348	24.87	1544	200	
Mo	95	2	115	38.986	ppb	38.986	2.01	29254	2000	
Pd	105	2	115	-0.012	ppb	-0.012	-108.84	17	100	
Ag	107	2	115	31.180	ppb	31.180	2.13	80678	100	
Cd	111	2	115	31.078	ppb	31.078	4.17	9787	2000	
Sn	120	2	115	30.618	ppb	30.618	1.39	25524	2000	
Sb	121	2	115	33.521	ppb	33.521	1.12	24382	1000	
Ba	137	2	115	87.820	ppb	87.820	1.38	22122	5000	
W	182	2	165	30.704	ppb	30.704	2.57	108988	100	
Pt	195	2	165	0.003	ppb	0.003	71.82	23	100	
Tl	205	2	165	31.127	ppb	31.127	0.98	197615	2000	
Pb	208	2	165	31.052	ppb	31.052	0.93	263890	5000	
Th	232	2	165	28.334	ppb	28.334	0.94	283990	2000	
U	238	2	165	44.444	ppb	44.444	1.01	482075	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1358299	1.71	1454508	93.39	60	120	
Sc (IS)	45	1	HMI H2	25507043	0.62	26285642	97.04	60	120	
Sc (IS)	45	2	HMI He	862019	0.57	903775	95.38	60	120	
Sc (IS)	45	3	No Gas	47133261	0.76	48040283	98.11	60	120	
Ge Internal Standard	72	1	HMI H2	9371439	0.79	9879865	94.85	60	120	
Ge Internal Standard	72	2	HMI He	896471	0.98	957593	93.62	60	120	
In Internal Standard	115	2	HMI He	2659070	0.17	2903780	91.57	60	120	
Ho-165	165	2	HMI He	13154634	0.97	14207049	92.59	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-3-E MS
Data File Name	047SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:37:43-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	86.077	ppb	86.077	2.82	225405	500000	
Li	7	2	45	83.416	ppb	83.416	7.31	14855	500000	
Li	7	3	45	76.086	ppb	76.086	6.91	7330072	50000	
Be	9	1	6	31.341	ppb	31.341	1.12	14735	2000	
B	11	1	6	136.638	ppb	136.638	1.28	67054	2000	
Na	23	1	45	88761.092	ppb	88761.092	0.64	302118902	2000	>LDR
Na	23	2	45	86259.878	ppb	86259.878	1.08	20388138	400000	
Mg	24	2	45	17991.543	ppb	17991.543	1.76	1886203	400000	
Al	27	2	45	483.310	ppb	483.310	5.14	12856	400000	
K	39	1	45	7306.062	ppb	7306.062	1.48	32379440	400000	
K	39	2	45	7207.038	ppb	7207.038	1.14	376906	400000	
Ca	40	1	45	78311.592	ppb	78311.592	0.64	377433354	400000	
Ca	44	2	45	77776.276	ppb	77776.276	0.67	213586	400000	
Ti	47	2	45	3.608	ppb	3.608	52.49	93	4000	
V	51	2	72	35.487	ppb	35.487	4.43	35568	2000	
Cr	52	2	72	32.318	ppb	32.318	2.69	40634	5000	
Mn	55	2	72	103.613	ppb	103.613	2.42	48362	10000	
Fe	57	2	72	595.177	ppb	595.177	3.94	13630	400000	
Co	59	2	72	31.862	ppb	31.862	0.80	68596	2000	
Ni	60	2	72	32.495	ppb	32.495	2.13	19848	5000	
Cu	63	2	72	33.837	ppb	33.837	2.08	57940	5000	
Zn	66	2	72	50.064	ppb	50.064	3.67	10815	5000	
As	75	2	72	32.513	ppb	32.513	2.17	4677	2000	
Se	78	1	72	32.573	ppb	32.573	1.49	7391	2000	
Sr	88	2	72	652.790	ppb	652.790	0.15	309239	4000	
Zr	90	2	72	2645.853	ppb	2645.853	2.73	35907	1000	
Nb	93	2	72	0.325	ppb	0.325	25.92	1494	200	
Mo	95	2	115	39.369	ppb	39.369	0.62	29458	2000	
Pd	105	2	115	-0.003	ppb	-0.003	-285.90	27	100	
Ag	107	2	115	31.150	ppb	31.150	2.77	80367	100	
Cd	111	2	115	30.826	ppb	30.826	1.07	9680	2000	
Sn	120	2	115	31.385	ppb	31.385	2.41	26092	2000	
Sb	121	2	115	34.774	ppb	34.774	0.84	25221	1000	
Ba	137	2	115	92.345	ppb	92.345	2.25	23197	5000	
W	182	2	165	30.823	ppb	30.823	1.99	109708	100	
Pt	195	2	165	0.003	ppb	0.003	71.96	23	100	
Tl	205	2	165	30.895	ppb	30.895	0.23	196653	2000	
Pb	208	2	165	31.029	ppb	31.029	0.41	264373	5000	
Th	232	2	165	28.697	ppb	28.697	0.81	288369	2000	
U	238	2	165	45.052	ppb	45.052	0.55	489919	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1351412	0.37	1454508	92.91	60	120	
Sc (IS)	45	1	HMI H2	25222445	0.41	26285642	95.96	60	120	
Sc (IS)	45	2	HMI He	864434	1.14	903775	95.65	60	120	
Sc (IS)	45	3	No Gas	46919131	1.28	48040283	97.67	60	120	
Ge Internal Standard	72	1	HMI H2	9359790	0.30	9879865	94.74	60	120	
Ge Internal Standard	72	2	HMI He	899935	0.92	957593	93.98	60	120	
In Internal Standard	115	2	HMI He	2651665	1.09	2903780	91.32	60	120	
Ho-165	165	2	HMI He	13188089	0.39	14207049	92.83	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-3-F MSD
Data File Name	048SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:41:31-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	17.006	ppb	17.006	19.56	191039	500000	
Li	7	2	45	11.480	ppb	11.480	80.35	12576	500000	
Li	7	3	45	9.591	ppb	9.591	12.14	6118401	50000	
Be	9	1	6	-0.004	ppb	-0.004	-1117.16	13	2000	
B	11	1	6	115.920	ppb	115.920	0.76	56728	2000	
Na	23	1	45	87575.616	ppb	87575.616	0.87	298027329	2000	>LDR
Na	23	2	45	84385.503	ppb	84385.503	1.33	20085496	400000	
Mg	24	2	45	17743.337	ppb	17743.337	0.67	1873050	400000	
Al	27	2	45	111.767	ppb	111.767	16.64	3041	400000	
K	39	1	45	7520.035	ppb	7520.035	1.01	33050578	400000	
K	39	2	45	7133.846	ppb	7133.846	1.37	375811	400000	
Ca	40	1	45	77752.257	ppb	77752.257	0.45	374663914	400000	
Ca	44	2	45	76585.230	ppb	76585.230	1.16	211780	400000	
Ti	47	2	45	1.790	ppb	1.790	65.10	47	4000	
V	51	2	72	1.982	ppb	1.982	5.40	3647	2000	
Cr	52	2	72	0.271	ppb	0.271	33.54	630	5000	
Mn	55	2	72	70.564	ppb	70.564	3.62	32995	10000	
Fe	57	2	72	247.119	ppb	247.119	4.79	5741	400000	
Co	59	2	72	0.337	ppb	0.337	20.89	757	2000	
Ni	60	2	72	1.791	ppb	1.791	5.29	1243	5000	
Cu	63	2	72	2.254	ppb	2.254	6.48	5121	5000	
Zn	66	2	72	18.423	ppb	18.423	2.54	4114	5000	
As	75	2	72	0.682	ppb	0.682	24.07	113	2000	
Se	78	1	72	1.223	ppb	1.223	28.43	309	2000	
Sr	88	2	72	619.886	ppb	619.886	1.53	293955	4000	
Zr	90	2	72	84.143	ppb	84.143	12.18	1180	1000	
Nb	93	2	72	0.184	ppb	0.184	30.86	1140	200	
Mo	95	2	115	9.302	ppb	9.302	0.39	7102	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-911.29	30	100	
Ag	107	2	115	-1.569	ppb	-1.569	-0.99	527	100	
Cd	111	2	115	0.084	ppb	0.084	37.45	30	2000	
Sn	120	2	115	0.358	ppb	0.358	36.89	403	2000	
Sb	121	2	115	0.318	ppb	0.318	10.68	250	1000	
Ba	137	2	115	59.611	ppb	59.611	7.43	15226	5000	
W	182	2	165	0.201	ppb	0.201	9.68	1450	100	
Pt	195	2	165	0.004	ppb	0.004	190.07	27	100	
Tl	205	2	165	-0.006	ppb	-0.006	-80.06	197	2000	
Pb	208	2	165	0.253	ppb	0.253	1.57	4284	5000	
Th	232	2	165	0.160	ppb	0.160	4.67	2217	2000	
U	238	2	165	12.415	ppb	12.415	0.76	136978	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1344970	1.49	1454508	92.47	60	120	
Sc (IS)	45	1	HMI H2	25217583	0.42	26285642	95.94	60	120	
Sc (IS)	45	2	HMI He	870403	0.38	903775	96.31	60	120	
Sc (IS)	45	3	No Gas	46048478	0.33	48040283	95.85	60	120	
Ge Internal Standard	72	1	HMI H2	9330870	0.27	9879865	94.44	60	120	
Ge Internal Standard	72	2	HMI He	900866	0.77	957593	94.08	60	120	
In Internal Standard	115	2	HMI He	2695690	0.55	2903780	92.83	60	120	
Ho-165	165	2	HMI He	13359490	1.70	14207049	94.03	60	120	

Sample Report

Sample Table

Sample Name	280-116538-J-1-B
Data File Name	049SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T15:45:20-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	12.389	ppb	12.389	33.91	190181	500000	
Li	7	2	45	4.655	ppb	4.655	117.36	12402	500000	
Li	7	3	45	4.068	ppb	4.068	84.52	6067183	50000	
Be	9	1	6	-0.033	ppb	-0.033	0.00	0	2000	
B	11	1	6	109.353	ppb	109.353	0.66	54711	2000	
Na	23	1	45	81674.555	ppb	81674.555	1.25	280071976	2000	>LDR
Na	23	2	45	79878.970	ppb	79878.970	0.86	19095722	400000	
Mg	24	2	45	17420.092	ppb	17420.092	0.22	1846996	400000	
Al	27	2	45	119.250	ppb	119.250	4.79	3254	400000	
K	39	1	45	8092.479	ppb	8092.479	0.39	35127580	400000	
K	39	2	45	7896.341	ppb	7896.341	0.29	416265	400000	
Ca	40	1	45	71473.665	ppb	71473.665	0.59	347029848	400000	
Ca	44	2	45	70723.560	ppb	70723.560	0.65	196432	400000	
Ti	47	2	45	2.428	ppb	2.428	64.31	63	4000	
V	51	2	72	1.729	ppb	1.729	4.84	3447	2000	
Cr	52	2	72	0.228	ppb	0.228	6.32	583	5000	
Mn	55	2	72	84.571	ppb	84.571	1.96	40000	10000	
Fe	57	2	72	220.169	ppb	220.169	5.28	5191	400000	
Co	59	2	72	0.377	ppb	0.377	3.06	853	2000	
Ni	60	2	72	2.165	ppb	2.165	7.23	1487	5000	
Cu	63	2	72	2.770	ppb	2.770	1.70	6058	5000	
Zn	66	2	72	21.087	ppb	21.087	3.58	4734	5000	
As	75	2	72	0.600	ppb	0.600	8.79	103	2000	
Se	78	1	72	1.621	ppb	1.621	12.41	401	2000	
Sr	88	2	72	544.447	ppb	544.447	1.85	261260	4000	
Zr	90	2	72	44.322	ppb	44.322	9.64	647	1000	
Nb	93	2	72	0.158	ppb	0.158	32.27	1087	200	
Mo	95	2	115	9.408	ppb	9.408	1.20	7216	2000	
Pd	105	2	115	-0.015	ppb	-0.015	-86.36	13	100	
Ag	107	2	115	-1.590	ppb	-1.590	-4.77	477	100	
Cd	111	2	115	0.115	ppb	0.115	1.32	40	2000	
Sn	120	2	115	1.086	ppb	1.086	12.28	1020	2000	
Sb	121	2	115	0.244	ppb	0.244	34.76	197	1000	
Ba	137	2	115	45.156	ppb	45.156	2.11	11582	5000	
W	182	2	165	0.100	ppb	0.100	40.58	1077	100	
Pt	195	2	165	0.005	ppb	0.005	136.83	30	100	
Tl	205	2	165	-0.016	ppb	-0.016	-42.91	130	2000	
Pb	208	2	165	0.233	ppb	0.233	8.40	4070	5000	
Th	232	2	165	0.057	ppb	0.057	25.96	1153	2000	
U	238	2	165	10.939	ppb	10.939	0.22	119380	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1373873	0.38	1454508	94.46	60	120	
Sc (IS)	45	1	HMI H2	25409303	0.43	26285642	96.67	60	120	
Sc (IS)	45	2	HMI He	874214	1.22	903775	96.73	60	120	
Sc (IS)	45	3	No Gas	46340621	0.19	48040283	96.46	60	120	
Ge Internal Standard	72	1	HMI H2	9384870	0.40	9879865	94.99	60	120	
Ge Internal Standard	72	2	HMI He	911673	1.06	957593	95.20	60	120	
In Internal Standard	115	2	HMI He	2707953	1.22	2903780	93.26	60	120	
Ho-165	165	2	HMI He	13209726	1.00	14207049	92.98	60	120	

Sample Report

Sample Table

Sample Name	280-116538-J-2-B
Data File Name	050SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:01:36-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	40.645	ppb	40.645	14.23	204219	500000	
Li	7	2	45	12.202	ppb	12.202	50.49	13316	500000	
Li	7	3	45	36.051	ppb	36.051	0.76	6778290	50000	
Be	9	1	6	-0.026	ppb	-0.026	-47.73	3	2000	
B	11	1	6	80.978	ppb	80.978	0.80	40302	2000	
Na	23	1	45	25914.125	ppb	25914.125	0.85	88966425	2000	>LDR
Na	23	2	45	24947.515	ppb	24947.515	1.44	6286830	400000	
Mg	24	2	45	51366.347	ppb	51366.347	0.98	5729687	400000	
Al	27	2	45	240.193	ppb	240.193	2.17	6829	400000	
K	39	1	45	4408.139	ppb	4408.139	1.48	23367210	400000	
K	39	2	45	5454.249	ppb	5454.249	1.13	307111	400000	
Ca	40	1	45	120037.913	ppb	120037.913	0.22	582478378	400000	
Ca	44	2	45	115961.452	ppb	115961.452	0.17	338847	400000	
Ti	47	2	45	3.641	ppb	3.641	18.28	100	4000	
V	51	2	72	0.588	ppb	0.588	66.70	2437	2000	
Cr	52	2	72	0.723	ppb	0.723	16.68	1257	5000	
Mn	55	2	72	248.014	ppb	248.014	1.13	121874	10000	
Fe	57	2	72	613.528	ppb	613.528	3.14	14795	400000	
Co	59	2	72	6.623	ppb	6.623	3.36	15049	2000	
Ni	60	2	72	13.777	ppb	13.777	2.48	8960	5000	
Cu	63	2	72	1.064	ppb	1.064	6.50	3294	5000	
Zn	66	2	72	5.211	ppb	5.211	10.89	1380	5000	
As	75	2	72	9.505	ppb	9.505	5.00	1451	2000	
Se	78	1	72	0.652	ppb	0.652	27.55	180	2000	
Sr	88	2	72	390.531	ppb	390.531	1.18	194876	4000	
Zr	90	2	72	43.690	ppb	43.690	19.14	663	1000	
Nb	93	2	72	0.183	ppb	0.183	8.70	1197	200	
Mo	95	2	115	2.698	ppb	2.698	5.38	2217	2000	
Pd	105	2	115	-0.021	ppb	-0.021	-43.30	7	100	
Ag	107	2	115	-1.645	ppb	-1.645	-1.09	360	100	
Cd	111	2	115	0.069	ppb	0.069	88.42	27	2000	
Sn	120	2	115	0.247	ppb	0.247	5.90	330	2000	
Sb	121	2	115	1.394	ppb	1.394	10.50	1110	1000	
Ba	137	2	115	38.951	ppb	38.951	2.81	10581	5000	
W	182	2	165	0.214	ppb	0.214	13.32	1514	100	
Pt	195	2	165	-0.003	ppb	-0.003	-124.40	7	100	
Tl	205	2	165	0.068	ppb	0.068	9.91	683	2000	
Pb	208	2	165	0.512	ppb	0.512	4.66	6584	5000	
Th	232	2	165	0.204	ppb	0.204	7.21	2690	2000	
U	238	2	165	3.347	ppb	3.347	3.51	37586	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1360092	1.15	1454508	93.51	60	120	
Sc (IS)	45	1	HMI H2	25395152	0.30	26285642	96.61	60	120	
Sc (IS)	45	2	HMI He	919817	1.31	903775	101.78	60	120	
Sc (IS)	45	3	No Gas	47678678	0.66	48040283	99.25	60	120	
Ge Internal Standard	72	1	HMI H2	9296264	0.87	9879865	94.09	60	120	
Ge Internal Standard	72	2	HMI He	947947	0.83	957593	98.99	60	120	
In Internal Standard	115	2	HMI He	2868050	0.97	2903780	98.77	60	120	
Ho-165	165	2	HMI He	13519284	0.72	14207049	95.16	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	051_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:05:23-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	493.341	ppb	3.504	441527	500	98.7	90	110	
Li	7	2	45	477.247	ppb	5.807	28414	500	95.4	90	110	
Li	7	3	45	500.254	ppb	1.301	14243337	500	100.1	90	110	
Be	9	1	6	47.756	ppb	4.233	23276	50	95.5	90	110	
B	11	1	6	49.881	ppb	2.253	25893	50	99.8	90	110	
Na	23	1	45	5105.363	ppb	2.303	18148348	5000	102.1	90	110	
Na	23	2	45	5246.846	ppb	1.558	1284024	5000	104.9	90	110	
Mg	24	2	45	5055.305	ppb	0.132	541877	5000	101.1	90	110	
Al	27	2	45	5143.609	ppb	0.872	139258	5000	102.9	90	110	
K	39	1	45	5102.414	ppb	2.479	26221127	5000	102.0	90	110	
K	39	2	45	5062.003	ppb	0.545	274887	5000	101.2	90	110	
Ca	40	1	45	5017.202	ppb	2.353	24997885	5000	100.3	90	110	
Ca	44	2	45	5149.720	ppb	3.902	14484	5000	103.0	90	110	
Ti	47	2	45	46.771	ppb	9.597	1237	50	93.5	90	110	
V	51	2	72	52.463	ppb	1.209	53054	50	104.9	90	110	
Cr	52	2	72	48.882	ppb	0.027	62859	50	97.8	90	110	
Mn	55	2	72	51.307	ppb	0.570	24585	50	102.6	90	110	
Fe	57	2	72	4957.977	ppb	1.891	115393	5000	99.2	90	110	
Co	59	2	72	48.834	ppb	1.151	107772	50	97.7	90	110	
Ni	60	2	72	49.269	ppb	2.416	30767	50	98.5	90	110	
Cu	63	2	72	48.855	ppb	0.485	85157	50	97.7	90	110	
Zn	66	2	72	50.835	ppb	0.751	11252	50	101.7	90	110	
As	75	2	72	48.820	ppb	5.534	7189	50	97.6	90	110	
Se	78	1	72	49.001	ppb	1.276	11261	50	98.0	90	110	
Sr	88	2	72	48.552	ppb	3.304	23594	50	97.1	90	110	
Zr	90	2	72	88.611	ppb	5.419	1270	50	177.2	90	110	>+\-10%
Nb	93	2	72	81.915	ppb	0.527	211187	100	81.9	90	110	>+\-10%
Mo	95	2	115	47.875	ppb	2.960	37417	50	95.7	90	110	
Pd	105	2	115	49.896	ppb	1.317	60006	50	99.8	90	110	
Ag	107	2	115	46.453	ppb	0.340	123001	50	92.9	90	110	
Cd	111	2	115	48.070	ppb	2.861	15770	50	96.1	90	110	
Sn	120	2	115	48.862	ppb	0.385	42376	50	97.7	90	110	
Sb	121	2	115	49.106	ppb	1.093	37204	50	98.2	90	110	
Ba	137	2	115	49.011	ppb	3.276	12863	50	98.0	90	110	
W	182	2	165	48.913	ppb	0.122	178187	50	97.8	90	110	
Pt	195	2	165	49.246	ppb	0.594	147124	50	98.5	90	110	
Tl	205	2	165	48.982	ppb	1.346	319742	50	98.0	90	110	
Pb	208	2	165	48.747	ppb	1.359	424895	50	97.5	90	110	
Th	232	2	165	48.412	ppb	1.035	498726	50	96.8	90	110	
U	238	2	165	48.316	ppb	0.978	539070	50	96.6	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1401926	1.60	1454508	96.38	60	120	
Sc (IS)	45	1	HMI H2	26036950	1.92	26285642	99.05	60	120	
Sc (IS)	45	2	HMI He	883727	1.09	903775	97.78	60	120	
Sc (IS)	45	3	No Gas	46654658	0.31	48040283	97.12	60	120	
Ge Internal Standard	72	1	HMI H2	9492646	1.55	9879865	96.08	60	120	
Ge Internal Standard	72	2	HMI He	922575	0.69	957593	96.34	60	120	
In Internal Standard	115	2	HMI He	2770353	0.83	2903780	95.41	60	120	
Ho-165	165	2	HMI He	13531423	0.62	14207049	95.24	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	052_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:09:11-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-0.102	ppb	-2957.8	6186408	10	
Be	9	1	6	-0.019	ppb	-120.5	7	0.5	
B	11	1	6	2.281	ppb	13.7	1950	0.5	>RL
Na	23	1	45	1.257	ppb	54.9	229353	25	
Na	23	2	45	0.808	ppb	235.0	17308	25	
Mg	24	2	45	2.949	ppb	10.8	380	25	
Al	27	2	45	-0.052	ppb	-3073.1	60	15	
K	39	1	45	100.952	ppb	8.7	9759632	50	>RL
K	39	2	45	20.389	ppb	72.7	15185	50	
Ca	40	1	45	3.768	ppb	7.7	62695	50	
Ca	44	2	45	-1.940	ppb	-389.8	27	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	2.326	ppb	6.4	4027	1	>RL
Cr	52	2	72	-0.057	ppb	-41.0	223	1	
Mn	55	2	72	-0.001	ppb	-8297.1	60	0.5	
Fe	57	2	72	-0.147	ppb	-1548.4	130	25	
Co	59	2	72	-0.001	ppb	-514.7	30	0.5	
Ni	60	2	72	-0.096	ppb	-76.9	100	1	
Cu	63	2	72	-0.143	ppb	-56.6	1123	1	
Zn	66	2	72	-0.170	ppb	-163.2	173	5	
As	75	2	72	0.032	ppb	214.2	20	1	
Se	78	1	72	-0.116	ppb	-14.8	8	1	
Sr	88	2	72	-0.019	ppb	-188.5	10	0.5	
Zr	90	2	72	0.864	ppb	385.3	50	1	
Nb	93	2	72	6.295	ppb	7.3	16691	2	>RL
Mo	95	2	115	0.134	ppb	18.7	140	0.5	
Pd	105	2	115	0.037	ppb	133.9	77	1	
Ag	107	2	115	-1.641	ppb	-1.2	357	1	
Cd	111	2	115	-0.010	ppb	0.0	0	0.5	
Sn	120	2	115	0.171	ppb	25.9	253	1	
Sb	121	2	115	0.484	ppb	13.9	383	0.6	
Ba	137	2	115	0.038	ppb	99.4	10	0.5	
W	182	2	165	0.120	ppb	27.7	1170	1	
Pt	195	2	165	0.004	ppb	229.9	27	1	
Tl	205	2	165	-0.021	ppb	-12.6	100	0.1	
Pb	208	2	165	-0.111	ppb	-19.2	1183	0.5	
Th	232	2	165	0.009	ppb	78.8	683	1	
U	238	2	165	0.025	ppb	42.1	577	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1417565	0.30	1454508	97.46	60	120	
Sc (IS)	45	1	HMI H2	25706518	0.56	26285642	97.80	60	120	
Sc (IS)	45	2	HMI He	873642	1.08	903775	96.67	60	120	
Sc (IS)	45	3	No Gas	47783989	0.66	48040283	99.47	60	120	
Ge Internal Standard	72	1	HMI H2	9488970	0.67	9879865	96.04	60	120	
Ge Internal Standard	72	2	HMI He	912732	0.58	957593	95.32	60	120	
In Internal Standard	115	2	HMI He	2772857	1.15	2903780	95.49	60	120	
Ho-165	165	2	HMI He	13470253	0.49	14207049	94.81	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	053LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:13:00-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	10.107	ppb	7.936	6297990	50	20.2	70	130	>+/-30%
Be	9	1	6	0.922	ppb	5.962	463	1	92.2	70	130	
Na	23	2	45	43.072	ppb	6.376	27139	50	86.1	70	130	
Mg	24	2	45	52.093	ppb	3.337	5535	50	104.2	70	130	
Al	27	2	45	36.339	ppb	6.906	1023	30	121.1	70	130	
K	39	2	45	110.870	ppb	19.322	19607	100	110.9	70	130	
Ca	44	2	45	52.569	ppb	43.987	177	50	105.1	70	130	
V	51	2	72	6.766	ppb	0.592	8236	5	135.3	70	130	>+/-30%
Cr	52	2	72	1.870	ppb	4.198	2637	2	93.5	70	130	
Mn	55	2	72	0.948	ppb	9.556	503	1	94.8	70	130	
Fe	57	2	72	55.557	ppb	0.632	1397	50	111.1	70	130	
Co	59	2	72	1.019	ppb	6.581	2234	1	101.9	70	130	
Ni	60	2	72	1.889	ppb	1.408	1307	2	94.5	70	130	
Cu	63	2	72	1.674	ppb	21.091	4164	2	83.7	70	130	
Zn	66	2	72	10.387	ppb	2.774	2417	10	103.9	70	130	
As	75	2	72	4.571	ppb	4.284	673	5	91.4	70	130	
Se	78	1	72	4.920	ppb	1.505	1159	5	98.4	70	130	
Sr	88	2	72	1.144	ppb	18.301	563	1	114.4	70	130	
Zr	90	2	72	19.749	ppb	18.280	307	0.5	3949.7	70	130	>+/-30%
Nb	93	2	72	10.913	ppb	4.931	28139	2	545.6	70	130	>+/-30%
Mo	95	2	115	1.747	ppb	12.225	1400	2	87.3	70	130	
Pd	105	2	115	-0.013	ppb	-38.436	17	1	-1.3	70	130	>+/-30%
Ag	107	2	115	3.225	ppb	4.975	12780	5	64.5	70	130	>+/-30%
Cd	111	2	115	0.906	ppb	31.456	300	1	90.6	70	130	
Sn	120	2	115	9.371	ppb	1.007	8223	10	93.7	70	130	
Sb	121	2	115	1.903	ppb	7.911	1460	2	95.2	70	130	
Ba	137	2	115	0.759	ppb	34.250	200	1	75.9	70	130	
W	182	2	165	4.708	ppb	3.014	17519	1	470.8	70	130	>+/-30%
Pt	195	2	165	0.008	ppb	147.896	40	1	0.8	70	130	>+/-30%
Tl	205	2	165	0.993	ppb	4.901	6602	1	99.3	70	130	
Pb	208	2	165	0.886	ppb	4.227	9669	1	88.6	70	130	
Th	232	2	165	2.008	ppb	4.209	20901	2	100.4	70	130	
U	238	2	165	0.953	ppb	3.541	10742	1	95.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1396246	0.80	1454508	95.99	60	120	
Sc (IS)	45	1	HMI H2	25411893	1.12	26285642	96.68	60	120	
Sc (IS)	45	2	HMI He	865590	0.85	903775	95.77	60	120	
Sc (IS)	45	3	No Gas	47335496	0.64	48040283	98.53	60	120	
Ge Internal Standard	72	1	HMI H2	9471001	1.12	9879865	95.86	60	120	
Ge Internal Standard	72	2	HMI He	903524	0.40	957593	94.35	60	120	
In Internal Standard	115	2	HMI He	2773950	1.17	2903780	95.53	60	120	
Ho-165	165	2	HMI He	13305233	1.04	14207049	93.65	60	120	

Sample Report

Sample Table

Sample Name	280-116511-A-1-B
Data File Name	054SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:16:46-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.619	ppb	-1.619	-197.38	183460	500000	
Li	7	2	45	-6.887	ppb	-6.887	-168.58	12042	500000	
Li	7	3	45	-3.254	ppb	-3.254	-126.81	6176635	50000	
Be	9	1	6	-0.026	ppb	-0.026	-46.26	3	2000	
B	11	1	6	2.253	ppb	2.253	18.46	1874	2000	
Na	23	1	45	2411.000	ppb	2411.000	0.58	8496420	2000	
Na	23	2	45	2346.636	ppb	2346.636	0.76	578772	400000	
Mg	24	2	45	3185.696	ppb	3185.696	0.51	338497	400000	
Al	27	2	45	14.730	ppb	14.730	19.66	457	400000	
K	39	1	45	2209.101	ppb	2209.101	1.04	16393444	400000	
K	39	2	45	3396.477	ppb	3396.477	1.41	187501	400000	
Ca	40	1	45	27046.875	ppb	27046.875	1.08	131544825	400000	
Ca	44	2	45	26240.309	ppb	26240.309	0.61	73049	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.686	ppb	0.686	39.24	2474	2000	
Cr	52	2	72	0.287	ppb	0.287	23.51	667	5000	
Mn	55	2	72	0.667	ppb	0.667	22.83	380	10000	
Fe	57	2	72	51.199	ppb	51.199	6.94	1327	400000	
Co	59	2	72	0.020	ppb	0.020	48.50	77	2000	
Ni	60	2	72	0.621	ppb	0.621	29.53	547	5000	
Cu	63	2	72	2.748	ppb	2.748	2.45	6105	5000	
Zn	66	2	72	11.625	ppb	11.625	15.45	2744	5000	
As	75	2	72	0.089	ppb	0.089	59.03	29	2000	
Se	78	1	72	-0.016	ppb	-0.016	-347.10	31	2000	
Sr	88	2	72	89.630	ppb	89.630	2.48	43632	4000	
Zr	90	2	72	2.963	ppb	2.963	46.69	80	1000	
Nb	93	2	72	1.771	ppb	1.771	11.62	5258	200	
Mo	95	2	115	0.069	ppb	0.069	67.08	90	2000	
Pd	105	2	115	-0.013	ppb	-0.013	-186.43	17	100	
Ag	107	2	115	-1.697	ppb	-1.697	-0.29	217	100	
Cd	111	2	115	-0.010	ppb	-0.010	0.00	0	2000	
Sn	120	2	115	0.298	ppb	0.298	16.92	367	2000	
Sb	121	2	115	0.140	ppb	0.140	28.19	123	1000	
Ba	137	2	115	4.898	ppb	4.898	10.69	1300	5000	
W	182	2	165	0.465	ppb	0.465	20.24	2450	100	
Pt	195	2	165	0.004	ppb	0.004	108.88	27	100	
Tl	205	2	165	-0.008	ppb	-0.008	-141.64	187	2000	
Pb	208	2	165	-0.055	ppb	-0.055	-23.27	1687	5000	
Th	232	2	165	0.066	ppb	0.066	8.67	1287	2000	
U	238	2	165	0.171	ppb	0.171	9.05	2227	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1372544	1.51	1454508	94.36	60	120	
Sc (IS)	45	1	HMI H2	25448244	0.88	26285642	96.81	60	120	
Sc (IS)	45	2	HMI He	875995	1.07	903775	96.93	60	120	
Sc (IS)	45	3	No Gas	48120344	0.53	48040283	100.17	60	120	
Ge Internal Standard	72	1	HMI H2	9450743	0.54	9879865	95.66	60	120	
Ge Internal Standard	72	2	HMI He	924309	1.14	957593	96.52	60	120	
In Internal Standard	115	2	HMI He	2802976	0.66	2903780	96.53	60	120	
Ho-165	165	2	HMI He	13676104	0.64	14207049	96.26	60	120	

Sample Report

Sample Table

Sample Name	280-116511-A-2-B
Data File Name	055SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:20:32-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.944	ppb	1.944	369.48	185522	500000	
Li	7	2	45	-1.391	ppb	-1.391	-1568.69	12175	500000	
Li	7	3	45	-2.144	ppb	-2.144	-146.18	6116169	50000	
Be	9	1	6	-0.033	ppb	-0.033	0.00	0	2000	
B	11	1	6	2.132	ppb	2.132	14.00	1837	2000	
Na	23	1	45	4456.852	ppb	4456.852	1.27	15542112	2000	
Na	23	2	45	4572.804	ppb	4572.804	1.70	1107371	400000	
Mg	24	2	45	6044.806	ppb	6044.806	1.01	639859	400000	
Al	27	2	45	11.921	ppb	11.921	21.67	380	400000	
K	39	1	45	3130.278	ppb	3130.278	2.02	19365993	400000	
K	39	2	45	4310.757	ppb	4310.757	0.52	233298	400000	
Ca	40	1	45	49660.217	ppb	49660.217	1.61	241879943	400000	
Ca	44	2	45	47864.523	ppb	47864.523	0.32	132732	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	0.630	ppb	0.630	21.72	2380	2000	
Cr	52	2	72	0.361	ppb	0.361	24.14	750	5000	
Mn	55	2	72	10.094	ppb	10.094	4.55	4818	10000	
Fe	57	2	72	10.931	ppb	10.931	23.28	383	400000	
Co	59	2	72	0.004	ppb	0.004	244.24	40	2000	
Ni	60	2	72	0.515	ppb	0.515	14.48	473	5000	
Cu	63	2	72	4.923	ppb	4.923	3.58	9684	5000	
Zn	66	2	72	12.372	ppb	12.372	6.73	2857	5000	
As	75	2	72	0.065	ppb	0.065	122.32	25	2000	
Se	78	1	72	-0.029	ppb	-0.029	-102.01	28	2000	
Sr	88	2	72	195.888	ppb	195.888	2.95	93816	4000	
Zr	90	2	72	4.043	ppb	4.043	38.47	93	1000	
Nb	93	2	72	1.104	ppb	1.104	12.46	3484	200	
Mo	95	2	115	0.776	ppb	0.776	19.07	637	2000	
Pd	105	2	115	-0.018	ppb	-0.018	-45.92	10	100	
Ag	107	2	115	-1.678	ppb	-1.678	-3.06	260	100	
Cd	111	2	115	-0.010	ppb	-0.010	0.00	0	2000	
Sn	120	2	115	0.221	ppb	0.221	26.38	293	2000	
Sb	121	2	115	0.125	ppb	0.125	11.86	110	1000	
Ba	137	2	115	9.890	ppb	9.890	7.71	2577	5000	
W	182	2	165	0.558	ppb	0.558	10.64	2770	100	
Pt	195	2	165	0.001	ppb	0.001	243.01	20	100	
Tl	205	2	165	-0.003	ppb	-0.003	-111.13	217	2000	
Pb	208	2	165	-0.063	ppb	-0.063	-23.98	1607	5000	
Th	232	2	165	0.019	ppb	0.019	61.36	790	2000	
U	238	2	165	1.737	ppb	1.737	0.85	19716	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1388501	1.21	1454508	95.46	60	120	
Sc (IS)	45	1	HMI H2	25489731	0.74	26285642	96.97	60	120	
Sc (IS)	45	2	HMI He	872824	1.74	903775	96.58	60	120	
Sc (IS)	45	3	No Gas	47507838	1.08	48040283	98.89	60	120	
Ge Internal Standard	72	1	HMI H2	9502001	0.74	9879865	96.18	60	120	
Ge Internal Standard	72	2	HMI He	909712	1.17	957593	95.00	60	120	
In Internal Standard	115	2	HMI He	2749621	1.06	2903780	94.69	60	120	
Ho-165	165	2	HMI He	13560066	0.51	14207049	95.45	60	120	

Sample Report

Sample Table

Sample Name	280-116511-A-3-B
Data File Name	056SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:24:19-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-1.238	ppb	-1.238	-230.08	185173	500000	
Li	7	2	45	-3.928	ppb	-3.928	-489.67	12079	500000	
Li	7	3	45	1.185	ppb	1.185	394.15	6162414	50000	
Be	9	1	6	-0.026	ppb	-0.026	-45.15	3	2000	
B	11	1	6	1.930	ppb	1.930	15.12	1760	2000	
Na	23	1	45	3637.979	ppb	3637.979	0.44	12812790	2000	
Na	23	2	45	3536.538	ppb	3536.538	1.75	858762	400000	
Mg	24	2	45	3875.679	ppb	3875.679	1.25	409531	400000	
Al	27	2	45	19.584	ppb	19.584	2.52	583	400000	
K	39	1	45	2055.606	ppb	2055.606	1.62	16035456	400000	
K	39	2	45	3348.372	ppb	3348.372	0.90	184022	400000	
Ca	40	1	45	29608.549	ppb	29608.549	0.39	145202825	400000	
Ca	44	2	45	30345.914	ppb	30345.914	2.59	84000	400000	
Ti	47	2	45	0.638	ppb	0.638	124.96	17	4000	
V	51	2	72	0.491	ppb	0.491	49.20	2257	2000	
Cr	52	2	72	0.264	ppb	0.264	19.31	630	5000	
Mn	55	2	72	0.527	ppb	0.527	17.22	310	10000	
Fe	57	2	72	7.517	ppb	7.517	37.03	307	400000	
Co	59	2	72	0.010	ppb	0.010	98.01	53	2000	
Ni	60	2	72	0.571	ppb	0.571	9.02	510	5000	
Cu	63	2	72	7.333	ppb	7.333	4.88	13821	5000	
Zn	66	2	72	5.012	ppb	5.012	22.85	1287	5000	
As	75	2	72	0.122	ppb	0.122	28.73	33	2000	
Se	78	1	72	0.246	ppb	0.246	13.10	91	2000	
Sr	88	2	72	427.718	ppb	427.718	0.20	205676	4000	
Zr	90	2	72	3.751	ppb	3.751	82.89	90	1000	
Nb	93	2	72	0.699	ppb	0.699	23.53	2467	200	
Mo	95	2	115	0.543	ppb	0.543	15.36	460	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-69.98	23	100	
Ag	107	2	115	-1.691	ppb	-1.691	-0.46	230	100	
Cd	111	2	115	0.001	ppb	0.001	2800.88	3	2000	
Sn	120	2	115	0.689	ppb	0.689	22.19	700	2000	
Sb	121	2	115	0.071	ppb	0.071	17.58	70	1000	
Ba	137	2	115	10.042	ppb	10.042	4.16	2637	5000	
W	182	2	165	1.057	ppb	1.057	12.36	4591	100	
Pt	195	2	165	0.006	ppb	0.006	32.80	33	100	
Tl	205	2	165	-0.003	ppb	-0.003	-456.32	220	2000	
Pb	208	2	165	-0.075	ppb	-0.075	-24.94	1507	5000	
Th	232	2	165	0.017	ppb	0.017	68.06	773	2000	
U	238	2	165	0.894	ppb	0.894	2.59	10301	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1408360	0.10	1454508	96.83	60	120	
Sc (IS)	45	1	HMI H2	25659693	0.47	26285642	97.62	60	120	
Sc (IS)	45	2	HMI He	871158	0.63	903775	96.39	60	120	
Sc (IS)	45	3	No Gas	47434578	0.50	48040283	98.74	60	120	
Ge Internal Standard	72	1	HMI H2	9446294	1.03	9879865	95.61	60	120	
Ge Internal Standard	72	2	HMI He	913473	0.77	957593	95.39	60	120	
In Internal Standard	115	2	HMI He	2771598	0.97	2903780	95.45	60	120	
Ho-165	165	2	HMI He	13576911	0.25	14207049	95.56	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-2-B
Data File Name	057SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:28:06-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	12.803	ppb	12.803	39.95	184410	500000	
Li	7	2	45	5.465	ppb	5.465	181.74	12009	500000	
Li	7	3	45	6.301	ppb	6.301	5.17	6123751	50000	
Be	9	1	6	0.004	ppb	0.004	1298.69	17	2000	
B	11	1	6	175.142	ppb	175.142	1.95	84217	2000	
Na	23	1	45	7785.194	ppb	7785.194	1.11	26053749	2000	
Na	23	2	45	7852.362	ppb	7852.362	1.04	1827725	400000	
Mg	24	2	45	24305.622	ppb	24305.622	1.93	2488252	400000	
Al	27	2	45	12.568	ppb	12.568	14.66	383	400000	
K	39	1	45	2955.134	ppb	2955.134	0.81	18159682	400000	
K	39	2	45	4202.786	ppb	4202.786	1.32	220351	400000	
Ca	40	1	45	190642.253	ppb	190642.253	0.61	896544467	400000	
Ca	44	2	45	190261.000	ppb	190261.000	0.71	510256	400000	
Ti	47	2	45	1.052	ppb	1.052	41.45	27	4000	
V	51	2	72	-0.146	ppb	-0.146	-35.03	1590	2000	
Cr	52	2	72	0.326	ppb	0.326	19.05	687	5000	
Mn	55	2	72	751.206	ppb	751.206	0.85	344684	10000	
Fe	57	2	72	8020.440	ppb	8020.440	1.22	179091	400000	
Co	59	2	72	0.028	ppb	0.028	74.00	90	2000	
Ni	60	2	72	0.167	ppb	0.167	8.17	253	5000	
Cu	63	2	72	-0.174	ppb	-0.174	-4.40	1040	5000	
Zn	66	2	72	9.040	ppb	9.040	9.04	2087	5000	
As	75	2	72	2.076	ppb	2.076	5.98	308	2000	
Se	78	1	72	-0.004	ppb	-0.004	-3641.36	32	2000	
Sr	88	2	72	1470.380	ppb	1470.380	0.55	685393	4000	
Zr	90	2	72	16.951	ppb	16.951	16.95	263	1000	
Nb	93	2	72	0.706	ppb	0.706	8.46	2407	200	
Mo	95	2	115	0.846	ppb	0.846	20.57	670	2000	
Pd	105	2	115	-0.004	ppb	-0.004	-523.12	27	100	
Ag	107	2	115	-1.690	ppb	-1.690	-0.66	223	100	
Cd	111	2	115	0.011	ppb	0.011	323.68	7	2000	
Sn	120	2	115	0.119	ppb	0.119	29.36	200	2000	
Sb	121	2	115	0.075	ppb	0.075	66.83	70	1000	
Ba	137	2	115	52.727	ppb	52.727	1.45	13347	5000	
W	182	2	165	0.444	ppb	0.444	5.17	2304	100	
Pt	195	2	165	-0.003	ppb	-0.003	-65.05	7	100	
Tl	205	2	165	-0.015	ppb	-0.015	-32.43	140	2000	
Pb	208	2	165	-0.059	ppb	-0.059	-9.55	1603	5000	
Th	232	2	165	0.011	ppb	0.011	45.26	693	2000	
U	238	2	165	0.680	ppb	0.680	3.82	7726	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1327425	0.97	1454508	91.26	60	120	
Sc (IS)	45	1	HMI H2	24613280	1.00	26285642	93.64	60	120	
Sc (IS)	45	2	HMI He	844311	1.93	903775	93.42	60	120	
Sc (IS)	45	3	No Gas	46493096	1.61	48040283	96.78	60	120	
Ge Internal Standard	72	1	HMI H2	9013349	0.20	9879865	91.23	60	120	
Ge Internal Standard	72	2	HMI He	885539	0.91	957593	92.48	60	120	
In Internal Standard	115	2	HMI He	2672103	1.61	2903780	92.02	60	120	
Ho-165	165	2	HMI He	13264432	0.21	14207049	93.37	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-3-D
Data File Name	058SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:31:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.643	ppb	10.643	14.28	183055	500000	
Li	7	2	45	7.563	ppb	7.563	360.41	12049	500000	
Li	7	3	45	0.775	ppb	0.775	119.69	5935716	50000	
Be	9	1	6	0.004	ppb	0.004	1277.10	17	2000	
B	11	1	6	179.340	ppb	179.340	1.68	86613	2000	
Na	23	1	45	7734.011	ppb	7734.011	0.71	25839399	2000	
Na	23	2	45	7774.767	ppb	7774.767	0.63	1807098	400000	
Mg	24	2	45	24584.604	ppb	24584.604	0.39	2513405	400000	
Al	27	2	45	22.119	ppb	22.119	17.39	630	400000	
K	39	1	45	3029.314	ppb	3029.314	1.04	18356599	400000	
K	39	2	45	4247.479	ppb	4247.479	1.42	222204	400000	
Ca	40	1	45	192989.373	ppb	192989.373	0.76	905988067	400000	
Ca	44	2	45	191194.044	ppb	191194.044	0.69	511973	400000	
Ti	47	2	45	0.399	ppb	0.399	100.66	10	4000	
V	51	2	72	-0.270	ppb	-0.270	-31.46	1467	2000	
Cr	52	2	72	0.328	ppb	0.328	36.27	687	5000	
Mn	55	2	72	763.606	ppb	763.606	0.70	348914	10000	
Fe	57	2	72	8168.461	ppb	8168.461	0.47	181636	400000	
Co	59	2	72	0.049	ppb	0.049	30.70	133	2000	
Ni	60	2	72	0.202	ppb	0.202	23.34	273	5000	
Cu	63	2	72	-0.150	ppb	-0.150	-75.93	1073	5000	
Zn	66	2	72	3.678	ppb	3.678	13.56	967	5000	
As	75	2	72	2.182	ppb	2.182	3.79	322	2000	
Se	78	1	72	0.033	ppb	0.033	245.83	40	2000	
Sr	88	2	72	1503.876	ppb	1503.876	0.59	698024	4000	
Zr	90	2	72	15.554	ppb	15.554	20.08	243	1000	
Nb	93	2	72	0.494	ppb	0.494	12.16	1877	200	
Mo	95	2	115	0.991	ppb	0.991	13.99	783	2000	
Pd	105	2	115	0.005	ppb	0.005	407.21	37	100	
Ag	107	2	115	-1.699	ppb	-1.699	-1.58	203	100	
Cd	111	2	115	0.001	ppb	0.001	1975.32	3	2000	
Sn	120	2	115	0.150	ppb	0.150	92.65	227	2000	
Sb	121	2	115	0.151	ppb	0.151	30.78	127	1000	
Ba	137	2	115	58.656	ppb	58.656	4.72	14919	5000	
W	182	2	165	0.413	ppb	0.413	10.95	2187	100	
Pt	195	2	165	-0.001	ppb	-0.001	-273.41	13	100	
Tl	205	2	165	-0.007	ppb	-0.007	-79.50	190	2000	
Pb	208	2	165	0.049	ppb	0.049	55.19	2517	5000	
Th	232	2	165	0.018	ppb	0.018	56.33	767	2000	
U	238	2	165	0.689	ppb	0.689	1.15	7796	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1333846	2.47	1454508	91.70	60	120	
Sc (IS)	45	1	HMI H2	24569577	0.39	26285642	93.47	60	120	
Sc (IS)	45	2	HMI He	842972	1.07	903775	93.27	60	120	
Sc (IS)	45	3	No Gas	45740533	0.42	48040283	95.21	60	120	
Ge Internal Standard	72	1	HMI H2	9026011	0.47	9879865	91.36	60	120	
Ge Internal Standard	72	2	HMI He	881798	0.91	957593	92.08	60	120	
In Internal Standard	115	2	HMI He	2684396	0.78	2903780	92.44	60	120	
Ho-165	165	2	HMI He	13217119	0.36	14207049	93.03	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-3-E MS
Data File Name	059SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:35:43-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	90.109	ppb	90.109	3.65	219789	500000	
Li	7	2	45	63.951	ppb	63.951	3.19	13683	500000	
Li	7	3	45	75.213	ppb	75.213	3.83	7094191	50000	
Be	9	1	6	40.323	ppb	40.323	3.13	18379	2000	
B	11	1	6	212.383	ppb	212.383	3.02	100667	2000	
Na	23	1	45	7747.714	ppb	7747.714	0.69	25682503	2000	
Na	23	2	45	7902.427	ppb	7902.427	3.57	1812395	400000	
Mg	24	2	45	24884.833	ppb	24884.833	4.38	2510419	400000	
Al	27	2	45	470.381	ppb	470.381	4.96	12039	400000	
K	39	1	45	3045.468	ppb	3045.468	0.98	18262082	400000	
K	39	2	45	4356.970	ppb	4356.970	3.83	224601	400000	
Ca	40	1	45	193034.135	ppb	193034.135	0.25	899122067	400000	
Ca	44	2	45	194516.584	ppb	194516.584	3.53	514033	400000	
Ti	47	2	45	1.466	ppb	1.466	82.99	37	4000	
V	51	2	72	39.951	ppb	39.951	4.07	38786	2000	
Cr	52	2	72	40.884	ppb	40.884	3.44	49984	5000	
Mn	55	2	72	808.848	ppb	808.848	2.35	367265	10000	
Fe	57	2	72	8645.626	ppb	8645.626	1.47	191031	400000	
Co	59	2	72	39.467	ppb	39.467	1.35	82729	2000	
Ni	60	2	72	38.411	ppb	38.411	4.41	22819	5000	
Cu	63	2	72	39.036	ppb	39.036	2.09	64893	5000	
Zn	66	2	72	41.342	ppb	41.342	6.17	8730	5000	
As	75	2	72	40.213	ppb	40.213	5.98	5627	2000	
Se	78	1	72	38.086	ppb	38.086	3.01	8261	2000	
Sr	88	2	72	1583.217	ppb	1583.217	2.85	730236	4000	
Zr	90	2	72	3746.628	ppb	3746.628	1.95	49491	1000	
Nb	93	2	72	0.503	ppb	0.503	17.95	1887	200	
Mo	95	2	115	40.163	ppb	40.163	6.01	30257	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-270.25	23	100	
Ag	107	2	115	38.989	ppb	38.989	3.73	100213	100	
Cd	111	2	115	38.843	ppb	38.843	0.94	12286	2000	
Sn	120	2	115	40.705	ppb	40.705	4.37	34039	2000	
Sb	121	2	115	39.989	ppb	39.989	8.74	29195	1000	
Ba	137	2	115	93.673	ppb	93.673	3.48	23695	5000	
W	182	2	165	39.918	ppb	39.918	3.07	142361	100	
Pt	195	2	165	0.006	ppb	0.006	116.78	33	100	
Tl	205	2	165	40.268	ppb	40.268	3.16	257154	2000	
Pb	208	2	165	40.008	ppb	40.008	3.80	341452	5000	
Th	232	2	165	39.921	ppb	39.921	4.01	402323	2000	
U	238	2	165	41.314	ppb	41.314	3.31	450874	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1310681	0.91	1454508	90.11	60	120	
Sc (IS)	45	1	HMI H2	24377179	0.24	26285642	92.74	60	120	
Sc (IS)	45	2	HMI He	832138	1.36	903775	92.07	60	120	
Sc (IS)	45	3	No Gas	45496631	0.25	48040283	94.71	60	120	
Ge Internal Standard	72	1	HMI H2	8953797	0.32	9879865	90.63	60	120	
Ge Internal Standard	72	2	HMI He	876316	0.70	957593	91.51	60	120	
In Internal Standard	115	2	HMI He	2670872	1.13	2903780	91.98	60	120	
Ho-165	165	2	HMI He	13237912	1.31	14207049	93.18	60	120	

Sample Report

Sample Table

Sample Name	280-116469-F-3-F MSD
Data File Name	060SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:39:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	89.436	ppb	89.436	3.26	218312	500000	
Li	7	2	45	69.304	ppb	69.304	17.08	13930	500000	
Li	7	3	45	69.656	ppb	69.656	8.03	6853314	50000	
Be	9	1	6	37.262	ppb	37.262	2.15	16910	2000	
B	11	1	6	216.358	ppb	216.358	1.71	102082	2000	
Na	23	1	45	7786.875	ppb	7786.875	0.53	25675199	2000	
Na	23	2	45	7722.693	ppb	7722.693	2.10	1782147	400000	
Mg	24	2	45	24644.436	ppb	24644.436	0.70	2501631	400000	
Al	27	2	45	471.092	ppb	471.092	7.61	12126	400000	
K	39	1	45	3120.034	ppb	3120.034	0.73	18392864	400000	
K	39	2	45	4287.590	ppb	4287.590	1.18	222590	400000	
Ca	40	1	45	195165.834	ppb	195165.834	0.83	904257560	400000	
Ca	44	2	45	195716.992	ppb	195716.992	0.30	520412	400000	
Ti	47	2	45	1.476	ppb	1.476	84.77	37	4000	
V	51	2	72	39.594	ppb	39.594	1.90	38857	2000	
Cr	52	2	72	39.965	ppb	39.965	2.12	49372	5000	
Mn	55	2	72	807.606	ppb	807.606	0.53	370535	10000	
Fe	57	2	72	8811.304	ppb	8811.304	2.20	196701	400000	
Co	59	2	72	38.567	ppb	38.567	0.81	81683	2000	
Ni	60	2	72	38.204	ppb	38.204	1.65	22936	5000	
Cu	63	2	72	37.848	ppb	37.848	2.27	63617	5000	
Zn	66	2	72	45.733	ppb	45.733	2.76	9737	5000	
As	75	2	72	38.931	ppb	38.931	1.75	5505	2000	
Se	78	1	72	38.266	ppb	38.266	1.96	8269	2000	
Sr	88	2	72	1568.575	ppb	1568.575	0.62	731066	4000	
Zr	90	2	72	3784.912	ppb	3784.912	2.54	50528	1000	
Nb	93	2	72	0.386	ppb	0.386	9.10	1617	200	
Mo	95	2	115	39.693	ppb	39.693	3.49	30163	2000	
Pd	105	2	115	0.025	ppb	0.025	38.35	60	100	
Ag	107	2	115	38.374	ppb	38.374	2.15	99544	100	
Cd	111	2	115	37.904	ppb	37.904	8.37	12079	2000	
Sn	120	2	115	39.445	ppb	39.445	4.24	33268	2000	
Sb	121	2	115	39.780	ppb	39.780	1.20	29305	1000	
Ba	137	2	115	101.951	ppb	101.951	2.38	26016	5000	
W	182	2	165	39.568	ppb	39.568	1.23	141783	100	
Pt	195	2	165	0.002	ppb	0.002	225.64	20	100	
Tl	205	2	165	40.223	ppb	40.223	0.77	258064	2000	
Pb	208	2	165	39.298	ppb	39.298	1.03	337017	5000	
Th	232	2	165	39.807	ppb	39.807	0.34	403085	2000	
U	238	2	165	41.090	ppb	41.090	0.19	450546	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1304766	0.70	1454508	89.70	60	120	
Sc (IS)	45	1	HMI H2	24248785	0.13	26285642	92.25	60	120	
Sc (IS)	45	2	HMI He	837045	1.63	903775	92.62	60	120	
Sc (IS)	45	3	No Gas	44513174	1.11	48040283	92.66	60	120	
Ge Internal Standard	72	1	HMI H2	8920485	0.76	9879865	90.29	60	120	
Ge Internal Standard	72	2	HMI He	885419	1.10	957593	92.46	60	120	
In Internal Standard	115	2	HMI He	2693862	2.11	2903780	92.77	60	120	
Ho-165	165	2	HMI He	13296880	0.40	14207049	93.59	60	120	

Sample Report

Sample Table

Sample Name	280-116538-J-1-B
Data File Name	061SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:43:18-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437002 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	15.413	ppb	15.413	11.08	182747	500000	
Li	7	2	45	-9.761	ppb	-9.761	-132.09	11612	500000	
Li	7	3	45	-1.119	ppb	-1.119	-235.77	5743324	50000	
Be	9	1	6	-0.018	ppb	-0.018	-144.33	7	2000	
B	11	1	6	138.864	ppb	138.864	0.32	64978	2000	
Na	23	1	45	25159.956	ppb	25159.956	0.38	82396282	2000	>LDR
Na	23	2	45	24102.211	ppb	24102.211	0.28	5622319	400000	
Mg	24	2	45	34308.978	ppb	34308.978	0.01	3542015	400000	
Al	27	2	45	44.505	ppb	44.505	15.42	1220	400000	
K	39	1	45	3486.696	ppb	3486.696	1.15	19487533	400000	
K	39	2	45	4572.133	ppb	4572.133	0.34	240507	400000	
Ca	40	1	45	177696.158	ppb	177696.158	0.25	822444068	400000	
Ca	44	2	45	174320.531	ppb	174320.531	0.19	471394	400000	
Ti	47	2	45	0.915	ppb	0.915	49.16	23	4000	
V	51	2	72	-0.131	ppb	-0.131	-124.03	1607	2000	
Cr	52	2	72	0.417	ppb	0.417	24.36	800	5000	
Mn	55	2	72	208.144	ppb	208.144	1.43	95764	10000	
Fe	57	2	72	97.830	ppb	97.830	6.34	2317	400000	
Co	59	2	72	2.256	ppb	2.256	4.67	4818	2000	
Ni	60	2	72	10.656	ppb	10.656	3.69	6522	5000	
Cu	63	2	72	1.754	ppb	1.754	9.51	4221	5000	
Zn	66	2	72	6.011	ppb	6.011	9.36	1460	5000	
As	75	2	72	4.883	ppb	4.883	6.20	705	2000	
Se	78	1	72	1.163	ppb	1.163	21.28	284	2000	
Sr	88	2	72	906.323	ppb	906.323	0.85	423392	4000	
Zr	90	2	72	113.383	ppb	113.383	10.57	1554	1000	
Nb	93	2	72	0.245	ppb	0.245	12.11	1273	200	
Mo	95	2	115	5.662	ppb	5.662	0.75	4374	2000	
Pd	105	2	115	0.010	ppb	0.010	269.37	43	100	
Ag	107	2	115	-1.521	ppb	-1.521	-0.80	650	100	
Cd	111	2	115	0.332	ppb	0.332	9.42	110	2000	
Sn	120	2	115	0.632	ppb	0.632	22.36	640	2000	
Sb	121	2	115	15.751	ppb	15.751	4.71	11725	1000	
Ba	137	2	115	104.268	ppb	104.268	2.17	26860	5000	
W	182	2	165	0.496	ppb	0.496	5.30	2500	100	
Pt	195	2	165	0.002	ppb	0.002	2.79	20	100	
Tl	205	2	165	0.010	ppb	0.010	119.90	300	2000	
Pb	208	2	165	0.178	ppb	0.178	13.01	3634	5000	
Th	232	2	165	0.119	ppb	0.119	18.51	1790	2000	
U	238	2	165	4.353	ppb	4.353	1.73	48071	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1288772	0.42	1454508	88.61	60	120	
Sc (IS)	45	1	HMI H2	24222806	0.30	26285642	92.15	60	120	
Sc (IS)	45	2	HMI He	851251	0.72	903775	94.19	60	120	
Sc (IS)	45	3	No Gas	44485246	0.33	48040283	92.60	60	120	
Ge Internal Standard	72	1	HMI H2	8953010	0.90	9879865	90.62	60	120	
Ge Internal Standard	72	2	HMI He	887449	0.69	957593	92.67	60	120	
In Internal Standard	115	2	HMI He	2719324	0.35	2903780	93.65	60	120	
Ho-165	165	2	HMI He	13318517	0.62	14207049	93.75	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	062_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:47:04-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	498.753	ppb	0.300	419180	500	99.8	90	110	
Li	7	2	45	438.058	ppb	5.812	26074	500	87.6	90	110	>+\-10%
Li	7	3	45	458.486	ppb	0.767	12696195	500	91.7	90	110	
Be	9	1	6	48.807	ppb	1.242	22281	50	97.6	90	110	
B	11	1	6	55.879	ppb	3.948	27052	50	111.8	90	110	>+\-10%
Na	23	1	45	5213.812	ppb	0.671	17481556	5000	104.3	90	110	
Na	23	2	45	5122.721	ppb	0.439	1206721	5000	102.5	90	110	
Mg	24	2	45	5034.101	ppb	0.946	519162	5000	100.7	90	110	
Al	27	2	45	5248.356	ppb	1.535	136714	5000	105.0	90	110	
K	39	1	45	5425.932	ppb	4.244	25733104	5000	108.5	90	110	
K	39	2	45	5070.158	ppb	0.424	264910	5000	101.4	90	110	
Ca	40	1	45	5183.769	ppb	0.858	24365659	5000	103.7	90	110	
Ca	44	2	45	5099.993	ppb	2.410	13804	5000	102.0	90	110	
Ti	47	2	45	42.453	ppb	8.618	1080	50	84.9	90	110	>+\-10%
V	51	2	72	49.527	ppb	2.318	48679	50	99.1	90	110	
Cr	52	2	72	47.991	ppb	1.890	59860	50	96.0	90	110	
Mn	55	2	72	51.141	ppb	1.374	23767	50	102.3	90	110	
Fe	57	2	72	4999.324	ppb	0.688	112866	5000	100.0	90	110	
Co	59	2	72	48.255	ppb	0.897	103282	50	96.5	90	110	
Ni	60	2	72	48.436	ppb	0.540	29344	50	96.9	90	110	
Cu	63	2	72	48.293	ppb	0.667	81667	50	96.6	90	110	
Zn	66	2	72	49.189	ppb	5.747	10568	50	98.4	90	110	
As	75	2	72	49.297	ppb	1.414	7042	50	98.6	90	110	
Se	78	1	72	50.001	ppb	0.820	10967	50	100.0	90	110	
Sr	88	2	72	51.184	ppb	2.523	24128	50	102.4	90	110	
Zr	90	2	72	115.415	ppb	3.869	1594	50	230.8	90	110	>+\-10%
Nb	93	2	72	83.051	ppb	0.156	207672	100	83.1	90	110	>+\-10%
Mo	95	2	115	45.325	ppb	2.722	35105	50	90.6	90	110	
Pd	105	2	115	49.499	ppb	1.362	58982	50	99.0	90	110	
Ag	107	2	115	44.659	ppb	1.916	117343	50	89.3	90	110	>+\-10%
Cd	111	2	115	46.530	ppb	2.755	15126	50	93.1	90	110	
Sn	120	2	115	47.317	ppb	3.161	40654	50	94.6	90	110	
Sb	121	2	115	48.198	ppb	2.714	36181	50	96.4	90	110	
Ba	137	2	115	46.993	ppb	2.003	12219	50	94.0	90	110	
W	182	2	165	48.200	ppb	1.011	176005	50	96.4	90	110	
Pt	195	2	165	48.134	ppb	0.457	144131	50	96.3	90	110	
Tl	205	2	165	48.553	ppb	0.910	317694	50	97.1	90	110	
Pb	208	2	165	48.482	ppb	0.709	423604	50	97.0	90	110	
Th	232	2	165	47.959	ppb	0.597	495232	50	95.9	90	110	
U	238	2	165	48.046	ppb	0.497	537304	50	96.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1312524	2.03	1454508	90.24	60	120	
Sc (IS)	45	1	HMI H2	24558656	0.68	26285642	93.43	60	120	
Sc (IS)	45	2	HMI He	850301	1.11	903775	94.08	60	120	
Sc (IS)	45	3	No Gas	43687761	0.42	48040283	90.94	60	120	
Ge Internal Standard	72	1	HMI H2	9062354	0.77	9879865	91.73	60	120	
Ge Internal Standard	72	2	HMI He	894851	0.82	957593	93.45	60	120	
In Internal Standard	115	2	HMI He	2745497	1.98	2903780	94.55	60	120	
Ho-165	165	2	HMI He	13562730	0.29	14207049	95.46	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	063_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:50:51-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-12.091	ppb	-49.0	5454846	10	
Be	9	1	6	-0.012	ppb	-313.6	10	0.5	
B	11	1	6	4.520	ppb	4.2	2930	0.5	>RL
Na	23	1	45	-5.631	ppb	-8.1	195228	25	
Na	23	2	45	-11.446	ppb	-14.9	13980	25	
Mg	24	2	45	2.568	ppb	37.2	330	25	
Al	27	2	45	1.827	ppb	153.8	107	15	
K	39	1	45	190.308	ppb	21.6	9546169	50	>RL
K	39	2	45	8.490	ppb	56.0	14177	50	
Ca	40	1	45	9.524	ppb	4.6	86444	50	
Ca	44	2	45	16.861	ppb	25.4	77	25	
Ti	47	2	45	0.132	ppb	173.2	3	0.5	
V	51	2	72	2.046	ppb	15.9	3704	1	>RL
Cr	52	2	72	0.018	ppb	280.6	313	1	
Mn	55	2	72	0.030	ppb	149.9	73	0.5	
Fe	57	2	72	1.261	ppb	151.3	160	25	
Co	59	2	72	-0.002	ppb	-435.7	27	0.5	
Ni	60	2	72	-0.027	ppb	-160.3	140	1	
Cu	63	2	72	-0.335	ppb	-6.4	787	1	
Zn	66	2	72	0.172	ppb	102.5	243	5	
As	75	2	72	0.053	ppb	212.3	23	1	
Se	78	1	72	-0.126	ppb	-16.9	5	1	
Sr	88	2	72	0.016	ppb	196.5	27	0.5	
Zr	90	2	72	4.601	ppb	55.5	100	1	>RL
Nb	93	2	72	5.666	ppb	11.0	14882	2	>RL
Mo	95	2	115	0.057	ppb	135.0	80	0.5	
Pd	105	2	115	0.026	ppb	35.5	63	1	
Ag	107	2	115	-1.686	ppb	-1.5	243	1	
Cd	111	2	115	0.011	ppb	164.9	7	0.5	
Sn	120	2	115	0.181	ppb	64.2	263	1	
Sb	121	2	115	0.500	ppb	2.3	397	0.6	
Ba	137	2	115	0.000	ppb	#DIV/0!	0	0.5	
W	182	2	165	0.157	ppb	32.1	1313	1	
Pt	195	2	165	0.006	ppb	184.6	33	1	
Tl	205	2	165	-0.005	ppb	-75.4	207	0.1	
Pb	208	2	165	-0.130	ppb	-5.3	1027	0.5	
Th	232	2	165	0.025	ppb	50.5	860	1	
U	238	2	165	0.045	ppb	46.8	807	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1344284	1.70	1454508	92.42	60	120	
Sc (IS)	45	1	HMI H2	24424831	1.00	26285642	92.92	60	120	
Sc (IS)	45	2	HMI He	849304	0.60	903775	93.97	60	120	
Sc (IS)	45	3	No Gas	43553801	0.35	48040283	90.66	60	120	
Ge Internal Standard	72	1	HMI H2	9020794	0.96	9879865	91.30	60	120	
Ge Internal Standard	72	2	HMI He	899870	0.28	957593	93.97	60	120	
In Internal Standard	115	2	HMI He	2785169	0.92	2903780	95.92	60	120	
Ho-165	165	2	HMI He	13578253	0.43	14207049	95.57	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	064LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T16:54:52-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-2.626	ppb	-217.050	5600133	50	-5.3	70	130	>+/-30%
Be	9	1	6	0.773	ppb	26.906	373	1	77.3	70	130	
Na	23	2	45	34.771	ppb	6.705	24848	50	69.5	70	130	>+/-30%
Mg	24	2	45	51.017	ppb	4.398	5351	50	102.0	70	130	
Al	27	2	45	34.797	ppb	4.452	970	30	116.0	70	130	
K	39	2	45	110.286	ppb	8.117	19324	100	110.3	70	130	
Ca	44	2	45	44.924	ppb	41.154	153	50	89.8	70	130	
V	51	2	72	6.385	ppb	5.714	7849	5	127.7	70	130	
Cr	52	2	72	1.871	ppb	5.681	2630	2	93.6	70	130	
Mn	55	2	72	0.937	ppb	15.703	497	1	93.7	70	130	
Fe	57	2	72	47.092	ppb	13.120	1200	50	94.2	70	130	
Co	59	2	72	1.014	ppb	6.347	2217	1	101.4	70	130	
Ni	60	2	72	2.034	ppb	12.664	1390	2	101.7	70	130	
Cu	63	2	72	1.815	ppb	1.660	4388	2	90.7	70	130	
Zn	66	2	72	11.427	ppb	10.618	2630	10	114.3	70	130	
As	75	2	72	4.462	ppb	2.924	656	5	89.2	70	130	
Se	78	1	72	4.663	ppb	9.190	1043	5	93.3	70	130	
Sr	88	2	72	1.064	ppb	5.860	523	1	106.4	70	130	
Zr	90	2	72	25.743	ppb	35.024	387	0.5	5148.5	70	130	>+/-30%
Nb	93	2	72	10.224	ppb	3.220	26332	2	511.2	70	130	>+/-30%
Mo	95	2	115	1.724	ppb	12.243	1383	2	86.2	70	130	
Pd	105	2	115	0.007	ppb	442.392	40	1	0.7	70	130	>+/-30%
Ag	107	2	115	3.155	ppb	5.166	12600	5	63.1	70	130	>+/-30%
Cd	111	2	115	0.811	ppb	11.982	270	1	81.1	70	130	
Sn	120	2	115	9.529	ppb	1.208	8360	10	95.3	70	130	
Sb	121	2	115	2.284	ppb	6.100	1747	2	114.2	70	130	
Ba	137	2	115	0.864	ppb	19.518	227	1	86.4	70	130	
W	182	2	165	4.644	ppb	2.495	17519	1	464.4	70	130	>+/-30%
Pt	195	2	165	0.014	ppb	75.042	57	1	1.4	70	130	>+/-30%
Tl	205	2	165	0.947	ppb	5.509	6389	1	94.7	70	130	
Pb	208	2	165	0.822	ppb	3.795	9245	1	82.2	70	130	
Th	232	2	165	1.983	ppb	1.016	20924	2	99.2	70	130	
U	238	2	165	0.963	ppb	7.609	10992	1	96.3	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1330330	1.67	1454508	91.46	60	120	
Sc (IS)	45	1	HMI H2	24119758	1.30	26285642	91.76	60	120	
Sc (IS)	45	2	HMI He	854228	0.66	903775	94.52	60	120	
Sc (IS)	45	3	No Gas	43557454	0.46	48040283	90.67	60	120	
Ge Internal Standard	72	1	HMI H2	8973402	1.44	9879865	90.83	60	120	
Ge Internal Standard	72	2	HMI He	900884	0.45	957593	94.08	60	120	
In Internal Standard	115	2	HMI He	2774226	1.68	2903780	95.54	60	120	
Ho-165	165	2	HMI He	13479871	0.58	14207049	94.88	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436225/1-C
Data File Name	065_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:05:42-07:00
Sample Type	Blank
Dilution	1
Comment	436242 6020a dod5
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	1.402	ppb	199.6466409	176269	0.5
Li	7	2	45	-44.476	ppb	-13.73083329	11115	0.5
Li	7	3	45	-18.095	ppb	-22.60436848	5363612	10
Be	9	1	6	-0.026	ppb	-48.92275022	3	0.5
B	11	1	6	1.064	ppb	18.50133116	1233	0.5
Na	23	1	45	-15.714	ppb	-8.851113727	160852	25
Na	23	2	45	-21.834	ppb	-2.537806423	12292	25
Mg	24	2	45	1.857	ppb	8.277282976	273	25
Al	27	2	45	7.381	ppb	29.82874371	267	15
K	39	1	45	-1102.277	ppb	-0.754156277	5546039	50
K	39	2	45	15.626	ppb	64.24260692	15432	50
Ca	40	1	45	9.725	ppb	5.301368428	86752	50
Ca	44	2	45	5.999	ppb	237.4817224	50	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	0.331	ppb	32.26950332	2150	1
Cr	52	2	72	-0.010	ppb	-696.6490567	290	1
Mn	55	2	72	0.204	ppb	88.17194024	160	0.5
Fe	57	2	72	1.701	ppb	114.5520228	177	25
Co	59	2	72	-0.004	ppb	-339.3299184	23	0.5
Ni	60	2	72	-0.132	ppb	-42.48388053	80	1
Cu	63	2	72	-0.259	ppb	-15.09307226	950	1
Zn	66	2	72	1.067	ppb	20.65211345	450	5
As	75	2	72	0.016	ppb	335.6131473	18	1
Se	78	1	72	-0.083	ppb	-72.13087542	15	1
Sr	88	2	72	0.008	ppb	660.5890871	23	0.5
Zr	90	2	72	3.138	ppb	24.16083577	83	1
Nb	93	2	72	0.893	ppb	2.493302388	3027	2
Mo	95	2	115	0.016	ppb	151.6651045	50	0.5
Pd	105	2	115	-0.024	ppb	-18.83542305	3	1
Ag	107	2	115	-1.717	ppb	-0.786403738	170	1
Cd	111	2	115	-0.010	ppb	0	0	0.5
Sn	120	2	115	0.136	ppb	52.48941163	233	1
Sb	121	2	115	0.033	ppb	93.50039437	43	0.6
Ba	137	2	115	0.121	ppb	18.33121373	33	0.5
W	182	2	165	0.153	ppb	2.928131095	1313	1
Pt	195	2	165	0.001	ppb	438.8535615	20	1
Tl	205	2	165	-0.018	ppb	-49.21470524	120	0.1
Pb	208	2	165	-0.117	ppb	-12.05131834	1150	0.5
Th	232	2	165	-0.013	ppb	-26.57166901	470	1
U	238	2	165	-0.013	ppb	-40.61407768	163	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1313524	1.05	1454508	90.31	60	120	
Sc (IS)	45	1	HMI H2	24253110	1.15	26285642	92.27	60	120	
Sc (IS)	45	2	HMI He	902279	1.52	903775	99.83	60	120	
Sc (IS)	45	3	No Gas	43559208	0.65	48040283	90.67	60	120	
Ge Internal Standard	72	1	HMI H2	8888276	0.69	9879865	89.96	60	120	
Ge Internal Standard	72	2	HMI He	934659	1.17	957593	97.60	60	120	
In Internal Standard	115	2	HMI He	2910099	1.13	2903780	100.22	60	120	
Ho-165	165	2	HMI He	13726375	0.13	14207049	96.62	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436225/2-C
Data File Name	066_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:09:31-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436242 6020a dod5
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	81.361	81.361	ppb	27.134	216434	400	20.3	80	120	>+/-20%
Li	7	2	45	30.265	30.265	ppb	36.219	13333	400	7.6	80	120	>+/-20%
Li	7	3	45	59.815	59.815	ppb	10.866	6607255	400	15.0	80	120	>+/-20%
Be	9	1	6	38.088	38.088	ppb	11.985	17508	40	95.2	80	120	
Na	23	2	45	-28.402	-28.402	ppb	-9.366	10397	40	-71.0	80	120	>+/-20%
Mg	24	2	45	1.614	1.614	ppb	28.258	240	40	4.0	80	120	>+/-20%
Al	27	2	45	407.773	407.773	ppb	4.029	11038	40	1019.4	80	120	>+/-20%
K	39	2	45	13.394	13.394	ppb	15.716	14932	40	33.5	80	120	>+/-20%
Ca	44	2	45	226.278	226.278	ppb	18.754	663	40	565.7	80	120	>+/-20%
V	51	2	72	38.965	38.965	ppb	1.217	39538	40	97.4	80	120	
Cr	52	2	72	39.303	39.303	ppb	2.914	50184	40	98.3	80	120	
Mn	55	2	72	41.764	41.764	ppb	4.409	19854	40	104.4	80	120	
Fe	57	2	72	410.049	410.049	ppb	3.677	9587	40	1025.1	80	120	>+/-20%
Co	59	2	72	39.080	39.080	ppb	1.846	85529	40	97.7	80	120	
Ni	60	2	72	39.585	39.585	ppb	3.848	24552	40	99.0	80	120	
Cu	63	2	72	37.794	37.794	ppb	3.072	65633	40	94.5	80	120	
Zn	66	2	72	40.709	40.709	ppb	3.321	8977	40	101.8	80	120	
As	75	2	72	37.270	37.270	ppb	1.655	5447	40	93.2	80	120	
Se	78	1	72	36.997	36.997	ppb	12.640	8002	40	92.5	80	120	
Nb	93	2	72	0.618	0.618	ppb	25.602	2264	40	1.5	80	120	>+/-20%
Mo	95	2	115	35.068	35.068	ppb	3.029	28232	40	87.7	80	120	
Pd	105	2	115	-0.019	-0.019	ppb	-0.515	10	40	0.0	80	120	>+/-20%
Ag	107	2	115	37.001	37.001	ppb	3.057	101831	40	92.5	80	120	
Cd	111	2	115	38.031	38.031	ppb	2.017	12850	40	95.1	80	120	
Sn	120	2	115	37.553	37.553	ppb	2.841	33562	40	93.9	80	120	
Sb	121	2	115	37.691	37.691	ppb	0.631	29412	40	94.2	80	120	
Ba	137	2	115	39.350	39.350	ppb	1.678	10635	40	98.4	80	120	
W	182	2	165	35.641	35.641	ppb	0.729	131045	40	89.1	80	120	
Pt	195	2	165	-0.002	-0.002	ppb	-168.745	10	40	0.0	80	120	>+/-20%
Tl	205	2	165	39.294	39.294	ppb	1.219	258542	40	98.2	80	120	
Pb	208	2	165	38.964	38.964	ppb	1.079	342700	40	97.4	80	120	
Th	232	2	165	38.005	38.005	ppb	0.651	394686	40	95.0	80	120	
U	238	2	165	38.274	38.274	ppb	0.359	430391	40	95.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1325706	3.95	1454508	91.14	60	120	
Sc (IS)	45	1	HMI H2	24527040	6.82	26285642	93.31	60	120	
Sc (IS)	45	2	HMI He	879354	1.29	903775	97.30	60	120	
Sc (IS)	45	3	No Gas	43901469	1.35	48040283	91.38	60	120	
Ge Internal Standard	72	1	HMI H2	8966779	5.47	9879865	90.76	60	120	
Ge Internal Standard	72	2	HMI He	914911	0.60	957593	95.54	60	120	
In Internal Standard	115	2	HMI He	2853114	1.17	2903780	98.26	60	120	
Ho-165	165	2	HMI He	13636023	0.29	14207049	95.98	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-436225/3-B
Data File Name	067SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:13:17-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	81.184	ppb	81.184	3.82	214741	500000	
Li	7	2	45	39.761	ppb	39.761	47.60	13503	500000	
Li	7	3	45	58.024	ppb	58.024	1.75	6539918	50000	
Be	9	1	6	37.718	ppb	37.718	4.62	17284	2000	
B	11	1	6	29.629	ppb	29.629	3.18	14741	2000	
Na	23	1	45	-21.825	ppb	-21.825	-3.48	141102	2000	
Na	23	2	45	-28.580	ppb	-28.580	-1.59	10244	400000	
Mg	24	2	45	2.175	ppb	2.175	16.26	297	400000	
Al	27	2	45	403.011	ppb	403.011	8.10	10794	400000	
K	39	1	45	-1208.398	ppb	-1208.398	-1.74	5231031	400000	
K	39	2	45	17.758	ppb	17.758	75.91	14985	400000	
Ca	40	1	45	8.057	ppb	8.057	0.86	79157	400000	
Ca	44	2	45	182.477	ppb	182.477	33.58	537	400000	
Ti	47	2	45	0.900	ppb	0.900	65.98	23	4000	
V	51	2	72	39.357	ppb	39.357	3.42	39615	2000	
Cr	52	2	72	38.454	ppb	38.454	0.76	48739	5000	
Mn	55	2	72	40.321	ppb	40.321	3.96	19030	10000	
Fe	57	2	72	410.558	ppb	410.558	3.98	9527	400000	
Co	59	2	72	38.475	ppb	38.475	0.60	83587	2000	
Ni	60	2	72	38.443	ppb	38.443	2.29	23667	5000	
Cu	63	2	72	38.407	ppb	38.407	1.96	66196	5000	
Zn	66	2	72	40.430	ppb	40.430	3.61	8850	5000	
As	75	2	72	35.987	ppb	35.987	0.40	5221	2000	
Se	78	1	72	37.708	ppb	37.708	3.74	8142	2000	
Sr	88	2	72	39.878	ppb	39.878	4.25	19084	4000	
Zr	90	2	72	3512.469	ppb	3512.469	1.60	48086	1000	
Nb	93	2	72	0.499	ppb	0.499	17.60	1947	200	
Mo	95	2	115	36.072	ppb	36.072	1.80	28400	2000	
Pd	105	2	115	-0.024	ppb	-0.024	-19.59	3	100	
Ag	107	2	115	37.763	ppb	37.763	2.27	101506	100	
Cd	111	2	115	37.708	ppb	37.708	1.55	12456	2000	
Sn	120	2	115	38.680	ppb	38.680	1.45	33792	2000	
Sb	121	2	115	36.727	ppb	36.727	3.94	28009	1000	
Ba	137	2	115	38.725	ppb	38.725	1.07	10231	5000	
W	182	2	165	35.820	ppb	35.820	1.61	130498	100	
Pt	195	2	165	0.001	ppb	0.001	635.57	20	100	
Tl	205	2	165	39.472	ppb	39.472	1.10	257348	2000	
Pb	208	2	165	39.296	ppb	39.296	0.44	342447	5000	
Th	232	2	165	38.631	ppb	38.631	1.08	397516	2000	
U	238	2	165	38.351	ppb	38.351	0.61	427328	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1316978	1.17	1454508	90.54	60	120	
Sc (IS)	45	1	HMI H2	24292392	1.36	26285642	92.42	60	120	
Sc (IS)	45	2	HMI He	869672	0.78	903775	96.23	60	120	
Sc (IS)	45	3	No Gas	43631671	0.55	48040283	90.82	60	120	
Ge Internal Standard	72	1	HMI H2	8914232	0.74	9879865	90.23	60	120	
Ge Internal Standard	72	2	HMI He	908169	0.96	957593	94.84	60	120	
In Internal Standard	115	2	HMI He	2789216	1.65	2903780	96.05	60	120	
Ho-165	165	2	HMI He	13511694	0.19	14207049	95.11	60	120	

Sample Report

Sample Table

Sample Name	280-116489-B-1-B
Data File Name	068SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:17:04-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.570	ppb	1.570	271.60	177198	500000	
Li	7	2	45	-26.073	ppb	-26.073	-47.92	11245	500000	
Li	7	3	45	-14.652	ppb	-14.652	-28.54	5465466	50000	
Be	9	1	6	0.075	ppb	0.075	27.49	50	2000	
B	11	1	6	13.371	ppb	13.371	4.99	7105	2000	
Na	23	1	45	3052.688	ppb	3052.688	0.96	10244882	2000	
Na	23	2	45	2883.644	ppb	2883.644	0.75	697466	400000	
Mg	24	2	45	1220.706	ppb	1220.706	1.42	127939	400000	
Al	27	2	45	455.326	ppb	455.326	3.89	12106	400000	
K	39	1	45	1058.380	ppb	1058.380	1.41	12179791	400000	
K	39	2	45	2236.746	ppb	2236.746	0.98	126537	400000	
Ca	40	1	45	5427.801	ppb	5427.801	1.21	25313291	400000	
Ca	44	2	45	5300.001	ppb	5300.001	3.89	14571	400000	
Ti	47	2	45	3.999	ppb	3.999	36.42	103	4000	
V	51	2	72	1.122	ppb	1.122	11.03	2834	2000	
Cr	52	2	72	1.252	ppb	1.252	12.24	1860	5000	
Mn	55	2	72	4.916	ppb	4.916	10.30	2360	10000	
Fe	57	2	72	396.146	ppb	396.146	3.52	9147	400000	
Co	59	2	72	0.160	ppb	0.160	38.60	377	2000	
Ni	60	2	72	2.061	ppb	2.061	3.20	1410	5000	
Cu	63	2	72	1.797	ppb	1.797	9.72	4368	5000	
Zn	66	2	72	7.228	ppb	7.228	15.88	1744	5000	
As	75	2	72	0.470	ppb	0.470	13.40	83	2000	
Se	78	1	72	0.128	ppb	0.128	14.05	60	2000	
Sr	88	2	72	58.078	ppb	58.078	0.99	27625	4000	
Zr	90	2	72	256.963	ppb	256.963	7.95	3534	1000	
Nb	93	2	72	0.597	ppb	0.597	12.13	2180	200	
Mo	95	2	115	0.116	ppb	0.116	65.83	127	2000	
Pd	105	2	115	-0.021	ppb	-0.021	-22.68	7	100	
Ag	107	2	115	-1.699	ppb	-1.699	-1.55	210	100	
Cd	111	2	115	0.010	ppb	0.010	166.67	7	2000	
Sn	120	2	115	0.247	ppb	0.247	39.63	320	2000	
Sb	121	2	115	0.560	ppb	0.560	25.66	443	1000	
Ba	137	2	115	44.549	ppb	44.549	7.29	11769	5000	
W	182	2	165	0.242	ppb	0.242	17.27	1637	100	
Pt	195	2	165	0.002	ppb	0.002	157.88	23	100	
Tl	205	2	165	0.004	ppb	0.004	198.11	267	2000	
Pb	208	2	165	0.264	ppb	0.264	5.67	4484	5000	
Th	232	2	165	0.296	ppb	0.296	10.84	3684	2000	
U	238	2	165	0.124	ppb	0.124	10.89	1697	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1325812	0.91	1454508	91.15	60	120	
Sc (IS)	45	1	HMI H2	24369442	0.57	26285642	92.71	60	120	
Sc (IS)	45	2	HMI He	863821	0.89	903775	95.58	60	120	
Sc (IS)	45	3	No Gas	43951841	0.63	48040283	91.49	60	120	
Ge Internal Standard	72	1	HMI H2	8904049	0.36	9879865	90.12	60	120	
Ge Internal Standard	72	2	HMI He	903011	0.45	957593	94.30	60	120	
In Internal Standard	115	2	HMI He	2788281	1.20	2903780	96.02	60	120	
Ho-165	165	2	HMI He	13678968	0.65	14207049	96.28	60	120	

Sample Report

Sample Table

Sample Name	280-116489-B-2-B
Data File Name	069SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:20:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	3.716	ppb	3.716	43.03	177261	500000	
Li	7	2	45	-24.458	ppb	-24.458	-109.42	11338	500000	
Li	7	3	45	-12.563	ppb	-12.563	-31.82	5420388	50000	
Be	9	1	6	0.055	ppb	0.055	69.37	40	2000	
B	11	1	6	12.198	ppb	12.198	4.59	6498	2000	
Na	23	1	45	2664.616	ppb	2664.616	0.62	8920878	2000	
Na	23	2	45	2466.422	ppb	2466.422	0.97	601109	400000	
Mg	24	2	45	1124.838	ppb	1124.838	1.29	118315	400000	
Al	27	2	45	447.301	ppb	447.301	5.52	11932	400000	
K	39	1	45	1008.151	ppb	1008.151	3.08	11960409	400000	
K	39	2	45	2208.838	ppb	2208.838	1.09	125575	400000	
Ca	40	1	45	4739.231	ppb	4739.231	0.55	21987906	400000	
Ca	44	2	45	4814.423	ppb	4814.423	3.89	13287	400000	
Ti	47	2	45	2.960	ppb	2.960	30.38	77	4000	
V	51	2	72	1.246	ppb	1.246	12.36	2944	2000	
Cr	52	2	72	0.622	ppb	0.622	21.31	1070	5000	
Mn	55	2	72	5.458	ppb	5.458	7.10	2607	10000	
Fe	57	2	72	376.214	ppb	376.214	5.41	8670	400000	
Co	59	2	72	0.148	ppb	0.148	15.03	350	2000	
Ni	60	2	72	1.952	ppb	1.952	9.54	1340	5000	
Cu	63	2	72	1.786	ppb	1.786	3.84	4338	5000	
Zn	66	2	72	7.349	ppb	7.349	24.33	1764	5000	
As	75	2	72	0.507	ppb	0.507	41.06	88	2000	
Se	78	1	72	0.080	ppb	0.080	49.25	49	2000	
Sr	88	2	72	57.123	ppb	57.123	1.88	27094	4000	
Zr	90	2	72	91.798	ppb	91.798	6.88	1283	1000	
Nb	93	2	72	0.402	ppb	0.402	34.26	1687	200	
Mo	95	2	115	0.015	ppb	0.015	250.77	47	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-123.22	13	100	
Ag	107	2	115	-1.726	ppb	-1.726	-1.26	140	100	
Cd	111	2	115	0.051	ppb	0.051	0.51	20	2000	
Sn	120	2	115	0.278	ppb	0.278	9.03	347	2000	
Sb	121	2	115	0.220	ppb	0.220	13.78	183	1000	
Ba	137	2	115	45.008	ppb	45.008	5.38	11842	5000	
W	182	2	165	0.137	ppb	0.137	2.83	1243	100	
Pt	195	2	165	-0.001	ppb	-0.001	-220.24	13	100	
Tl	205	2	165	-0.013	ppb	-0.013	-57.78	153	2000	
Pb	208	2	165	0.296	ppb	0.296	14.53	4737	5000	
Th	232	2	165	0.200	ppb	0.200	7.89	2670	2000	
U	238	2	165	0.070	ppb	0.070	12.31	1083	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1316140	0.64	1454508	90.49	60	120	
Sc (IS)	45	1	HMI H2	24236564	0.53	26285642	92.20	60	120	
Sc (IS)	45	2	HMI He	866856	0.59	903775	95.92	60	120	
Sc (IS)	45	3	No Gas	43336899	0.85	48040283	90.21	60	120	
Ge Internal Standard	72	1	HMI H2	8845093	0.54	9879865	89.53	60	120	
Ge Internal Standard	72	2	HMI He	900554	0.88	957593	94.04	60	120	
In Internal Standard	115	2	HMI He	2777838	0.43	2903780	95.66	60	120	
Ho-165	165	2	HMI He	13591045	0.63	14207049	95.66	60	120	

Sample Report

Sample Table

Sample Name	280-116489-B-3-B
Data File Name	070SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:24:38-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-2.041	ppb	-2.041	-68.02	174262	500000	
Li	7	2	45	-31.756	ppb	-31.756	-6.08	11008	500000	
Li	7	3	45	-18.850	ppb	-18.850	-22.95	5358356	50000	
Be	9	1	6	0.062	ppb	0.062	55.60	43	2000	
B	11	1	6	13.500	ppb	13.500	8.37	7152	2000	
Na	23	1	45	2638.230	ppb	2638.230	0.98	8822349	2000	
Na	23	2	45	2480.782	ppb	2480.782	0.49	599499	400000	
Mg	24	2	45	1104.954	ppb	1104.954	1.55	115257	400000	
Al	27	2	45	440.253	ppb	440.253	1.65	11648	400000	
K	39	1	45	1032.662	ppb	1032.662	2.77	12017547	400000	
K	39	2	45	2240.611	ppb	2240.611	1.81	126112	400000	
Ca	40	1	45	4413.388	ppb	4413.388	0.30	20449235	400000	
Ca	44	2	45	4516.657	ppb	4516.657	3.70	12366	400000	
Ti	47	2	45	4.032	ppb	4.032	37.51	103	4000	
V	51	2	72	1.136	ppb	1.136	20.89	2830	2000	
Cr	52	2	72	0.485	ppb	0.485	39.12	893	5000	
Mn	55	2	72	5.085	ppb	5.085	6.82	2424	10000	
Fe	57	2	72	367.892	ppb	367.892	1.77	8453	400000	
Co	59	2	72	0.166	ppb	0.166	7.63	387	2000	
Ni	60	2	72	2.041	ppb	2.041	9.28	1390	5000	
Cu	63	2	72	1.650	ppb	1.650	5.88	4097	5000	
Zn	66	2	72	7.951	ppb	7.951	8.88	1887	5000	
As	75	2	72	0.473	ppb	0.473	17.33	83	2000	
Se	78	1	72	0.074	ppb	0.074	125.49	48	2000	
Sr	88	2	72	55.829	ppb	55.829	1.34	26396	4000	
Zr	90	2	72	69.195	ppb	69.195	8.66	973	1000	
Nb	93	2	72	0.319	ppb	0.319	27.06	1473	200	
Mo	95	2	115	0.038	ppb	0.038	133.37	67	2000	
Pd	105	2	115	-0.008	ppb	-0.008	-56.42	23	100	
Ag	107	2	115	-1.735	ppb	-1.735	-0.26	120	100	
Cd	111	2	115	0.030	ppb	0.030	114.37	13	2000	
Sn	120	2	115	0.227	ppb	0.227	29.98	307	2000	
Sb	121	2	115	0.178	ppb	0.178	34.58	153	1000	
Ba	137	2	115	43.563	ppb	43.563	2.41	11645	5000	
W	182	2	165	0.092	ppb	0.092	30.90	1077	100	
Pt	195	2	165	0.000	ppb	0.000	2846.45	17	100	
Tl	205	2	165	-0.012	ppb	-0.012	-76.86	160	2000	
Pb	208	2	165	0.328	ppb	0.328	7.29	5014	5000	
Th	232	2	165	0.152	ppb	0.152	21.91	2167	2000	
U	238	2	165	0.059	ppb	0.059	22.93	963	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1324366	2.06	1454508	91.05	60	120	
Sc (IS)	45	1	HMI H2	24201766	0.80	26285642	92.07	60	120	
Sc (IS)	45	2	HMI He	859673	1.23	903775	95.12	60	120	
Sc (IS)	45	3	No Gas	43608841	1.28	48040283	90.78	60	120	
Ge Internal Standard	72	1	HMI H2	8816448	1.01	9879865	89.24	60	120	
Ge Internal Standard	72	2	HMI He	897614	0.62	957593	93.74	60	120	
In Internal Standard	115	2	HMI He	2822633	2.00	2903780	97.21	60	120	
Ho-165	165	2	HMI He	13578372	0.34	14207049	95.57	60	120	

Sample Report

Sample Table

Sample Name	280-116292-A-1-C
Data File Name	071SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:28:24-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	17.265	ppb	17.265	29.09	178669	500000	
Li	7	2	45	-5.667	ppb	-5.667	-212.36	11452	500000	
Li	7	3	45	-5.925	ppb	-5.925	-33.30	5349143	50000	
Be	9	1	6	-0.018	ppb	-0.018	-149.29	7	2000	
B	11	1	6	45.835	ppb	45.835	3.82	21536	2000	
Na	23	1	45	62229.918	ppb	62229.918	1.72	197979937	2000	>LDR
Na	23	2	45	58548.591	ppb	58548.591	1.26	13297134	400000	
Mg	24	2	45	18554.911	ppb	18554.911	1.36	1868297	400000	
Al	27	2	45	85.187	ppb	85.187	9.41	2224	400000	
K	39	1	45	1985.388	ppb	1985.388	1.95	14521581	400000	
K	39	2	45	3107.351	ppb	3107.351	1.25	163730	400000	
Ca	40	1	45	137341.957	ppb	137341.957	0.40	618538577	400000	
Ca	44	2	45	135613.113	ppb	135613.113	1.02	357687	400000	
Ti	47	2	45	0.407	ppb	0.407	100.21	10	4000	
V	51	2	72	4.222	ppb	4.222	12.40	5645	2000	
Cr	52	2	72	1.922	ppb	1.922	9.43	2627	5000	
Mn	55	2	72	0.671	ppb	0.671	24.45	363	10000	
Fe	57	2	72	17.996	ppb	17.996	13.56	527	400000	
Co	59	2	72	0.001	ppb	0.001	1312.30	33	2000	
Ni	60	2	72	0.783	ppb	0.783	11.27	617	5000	
Cu	63	2	72	-0.010	ppb	-0.010	-980.05	1300	5000	
Zn	66	2	72	6.337	ppb	6.337	8.37	1513	5000	
As	75	2	72	0.863	ppb	0.863	14.27	136	2000	
Se	78	1	72	31.485	ppb	31.485	4.86	6598	2000	
Sr	88	2	72	595.790	ppb	595.790	1.53	275715	4000	
Zr	90	2	72	17.080	ppb	17.080	27.32	263	1000	
Nb	93	2	72	0.126	ppb	0.126	57.54	970	200	
Mo	95	2	115	7.502	ppb	7.502	9.60	5745	2000	
Pd	105	2	115	-0.015	ppb	-0.015	-63.85	13	100	
Ag	107	2	115	-1.735	ppb	-1.735	-0.71	113	100	
Cd	111	2	115	0.042	ppb	0.042	111.75	17	2000	
Sn	120	2	115	0.056	ppb	0.056	68.90	150	2000	
Sb	121	2	115	0.773	ppb	0.773	7.00	587	1000	
Ba	137	2	115	67.697	ppb	67.697	2.16	17332	5000	
W	182	2	165	0.105	ppb	0.105	16.35	1107	100	
Pt	195	2	165	-0.002	ppb	-0.002	-177.36	10	100	
Tl	205	2	165	0.152	ppb	0.152	26.08	1213	2000	
Pb	208	2	165	-0.113	ppb	-0.113	-17.70	1153	5000	
Th	232	2	165	0.005	ppb	0.005	167.94	643	2000	
U	238	2	165	5.532	ppb	5.532	0.31	61129	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1265976	1.40	1454508	87.04	60	120	
Sc (IS)	45	1	HMI H2	23570438	1.14	26285642	89.67	60	120	
Sc (IS)	45	2	HMI He	830337	1.51	903775	91.87	60	120	
Sc (IS)	45	3	No Gas	41983090	0.88	48040283	87.39	60	120	
Ge Internal Standard	72	1	HMI H2	8642877	0.23	9879865	87.48	60	120	
Ge Internal Standard	72	2	HMI He	879029	1.09	957593	91.80	60	120	
In Internal Standard	115	2	HMI He	2702752	1.36	2903780	93.08	60	120	
Ho-165	165	2	HMI He	13344731	0.22	14207049	93.93	60	120	

Sample Report

Sample Table

Sample Name	280-116324-A-1-C
Data File Name	072SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:32:10-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	14.110	ppb	14.110	55.56	177173	500000	
Li	7	2	45	-23.424	ppb	-23.424	-62.14	10961	500000	
Li	7	3	45	-8.468	ppb	-8.468	-24.73	5250669	50000	
Be	9	1	6	-0.033	ppb	-0.033	0.00	0	2000	
B	11	1	6	65.517	ppb	65.517	3.87	29998	2000	
Na	23	1	45	32062.837	ppb	32062.837	0.77	102094688	2000	>LDR
Na	23	2	45	30316.611	ppb	30316.611	0.20	6936974	400000	
Mg	24	2	45	16976.299	ppb	16976.299	0.56	1720262	400000	
Al	27	2	45	2.924	ppb	2.924	49.97	133	400000	
K	39	1	45	2761.963	ppb	2761.963	0.49	16815237	400000	
K	39	2	45	3896.753	ppb	3896.753	1.30	203195	400000	
Ca	40	1	45	128592.079	ppb	128592.079	0.55	579010298	400000	
Ca	44	2	45	126414.791	ppb	126414.791	0.98	335542	400000	
Ti	47	2	45	0.532	ppb	0.532	114.21	13	4000	
V	51	2	72	3.210	ppb	3.210	5.13	4708	2000	
Cr	52	2	72	0.398	ppb	0.398	14.20	770	5000	
Mn	55	2	72	0.282	ppb	0.282	36.42	187	10000	
Fe	57	2	72	31.467	ppb	31.467	28.59	827	400000	
Co	59	2	72	0.009	ppb	0.009	208.47	50	2000	
Ni	60	2	72	2.216	ppb	2.216	6.27	1467	5000	
Cu	63	2	72	-0.021	ppb	-0.021	-277.36	1283	5000	
Zn	66	2	72	2.111	ppb	2.111	27.30	640	5000	
As	75	2	72	0.807	ppb	0.807	13.16	128	2000	
Se	78	1	72	26.467	ppb	26.467	3.30	5577	2000	
Sr	88	2	72	712.793	ppb	712.793	1.72	330190	4000	
Zr	90	2	72	24.363	ppb	24.363	27.78	360	1000	
Nb	93	2	72	0.079	ppb	0.079	87.87	857	200	
Mo	95	2	115	5.006	ppb	5.006	14.02	3941	2000	
Pd	105	2	115	0.013	ppb	0.013	209.80	47	100	
Ag	107	2	115	-1.734	ppb	-1.734	-1.07	120	100	
Cd	111	2	115	0.010	ppb	0.010	332.59	7	2000	
Sn	120	2	115	0.107	ppb	0.107	68.95	197	2000	
Sb	121	2	115	0.106	ppb	0.106	24.53	97	1000	
Ba	137	2	115	40.227	ppb	40.227	7.20	10558	5000	
W	182	2	165	0.112	ppb	0.112	12.56	1140	100	
Pt	195	2	165	-0.003	ppb	-0.003	-128.51	7	100	
Tl	205	2	165	0.343	ppb	0.343	8.44	2457	2000	
Pb	208	2	165	-0.112	ppb	-0.112	-11.83	1167	5000	
Th	232	2	165	0.007	ppb	0.007	129.66	663	2000	
U	238	2	165	5.563	ppb	5.563	1.79	61922	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1246168	1.66	1454508	85.68	60	120	
Sc (IS)	45	1	HMI H2	23564670	0.19	26285642	89.65	60	120	
Sc (IS)	45	2	HMI He	835512	0.48	903775	92.45	60	120	
Sc (IS)	45	3	No Gas	41500149	0.72	48040283	86.39	60	120	
Ge Internal Standard	72	1	HMI H2	8682401	0.81	9879865	87.88	60	120	
Ge Internal Standard	72	2	HMI He	879974	0.50	957593	91.89	60	120	
In Internal Standard	115	2	HMI He	2769595	1.72	2903780	95.38	60	120	
Ho-165	165	2	HMI He	13441046	0.44	14207049	94.61	60	120	

Sample Report

Sample Table

Sample Name	280-116324-A-2-C
Data File Name	073SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:35:57-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	14.205	ppb	14.205	15.56	175565	500000	
Li	7	2	45	-38.764	ppb	-38.764	-30.17	10504	500000	
Li	7	3	45	-11.773	ppb	-11.773	-23.27	5199526	50000	
Be	9	1	6	-0.033	ppb	-0.033	0.00	0	2000	
B	11	1	6	67.549	ppb	67.549	2.66	30522	2000	
Na	23	1	45	32866.274	ppb	32866.274	1.31	103664018	2000	>LDR
Na	23	2	45	30611.175	ppb	30611.175	0.76	7024122	400000	
Mg	24	2	45	17246.597	ppb	17246.597	2.04	1752432	400000	
Al	27	2	45	9.151	ppb	9.151	17.82	293	400000	
K	39	1	45	2594.678	ppb	2594.678	1.44	16167844	400000	
K	39	2	45	3637.729	ppb	3637.729	1.17	191121	400000	
Ca	40	1	45	128348.963	ppb	128348.963	1.02	572500578	400000	
Ca	44	2	45	126003.641	ppb	126003.641	1.80	335394	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	3.253	ppb	3.253	7.63	4754	2000	
Cr	52	2	72	0.165	ppb	0.165	23.44	487	5000	
Mn	55	2	72	0.106	ppb	0.106	10.50	107	10000	
Fe	57	2	72	15.380	ppb	15.380	19.77	470	400000	
Co	59	2	72	0.004	ppb	0.004	110.70	40	2000	
Ni	60	2	72	1.786	ppb	1.786	16.64	1213	5000	
Cu	63	2	72	-0.054	ppb	-0.054	-170.65	1230	5000	
Zn	66	2	72	2.043	ppb	2.043	17.23	627	5000	
As	75	2	72	0.582	ppb	0.582	9.04	97	2000	
Se	78	1	72	25.922	ppb	25.922	4.03	5416	2000	
Sr	88	2	72	721.773	ppb	721.773	0.51	334869	4000	
Zr	90	2	72	17.053	ppb	17.053	29.10	263	1000	
Nb	93	2	72	0.050	ppb	0.050	61.14	787	200	
Mo	95	2	115	5.404	ppb	5.404	5.26	4251	2000	
Pd	105	2	115	-0.021	ppb	-0.021	-22.88	7	100	
Ag	107	2	115	-1.742	ppb	-1.742	-0.69	100	100	
Cd	111	2	115	-0.010	ppb	-0.010	0.00	0	2000	
Sn	120	2	115	0.064	ppb	0.064	53.92	160	2000	
Sb	121	2	115	0.084	ppb	0.084	53.65	80	1000	
Ba	137	2	115	42.572	ppb	42.572	3.96	11165	5000	
W	182	2	165	0.101	ppb	0.101	45.10	1093	100	
Pt	195	2	165	0.003	ppb	0.003	74.90	23	100	
Tl	205	2	165	0.346	ppb	0.346	16.55	2464	2000	
Pb	208	2	165	-0.112	ppb	-0.112	-11.66	1167	5000	
Th	232	2	165	-0.003	ppb	-0.003	-132.75	557	2000	
U	238	2	165	5.737	ppb	5.737	1.58	63457	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1230374	1.08	1454508	84.59	60	120	
Sc (IS)	45	1	HMI H2	23345090	0.86	26285642	88.81	60	120	
Sc (IS)	45	2	HMI He	837938	1.24	903775	92.72	60	120	
Sc (IS)	45	3	No Gas	41476446	0.10	48040283	86.34	60	120	
Ge Internal Standard	72	1	HMI H2	8609618	0.70	9879865	87.14	60	120	
Ge Internal Standard	72	2	HMI He	881394	0.79	957593	92.04	60	120	
In Internal Standard	115	2	HMI He	2768016	0.62	2903780	95.32	60	120	
Ho-165	165	2	HMI He	13359500	0.48	14207049	94.03	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	074_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:39:45-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	484.457	ppb	1.646	394874	500	96.9	90	110	
Li	7	2	45	402.756	ppb	5.028	24324	500	80.6	90	110	>+\-10%
Li	7	3	45	439.526	ppb	1.134	11691444	500	87.9	90	110	>+\-10%
Be	9	1	6	46.709	ppb	7.281	20502	50	93.4	90	110	
B	11	1	6	49.699	ppb	3.551	23239	50	99.4	90	110	
Na	23	1	45	5111.077	ppb	0.378	16418665	5000	102.2	90	110	
Na	23	2	45	4959.213	ppb	0.524	1140252	5000	99.2	90	110	
Mg	24	2	45	4919.871	ppb	0.406	495021	5000	98.4	90	110	
Al	27	2	45	5180.075	ppb	2.012	131646	5000	103.6	90	110	
K	39	1	45	5288.848	ppb	0.982	24243925	5000	105.8	90	110	
K	39	2	45	5021.664	ppb	1.092	256086	5000	100.4	90	110	
Ca	40	1	45	5061.285	ppb	0.602	22788060	5000	101.2	90	110	
Ca	44	2	45	5074.394	ppb	3.384	13400	5000	101.5	90	110	
Ti	47	2	45	40.872	ppb	6.967	1013	50	81.7	90	110	>+\-10%
V	51	2	72	47.571	ppb	1.119	45713	50	95.1	90	110	
Cr	52	2	72	47.440	ppb	0.811	57772	50	94.9	90	110	
Mn	55	2	72	49.676	ppb	1.701	22538	50	99.4	90	110	
Fe	57	2	72	4798.318	ppb	1.456	105753	5000	96.0	90	110	
Co	59	2	72	46.246	ppb	0.505	96634	50	92.5	90	110	
Ni	60	2	72	46.763	ppb	2.701	27664	50	93.5	90	110	
Cu	63	2	72	45.610	ppb	0.806	75366	50	91.2	90	110	
Zn	66	2	72	48.537	ppb	1.296	10181	50	97.1	90	110	
As	75	2	72	48.116	ppb	3.519	6709	50	96.2	90	110	
Se	78	1	72	48.027	ppb	1.335	10110	50	96.1	90	110	
Sr	88	2	72	51.078	ppb	2.479	23507	50	102.2	90	110	
Zr	90	2	72	105.652	ppb	8.558	1427	50	211.3	90	110	>+\-10%
Nb	93	2	72	80.795	ppb	0.722	197232	100	80.8	90	110	>+\-10%
Mo	95	2	115	45.013	ppb	3.154	34533	50	90.0	90	110	
Pd	105	2	115	47.257	ppb	3.380	55782	50	94.5	90	110	
Ag	107	2	115	43.872	ppb	1.189	114265	50	87.7	90	110	>+\-10%
Cd	111	2	115	46.469	ppb	3.738	14965	50	92.9	90	110	
Sn	120	2	115	47.728	ppb	1.839	40624	50	95.5	90	110	
Sb	121	2	115	48.868	ppb	3.052	36332	50	97.7	90	110	
Ba	137	2	115	47.516	ppb	1.035	12239	50	95.0	90	110	
W	182	2	165	47.004	ppb	2.356	168550	50	94.0	90	110	
Pt	195	2	165	46.224	ppb	2.885	135901	50	92.4	90	110	
Tl	205	2	165	48.855	ppb	1.736	313916	50	97.7	90	110	
Pb	208	2	165	48.281	ppb	0.992	414265	50	96.6	90	110	
Th	232	2	165	48.117	ppb	1.689	487892	50	96.2	90	110	
U	238	2	165	48.131	ppb	1.592	528542	50	96.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1263455	2.19	1454508	86.86	60	120	
Sc (IS)	45	1	HMI H2	23522890	0.29	26285642	89.49	60	120	
Sc (IS)	45	2	HMI He	829558	0.92	903775	91.79	60	120	
Sc (IS)	45	3	No Gas	41173669	0.28	48040283	85.71	60	120	
Ge Internal Standard	72	1	HMI H2	8696379	0.15	9879865	88.02	60	120	
Ge Internal Standard	72	2	HMI He	873547	0.83	957593	91.22	60	120	
In Internal Standard	115	2	HMI He	2719069	1.11	2903780	93.64	60	120	
Ho-165	165	2	HMI He	13320144	1.39	14207049	93.76	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	075_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:43:48-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-20.854	ppb	-19.4	4967532	10	
Be	9	1	6	0.005	ppb	272.2	17	0.5	
B	11	1	6	1.983	ppb	10.1	1613	0.5	>RL
Na	23	1	45	5.548	ppb	13.6	220026	25	
Na	23	2	45	-3.129	ppb	-46.6	15592	25	
Mg	24	2	45	2.266	ppb	13.5	293	25	
Al	27	2	45	3.082	ppb	60.7	137	15	
K	39	1	45	329.439	ppb	14.8	9455209	50	>RL
K	39	2	45	10.096	ppb	236.9	13974	50	
Ca	40	1	45	30.456	ppb	1.8	174562	50	
Ca	44	2	45	42.680	ppb	44.0	143	25	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.777	ppb	13.8	3367	1	>RL
Cr	52	2	72	-0.083	ppb	-54.3	183	1	
Mn	55	2	72	0.055	ppb	99.5	83	0.5	
Fe	57	2	72	-0.372	ppb	-440.1	120	25	
Co	59	2	72	-0.002	ppb	-929.5	27	0.5	
Ni	60	2	72	-0.106	ppb	-57.3	90	1	
Cu	63	2	72	-0.193	ppb	-58.1	1000	1	
Zn	66	2	72	0.458	ppb	49.7	297	5	
As	75	2	72	0.056	ppb	87.4	23	1	
Se	78	1	72	-0.087	ppb	-46.6	13	1	
Sr	88	2	72	0.018	ppb	70.5	27	0.5	
Zr	90	2	72	1.759	ppb	114.0	60	1	>RL
Nb	93	2	72	5.077	ppb	3.7	13087	2	>RL
Mo	95	2	115	0.139	ppb	36.2	143	0.5	
Pd	105	2	115	0.027	ppb	217.0	63	1	
Ag	107	2	115	-1.746	ppb	-0.4	90	1	
Cd	111	2	115	0.001	ppb	2488.1	3	0.5	
Sn	120	2	115	0.195	ppb	34.1	273	1	
Sb	121	2	115	0.384	ppb	30.7	307	0.6	
Ba	137	2	115	0.026	ppb	173.2	7	0.5	
W	182	2	165	0.158	ppb	22.1	1293	1	
Pt	195	2	165	0.006	ppb	118.0	33	1	
Tl	205	2	165	-0.009	ppb	-108.1	180	0.1	
Pb	208	2	165	-0.124	ppb	-3.7	1063	0.5	
Th	232	2	165	0.020	ppb	22.1	793	1	
U	238	2	165	0.020	ppb	26.4	517	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1271653	0.43	1454508	87.43	60	120	
Sc (IS)	45	1	HMI H2	23157850	0.93	26285642	88.10	60	120	
Sc (IS)	45	2	HMI He	832308	0.41	903775	92.09	60	120	
Sc (IS)	45	3	No Gas	40664136	0.99	48040283	84.65	60	120	
Ge Internal Standard	72	1	HMI H2	8596991	0.54	9879865	87.02	60	120	
Ge Internal Standard	72	2	HMI He	878739	0.11	957593	91.77	60	120	
In Internal Standard	115	2	HMI He	2769205	1.60	2903780	95.37	60	120	
Ho-165	165	2	HMI He	13351929	1.21	14207049	93.98	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	076LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:47:36-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-10.091	ppb	-22.295	5168408	50	-20.2	70	130	>+/-30%
Be	9	1	6	0.745	ppb	45.489	343	1	74.5	70	130	
Na	23	2	45	36.843	ppb	5.054	24685	50	73.7	70	130	
Mg	24	2	45	51.174	ppb	7.890	5231	50	102.3	70	130	
Al	27	2	45	35.676	ppb	11.531	967	30	118.9	70	130	
K	39	2	45	125.309	ppb	8.905	19561	100	125.3	70	130	
Ca	44	2	45	80.617	ppb	26.861	243	50	161.2	70	130	>+/-30%
V	51	2	72	6.491	ppb	0.611	7752	5	129.8	70	130	
Cr	52	2	72	1.793	ppb	5.792	2470	2	89.7	70	130	
Mn	55	2	72	0.986	ppb	8.069	507	1	98.6	70	130	
Fe	57	2	72	50.067	ppb	3.696	1237	50	100.1	70	130	
Co	59	2	72	0.952	ppb	4.933	2030	1	95.2	70	130	
Ni	60	2	72	1.910	ppb	12.877	1283	2	95.5	70	130	
Cu	63	2	72	1.595	ppb	9.216	3921	2	79.8	70	130	
Zn	66	2	72	10.975	ppb	9.074	2470	10	109.7	70	130	
As	75	2	72	4.636	ppb	9.208	663	5	92.7	70	130	
Se	78	1	72	4.296	ppb	3.354	931	5	85.9	70	130	
Sr	88	2	72	1.092	ppb	9.269	523	1	109.2	70	130	
Zr	90	2	72	25.204	ppb	14.590	370	0.5	5040.9	70	130	>+/-30%
Nb	93	2	72	10.401	ppb	3.999	26115	2	520.0	70	130	>+/-30%
Mo	95	2	115	1.773	ppb	22.373	1420	2	88.7	70	130	
Pd	105	2	115	-0.016	ppb	-80.301	13	1	-1.6	70	130	>+/-30%
Ag	107	2	115	2.935	ppb	3.833	12042	5	58.7	70	130	>+/-30%
Cd	111	2	115	1.221	ppb	21.491	403	1	122.1	70	130	
Sn	120	2	115	9.400	ppb	3.744	8246	10	94.0	70	130	
Sb	121	2	115	1.968	ppb	12.257	1510	2	98.4	70	130	
Ba	137	2	115	0.925	ppb	17.991	243	1	92.5	70	130	
W	182	2	165	4.704	ppb	1.990	17536	1	470.4	70	130	>+/-30%
Pt	195	2	165	0.021	ppb	62.203	77	1	2.1	70	130	>+/-30%
Tl	205	2	165	0.951	ppb	6.395	6345	1	95.1	70	130	
Pb	208	2	165	0.887	ppb	1.528	9692	1	88.7	70	130	
Th	232	2	165	2.011	ppb	2.759	20978	2	100.6	70	130	
U	238	2	165	1.039	ppb	2.867	11709	1	103.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1274609	1.20	1454508	87.63	60	120	
Sc (IS)	45	1	HMI H2	23333900	0.56	26285642	88.77	60	120	
Sc (IS)	45	2	HMI He	832414	1.19	903775	92.10	60	120	
Sc (IS)	45	3	No Gas	41035114	0.23	48040283	85.42	60	120	
Ge Internal Standard	72	1	HMI H2	8670641	0.86	9879865	87.76	60	120	
Ge Internal Standard	72	2	HMI He	878511	0.89	957593	91.74	60	120	
In Internal Standard	115	2	HMI He	2774493	1.53	2903780	95.55	60	120	
Ho-165	165	2	HMI He	13328636	0.94	14207049	93.82	60	120	

Sample Report

Sample Table

Sample Name	280-116324-A-3-C
Data File Name	077SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:51:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	16.020	ppb	16.020	17.58	172142	500000	
Li	7	2	45	-29.203	ppb	-29.203	-41.70	10604	500000	
Li	7	3	45	-15.786	ppb	-15.786	-25.58	4932952	50000	
Be	9	1	6	-0.001	ppb	-0.001	-4802.87	13	2000	
B	11	1	6	46.334	ppb	46.334	5.18	20765	2000	
Na	23	1	45	68449.337	ppb	68449.337	0.50	210475170	2000	>LDR
Na	23	2	45	63791.482	ppb	63791.482	1.31	14343197	400000	
Mg	24	2	45	17996.753	ppb	17996.753	0.82	1794226	400000	
Al	27	2	45	5.664	ppb	5.664	7.70	200	400000	
K	39	1	45	2813.525	ppb	2813.525	1.07	16402987	400000	
K	39	2	45	3783.281	ppb	3783.281	1.28	194475	400000	
Ca	40	1	45	141338.803	ppb	141338.803	0.94	615211418	400000	
Ca	44	2	45	137866.310	ppb	137866.310	0.84	360025	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	4.655	ppb	4.655	8.11	5938	2000	
Cr	52	2	72	1.424	ppb	1.424	13.97	1984	5000	
Mn	55	2	72	0.902	ppb	0.902	24.95	460	10000	
Fe	57	2	72	15.957	ppb	15.957	28.98	473	400000	
Co	59	2	72	0.013	ppb	0.013	43.10	57	2000	
Ni	60	2	72	0.928	ppb	0.928	18.04	690	5000	
Cu	63	2	72	0.146	ppb	0.146	91.65	1527	5000	
Zn	66	2	72	2.782	ppb	2.782	20.56	763	5000	
As	75	2	72	0.678	ppb	0.678	17.00	108	2000	
Se	78	1	72	34.374	ppb	34.374	2.50	6947	2000	
Sr	88	2	72	576.190	ppb	576.190	1.00	261841	4000	
Zr	90	2	72	4.170	ppb	4.170	113.99	90	1000	
Nb	93	2	72	1.467	ppb	1.467	5.73	4177	200	
Mo	95	2	115	10.360	ppb	10.360	3.57	7969	2000	
Pd	105	2	115	-0.018	ppb	-0.018	-46.52	10	100	
Ag	107	2	115	-1.745	ppb	-1.745	-0.24	90	100	
Cd	111	2	115	0.011	ppb	0.011	162.32	7	2000	
Sn	120	2	115	0.095	ppb	0.095	83.77	183	2000	
Sb	121	2	115	0.185	ppb	0.185	23.37	153	1000	
Ba	137	2	115	79.120	ppb	79.120	1.86	20369	5000	
W	182	2	165	0.154	ppb	0.154	36.55	1280	100	
Pt	195	2	165	0.000	ppb	0.000	540.85	17	100	
Tl	205	2	165	0.114	ppb	0.114	7.87	967	2000	
Pb	208	2	165	-0.116	ppb	-0.116	-8.63	1127	5000	
Th	232	2	165	0.009	ppb	0.009	80.48	683	2000	
U	238	2	165	7.477	ppb	7.477	0.54	82458	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1208252	1.58	1454508	83.07	60	120	
Sc (IS)	45	1	HMI H2	22780854	0.73	26285642	86.67	60	120	
Sc (IS)	45	2	HMI He	822059	0.58	903775	90.96	60	120	
Sc (IS)	45	3	No Gas	39798839	0.39	48040283	82.84	60	120	
Ge Internal Standard	72	1	HMI H2	8340120	1.03	9879865	84.42	60	120	
Ge Internal Standard	72	2	HMI He	863327	0.81	957593	90.16	60	120	
In Internal Standard	115	2	HMI He	2717638	0.55	2903780	93.59	60	120	
Ho-165	165	2	HMI He	13333858	0.86	14207049	93.85	60	120	

Sample Report

Sample Table

Sample Name	280-116324-A-5-C
Data File Name	078SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:55:10-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.601	ppb	10.601	15.34	169978	500000	
Li	7	2	45	-36.396	ppb	-36.396	-44.88	10394	500000	
Li	7	3	45	-17.560	ppb	-17.560	-15.27	4907068	50000	
Be	9	1	6	-0.017	ppb	-0.017	-85.32	7	2000	
B	11	1	6	48.737	ppb	48.737	2.30	21202	2000	
Na	23	1	45	74854.802	ppb	74854.802	0.65	230517883	2000	>LDR
Na	23	2	45	69585.558	ppb	69585.558	0.64	15667142	400000	
Mg	24	2	45	19574.793	ppb	19574.793	1.55	1954395	400000	
Al	27	2	45	22.847	ppb	22.847	13.29	633	400000	
K	39	1	45	2458.409	ppb	2458.409	1.04	15412297	400000	
K	39	2	45	3489.849	ppb	3489.849	1.28	180689	400000	
Ca	40	1	45	148240.251	ppb	148240.251	1.08	646274484	400000	
Ca	44	2	45	143189.607	ppb	143189.607	1.28	374474	400000	
Ti	47	2	45	0.271	ppb	0.271	173.21	7	4000	
V	51	2	72	2.819	ppb	2.819	9.80	4281	2000	
Cr	52	2	72	28.102	ppb	28.102	0.87	34088	5000	
Mn	55	2	72	7.990	ppb	7.990	2.00	3647	10000	
Fe	57	2	72	14.195	ppb	14.195	10.41	437	400000	
Co	59	2	72	0.014	ppb	0.014	57.66	60	2000	
Ni	60	2	72	0.021	ppb	0.021	172.42	163	5000	
Cu	63	2	72	0.518	ppb	0.518	21.31	2134	5000	
Zn	66	2	72	3.531	ppb	3.531	2.99	920	5000	
As	75	2	72	0.991	ppb	0.991	12.46	152	2000	
Se	78	1	72	23.658	ppb	23.658	6.27	4820	2000	
Sr	88	2	72	580.904	ppb	580.904	0.49	265178	4000	
Zr	90	2	72	2.839	ppb	2.839	179.45	73	1000	
Nb	93	2	72	0.997	ppb	0.997	11.70	3060	200	
Mo	95	2	115	1.765	ppb	1.765	9.86	1400	2000	
Pd	105	2	115	0.004	ppb	0.004	305.01	37	100	
Ag	107	2	115	-1.737	ppb	-1.737	-0.83	110	100	
Cd	111	2	115	-0.010	ppb	-0.010	0.00	0	2000	
Sn	120	2	115	0.124	ppb	0.124	65.13	210	2000	
Sb	121	2	115	0.201	ppb	0.201	36.56	167	1000	
Ba	137	2	115	42.062	ppb	42.062	4.19	10931	5000	
W	182	2	165	0.086	ppb	0.086	47.11	1040	100	
Pt	195	2	165	0.006	ppb	0.006	143.02	33	100	
Tl	205	2	165	0.013	ppb	0.013	143.13	317	2000	
Pb	208	2	165	-0.113	ppb	-0.113	-6.26	1157	5000	
Th	232	2	165	-0.011	ppb	-0.011	-72.74	477	2000	
U	238	2	165	5.721	ppb	5.721	1.80	63491	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1174239	0.75	1454508	80.73	60	120	
Sc (IS)	45	1	HMI H2	22816868	0.43	26285642	86.80	60	120	
Sc (IS)	45	2	HMI He	823226	0.40	903775	91.09	60	120	
Sc (IS)	45	3	No Gas	39790031	0.49	48040283	82.83	60	120	
Ge Internal Standard	72	1	HMI H2	8391183	0.71	9879865	84.93	60	120	
Ge Internal Standard	72	2	HMI He	867199	0.53	957593	90.56	60	120	
In Internal Standard	115	2	HMI He	2743144	0.38	2903780	94.47	60	120	
Ho-165	165	2	HMI He	13404607	0.67	14207049	94.35	60	120	

Sample Report

Sample Table

Sample Name	280-116324-A-6-C
Data File Name	079SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T17:58:57-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	8.191	ppb	8.191	96.55	170494	500000	
Li	7	2	45	-36.664	ppb	-36.664	-14.02	10461	500000	
Li	7	3	45	-22.104	ppb	-22.104	-14.12	4889874	50000	
Be	9	1	6	-0.017	ppb	-0.017	-164.72	7	2000	
B	11	1	6	50.504	ppb	50.504	1.08	22471	2000	
Na	23	1	45	47202.315	ppb	47202.315	0.99	146827344	2000	>LDR
Na	23	2	45	43920.901	ppb	43920.901	0.19	9964588	400000	
Mg	24	2	45	18132.338	ppb	18132.338	0.58	1823094	400000	
Al	27	2	45	26.447	ppb	26.447	28.34	730	400000	
K	39	1	45	1833.965	ppb	1833.965	1.82	13755063	400000	
K	39	2	45	2882.234	ppb	2882.234	2.12	152616	400000	
Ca	40	1	45	143128.522	ppb	143128.522	1.23	629958057	400000	
Ca	44	2	45	140549.963	ppb	140549.963	1.26	370142	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	3.399	ppb	3.399	7.85	4848	2000	
Cr	52	2	72	0.484	ppb	0.484	4.06	870	5000	
Mn	55	2	72	3.379	ppb	3.379	5.36	1587	10000	
Fe	57	2	72	8.137	ppb	8.137	5.75	307	400000	
Co	59	2	72	0.003	ppb	0.003	407.37	37	2000	
Ni	60	2	72	0.953	ppb	0.953	29.45	713	5000	
Cu	63	2	72	0.144	ppb	0.144	82.90	1540	5000	
Zn	66	2	72	3.850	ppb	3.850	18.06	993	5000	
As	75	2	72	0.776	ppb	0.776	11.16	123	2000	
Se	78	1	72	27.166	ppb	27.166	5.14	5563	2000	
Sr	88	2	72	639.533	ppb	639.533	1.25	294122	4000	
Zr	90	2	72	2.292	ppb	2.292	19.96	67	1000	
Nb	93	2	72	0.682	ppb	0.682	2.50	2317	200	
Mo	95	2	115	12.806	ppb	12.806	2.30	9891	2000	
Pd	105	2	115	-0.018	ppb	-0.018	-46.52	10	100	
Ag	107	2	115	-1.750	ppb	-1.750	-0.92	77	100	
Cd	111	2	115	-0.010	ppb	-0.010	0.00	0	2000	
Sn	120	2	115	0.278	ppb	0.278	23.28	340	2000	
Sb	121	2	115	0.140	ppb	0.140	9.80	120	1000	
Ba	137	2	115	54.196	ppb	54.196	1.62	14018	5000	
W	182	2	165	0.084	ppb	0.084	67.55	1033	100	
Pt	195	2	165	0.000	ppb	0.000	569.02	17	100	
Tl	205	2	165	0.294	ppb	0.294	1.40	2130	2000	
Pb	208	2	165	-0.117	ppb	-0.117	-26.28	1123	5000	
Th	232	2	165	-0.014	ppb	-0.014	-59.17	447	2000	
U	238	2	165	6.402	ppb	6.402	2.25	70885	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1202295	0.97	1454508	82.66	60	120	
Sc (IS)	45	1	HMI H2	23036628	1.14	26285642	87.64	60	120	
Sc (IS)	45	2	HMI He	829033	0.54	903775	91.73	60	120	
Sc (IS)	45	3	No Gas	40170400	0.28	48040283	83.62	60	120	
Ge Internal Standard	72	1	HMI H2	8439251	0.27	9879865	85.42	60	120	
Ge Internal Standard	72	2	HMI He	873681	0.81	957593	91.24	60	120	
In Internal Standard	115	2	HMI He	2730361	0.20	2903780	94.03	60	120	
Ho-165	165	2	HMI He	13380177	0.53	14207049	94.18	60	120	

Sample Report

Sample Table

Sample Name	280-116324-A-7-C
Data File Name	080SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:02:44-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	10.498	ppb	10.498	27.90	170137	500000	
Li	7	2	45	-40.026	ppb	-40.026	-20.95	10231	500000	
Li	7	3	45	-22.107	ppb	-22.107	-15.66	4933068	50000	
Be	9	1	6	-0.025	ppb	-0.025	-56.93	3	2000	
B	11	1	6	48.978	ppb	48.978	1.73	21416	2000	
Na	23	1	45	66092.389	ppb	66092.389	0.76	203803450	2000	>LDR
Na	23	2	45	61592.174	ppb	61592.174	0.11	13802886	400000	
Mg	24	2	45	20283.438	ppb	20283.438	0.58	2015360	400000	
Al	27	2	45	4.227	ppb	4.227	21.45	163	400000	
K	39	1	45	2045.385	ppb	2045.385	1.52	14246995	400000	
K	39	2	45	3100.355	ppb	3100.355	1.17	161221	400000	
Ca	40	1	45	143575.584	ppb	143575.584	0.82	626710684	400000	
Ca	44	2	45	140621.232	ppb	140621.232	0.78	366011	400000	
Ti	47	2	45	0.136	ppb	0.136	173.21	3	4000	
V	51	2	72	10.096	ppb	10.096	1.57	11018	2000	
Cr	52	2	72	1.193	ppb	1.193	17.26	1727	5000	
Mn	55	2	72	7.029	ppb	7.029	12.91	3231	10000	
Fe	57	2	72	15.913	ppb	15.913	4.69	477	400000	
Co	59	2	72	0.014	ppb	0.014	32.03	60	2000	
Ni	60	2	72	1.400	ppb	1.400	9.90	973	5000	
Cu	63	2	72	0.411	ppb	0.411	19.55	1970	5000	
Zn	66	2	72	4.341	ppb	4.341	15.65	1090	5000	
As	75	2	72	2.157	ppb	2.157	14.81	314	2000	
Se	78	1	72	23.560	ppb	23.560	1.73	4804	2000	
Sr	88	2	72	602.559	ppb	602.559	0.86	276473	4000	
Zr	90	2	72	4.073	ppb	4.073	48.84	90	1000	
Nb	93	2	72	0.487	ppb	0.487	24.84	1840	200	
Mo	95	2	115	15.098	ppb	15.098	5.28	11595	2000	
Pd	105	2	115	-0.007	ppb	-0.007	-303.22	23	100	
Ag	107	2	115	-1.752	ppb	-1.752	-1.06	73	100	
Cd	111	2	115	0.001	ppb	0.001	3001.82	3	2000	
Sn	120	2	115	0.111	ppb	0.111	52.45	197	2000	
Sb	121	2	115	0.289	ppb	0.289	21.28	230	1000	
Ba	137	2	115	41.719	ppb	41.719	3.13	10735	5000	
W	182	2	165	0.085	ppb	0.085	52.30	1030	100	
Pt	195	2	165	-0.003	ppb	-0.003	-128.13	7	100	
Tl	205	2	165	0.087	ppb	0.087	33.84	793	2000	
Pb	208	2	165	-0.102	ppb	-0.102	-19.89	1240	5000	
Th	232	2	165	-0.014	ppb	-0.014	-9.81	440	2000	
U	238	2	165	6.322	ppb	6.322	1.03	69564	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1180357	0.40	1454508	81.15	60	120	
Sc (IS)	45	1	HMI H2	22844651	0.38	26285642	86.91	60	120	
Sc (IS)	45	2	HMI He	819279	1.27	903775	90.65	60	120	
Sc (IS)	45	3	No Gas	40525200	0.62	48040283	84.36	60	120	
Ge Internal Standard	72	1	HMI H2	8395534	0.35	9879865	84.98	60	120	
Ge Internal Standard	72	2	HMI He	871633	0.94	957593	91.02	60	120	
In Internal Standard	115	2	HMI He	2716979	1.54	2903780	93.57	60	120	
Ho-165	165	2	HMI He	13296904	0.78	14207049	93.59	60	120	

Sample Report

Sample Table

Sample Name	280-116489-B-4-D
Data File Name	081SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:06:31-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-4.116	ppb	-4.116	-87.20	166710	500000	
Li	7	2	45	-38.963	ppb	-38.963	-21.62	10491	500000	
Li	7	3	45	-32.561	ppb	-32.561	-7.45	4832571	50000	
Be	9	1	6	0.098	ppb	0.098	58.72	57	2000	
B	11	1	6	13.638	ppb	13.638	4.73	6799	2000	
Na	23	1	45	2768.518	ppb	2768.518	0.20	8897172	2000	
Na	23	2	45	2512.654	ppb	2512.654	0.86	591139	400000	
Mg	24	2	45	1125.432	ppb	1125.432	1.66	114330	400000	
Al	27	2	45	422.046	ppb	422.046	2.16	10878	400000	
K	39	1	45	1098.002	ppb	1098.002	2.18	11753610	400000	
K	39	2	45	2178.950	ppb	2178.950	0.75	119825	400000	
Ca	40	1	45	4937.769	ppb	4937.769	0.79	22008150	400000	
Ca	44	2	45	4863.133	ppb	4863.133	2.07	12963	400000	
Ti	47	2	45	2.260	ppb	2.260	43.99	57	4000	
V	51	2	72	0.966	ppb	0.966	21.54	2630	2000	
Cr	52	2	72	0.489	ppb	0.489	23.35	887	5000	
Mn	55	2	72	5.662	ppb	5.662	9.01	2654	10000	
Fe	57	2	72	382.688	ppb	382.688	6.41	8663	400000	
Co	59	2	72	0.097	ppb	0.097	15.27	237	2000	
Ni	60	2	72	1.946	ppb	1.946	9.32	1313	5000	
Cu	63	2	72	2.029	ppb	2.029	5.15	4661	5000	
Zn	66	2	72	8.166	ppb	8.166	18.71	1904	5000	
As	75	2	72	0.389	ppb	0.389	30.83	70	2000	
Se	78	1	72	0.073	ppb	0.073	152.00	47	2000	
Sr	88	2	72	59.161	ppb	59.161	1.60	27571	4000	
Zr	90	2	72	47.239	ppb	47.239	7.44	667	1000	
Nb	93	2	72	0.627	ppb	0.627	12.68	2210	200	
Mo	95	2	115	0.040	ppb	0.040	92.63	67	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-82.84	13	100	
Ag	107	2	115	-1.742	ppb	-1.742	-1.19	100	100	
Cd	111	2	115	0.011	ppb	0.011	164.85	7	2000	
Sn	120	2	115	0.158	ppb	0.158	57.88	243	2000	
Sb	121	2	115	0.088	ppb	0.088	34.50	83	1000	
Ba	137	2	115	45.272	ppb	45.272	1.59	12016	5000	
W	182	2	165	0.082	ppb	0.082	5.70	1033	100	
Pt	195	2	165	0.006	ppb	0.006	31.04	33	100	
Tl	205	2	165	-0.018	ppb	-0.018	-28.25	123	2000	
Pb	208	2	165	0.280	ppb	0.280	10.17	4561	5000	
Th	232	2	165	4.216	ppb	4.216	2.02	43858	2000	
U	238	2	165	0.068	ppb	0.068	7.22	1057	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1246647	0.81	1454508	85.71	60	120	
Sc (IS)	45	1	HMI H2	23285251	0.41	26285642	88.59	60	120	
Sc (IS)	45	2	HMI He	837222	0.54	903775	92.64	60	120	
Sc (IS)	45	3	No Gas	40935607	0.65	48040283	85.21	60	120	
Ge Internal Standard	72	1	HMI H2	8632787	0.81	9879865	87.38	60	120	
Ge Internal Standard	72	2	HMI He	884780	0.44	957593	92.40	60	120	
In Internal Standard	115	2	HMI He	2802364	2.06	2903780	96.51	60	120	
Ho-165	165	2	HMI He	13495542	1.12	14207049	94.99	60	120	

Sample Report

Sample Table

Sample Name	280-116489-B-4-Dsd@5
Data File Name	082SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:10:18-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-3.180	ppb	-3.180	-109.22	166548	500000	
Li	7	2	45	-59.257	ppb	-59.257	-11.59	9770	500000	
Li	7	3	45	-32.449	ppb	-32.449	-6.41	4750250	50000	
Be	9	1	6	-0.010	ppb	-0.010	-232.70	10	2000	
B	11	1	6	3.195	ppb	3.195	22.80	2140	2000	
Na	23	1	45	587.034	ppb	587.034	1.14	2039845	2000	
Na	23	2	45	510.264	ppb	510.264	1.04	132109	400000	
Mg	24	2	45	227.695	ppb	227.695	0.60	23009	400000	
Al	27	2	45	92.957	ppb	92.957	4.53	2424	400000	
K	39	1	45	425.494	ppb	425.494	2.12	9753752	400000	
K	39	2	45	465.327	ppb	465.327	0.41	35982	400000	
Ca	40	1	45	1017.205	ppb	1017.205	2.16	4549491	400000	
Ca	44	2	45	1004.051	ppb	1004.051	1.27	2680	400000	
Ti	47	2	45	1.072	ppb	1.072	77.63	27	4000	
V	51	2	72	0.797	ppb	0.797	73.80	2460	2000	
Cr	52	2	72	0.029	ppb	0.029	227.88	320	5000	
Mn	55	2	72	1.291	ppb	1.291	21.98	647	10000	
Fe	57	2	72	84.158	ppb	84.158	1.57	1997	400000	
Co	59	2	72	0.028	ppb	0.028	60.17	90	2000	
Ni	60	2	72	0.450	ppb	0.450	15.08	420	5000	
Cu	63	2	72	0.176	ppb	0.176	63.09	1607	5000	
Zn	66	2	72	1.145	ppb	1.145	46.95	440	5000	
As	75	2	72	0.121	ppb	0.121	75.41	32	2000	
Se	78	1	72	-0.106	ppb	-0.106	-27.80	9	2000	
Sr	88	2	72	11.406	ppb	11.406	3.34	5308	4000	
Zr	90	2	72	10.302	ppb	10.302	38.31	173	1000	
Nb	93	2	72	0.173	ppb	0.173	26.01	1087	200	
Mo	95	2	115	0.228	ppb	0.228	44.34	213	2000	
Pd	105	2	115	0.012	ppb	0.012	103.80	47	100	
Ag	107	2	115	-1.765	ppb	-1.765	-0.59	40	100	
Cd	111	2	115	0.001	ppb	0.001	3301.68	3	2000	
Sn	120	2	115	0.040	ppb	0.040	149.29	140	2000	
Sb	121	2	115	0.032	ppb	0.032	144.57	40	1000	
Ba	137	2	115	8.868	ppb	8.868	3.32	2330	5000	
W	182	2	165	0.014	ppb	0.014	189.80	780	100	
Pt	195	2	165	0.004	ppb	0.004	106.31	27	100	
Tl	205	2	165	-0.023	ppb	-0.023	-10.43	87	2000	
Pb	208	2	165	-0.058	ppb	-0.058	-12.84	1627	5000	
Th	232	2	165	0.037	ppb	0.037	45.45	970	2000	
U	238	2	165	-0.006	ppb	-0.006	-87.92	237	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1255487	0.67	1454508	86.32	60	120	
Sc (IS)	45	1	HMI H2	23201756	0.48	26285642	88.27	60	120	
Sc (IS)	45	2	HMI He	830895	0.61	903775	91.94	60	120	
Sc (IS)	45	3	No Gas	40224444	0.26	48040283	83.73	60	120	
Ge Internal Standard	72	1	HMI H2	8597773	0.67	9879865	87.02	60	120	
Ge Internal Standard	72	2	HMI He	881038	0.82	957593	92.01	60	120	
In Internal Standard	115	2	HMI He	2773607	0.82	2903780	95.52	60	120	
Ho-165	165	2	HMI He	13378932	0.65	14207049	94.17	60	120	

Sample Report

Sample Table

Sample Name	280-116489-B-4-E MS
Data File Name	083SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:14:05-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	71.771	ppb	71.771	2.98	198451	500000	
Li	7	2	45	12.465	ppb	12.465	120.53	12095	500000	
Li	7	3	45	41.628	ppb	41.628	11.01	5825568	50000	
Be	9	1	6	39.236	ppb	39.236	2.40	16727	2000	
B	11	1	6	40.062	ppb	40.062	1.02	18318	2000	
Na	23	1	45	2704.259	ppb	2704.259	0.49	8562317	2000	
Na	23	2	45	2455.507	ppb	2455.507	0.86	576746	400000	
Mg	24	2	45	1125.862	ppb	1125.862	0.03	114125	400000	
Al	27	2	45	943.406	ppb	943.406	2.94	24194	400000	
K	39	1	45	1150.916	ppb	1150.916	1.40	11726642	400000	
K	39	2	45	2214.069	ppb	2214.069	1.51	121287	400000	
Ca	40	1	45	4976.392	ppb	4976.392	0.88	21840066	400000	
Ca	44	2	45	5054.835	ppb	5054.835	3.46	13447	400000	
Ti	47	2	45	4.418	ppb	4.418	28.83	110	4000	
V	51	2	72	40.029	ppb	40.029	2.25	38879	2000	
Cr	52	2	72	38.559	ppb	38.559	2.18	47184	5000	
Mn	55	2	72	45.384	ppb	45.384	2.12	20679	10000	
Fe	57	2	72	739.237	ppb	739.237	0.32	16463	400000	
Co	59	2	72	37.992	ppb	37.992	0.80	79699	2000	
Ni	60	2	72	41.141	ppb	41.141	3.98	24441	5000	
Cu	63	2	72	40.381	ppb	40.381	0.62	67133	5000	
Zn	66	2	72	46.492	ppb	46.492	4.03	9800	5000	
As	75	2	72	36.943	ppb	36.943	0.87	5175	2000	
Se	78	1	72	37.485	ppb	37.485	1.86	7716	2000	
Sr	88	2	72	98.247	ppb	98.247	1.38	45363	4000	
Zr	90	2	72	3265.319	ppb	3265.319	0.60	43170	1000	
Nb	93	2	72	0.529	ppb	0.529	19.98	1954	200	
Mo	95	2	115	35.295	ppb	35.295	3.79	27775	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-122.01	13	100	
Ag	107	2	115	36.592	ppb	36.592	1.68	98507	100	
Cd	111	2	115	38.162	ppb	38.162	2.47	12603	2000	
Sn	120	2	115	34.930	ppb	34.930	0.77	30525	2000	
Sb	121	2	115	34.933	ppb	34.933	1.29	26646	1000	
Ba	137	2	115	83.667	ppb	83.667	3.30	22102	5000	
W	182	2	165	33.809	ppb	33.809	0.61	122270	100	
Pt	195	2	165	-0.003	ppb	-0.003	-127.35	7	100	
Tl	205	2	165	39.583	ppb	39.583	1.90	256091	2000	
Pb	208	2	165	39.877	ppb	39.877	0.87	344821	5000	
Th	232	2	165	37.675	ppb	37.675	0.35	384731	2000	
U	238	2	165	38.731	ppb	38.731	1.43	428260	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1225899	1.57	1454508	84.28	60	120	
Sc (IS)	45	1	HMI H2	22929534	0.79	26285642	87.23	60	120	
Sc (IS)	45	2	HMI He	835360	1.63	903775	92.43	60	120	
Sc (IS)	45	3	No Gas	40421473	0.76	48040283	84.14	60	120	
Ge Internal Standard	72	1	HMI H2	8495176	0.36	9879865	85.98	60	120	
Ge Internal Standard	72	2	HMI He	876907	0.95	957593	91.57	60	120	
In Internal Standard	115	2	HMI He	2788683	0.54	2903780	96.04	60	120	
Ho-165	165	2	HMI He	13408254	0.33	14207049	94.38	60	120	

Sample Report

Sample Table

Sample Name	280-116489-B-4-F MSD
Data File Name	084SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:17:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	72.484	ppb	72.484	8.14	200527	500000	
Li	7	2	45	27.711	ppb	27.711	93.11	12356	500000	
Li	7	3	45	31.596	ppb	31.596	12.00	6022909	50000	
Be	9	1	6	37.715	ppb	37.715	2.58	16233	2000	
B	11	1	6	41.263	ppb	41.263	2.44	19023	2000	
Na	23	1	45	2665.365	ppb	2665.365	1.07	8516502	2000	
Na	23	2	45	2534.778	ppb	2534.778	4.07	583854	400000	
Mg	24	2	45	1162.484	ppb	1162.484	3.80	115650	400000	
Al	27	2	45	968.020	ppb	968.020	8.63	24351	400000	
K	39	1	45	1046.959	ppb	1046.959	3.93	11527739	400000	
K	39	2	45	2290.180	ppb	2290.180	3.40	122678	400000	
Ca	40	1	45	4946.756	ppb	4946.756	0.76	21902881	400000	
Ca	44	2	45	5220.369	ppb	5220.369	5.31	13630	400000	
Ti	47	2	45	5.416	ppb	5.416	40.35	133	4000	
V	51	2	72	40.281	ppb	40.281	2.95	38806	2000	
Cr	52	2	72	38.923	ppb	38.923	0.45	47261	5000	
Mn	55	2	72	45.805	ppb	45.805	2.49	20702	10000	
Fe	57	2	72	761.761	ppb	761.761	5.17	16824	400000	
Co	59	2	72	39.022	ppb	39.022	3.11	81211	2000	
Ni	60	2	72	40.635	ppb	40.635	4.55	23954	5000	
Cu	63	2	72	41.298	ppb	41.298	3.41	68078	5000	
Zn	66	2	72	44.226	ppb	44.226	2.25	9257	5000	
As	75	2	72	37.611	ppb	37.611	3.52	5226	2000	
Se	78	1	72	36.542	ppb	36.542	1.82	7482	2000	
Sr	88	2	72	98.857	ppb	98.857	4.91	45287	4000	
Zr	90	2	72	3449.080	ppb	3449.080	2.03	45237	1000	
Nb	93	2	72	0.337	ppb	0.337	11.32	1470	200	
Mo	95	2	115	35.910	ppb	35.910	1.88	27611	2000	
Pd	105	2	115	-0.021	ppb	-0.021	-46.03	7	100	
Ag	107	2	115	37.177	ppb	37.177	1.96	97695	100	
Cd	111	2	115	38.405	ppb	38.405	7.74	12386	2000	
Sn	120	2	115	35.778	ppb	35.778	2.77	30538	2000	
Sb	121	2	115	36.687	ppb	36.687	4.72	27331	1000	
Ba	137	2	115	88.283	ppb	88.283	4.65	22780	5000	
W	182	2	165	34.729	ppb	34.729	4.27	123277	100	
Pt	195	2	165	0.011	ppb	0.011	69.69	47	100	
Tl	205	2	165	40.604	ppb	40.604	3.09	257921	2000	
Pb	208	2	165	40.707	ppb	40.707	3.87	345528	5000	
Th	232	2	165	38.943	ppb	38.943	3.96	390386	2000	
U	238	2	165	39.864	ppb	39.864	3.73	432721	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1237446	0.27	1454508	85.08	60	120	
Sc (IS)	45	1	HMI H2	23131894	0.64	26285642	88.00	60	120	
Sc (IS)	45	2	HMI He	820152	1.44	903775	90.75	60	120	
Sc (IS)	45	3	No Gas	42837728	0.38	48040283	89.17	60	120	
Ge Internal Standard	72	1	HMI H2	8450202	0.09	9879865	85.53	60	120	
Ge Internal Standard	72	2	HMI He	870062	0.82	957593	90.86	60	120	
In Internal Standard	115	2	HMI He	2724630	1.21	2903780	93.83	60	120	
Ho-165	165	2	HMI He	13170595	2.18	14207049	92.70	60	120	

Sample Report

Sample Table

Sample Name	280-116489-B-4-D pds
Data File Name	085SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:21:39-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	200.925	ppb	200.925	1.01	258314	500000	
Li	7	2	45	136.758	ppb	136.758	3.81	16056	500000	
Li	7	3	45	164.586	ppb	164.586	1.85	7546651	50000	
Be	9	1	6	200.353	ppb	200.353	1.54	85570	2000	
B	11	1	6	13.455	ppb	13.455	2.99	6622	2000	
Na	23	1	45	2650.559	ppb	2650.559	0.66	8445755	2000	
Na	23	2	45	2419.918	ppb	2419.918	1.22	568931	400000	
Mg	24	2	45	1118.591	ppb	1118.591	2.84	113421	400000	
Al	27	2	45	2687.618	ppb	2687.618	0.72	68840	400000	
K	39	1	45	1052.983	ppb	1052.983	3.55	11511756	400000	
K	39	2	45	2189.729	ppb	2189.729	2.27	120127	400000	
Ca	40	1	45	4879.644	ppb	4879.644	0.15	21542846	400000	
Ca	44	2	45	6047.468	ppb	6047.468	1.79	16086	400000	
Ti	47	2	45	12.274	ppb	12.274	2.88	307	4000	
V	51	2	72	201.315	ppb	201.315	0.25	189218	2000	
Cr	52	2	72	199.611	ppb	199.611	0.82	243830	5000	
Mn	55	2	72	217.780	ppb	217.780	1.41	99295	10000	
Fe	57	2	72	2458.372	ppb	2458.372	1.45	54614	400000	
Co	59	2	72	197.863	ppb	197.863	0.51	416152	2000	
Ni	60	2	72	197.604	ppb	197.604	2.04	117191	5000	
Cu	63	2	72	199.248	ppb	199.248	0.47	327031	5000	
Zn	66	2	72	221.684	ppb	221.684	1.97	46098	5000	
As	75	2	72	191.783	ppb	191.783	0.56	26882	2000	
Se	78	1	72	191.165	ppb	191.165	2.59	39243	2000	
Sr	88	2	72	272.267	ppb	272.267	0.69	126061	4000	
Zr	90	2	72	19295.465	ppb	19295.465	0.76	255670	1000	>LDR
Nb	93	2	72	7.680	ppb	7.680	3.60	19474	200	
Mo	95	2	115	187.186	ppb	187.186	0.94	144704	2000	
Pd	105	2	115	0.024	ppb	0.024	69.99	60	100	
Ag	107	2	115	37.054	ppb	37.054	1.25	98025	100	
Cd	111	2	115	195.600	ppb	195.600	2.75	63498	2000	
Sn	120	2	115	201.751	ppb	201.751	0.84	172854	2000	
Sb	121	2	115	200.649	ppb	200.649	1.58	150421	1000	
Ba	137	2	115	249.454	ppb	249.454	1.34	64800	5000	
W	182	2	165	194.369	ppb	194.369	0.55	700973	100	
Pt	195	2	165	0.049	ppb	0.049	30.36	160	100	
Tl	205	2	165	205.629	ppb	205.629	0.29	1332304	2000	
Pb	208	2	165	201.840	ppb	201.840	0.65	1740502	5000	
Th	232	2	165	255.649	ppb	255.649	4.74	2612747	2000	
U	238	2	165	223.370	ppb	223.370	1.17	2473806	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1228899	0.93	1454508	84.49	60	120	
Sc (IS)	45	1	HMI H2	23064065	0.18	26285642	87.74	60	120	
Sc (IS)	45	2	HMI He	835781	1.21	903775	92.48	60	120	
Sc (IS)	45	3	No Gas	40283416	0.56	48040283	83.85	60	120	
Ge Internal Standard	72	1	HMI H2	8500563	0.21	9879865	86.04	60	120	
Ge Internal Standard	72	2	HMI He	879497	0.47	957593	91.84	60	120	
In Internal Standard	115	2	HMI He	2741972	0.67	2903780	94.43	60	120	
Ho-165	165	2	HMI He	13437500	0.27	14207049	94.58	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	086_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:25:25-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	485.692	ppb	2.088	391287	500	97.1	90	110	
Li	7	2	45	405.725	ppb	6.728	24274	500	81.1	90	110	>+\-10%
Li	7	3	45	428.382	ppb	0.199	11241486	500	85.7	90	110	>+\-10%
Be	9	1	6	45.970	ppb	4.511	19831	50	91.9	90	110	
B	11	1	6	48.052	ppb	1.340	22097	50	96.1	90	110	
Na	23	1	45	5091.616	ppb	0.761	16185249	5000	101.8	90	110	
Na	23	2	45	4839.202	ppb	1.778	1106345	5000	96.8	90	110	
Mg	24	2	45	4873.339	ppb	0.989	487396	5000	97.5	90	110	
Al	27	2	45	5092.905	ppb	0.629	128650	5000	101.9	90	110	
K	39	1	45	5369.584	ppb	0.750	24225820	5000	107.4	90	110	
K	39	2	45	4960.846	ppb	0.416	251634	5000	99.2	90	110	
Ca	40	1	45	5054.411	ppb	0.747	22518186	5000	101.1	90	110	
Ca	44	2	45	4963.126	ppb	1.678	13030	5000	99.3	90	110	
Ti	47	2	45	46.783	ppb	8.500	1153	50	93.6	90	110	
V	51	2	72	48.242	ppb	1.683	46425	50	96.5	90	110	
Cr	52	2	72	47.254	ppb	1.916	57661	50	94.5	90	110	
Mn	55	2	72	48.388	ppb	4.623	22001	50	96.8	90	110	
Fe	57	2	72	4794.436	ppb	1.258	105877	5000	95.9	90	110	
Co	59	2	72	46.605	ppb	0.553	97578	50	93.2	90	110	
Ni	60	2	72	46.029	ppb	3.419	27283	50	92.1	90	110	
Cu	63	2	72	45.655	ppb	1.414	75588	50	91.3	90	110	
Zn	66	2	72	47.512	ppb	1.734	9991	50	95.0	90	110	
As	75	2	72	47.298	ppb	0.727	6609	50	94.6	90	110	
Se	78	1	72	47.544	ppb	1.543	9926	50	95.1	90	110	
Sr	88	2	72	50.250	ppb	1.177	23170	50	100.5	90	110	
Zr	90	2	72	45.009	ppb	11.673	630	50	90.0	90	110	
Nb	93	2	72	80.709	ppb	1.486	197425	100	80.7	90	110	>+\-10%
Mo	95	2	115	44.920	ppb	2.649	34346	50	89.8	90	110	>+\-10%
Pd	105	2	115	47.907	ppb	1.693	56354	50	95.8	90	110	
Ag	107	2	115	43.871	ppb	1.217	113879	50	87.7	90	110	>+\-10%
Cd	111	2	115	46.158	ppb	3.042	14812	50	92.3	90	110	
Sn	120	2	115	48.313	ppb	1.465	40981	50	96.6	90	110	
Sb	121	2	115	50.459	ppb	0.841	37392	50	100.9	90	110	
Ba	137	2	115	48.120	ppb	2.845	12353	50	96.2	90	110	
W	182	2	165	46.594	ppb	0.394	167072	50	93.2	90	110	
Pt	195	2	165	46.827	ppb	0.826	137670	50	93.7	90	110	
Tl	205	2	165	48.317	ppb	0.515	310408	50	96.6	90	110	
Pb	208	2	165	48.469	ppb	0.680	415791	50	96.9	90	110	
Th	232	2	165	48.163	ppb	0.934	488295	50	96.3	90	110	
U	238	2	165	48.184	ppb	0.503	529053	50	96.4	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1240745	1.09	1454508	85.30	60	120	
Sc (IS)	45	1	HMI H2	23276555	0.64	26285642	88.55	60	120	
Sc (IS)	45	2	HMI He	824561	0.08	903775	91.24	60	120	
Sc (IS)	45	3	No Gas	40143074	0.81	48040283	83.56	60	120	
Ge Internal Standard	72	1	HMI H2	8624312	0.25	9879865	87.29	60	120	
Ge Internal Standard	72	2	HMI He	875302	0.12	957593	91.41	60	120	
In Internal Standard	115	2	HMI He	2709734	0.74	2903780	93.32	60	120	
Ho-165	165	2	HMI He	13316216	0.47	14207049	93.73	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	087_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:29:12-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-24.934	ppb	-20.8	4825682	10	
Be	9	1	6	0.060	ppb	35.8	40	0.5	
B	11	1	6	2.231	ppb	2.7	1677	0.5	>RL
Na	23	1	45	-10.100	ppb	-5.0	168778	25	
Na	23	2	45	-16.444	ppb	-14.3	12179	25	
Mg	24	2	45	2.332	ppb	35.1	290	25	
Al	27	2	45	2.300	ppb	43.9	113	15	
K	39	1	45	341.967	ppb	14.8	9360653	50	>RL
K	39	2	45	24.700	ppb	21.2	14234	50	
Ca	40	1	45	32.019	ppb	2.8	178957	50	
Ca	44	2	45	32.618	ppb	12.3	113	25	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	2.035	ppb	3.3	3521	1	>RL
Cr	52	2	72	-0.029	ppb	-249.0	243	1	
Mn	55	2	72	0.120	ppb	17.7	110	0.5	
Fe	57	2	72	-0.256	ppb	-1392.3	120	25	
Co	59	2	72	0.006	ppb	216.6	43	0.5	
Ni	60	2	72	-0.067	ppb	-155.8	110	1	
Cu	63	2	72	-0.186	ppb	-51.4	987	1	
Zn	66	2	72	0.707	ppb	90.6	340	5	
As	75	2	72	0.046	ppb	80.2	21	1	
Se	78	1	72	-0.060	ppb	-67.8	19	1	
Sr	88	2	72	-0.018	ppb	-123.2	10	0.5	
Zr	90	2	72	2.655	ppb	106.0	70	1	>RL
Nb	93	2	72	5.308	ppb	4.1	13327	2	>RL
Mo	95	2	115	0.222	ppb	31.6	207	0.5	
Pd	105	2	115	-0.001	ppb	-1091.5	30	1	
Ag	107	2	115	-1.735	ppb	-0.1	117	1	
Cd	111	2	115	0.001	ppb	3058.1	3	0.5	
Sn	120	2	115	0.194	ppb	26.6	270	1	
Sb	121	2	115	0.583	ppb	13.0	453	0.6	
Ba	137	2	115	0.038	ppb	99.6	10	0.5	
W	182	2	165	0.212	ppb	16.9	1467	1	
Pt	195	2	165	0.008	ppb	69.7	40	1	
Tl	205	2	165	-0.005	ppb	-393.2	200	0.1	
Pb	208	2	165	-0.112	ppb	-3.9	1147	0.5	
Th	232	2	165	0.037	ppb	18.6	953	1	
U	238	2	165	0.064	ppb	30.6	987	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1235111	2.06	1454508	84.92	60	120	
Sc (IS)	45	1	HMI H2	22838392	0.92	26285642	86.89	60	120	
Sc (IS)	45	2	HMI He	807106	1.62	903775	89.30	60	120	
Sc (IS)	45	3	No Gas	39968582	0.57	48040283	83.20	60	120	
Ge Internal Standard	72	1	HMI H2	8435948	0.59	9879865	85.39	60	120	
Ge Internal Standard	72	2	HMI He	857631	0.71	957593	89.56	60	120	
In Internal Standard	115	2	HMI He	2745133	0.65	2903780	94.54	60	120	
Ho-165	165	2	HMI He	13155755	0.81	14207049	92.60	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	088LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:32:59-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-14.460	ppb	-44.910	4981658	50	-28.9	70	130	>+/-30%
Be	9	1	6	1.068	ppb	3.430	477	1	106.8	70	130	
Na	23	2	45	29.489	ppb	6.364	22408	50	59.0	70	130	>+/-30%
Mg	24	2	45	52.082	ppb	6.731	5185	50	104.2	70	130	
Al	27	2	45	41.891	ppb	17.632	1097	30	139.6	70	130	>+/-30%
K	39	2	45	120.883	ppb	14.735	18836	100	120.9	70	130	
Ca	44	2	45	67.380	ppb	12.680	203	50	134.8	70	130	>+/-30%
V	51	2	72	6.001	ppb	5.787	7162	5	120.0	70	130	
Cr	52	2	72	1.856	ppb	8.065	2500	2	92.8	70	130	
Mn	55	2	72	1.081	ppb	3.113	540	1	108.1	70	130	
Fe	57	2	72	52.174	ppb	21.472	1260	50	104.3	70	130	
Co	59	2	72	0.947	ppb	3.089	1984	1	94.7	70	130	
Ni	60	2	72	1.802	ppb	7.271	1197	2	90.1	70	130	
Cu	63	2	72	1.832	ppb	3.357	4227	2	91.6	70	130	
Zn	66	2	72	11.509	ppb	16.892	2534	10	115.1	70	130	
As	75	2	72	4.513	ppb	3.080	635	5	90.3	70	130	
Se	78	1	72	4.394	ppb	5.449	928	5	87.9	70	130	
Sr	88	2	72	0.951	ppb	8.835	450	1	95.1	70	130	
Zr	90	2	72	15.710	ppb	29.727	240	0.5	3141.9	70	130	>+/-30%
Nb	93	2	72	10.052	ppb	3.121	24796	2	502.6	70	130	>+/-30%
Mo	95	2	115	1.889	ppb	10.662	1477	2	94.4	70	130	
Pd	105	2	115	0.002	ppb	723.442	33	1	0.2	70	130	>+/-30%
Ag	107	2	115	3.128	ppb	8.058	12243	5	62.6	70	130	>+/-30%
Cd	111	2	115	0.882	ppb	15.696	287	1	88.2	70	130	
Sn	120	2	115	9.532	ppb	4.601	8173	10	95.3	70	130	
Sb	121	2	115	2.290	ppb	12.897	1714	2	114.5	70	130	
Ba	137	2	115	1.081	ppb	36.507	277	1	108.1	70	130	
W	182	2	165	4.564	ppb	3.051	16851	1	456.4	70	130	>+/-30%
Pt	195	2	165	0.020	ppb	27.113	73	1	2.0	70	130	>+/-30%
Tl	205	2	165	0.901	ppb	4.844	5958	1	90.1	70	130	
Pb	208	2	165	0.866	ppb	0.956	9408	1	86.6	70	130	
Th	232	2	165	2.023	ppb	2.644	20857	2	101.2	70	130	
U	238	2	165	0.981	ppb	4.942	10945	1	98.1	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1246631	1.18	1454508	85.71	60	120	
Sc (IS)	45	1	HMI H2	22731162	0.64	26285642	86.48	60	120	
Sc (IS)	45	2	HMI He	810633	0.60	903775	89.69	60	120	
Sc (IS)	45	3	No Gas	40043717	0.71	48040283	83.35	60	120	
Ge Internal Standard	72	1	HMI H2	8459709	0.52	9879865	85.63	60	120	
Ge Internal Standard	72	2	HMI He	862432	0.43	957593	90.06	60	120	
In Internal Standard	115	2	HMI He	2711200	1.90	2903780	93.37	60	120	
Ho-165	165	2	HMI He	13180427	0.69	14207049	92.77	60	120	

Sample Report

Sample Table

Sample Name	280-116324-A-8-C
Data File Name	089SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:36:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	12.812	ppb	12.812	7.90	163971	500000	
Li	7	2	45	-50.476	ppb	-50.476	-18.51	9497	500000	
Li	7	3	45	-20.078	ppb	-20.078	-15.02	4638584	50000	
Be	9	1	6	0.009	ppb	0.009	574.73	17	2000	
B	11	1	6	44.950	ppb	44.950	0.67	19099	2000	
Na	23	1	45	118556.533	ppb	118556.533	0.48	350043995	2000	>LDR
Na	23	2	45	109668.826	ppb	109668.826	0.12	23546606	400000	
Mg	24	2	45	18020.353	ppb	18020.353	0.18	1716357	400000	
Al	27	2	45	14.349	ppb	14.349	18.80	400	400000	
K	39	1	45	3169.747	ppb	3169.747	1.49	16734219	400000	
K	39	2	45	4134.466	ppb	4134.466	0.63	201860	400000	
Ca	40	1	45	129088.850	ppb	129088.850	0.76	539742312	400000	
Ca	44	2	45	125823.805	ppb	125823.805	1.09	313888	400000	
Ti	47	2	45	0.283	ppb	0.283	173.21	7	4000	
V	51	2	72	0.004	ppb	0.004	3985.92	1620	2000	
Cr	52	2	72	78.749	ppb	78.749	0.98	90880	5000	
Mn	55	2	72	23188.762	ppb	23188.762	0.42	9965694	10000	
Fe	57	2	72	25.972	ppb	25.972	23.78	663	400000	
Co	59	2	72	0.009	ppb	0.009	86.34	47	2000	
Ni	60	2	72	-0.014	ppb	-0.014	-256.60	137	5000	
Cu	63	2	72	-0.127	ppb	-0.127	-11.98	1047	5000	
Zn	66	2	72	1.892	ppb	1.892	10.23	560	5000	
As	75	2	72	0.299	ppb	0.299	29.99	54	2000	
Se	78	1	72	28.523	ppb	28.523	5.26	5501	2000	
Sr	88	2	72	531.598	ppb	531.598	1.31	232123	4000	
Zr	90	2	72	3.884	ppb	3.884	41.45	83	1000	
Nb	93	2	72	1.426	ppb	1.426	7.93	3921	200	
Mo	95	2	115	0.044	ppb	0.044	139.28	67	2000	
Pd	105	2	115	0.101	ppb	0.101	36.02	147	100	
Ag	107	2	115	-1.707	ppb	-1.707	-1.85	180	100	
Cd	111	2	115	-0.010	ppb	-0.010	0.00	0	2000	
Sn	120	2	115	0.048	ppb	0.048	109.28	140	2000	
Sb	121	2	115	0.236	ppb	0.236	44.91	187	1000	
Ba	137	2	115	12.400	ppb	12.400	3.68	3121	5000	
W	182	2	165	0.123	ppb	0.123	5.86	1143	100	
Pt	195	2	165	0.034	ppb	0.034	16.03	113	100	
Tl	205	2	165	-0.013	ppb	-0.013	-44.67	150	2000	
Pb	208	2	165	-0.128	ppb	-0.128	-19.20	997	5000	
Th	232	2	165	0.014	ppb	0.014	77.17	713	2000	
U	238	2	165	6.707	ppb	6.707	1.93	72289	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1143852	1.50	1454508	78.64	60	120	
Sc (IS)	45	1	HMI H2	21882927	0.81	26285642	83.25	60	120	
Sc (IS)	45	2	HMI He	785323	0.76	903775	86.89	60	120	
Sc (IS)	45	3	No Gas	37884608	0.40	48040283	78.86	60	120	
Ge Internal Standard	72	1	HMI H2	7949803	0.50	9879865	80.46	60	120	
Ge Internal Standard	72	2	HMI He	829494	0.99	957593	86.62	60	120	
In Internal Standard	115	2	HMI He	2656677	0.62	2903780	91.49	60	120	
Ho-165	165	2	HMI He	13028257	0.44	14207049	91.70	60	120	

Sample Report

Sample Table

Sample Name	280-116324-A-9-C
Data File Name	090SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:40:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.946	ppb	1.946	150.79	160537	500000	
Li	7	2	45	-62.157	ppb	-62.157	-26.06	9357	500000	
Li	7	3	45	-33.013	ppb	-33.013	-15.56	4625264	50000	
Be	9	1	6	0.000	ppb	0.000	17026.21	13	2000	
B	11	1	6	61.997	ppb	61.997	1.86	26371	2000	
Na	23	1	45	66931.896	ppb	66931.896	0.43	199251164	2000	>LDR
Na	23	2	45	60920.886	ppb	60920.886	0.35	13390381	400000	
Mg	24	2	45	20938.331	ppb	20938.331	1.97	2040256	400000	
Al	27	2	45	112.463	ppb	112.463	6.41	2824	400000	
K	39	1	45	6422.337	ppb	6422.337	0.88	25866558	400000	
K	39	2	45	7182.995	ppb	7182.995	1.18	349214	400000	
Ca	40	1	45	188085.286	ppb	188085.286	0.40	792575055	400000	
Ca	44	2	45	180959.353	ppb	180959.353	0.38	461911	400000	
Ti	47	2	45	0.275	ppb	0.275	173.21	7	4000	
V	51	2	72	-0.459	ppb	-0.459	-19.80	1240	2000	
Cr	52	2	72	106.978	ppb	106.978	1.37	125993	5000	
Mn	55	2	72	6161.837	ppb	6161.837	0.61	2704472	10000	
Fe	57	2	72	37.286	ppb	37.286	11.63	920	400000	
Co	59	2	72	0.025	ppb	0.025	40.21	80	2000	
Ni	60	2	72	0.168	ppb	0.168	58.26	243	5000	
Cu	63	2	72	0.404	ppb	0.404	45.53	1904	5000	
Zn	66	2	72	6.582	ppb	6.582	10.37	1507	5000	
As	75	2	72	0.498	ppb	0.498	10.52	82	2000	
Se	78	1	72	4.263	ppb	4.263	14.62	860	2000	
Sr	88	2	72	508.106	ppb	508.106	0.41	226577	4000	
Zr	90	2	72	194.688	ppb	194.688	6.05	2520	1000	
Nb	93	2	72	0.816	ppb	0.816	10.37	2564	200	
Mo	95	2	115	0.079	ppb	0.079	27.11	93	2000	
Pd	105	2	115	0.077	ppb	0.077	31.36	120	100	
Ag	107	2	115	-1.761	ppb	-1.761	-0.21	50	100	
Cd	111	2	115	-0.010	ppb	-0.010	0.00	0	2000	
Sn	120	2	115	0.166	ppb	0.166	27.47	240	2000	
Sb	121	2	115	0.257	ppb	0.257	28.41	203	1000	
Ba	137	2	115	14.526	ppb	14.526	9.89	3684	5000	
W	182	2	165	0.086	ppb	0.086	11.48	1023	100	
Pt	195	2	165	0.015	ppb	0.015	22.67	60	100	
Tl	205	2	165	-0.019	ppb	-0.019	-12.74	113	2000	
Pb	208	2	165	-0.134	ppb	-0.134	-12.88	957	5000	
Th	232	2	165	-0.007	ppb	-0.007	-171.88	513	2000	
U	238	2	165	1.967	ppb	1.967	0.40	21616	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1155662	0.29	1454508	79.45	60	120	
Sc (IS)	45	1	HMI H2	22054043	0.57	26285642	83.90	60	120	
Sc (IS)	45	2	HMI He	803550	1.10	903775	88.91	60	120	
Sc (IS)	45	3	No Gas	39236154	1.24	48040283	81.67	60	120	
Ge Internal Standard	72	1	HMI H2	8070156	0.68	9879865	81.68	60	120	
Ge Internal Standard	72	2	HMI He	847133	0.83	957593	88.46	60	120	
In Internal Standard	115	2	HMI He	2678693	1.67	2903780	92.25	60	120	
Ho-165	165	2	HMI He	13157101	0.55	14207049	92.61	60	120	

Sample Report

Sample Table

Sample Name	280-116397-A-1-C
Data File Name	091SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:44:20-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	8.266	ppb	8.266	52.97	163807	500000	
Li	7	2	45	-37.819	ppb	-37.819	-26.33	10137	500000	
Li	7	3	45	-26.977	ppb	-26.977	-15.32	4639861	50000	
Be	9	1	6	-0.016	ppb	-0.016	-89.66	7	2000	
B	11	1	6	53.015	ppb	53.015	3.39	22277	2000	
Na	23	1	45	93832.510	ppb	93832.510	1.28	280149336	2000	>LDR
Na	23	2	45	86195.177	ppb	86195.177	1.14	19003733	400000	
Mg	24	2	45	19739.247	ppb	19739.247	1.28	1930223	400000	
Al	27	2	45	6.348	ppb	6.348	31.33	213	400000	
K	39	1	45	3028.342	ppb	3028.342	1.45	16527451	400000	
K	39	2	45	4060.125	ppb	4060.125	1.25	203756	400000	
Ca	40	1	45	155983.002	ppb	155983.002	1.15	659410804	400000	
Ca	44	2	45	152838.297	ppb	152838.297	1.03	391475	400000	
Ti	47	2	45	0.138	ppb	0.138	173.21	3	4000	
V	51	2	72	1.827	ppb	1.827	22.85	3314	2000	
Cr	52	2	72	107.627	ppb	107.627	1.76	127724	5000	
Mn	55	2	72	19.897	ppb	19.897	2.27	8856	10000	
Fe	57	2	72	14.779	ppb	14.779	44.58	443	400000	
Co	59	2	72	0.018	ppb	0.018	69.01	67	2000	
Ni	60	2	72	0.270	ppb	0.270	57.68	303	5000	
Cu	63	2	72	1.474	ppb	1.474	10.82	3617	5000	
Zn	66	2	72	3.737	ppb	3.737	13.40	947	5000	
As	75	2	72	1.037	ppb	1.037	4.11	156	2000	
Se	78	1	72	26.666	ppb	26.666	3.41	5268	2000	
Sr	88	2	72	597.649	ppb	597.649	0.98	268565	4000	
Zr	90	2	72	5.531	ppb	5.531	57.85	107	1000	
Nb	93	2	72	0.642	ppb	0.642	29.16	2170	200	
Mo	95	2	115	0.861	ppb	0.861	4.82	687	2000	
Pd	105	2	115	0.090	ppb	0.090	22.74	137	100	
Ag	107	2	115	-1.753	ppb	-1.753	-0.99	70	100	
Cd	111	2	115	0.001	ppb	0.001	1925.90	3	2000	
Sn	120	2	115	0.220	ppb	0.220	26.88	287	2000	
Sb	121	2	115	0.437	ppb	0.437	20.18	337	1000	
Ba	137	2	115	29.354	ppb	29.354	8.89	7479	5000	
W	182	2	165	0.141	ppb	0.141	2.93	1220	100	
Pt	195	2	165	0.018	ppb	0.018	29.19	67	100	
Tl	205	2	165	0.094	ppb	0.094	32.85	833	2000	
Pb	208	2	165	-0.096	ppb	-0.096	-7.30	1280	5000	
Th	232	2	165	-0.011	ppb	-0.011	-52.90	473	2000	
U	238	2	165	6.928	ppb	6.928	1.61	75645	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1137355	1.33	1454508	78.20	60	120	
Sc (IS)	45	1	HMI H2	22125834	0.77	26285642	84.17	60	120	
Sc (IS)	45	2	HMI He	806335	1.07	903775	89.22	60	120	
Sc (IS)	45	3	No Gas	38660216	0.14	48040283	80.47	60	120	
Ge Internal Standard	72	1	HMI H2	8142134	1.10	9879865	82.41	60	120	
Ge Internal Standard	72	2	HMI He	853620	0.95	957593	89.14	60	120	
In Internal Standard	115	2	HMI He	2691208	1.05	2903780	92.68	60	120	
Ho-165	165	2	HMI He	13198098	0.75	14207049	92.90	60	120	

Sample Report

Sample Table

Sample Name	280-116397-A-2-C
Data File Name	092SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:48:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	7.419	ppb	7.419	37.26	165792	500000	
Li	7	2	45	-41.535	ppb	-41.535	-47.70	10124	500000	
Li	7	3	45	-32.099	ppb	-32.099	-2.01	4561560	50000	
Be	9	1	6	-0.025	ppb	-0.025	-59.25	3	2000	
B	11	1	6	52.642	ppb	52.642	4.56	22244	2000	
Na	23	1	45	78969.311	ppb	78969.311	0.30	239201870	2000	>LDR
Na	23	2	45	72949.810	ppb	72949.810	1.05	16244490	400000	
Mg	24	2	45	18910.187	ppb	18910.187	1.35	1867344	400000	
Al	27	2	45	5.198	ppb	5.198	30.37	187	400000	
K	39	1	45	2817.013	ppb	2817.013	0.93	16170171	400000	
K	39	2	45	3851.875	ppb	3851.875	0.59	195884	400000	
Ca	40	1	45	150953.905	ppb	150953.905	0.85	647344017	400000	
Ca	44	2	45	146708.511	ppb	146708.511	0.46	379481	400000	
Ti	47	2	45	0.272	ppb	0.272	173.21	7	4000	
V	51	2	72	1.580	ppb	1.580	20.15	3130	2000	
Cr	52	2	72	29.168	ppb	29.168	2.69	35244	5000	
Mn	55	2	72	17.120	ppb	17.120	0.90	7722	10000	
Fe	57	2	72	16.255	ppb	16.255	32.03	480	400000	
Co	59	2	72	0.019	ppb	0.019	24.78	70	2000	
Ni	60	2	72	0.263	ppb	0.263	32.59	303	5000	
Cu	63	2	72	0.961	ppb	0.961	17.16	2837	5000	
Zn	66	2	72	4.647	ppb	4.647	13.96	1143	5000	
As	75	2	72	0.809	ppb	0.809	14.22	126	2000	
Se	78	1	72	24.704	ppb	24.704	2.02	4930	2000	
Sr	88	2	72	576.676	ppb	576.676	1.22	262331	4000	
Zr	90	2	72	7.457	ppb	7.457	38.45	133	1000	
Nb	93	2	72	0.543	ppb	0.543	7.41	1957	200	
Mo	95	2	115	0.845	ppb	0.845	9.02	683	2000	
Pd	105	2	115	0.035	ppb	0.035	83.13	73	100	
Ag	107	2	115	-1.748	ppb	-1.748	-1.26	83	100	
Cd	111	2	115	0.032	ppb	0.032	149.35	13	2000	
Sn	120	2	115	0.067	ppb	0.067	18.37	160	2000	
Sb	121	2	115	0.131	ppb	0.131	15.90	113	1000	
Ba	137	2	115	39.443	ppb	39.443	4.36	10171	5000	
W	182	2	165	0.086	ppb	0.086	50.74	1033	100	
Pt	195	2	165	0.009	ppb	0.009	136.12	43	100	
Tl	205	2	165	0.132	ppb	0.132	5.74	1083	2000	
Pb	208	2	165	-0.114	ppb	-0.114	-22.34	1140	5000	
Th	232	2	165	-0.009	ppb	-0.009	-26.55	497	2000	
U	238	2	165	6.258	ppb	6.258	0.90	68875	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1143263	0.50	1454508	78.60	60	120	
Sc (IS)	45	1	HMI H2	22443746	0.43	26285642	85.38	60	120	
Sc (IS)	45	2	HMI He	814250	0.55	903775	90.09	60	120	
Sc (IS)	45	3	No Gas	38586240	0.47	48040283	80.32	60	120	
Ge Internal Standard	72	1	HMI H2	8220994	0.90	9879865	83.21	60	120	
Ge Internal Standard	72	2	HMI He	864219	0.74	957593	90.25	60	120	
In Internal Standard	115	2	HMI He	2722359	0.46	2903780	93.75	60	120	
Ho-165	165	2	HMI He	13298097	0.43	14207049	93.60	60	120	

Sample Report

Sample Table

Sample Name	280-116397-A-3-C
Data File Name	093SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:51:57-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.247	ppb	5.247	89.04	165270	500000	
Li	7	2	45	-52.633	ppb	-52.633	-8.88	9757	500000	
Li	7	3	45	-30.380	ppb	-30.380	-12.69	4673970	50000	
Be	9	1	6	0.000	ppb	0.000	16948.59	13	2000	
B	11	1	6	55.959	ppb	55.959	1.42	23669	2000	
Na	23	1	45	77883.029	ppb	77883.029	0.49	236544550	2000	>LDR
Na	23	2	45	71540.840	ppb	71540.840	1.18	15893198	400000	
Mg	24	2	45	18842.371	ppb	18842.371	0.39	1856362	400000	
Al	27	2	45	6.159	ppb	6.159	1.10	210	400000	
K	39	1	45	2766.783	ppb	2766.783	0.13	16071624	400000	
K	39	2	45	3817.243	ppb	3817.243	1.88	193776	400000	
Ca	40	1	45	148083.753	ppb	148083.753	0.61	636740297	400000	
Ca	44	2	45	144291.099	ppb	144291.099	0.49	372358	400000	
Ti	47	2	45	0.136	ppb	0.136	173.21	3	4000	
V	51	2	72	1.743	ppb	1.743	10.35	3271	2000	
Cr	52	2	72	43.131	ppb	43.131	1.66	51837	5000	
Mn	55	2	72	9.693	ppb	9.693	2.31	4384	10000	
Fe	57	2	72	20.616	ppb	20.616	27.93	573	400000	
Co	59	2	72	0.034	ppb	0.034	42.47	100	2000	
Ni	60	2	72	0.242	ppb	0.242	40.74	290	5000	
Cu	63	2	72	0.749	ppb	0.749	14.57	2490	5000	
Zn	66	2	72	2.475	ppb	2.475	9.19	700	5000	
As	75	2	72	0.731	ppb	0.731	25.67	115	2000	
Se	78	1	72	26.798	ppb	26.798	2.78	5394	2000	
Sr	88	2	72	576.237	ppb	576.237	0.98	261381	4000	
Zr	90	2	72	5.203	ppb	5.203	106.02	103	1000	
Nb	93	2	72	0.341	ppb	0.341	22.42	1467	200	
Mo	95	2	115	1.741	ppb	1.741	8.72	1373	2000	
Pd	105	2	115	0.047	ppb	0.047	41.40	87	100	
Ag	107	2	115	-1.772	ppb	-1.772	-0.34	23	100	
Cd	111	2	115	-0.010	ppb	-0.010	0.00	0	2000	
Sn	120	2	115	0.173	ppb	0.173	38.55	250	2000	
Sb	121	2	115	0.265	ppb	0.265	23.04	213	1000	
Ba	137	2	115	42.741	ppb	42.741	1.88	11045	5000	
W	182	2	165	0.061	ppb	0.061	103.77	933	100	
Pt	195	2	165	0.002	ppb	0.002	569.82	20	100	
Tl	205	2	165	0.060	ppb	0.060	41.90	610	2000	
Pb	208	2	165	-0.132	ppb	-0.132	-12.01	973	5000	
Th	232	2	165	-0.022	ppb	-0.022	-32.88	363	2000	
U	238	2	165	5.980	ppb	5.980	1.19	64965	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1146223	1.48	1454508	78.80	60	120	
Sc (IS)	45	1	HMI H2	22503544	0.26	26285642	85.61	60	120	
Sc (IS)	45	2	HMI He	812342	0.81	903775	89.88	60	120	
Sc (IS)	45	3	No Gas	39338056	0.76	48040283	81.89	60	120	
Ge Internal Standard	72	1	HMI H2	8296102	0.88	9879865	83.97	60	120	
Ge Internal Standard	72	2	HMI He	861684	0.52	957593	89.98	60	120	
In Internal Standard	115	2	HMI He	2727745	0.37	2903780	93.94	60	120	
Ho-165	165	2	HMI He	13122886	0.02	14207049	92.37	60	120	

Sample Report

Sample Table

Sample Name	280-116397-A-4-C
Data File Name	094SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:55:44-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.086	ppb	5.086	106.01	163881	500000	
Li	7	2	45	-53.145	ppb	-53.145	-31.29	9820	500000	
Li	7	3	45	-30.726	ppb	-30.726	-16.71	4538360	50000	
Be	9	1	6	-0.024	ppb	-0.024	-60.73	3	2000	
B	11	1	6	53.850	ppb	53.850	3.85	22551	2000	
Na	23	1	45	72474.438	ppb	72474.438	1.30	218342523	2000	>LDR
Na	23	2	45	65367.977	ppb	65367.977	0.65	14642657	400000	
Mg	24	2	45	17398.650	ppb	17398.650	1.40	1728061	400000	
Al	27	2	45	4.742	ppb	4.742	58.91	177	400000	
K	39	1	45	2522.155	ppb	2522.155	2.96	15255754	400000	
K	39	2	45	3482.144	ppb	3482.144	0.80	179386	400000	
Ca	40	1	45	145263.052	ppb	145263.052	1.00	619551097	400000	
Ca	44	2	45	140288.106	ppb	140288.106	0.27	364973	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	3.306	ppb	3.306	6.62	4741	2000	
Cr	52	2	72	27.076	ppb	27.076	1.60	32948	5000	
Mn	55	2	72	0.760	ppb	0.760	12.60	400	10000	
Fe	57	2	72	16.416	ppb	16.416	1.17	487	400000	
Co	59	2	72	0.021	ppb	0.021	81.20	73	2000	
Ni	60	2	72	0.936	ppb	0.936	17.33	700	5000	
Cu	63	2	72	0.213	ppb	0.213	47.08	1647	5000	
Zn	66	2	72	2.915	ppb	2.915	7.28	797	5000	
As	75	2	72	0.837	ppb	0.837	9.74	131	2000	
Se	78	1	72	25.103	ppb	25.103	0.89	5005	2000	
Sr	88	2	72	569.313	ppb	569.313	0.99	260642	4000	
Zr	90	2	72	5.357	ppb	5.357	69.81	107	1000	
Nb	93	2	72	0.195	ppb	0.195	12.65	1127	200	
Mo	95	2	115	7.769	ppb	7.769	6.12	6108	2000	
Pd	105	2	115	0.021	ppb	0.021	131.24	57	100	
Ag	107	2	115	-1.752	ppb	-1.752	-0.32	73	100	
Cd	111	2	115	0.001	ppb	0.001	2744.53	3	2000	
Sn	120	2	115	0.067	ppb	0.067	40.88	163	2000	
Sb	121	2	115	0.208	ppb	0.208	30.35	173	1000	
Ba	137	2	115	61.492	ppb	61.492	0.49	16164	5000	
W	182	2	165	0.093	ppb	0.093	45.50	1067	100	
Pt	195	2	165	0.012	ppb	0.012	126.46	50	100	
Tl	205	2	165	0.078	ppb	0.078	13.88	737	2000	
Pb	208	2	165	-0.126	ppb	-0.126	-9.81	1047	5000	
Th	232	2	165	-0.018	ppb	-0.018	-9.83	403	2000	
U	238	2	165	5.610	ppb	5.610	2.01	62251	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1134038	1.35	1454508	77.97	60	120	
Sc (IS)	45	1	HMI H2	22322421	0.91	26285642	84.92	60	120	
Sc (IS)	45	2	HMI He	818958	1.06	903775	90.62	60	120	
Sc (IS)	45	3	No Gas	38235548	0.95	48040283	79.59	60	120	
Ge Internal Standard	72	1	HMI H2	8213029	0.25	9879865	83.13	60	120	
Ge Internal Standard	72	2	HMI He	869692	0.48	957593	90.82	60	120	
In Internal Standard	115	2	HMI He	2774654	1.33	2903780	95.55	60	120	
Ho-165	165	2	HMI He	13399036	0.68	14207049	94.31	60	120	

Sample Report

Sample Table

Sample Name	280-116397-A-6-C
Data File Name	095SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T18:59:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.960	ppb	5.960	39.56	164415	500000	
Li	7	2	45	-59.036	ppb	-59.036	-24.22	9570	500000	
Li	7	3	45	-31.897	ppb	-31.897	-14.12	4566896	50000	
Be	9	1	6	0.010	ppb	0.010	381.66	17	2000	
B	11	1	6	50.201	ppb	50.201	4.89	20698	2000	
Na	23	1	45	86365.211	ppb	86365.211	0.52	260433376	2000	>LDR
Na	23	2	45	79327.950	ppb	79327.950	0.79	17647020	400000	
Mg	24	2	45	18674.835	ppb	18674.835	0.05	1842417	400000	
Al	27	2	45	1.735	ppb	1.735	47.89	100	400000	
K	39	1	45	2672.749	ppb	2672.749	1.27	15694526	400000	
K	39	2	45	3674.215	ppb	3674.215	0.32	187279	400000	
Ca	40	1	45	152305.533	ppb	152305.533	0.91	650267870	400000	
Ca	44	2	45	149882.604	ppb	149882.604	0.30	387323	400000	
Ti	47	2	45	0.136	ppb	0.136	173.21	3	4000	
V	51	2	72	0.131	ppb	0.131	136.48	1804	2000	
Cr	52	2	72	82.450	ppb	82.450	1.20	99045	5000	
Mn	55	2	72	1194.818	ppb	1194.818	0.54	534572	10000	
Fe	57	2	72	15.962	ppb	15.962	5.91	473	400000	
Co	59	2	72	0.085	ppb	0.085	40.04	207	2000	
Ni	60	2	72	3.984	ppb	3.984	10.51	2467	5000	
Cu	63	2	72	1.299	ppb	1.299	2.80	3377	5000	
Zn	66	2	72	3.435	ppb	3.435	8.24	897	5000	
As	75	2	72	0.454	ppb	0.454	31.02	77	2000	
Se	78	1	72	13.664	ppb	13.664	3.03	2748	2000	
Sr	88	2	72	619.561	ppb	619.561	0.44	281612	4000	
Zr	90	2	72	3.377	ppb	3.377	99.42	80	1000	
Nb	93	2	72	0.161	ppb	0.161	74.96	1037	200	
Mo	95	2	115	6.617	ppb	6.617	4.30	5185	2000	
Pd	105	2	115	0.102	ppb	0.102	58.71	153	100	
Ag	107	2	115	-1.752	ppb	-1.752	-0.65	73	100	
Cd	111	2	115	0.042	ppb	0.042	112.99	17	2000	
Sn	120	2	115	0.122	ppb	0.122	24.14	210	2000	
Sb	121	2	115	0.928	ppb	0.928	10.56	717	1000	
Ba	137	2	115	28.912	ppb	28.912	9.23	7562	5000	
W	182	2	165	0.103	ppb	0.103	76.22	1097	100	
Pt	195	2	165	0.021	ppb	0.021	52.75	77	100	
Tl	205	2	165	0.113	ppb	0.113	6.62	960	2000	
Pb	208	2	165	-0.155	ppb	-0.155	-9.83	790	5000	
Th	232	2	165	-0.023	ppb	-0.023	-26.70	353	2000	
U	238	2	165	6.708	ppb	6.708	0.80	74066	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1114223	1.06	1454508	76.60	60	120	
Sc (IS)	45	1	HMI H2	22344811	0.21	26285642	85.01	60	120	
Sc (IS)	45	2	HMI He	813465	0.69	903775	90.01	60	120	
Sc (IS)	45	3	No Gas	38611013	0.93	48040283	80.37	60	120	
Ge Internal Standard	72	1	HMI H2	8244376	0.48	9879865	83.45	60	120	
Ge Internal Standard	72	2	HMI He	863487	0.18	957593	90.17	60	120	
In Internal Standard	115	2	HMI He	2760896	0.62	2903780	95.08	60	120	
Ho-165	165	2	HMI He	13345175	0.21	14207049	93.93	60	120	

Sample Report

Sample Table

Sample Name	280-116397-A-7-C
Data File Name	096SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:03:16-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	2.329	ppb	2.329	214.74	164889	500000	
Li	7	2	45	-41.043	ppb	-41.043	-17.62	10237	500000	
Li	7	3	45	-32.102	ppb	-32.102	-7.40	4584486	50000	
Be	9	1	6	0.018	ppb	0.018	2.02	20	2000	
B	11	1	6	594.626	ppb	594.626	0.28	243548	2000	
Na	23	1	45	66659.858	ppb	66659.858	1.12	203605270	2000	>LDR
Na	23	2	45	61044.885	ppb	61044.885	1.02	13730041	400000	
Mg	24	2	45	29692.367	ppb	29692.367	0.77	2961156	400000	
Al	27	2	45	22.603	ppb	22.603	32.41	627	400000	
K	39	1	45	7456.174	ppb	7456.174	0.30	29476685	400000	
K	39	2	45	8231.329	ppb	8231.329	1.19	407596	400000	
Ca	40	1	45	150655.518	ppb	150655.518	0.94	651390204	400000	
Ca	44	2	45	154933.880	ppb	154933.880	0.56	404719	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.664	ppb	-0.664	-36.69	1087	2000	
Cr	52	2	72	0.020	ppb	0.020	136.91	307	5000	
Mn	55	2	72	138.016	ppb	138.016	1.44	62384	10000	
Fe	57	2	72	79.579	ppb	79.579	16.02	1877	400000	
Co	59	2	72	0.043	ppb	0.043	34.75	120	2000	
Ni	60	2	72	0.259	ppb	0.259	54.89	303	5000	
Cu	63	2	72	-0.161	ppb	-0.161	-58.66	1043	5000	
Zn	66	2	72	2.109	ppb	2.109	14.60	633	5000	
As	75	2	72	1.132	ppb	1.132	14.55	172	2000	
Se	78	1	72	-0.065	ppb	-0.065	-99.27	17	2000	
Sr	88	2	72	2317.854	ppb	2317.854	0.97	1063371	4000	
Zr	90	2	72	3.819	ppb	3.819	28.94	87	1000	
Nb	93	2	72	0.115	ppb	0.115	65.77	933	200	
Mo	95	2	115	10.432	ppb	10.432	3.15	8216	2000	
Pd	105	2	115	0.018	ppb	0.018	98.61	53	100	
Ag	107	2	115	-1.761	ppb	-1.761	-0.80	50	100	
Cd	111	2	115	-0.010	ppb	-0.010	0.00	0	2000	
Sn	120	2	115	0.044	ppb	0.044	62.36	143	2000	
Sb	121	2	115	0.527	ppb	0.527	19.12	417	1000	
Ba	137	2	115	13.930	ppb	13.930	5.03	3671	5000	
W	182	2	165	0.120	ppb	0.120	9.89	1160	100	
Pt	195	2	165	0.005	ppb	0.005	208.83	30	100	
Tl	205	2	165	-0.022	ppb	-0.022	-14.89	93	2000	
Pb	208	2	165	-0.131	ppb	-0.131	-10.76	1000	5000	
Th	232	2	165	-0.019	ppb	-0.019	-31.03	393	2000	
U	238	2	165	0.692	ppb	0.692	4.39	7900	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1137699	0.70	1454508	78.22	60	120	
Sc (IS)	45	1	HMI H2	22628780	0.57	26285642	86.09	60	120	
Sc (IS)	45	2	HMI He	822279	0.60	903775	90.98	60	120	
Sc (IS)	45	3	No Gas	38781084	0.40	48040283	80.73	60	120	
Ge Internal Standard	72	1	HMI H2	8295248	0.54	9879865	83.96	60	120	
Ge Internal Standard	72	2	HMI He	871607	1.07	957593	91.02	60	120	
In Internal Standard	115	2	HMI He	2781860	0.48	2903780	95.80	60	120	
Ho-165	165	2	HMI He	13339844	0.33	14207049	93.90	60	120	

Sample Report

Sample Table

Sample Name	280-116397-A-9-C
Data File Name	097SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:07:04-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436242 6020a dod5
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-2.670	ppb	-2.670	-227.32	161984	500000	
Li	7	2	45	-73.191	ppb	-73.191	-12.28	9277	500000	
Li	7	3	45	-36.710	ppb	-36.710	-4.38	4530433	50000	
Be	9	1	6	-0.033	ppb	-0.033	0.00	0	2000	
B	11	1	6	66.811	ppb	66.811	2.25	27443	2000	
Na	23	1	45	97759.362	ppb	97759.362	0.67	297287089	2000	>LDR
Na	23	2	45	88294.875	ppb	88294.875	0.60	19946615	400000	
Mg	24	2	45	18904.734	ppb	18904.734	0.63	1894371	400000	
Al	27	2	45	108.444	ppb	108.444	5.60	2800	400000	
K	39	1	45	3291.070	ppb	3291.070	0.62	17577427	400000	
K	39	2	45	4212.678	ppb	4212.678	0.32	216127	400000	
Ca	40	1	45	144026.767	ppb	144026.767	0.45	620190391	400000	
Ca	44	2	45	139681.228	ppb	139681.228	0.63	366607	400000	
Ti	47	2	45	0.270	ppb	0.270	173.21	7	4000	
V	51	2	72	0.157	ppb	0.157	113.03	1840	2000	
Cr	52	2	72	118.636	ppb	118.636	1.29	143436	5000	
Mn	55	2	72	56.618	ppb	56.618	1.93	25570	10000	
Fe	57	2	72	14.424	ppb	14.424	22.97	443	400000	
Co	59	2	72	0.005	ppb	0.005	276.34	40	2000	
Ni	60	2	72	0.066	ppb	0.066	45.58	190	5000	
Cu	63	2	72	0.589	ppb	0.589	41.80	2254	5000	
Zn	66	2	72	2.866	ppb	2.866	2.50	787	5000	
As	75	2	72	0.983	ppb	0.983	8.44	151	2000	
Se	78	1	72	24.076	ppb	24.076	4.11	4874	2000	
Sr	88	2	72	570.669	ppb	570.669	1.20	261297	4000	
Zr	90	2	72	2.815	ppb	2.815	94.22	73	1000	
Nb	93	2	72	0.078	ppb	0.078	40.77	843	200	
Mo	95	2	115	0.330	ppb	0.330	4.68	293	2000	
Pd	105	2	115	0.081	ppb	0.081	46.76	130	100	
Ag	107	2	115	-1.760	ppb	-1.760	-0.72	53	100	
Cd	111	2	115	0.001	ppb	0.001	3457.25	3	2000	
Sn	120	2	115	0.029	ppb	0.029	137.50	130	2000	
Sb	121	2	115	0.242	ppb	0.242	27.11	200	1000	
Ba	137	2	115	37.717	ppb	37.717	3.56	9918	5000	
W	182	2	165	0.055	ppb	0.055	41.71	933	100	
Pt	195	2	165	0.024	ppb	0.024	35.15	87	100	
Tl	205	2	165	-0.022	ppb	-0.022	-35.66	97	2000	
Pb	208	2	165	-0.127	ppb	-0.127	-6.37	1043	5000	
Th	232	2	165	-0.014	ppb	-0.014	-39.92	450	2000	
U	238	2	165	6.489	ppb	6.489	1.06	72135	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1118094	0.59	1454508	76.87	60	120	
Sc (IS)	45	1	HMI H2	22536274	0.57	26285642	85.74	60	120	
Sc (IS)	45	2	HMI He	826203	0.96	903775	91.42	60	120	
Sc (IS)	45	3	No Gas	38855639	0.23	48040283	80.88	60	120	
Ge Internal Standard	72	1	HMI H2	8338947	0.68	9879865	84.40	60	120	
Ge Internal Standard	72	2	HMI He	869814	0.52	957593	90.83	60	120	
In Internal Standard	115	2	HMI He	2775587	0.21	2903780	95.59	60	120	
Ho-165	165	2	HMI He	13434821	0.67	14207049	94.56	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	098_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:10:52-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	468.011	ppb	0.415	378251	500	93.6	90	110	
Li	7	2	45	358.353	ppb	5.809	22728	500	71.7	90	110	>+\-10%
Li	7	3	45	394.936	ppb	0.968	10501624	500	79.0	90	110	>+\-10%
Be	9	1	6	47.244	ppb	0.912	19413	50	94.5	90	110	
B	11	1	6	53.966	ppb	3.994	23553	50	107.9	90	110	
Na	23	1	45	5175.967	ppb	0.217	16238528	5000	103.5	90	110	
Na	23	2	45	4924.855	ppb	2.505	1122693	5000	98.5	90	110	
Mg	24	2	45	4804.043	ppb	2.014	479226	5000	96.1	90	110	
Al	27	2	45	5103.590	ppb	2.858	128583	5000	102.1	90	110	
K	39	1	45	5428.557	ppb	0.717	24083793	5000	108.6	90	110	
K	39	2	45	5052.076	ppb	1.211	255379	5000	101.0	90	110	
Ca	40	1	45	5141.182	ppb	0.294	22608921	5000	102.8	90	110	
Ca	44	2	45	4996.770	ppb	2.761	13087	5000	99.9	90	110	
Ti	47	2	45	41.885	ppb	10.548	1030	50	83.8	90	110	>+\-10%
V	51	2	72	46.224	ppb	2.075	44539	50	92.4	90	110	
Cr	52	2	72	45.664	ppb	1.737	55711	50	91.3	90	110	
Mn	55	2	72	50.441	ppb	3.714	22922	50	100.9	90	110	
Fe	57	2	72	4741.278	ppb	0.229	104669	5000	94.8	90	110	
Co	59	2	72	46.077	ppb	0.034	96438	50	92.2	90	110	
Ni	60	2	72	45.171	ppb	2.252	26769	50	90.3	90	110	
Cu	63	2	72	45.564	ppb	1.538	75413	50	91.1	90	110	
Zn	66	2	72	49.796	ppb	2.134	10458	50	99.6	90	110	
As	75	2	72	47.647	ppb	1.446	6656	50	95.3	90	110	
Se	78	1	72	49.266	ppb	2.436	10108	50	98.5	90	110	
Sr	88	2	72	51.928	ppb	1.472	23935	50	103.9	90	110	
Zr	90	2	72	33.643	ppb	6.714	480	50	67.3	90	110	>+\-10%
Nb	93	2	72	81.088	ppb	0.902	198279	100	81.1	90	110	>+\-10%
Mo	95	2	115	43.462	ppb	1.635	34029	50	86.9	90	110	>+\-10%
Pd	105	2	115	45.707	ppb	2.344	55055	50	91.4	90	110	
Ag	107	2	115	42.529	ppb	0.645	113159	50	85.1	90	110	>+\-10%
Cd	111	2	115	45.226	ppb	2.892	14859	50	90.5	90	110	
Sn	120	2	115	46.933	ppb	1.413	40771	50	93.9	90	110	
Sb	121	2	115	47.405	ppb	1.454	35968	50	94.8	90	110	
Ba	137	2	115	48.991	ppb	3.682	12873	50	98.0	90	110	
W	182	2	165	45.932	ppb	0.635	167224	50	91.9	90	110	
Pt	195	2	165	45.921	ppb	0.191	137067	50	91.8	90	110	
Tl	205	2	165	48.398	ppb	0.668	315672	50	96.8	90	110	
Pb	208	2	165	47.593	ppb	0.315	414547	50	95.2	90	110	
Th	232	2	165	47.298	ppb	0.046	486845	50	94.6	90	110	
U	238	2	165	47.426	ppb	0.480	528672	50	94.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1181582	0.26	1454508	81.24	60	120	
Sc (IS)	45	1	HMI H2	22976416	0.53	26285642	87.41	60	120	
Sc (IS)	45	2	HMI He	822572	1.33	903775	91.02	60	120	
Sc (IS)	45	3	No Gas	39142940	1.05	48040283	81.48	60	120	
Ge Internal Standard	72	1	HMI H2	8477163	0.70	9879865	85.80	60	120	
Ge Internal Standard	72	2	HMI He	874993	0.30	957593	91.37	60	120	
In Internal Standard	115	2	HMI He	2774477	1.39	2903780	95.55	60	120	
Ho-165	165	2	HMI He	13519461	0.23	14207049	95.16	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	099_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:14:38-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-39.664	ppb	-2.8	4471362	10	
Be	9	1	6	-0.025	ppb	-54.7	3	0.5	
B	11	1	6	4.519	ppb	7.1	2627	0.5	>RL
Na	23	1	45	42.448	ppb	2.2	330295	25	>RL
Na	23	2	45	29.505	ppb	0.4	22254	25	>RL
Mg	24	2	45	3.429	ppb	28.0	397	25	
Al	27	2	45	2.441	ppb	83.6	117	15	
K	39	1	45	339.915	ppb	12.4	9346006	50	>RL
K	39	2	45	33.653	ppb	17.3	14618	50	
Ca	40	1	45	28.360	ppb	1.6	162841	50	
Ca	44	2	45	23.824	ppb	102.3	90	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.025	ppb	16.7	2600	1	>RL
Cr	52	2	72	-0.046	ppb	-156.6	223	1	
Mn	55	2	72	0.197	ppb	89.1	143	0.5	
Fe	57	2	72	-0.852	ppb	-164.9	107	25	
Co	59	2	72	-0.003	ppb	-179.3	23	0.5	
Ni	60	2	72	0.031	ppb	43.4	167	1	
Cu	63	2	72	-0.166	ppb	-41.0	1020	1	
Zn	66	2	72	0.743	ppb	40.8	347	5	
As	75	2	72	0.003	ppb	935.6	15	1	
Se	78	1	72	-0.099	ppb	-40.6	11	1	
Sr	88	2	72	0.013	ppb	577.2	23	0.5	
Zr	90	2	72	3.160	ppb	114.8	77	1	>RL
Nb	93	2	72	5.328	ppb	7.3	13367	2	>RL
Mo	95	2	115	0.137	ppb	27.5	140	0.5	
Pd	105	2	115	0.013	ppb	81.7	47	1	
Ag	107	2	115	-1.754	ppb	-1.0	67	1	
Cd	111	2	115	-0.010	ppb	0.0	0	0.5	
Sn	120	2	115	0.180	ppb	64.2	257	1	
Sb	121	2	115	0.421	ppb	6.8	330	0.6	
Ba	137	2	115	0.038	ppb	100.2	10	0.5	
W	182	2	165	0.149	ppb	20.5	1240	1	
Pt	195	2	165	0.019	ppb	31.9	70	1	
Tl	205	2	165	-0.007	ppb	-108.6	183	0.1	
Pb	208	2	165	-0.120	ppb	-11.4	1070	0.5	
Th	232	2	165	0.021	ppb	14.7	787	1	
U	238	2	165	0.038	ppb	19.7	700	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1205791	1.30	1454508	82.90	60	120	
Sc (IS)	45	1	HMI H2	22816029	0.81	26285642	86.80	60	120	
Sc (IS)	45	2	HMI He	804883	1.60	903775	89.06	60	120	
Sc (IS)	45	3	No Gas	38693555	0.44	48040283	80.54	60	120	
Ge Internal Standard	72	1	HMI H2	8496185	0.78	9879865	85.99	60	120	
Ge Internal Standard	72	2	HMI He	856875	1.54	957593	89.48	60	120	
In Internal Standard	115	2	HMI He	2731187	1.75	2903780	94.06	60	120	
Ho-165	165	2	HMI He	13098686	0.24	14207049	92.20	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	100LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:18:26-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	-31.515	ppb	-7.708	4625987	50	-63.0	70	130	>+/-30%
Be	9	1	6	0.948	ppb	13.541	403	1	94.8	70	130	
Na	23	2	45	68.681	ppb	2.164	31772	50	137.4	70	130	>+/-30%
Mg	24	2	45	49.381	ppb	9.177	5024	50	98.8	70	130	
Al	27	2	45	42.000	ppb	5.049	1123	30	140.0	70	130	>+/-30%
K	39	2	45	125.294	ppb	13.240	19467	100	125.3	70	130	
Ca	44	2	45	90.908	ppb	32.518	270	50	181.8	70	130	>+/-30%
V	51	2	72	5.419	ppb	1.511	6765	5	108.4	70	130	
Cr	52	2	72	1.835	ppb	12.895	2524	2	91.7	70	130	
Mn	55	2	72	1.115	ppb	26.485	567	1	111.5	70	130	
Fe	57	2	72	53.454	ppb	2.205	1313	50	106.9	70	130	
Co	59	2	72	0.927	ppb	2.735	1980	1	92.7	70	130	
Ni	60	2	72	1.931	ppb	20.394	1297	2	96.5	70	130	
Cu	63	2	72	1.949	ppb	4.973	4504	2	97.4	70	130	
Zn	66	2	72	10.892	ppb	10.342	2457	10	108.9	70	130	
As	75	2	72	4.653	ppb	7.489	667	5	93.1	70	130	
Se	78	1	72	4.950	ppb	4.715	1039	5	99.0	70	130	
Sr	88	2	72	1.184	ppb	8.363	567	1	118.4	70	130	
Zr	90	2	72	11.069	ppb	21.719	183	0.5	2213.9	70	130	>+/-30%
Nb	93	2	72	10.834	ppb	6.101	27214	2	541.7	70	130	>+/-30%
Mo	95	2	115	1.632	ppb	4.714	1327	2	81.6	70	130	
Pd	105	2	115	-0.002	ppb	-862.315	30	1	-0.2	70	130	>+/-30%
Ag	107	2	115	2.813	ppb	7.795	11866	5	56.3	70	130	>+/-30%
Cd	111	2	115	0.903	ppb	8.836	303	1	90.3	70	130	
Sn	120	2	115	9.322	ppb	2.391	8276	10	93.2	70	130	
Sb	121	2	115	2.112	ppb	10.214	1637	2	105.6	70	130	
Ba	137	2	115	1.054	ppb	12.766	280	1	105.4	70	130	
W	182	2	165	4.526	ppb	6.076	17165	1	452.6	70	130	>+/-30%
Pt	195	2	165	0.013	ppb	66.432	53	1	1.3	70	130	>+/-30%
Tl	205	2	165	0.914	ppb	6.489	6205	1	91.4	70	130	
Pb	208	2	165	0.838	ppb	0.819	9425	1	83.8	70	130	
Th	232	2	165	1.940	ppb	1.375	20577	2	97.0	70	130	
U	238	2	165	0.948	ppb	5.668	10875	1	94.8	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1184334	1.47	1454508	81.43	60	120	
Sc (IS)	45	1	HMI H2	22763875	0.85	26285642	86.60	60	120	
Sc (IS)	45	2	HMI He	828449	0.76	903775	91.67	60	120	
Sc (IS)	45	3	No Gas	39064757	0.86	48040283	81.32	60	120	
Ge Internal Standard	72	1	HMI H2	8435971	1.07	9879865	85.39	60	120	
Ge Internal Standard	72	2	HMI He	879862	0.86	957593	91.88	60	120	
In Internal Standard	115	2	HMI He	2806538	0.46	2903780	96.65	60	120	
Ho-165	165	2	HMI He	13541160	0.79	14207049	95.31	60	120	

Blank Report

Sample Table

Sample Name	MB 280-437338/1-A
Data File Name	101_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:22:13-07:00
Sample Type	Blank
Dilution	1
Comment	437338 soil 6020
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-16.785	ppb	-36.89958107	155976	0.5
Li	7	2	45	-80.560	ppb	-15.2525859	9153	0.5
Li	7	3	45	-46.985	ppb	-15.41494696	4416368	10
Be	9	1	6	-0.008	ppb	-4.31225663	10	0.5
B	11	1	6	1.857	ppb	17.85072012	1437	0.5
Na	23	1	45	75.851	ppb	0.441355841	428458	25
Na	23	2	45	60.789	ppb	2.131337072	30265	25
Mg	24	2	45	42.987	ppb	2.579889157	4424	25
Al	27	2	45	5.396	ppb	29.97350719	197	15
K	39	1	45	-1046.029	ppb	-0.474762672	5321219	50
K	39	2	45	22.506	ppb	16.24298112	14641	50
Ca	40	1	45	160.991	ppb	0.476198824	733135	50
Ca	44	2	45	185.556	ppb	8.779811135	523	25
Ti	47	2	45	0.266	ppb	86.60586891	7	0.5
V	51	2	72	-0.139	ppb	-159.8252925	1597	1
Cr	52	2	72	0.340	ppb	23.41683452	703	1
Mn	55	2	72	0.577	ppb	24.52790545	323	0.5
Fe	57	2	72	12.888	ppb	26.13064619	417	25
Co	59	2	72	0.001	ppb	237.5145074	33	0.5
Ni	60	2	72	0.088	ppb	44.91193354	207	1
Cu	63	2	72	0.039	ppb	184.08228	1390	1
Zn	66	2	72	2.369	ppb	22.80355172	697	5
As	75	2	72	0.013	ppb	62.05727646	17	1
Se	78	1	72	-0.091	ppb	-38.29916088	12	1
Sr	88	2	72	0.382	ppb	16.61187375	197	0.5
Zr	90	2	72	3.221	ppb	22.36832456	80	1
Nb	93	2	72	2.103	ppb	13.92202013	5855	2
Mo	95	2	115	0.055	ppb	24.13967944	80	0.5
Pd	105	2	115	-0.027	ppb	0	0	1
Ag	107	2	115	-1.756	ppb	-0.437470364	67	1
Cd	111	2	115	0.000	ppb	6276.341502	3	0.5
Sn	120	2	115	0.238	ppb	18.17772342	320	1
Sb	121	2	115	0.128	ppb	27.73401503	117	0.6
Ba	137	2	115	0.985	ppb	15.53088205	267	0.5
W	182	2	165	0.183	ppb	9.135324093	1403	1
Pt	195	2	165	0.014	ppb	14.87714893	57	1
Tl	205	2	165	-0.011	ppb	-48.76784187	163	0.1
Pb	208	2	165	-0.092	ppb	-5.696671752	1350	0.5
Th	232	2	165	0.031	ppb	36.84216592	920	1
U	238	2	165	-0.003	ppb	-156.9682881	263	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1175014	1.47	1454508	80.78	60	120	
Sc (IS)	45	1	HMI H2	22573047	0.59	26285642	85.88	60	120	
Sc (IS)	45	2	HMI He	836135	0.60	903775	92.52	60	120	
Sc (IS)	45	3	No Gas	39093684	1.06	48040283	81.38	60	120	
Ge Internal Standard	72	1	HMI H2	8311262	0.90	9879865	84.12	60	120	
Ge Internal Standard	72	2	HMI He	885305	0.63	957593	92.45	60	120	
In Internal Standard	115	2	HMI He	2856574	0.85	2903780	98.37	60	120	
Ho-165	165	2	HMI He	13511714	0.66	14207049	95.11	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-437338/2-A
Data File Name	102LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:26:00-07:00
Sample Type	LCS-s
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	437338 soil 6020
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	182.087	182.087	ppb	5.096	72379	200	91.0	80	120	
Na	23	2	45	34.788	34.788	ppb	8.478	24120	200	17.4	80	120	NewName Main CR1 Failed
Mg	24	2	45	38.876	38.876	ppb	5.261	3974	200000	0.0	80	120	NewName Main CR1 Failed
Al	27	2	45	2029.740	2029.740	ppb	3.758	51588	200000	1.0	80	120	NewName Main CR1 Failed
K	39	2	45	41.752	41.752	ppb	32.574	15445	200000	0.0	80	120	NewName Main CR1 Failed
Ca	44	2	45	1115.764	1115.764	ppb	12.162	2967	200000	0.6	80	120	NewName Main CR1 Failed
V	51	2	72	178.453	178.453	ppb	0.794	167755	200	89.2	80	120	
Cr	52	2	72	179.960	179.960	ppb	1.011	219599	200	90.0	80	120	
(Cr)	53	2	72	188.231	188.231	ppb	2.267	27290	200	94.1	80	120	
Mn	55	2	72	194.763	194.763	ppb	1.298	88714	200	97.4	80	120	
Fe	57	2	72	1845.373	1845.373	ppb	2.407	40982	200000	0.9	80	120	NewName Main CR1 Failed
Co	59	2	72	176.809	176.809	ppb	0.804	371463	200	88.4	80	120	
Ni	60	2	72	177.523	177.523	ppb	1.671	105186	200	88.8	80	120	
Cu	63	2	72	177.730	177.730	ppb	0.403	291547	200	88.9	80	120	
Zn	66	2	72	178.761	178.761	ppb	1.039	37169	200	89.4	80	120	
As	75	2	72	170.079	170.079	ppb	0.494	23816	200	85.0	80	120	
Se	78	1	72	173.617	173.617	ppb	1.152	34738	200	86.8	80	120	
(Se)	82	1	72	155.202	155.202	ppb	2.985	14408	200	77.6	80	120	NewName Main CR1 Failed
Nb	93	2	72	2.157	2.157	ppb	9.162	5942	400	0.5	80	120	NewName Main CR1 Failed
Mo	95	2	115	169.783	169.783	ppb	0.311	131875	200	84.9	80	120	
Pd	105	2	115	-0.004	-0.004	ppb	-475.444	27	200	0.0	80	120	NewName Main CR1 Failed
Ag	107	2	115	175.160	175.160	ppb	0.988	448671	200	87.6	80	120	
Cd	111	2	115	176.510	176.510	ppb	1.417	57583	200	88.3	80	120	
(Cd)	114	2	115	177.930	177.930	ppb	1.087	150307	200	89.0	80	120	
Sn	120	2	115	184.029	184.029	ppb	0.791	158404	200	92.0	80	120	
Sb	121	2	115	191.779	191.779	ppb	0.280	144442	200	95.9	80	110	
Ba	137	2	115	191.516	191.516	ppb	0.789	49981	200	95.8	80	120	
W	182	2	165	174.197	174.197	ppb	0.992	625887	200	87.1	80	120	
Pt	195	2	165	0.004	0.004	ppb	139.736	27	200	0.0	80	120	NewName Main CR1 Failed
Tl	205	2	165	188.234	188.234	ppb	0.625	1214855	200	94.1	80	120	
(Pb)	206	2	165	189.026	189.026	ppb	0.804	394688	200	94.5	80	120	
(Pb)	207	2	165	188.922	188.922	ppb	0.506	361149	200	94.5	80	120	
Pb	208	2	165	189.176	189.176	ppb	0.327	1625085	200	94.6	80	120	
Th	232	2	165	204.477	204.477	ppb	1.109	2081785	200	102.2	80	120	
U	238	2	165	206.644	206.644	ppb	0.417	2279772	200	103.3	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1144382	2.04	1454508	78.68	60	120	
Sc (IS)	45	1	HMI H2	22535772	0.21	26285642	85.73	60	120	
Sc (IS)	45	2	HMI He	829269	1.13	903775	91.76	60	120	
Sc (IS)	45	3	No Gas	38367574	0.38	48040283	79.87	60	120	
Ge Internal Standard	72	1	HMI H2	8284764	0.56	9879865	83.86	60	120	
Ge Internal Standard	72	2	HMI He	878563	1.17	957593	91.75	60	120	
In Internal Standard	115	2	HMI He	2754791	1.26	2903780	94.87	60	120	
Ho-165	165	2	HMI He	13385562	0.90	14207049	94.22	60	120	

Sample Report

Sample Table

Sample Name	280-116860-B-1-B
Data File Name	103SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:29:48-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437338 soil 6020
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	47.844	ppb	47.844	8.43	180003	500000	
Li	7	2	45	-19.723	ppb	-19.723	-83.81	10911	500000	
Li	7	3	45	0.182	ppb	0.182	685.05	4805556	50000	
Be	9	1	6	2.782	ppb	2.782	12.21	1073	2000	
B	11	1	6	62.059	ppb	62.059	1.26	25075	2000	
Na	23	1	45	2785.558	ppb	2785.558	0.72	8455113	2000	
Na	23	2	45	2488.124	ppb	2488.124	1.20	575508	400000	
Mg	24	2	45	43867.380	ppb	43867.380	0.78	4378046	400000	
Al	27	2	45	50727.006	ppb	50727.006	0.97	1278346	400000	
K	39	1	45	18698.118	ppb	18698.118	0.42	59682006	400000	
K	39	2	45	18962.930	ppb	18962.930	0.82	922336	400000	
Ca	40	1	45	364383.616	ppb	364383.616	0.53	1531421311	400000	
Ca	44	2	45	354261.293	ppb	354261.293	0.98	926084	400000	
Ti	47	2	45	1670.987	ppb	1670.987	3.36	41112	4000	
V	51	2	72	128.265	ppb	128.265	1.15	117198	2000	
Cr	52	2	72	71.554	ppb	71.554	0.73	84709	5000	
Mn	55	2	72	3304.277	ppb	3304.277	0.74	1456226	10000	
Fe	57	2	72	77700.958	ppb	77700.958	0.88	1665605	400000	
Co	59	2	72	27.648	ppb	27.648	0.25	56270	2000	
Ni	60	2	72	47.039	ppb	47.039	2.03	27096	5000	
Cu	63	2	72	46.223	ppb	46.223	0.90	74354	5000	
Zn	66	2	72	187.776	ppb	187.776	1.60	37794	5000	
As	75	2	72	29.104	ppb	29.104	4.03	3959	2000	
Se	78	1	72	1.432	ppb	1.432	13.87	300	2000	
Sr	88	2	72	1309.859	ppb	1309.859	0.35	586504	4000	
Zr	90	2	72	7170.632	ppb	7170.632	1.38	91916	1000	>LDR
Nb	93	2	72	3.039	ppb	3.039	0.92	7839	200	
Mo	95	2	115	3.242	ppb	3.242	13.89	2510	2000	
Pd	105	2	115	0.041	ppb	0.041	59.53	80	100	
Ag	107	2	115	-1.363	ppb	-1.363	-5.77	1043	100	
Cd	111	2	115	1.504	ppb	1.504	31.07	487	2000	
Sn	120	2	115	1.346	ppb	1.346	16.98	1243	2000	
Sb	121	2	115	0.464	ppb	0.464	14.43	360	1000	
Ba	137	2	115	961.341	ppb	961.341	0.51	246993	5000	
W	182	2	165	1.023	ppb	1.023	6.84	4364	100	
Pt	195	2	165	0.002	ppb	0.002	384.07	20	100	
Tl	205	2	165	0.739	ppb	0.739	11.41	4961	2000	
Pb	208	2	165	26.794	ppb	26.794	0.52	229976	5000	
Th	232	2	165	18.626	ppb	18.626	1.10	188525	2000	
U	238	2	165	3.995	ppb	3.995	1.84	43980	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1097871	1.43	1454508	75.48	60	120	
Sc (IS)	45	1	HMI H2	21996029	0.20	26285642	83.68	60	120	
Sc (IS)	45	2	HMI He	822903	0.62	903775	91.05	60	120	
Sc (IS)	45	3	No Gas	37090624	0.27	48040283	77.21	60	120	
Ge Internal Standard	72	1	HMI H2	7855183	0.36	9879865	79.51	60	120	
Ge Internal Standard	72	2	HMI He	850640	0.80	957593	88.83	60	120	
In Internal Standard	115	2	HMI He	2712209	1.53	2903780	93.40	60	120	
Ho-165	165	2	HMI He	13268780	0.87	14207049	93.40	60	120	

Sample Report

Sample Table

Sample Name	280-116600-D-1-B
Data File Name	104SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:33:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437338 soil 6020
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	252.147	ppb	252.147	1.68	259079	500000	
Li	7	2	45	136.974	ppb	136.974	9.24	15028	500000	
Li	7	3	45	183.765	ppb	183.765	1.64	6785080	50000	
Be	9	1	6	3.146	ppb	3.146	9.64	1190	2000	
B	11	1	6	183.822	ppb	183.822	0.70	71692	2000	
Na	23	1	45	5216.586	ppb	5216.586	0.53	15113358	2000	
Na	23	2	45	4646.462	ppb	4646.462	1.12	1008090	400000	
Mg	24	2	45	23590.489	ppb	23590.489	1.67	2237268	400000	
Al	27	2	45	70389.730	ppb	70389.730	1.75	1685579	400000	
K	39	1	45	14324.904	ppb	14324.904	0.82	45931624	400000	
K	39	2	45	14704.084	ppb	14704.084	0.68	682498	400000	
Ca	40	1	45	396709.480	ppb	396709.480	0.59	1608448829	400000	
Ca	44	2	45	419534.489	ppb	419534.489	0.15	1042239	400000	
Ti	47	2	45	139.448	ppb	139.448	6.59	3261	4000	
V	51	2	72	265.855	ppb	265.855	1.36	234420	2000	
Cr	52	2	72	186.521	ppb	186.521	0.32	214240	5000	
Mn	55	2	72	1534.274	ppb	1534.274	0.71	657366	10000	
Fe	57	2	72	79051.738	ppb	79051.738	0.45	1647387	400000	
Co	59	2	72	24.928	ppb	24.928	0.91	49322	2000	
Ni	60	2	72	105.246	ppb	105.246	0.71	58753	5000	
Cu	63	2	72	211.201	ppb	211.201	0.68	325862	5000	
Zn	66	2	72	396.780	ppb	396.780	0.93	77428	5000	
As	75	2	72	27.381	ppb	27.381	4.38	3621	2000	
Se	78	1	72	9.627	ppb	9.627	4.74	1812	2000	
Sr	88	2	72	8765.560	ppb	8765.560	1.63	3815162	4000	
Zr	90	2	72	17325.594	ppb	17325.594	1.07	215857	1000	>LDR
Nb	93	2	72	5.138	ppb	5.138	4.60	12459	200	
Mo	95	2	115	25.438	ppb	25.438	4.75	18957	2000	
Pd	105	2	115	0.206	ppb	0.206	39.53	267	100	
Ag	107	2	115	-0.976	ppb	-0.976	-10.67	1954	100	
Cd	111	2	115	4.048	ppb	4.048	15.84	1267	2000	
Sn	120	2	115	0.745	ppb	0.745	20.08	713	2000	
Sb	121	2	115	0.173	ppb	0.173	29.50	140	1000	
Ba	137	2	115	10035.890	ppb	10035.890	2.11	2507796	5000	
W	182	2	165	5.354	ppb	5.354	0.36	19378	100	
Pt	195	2	165	0.030	ppb	0.030	23.14	100	100	
Tl	205	2	165	1.945	ppb	1.945	7.29	12417	2000	
Pb	208	2	165	71.188	ppb	71.188	1.12	595349	5000	
Th	232	2	165	17.959	ppb	17.959	1.16	178150	2000	
U	238	2	165	9.118	ppb	9.118	1.34	97993	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1077117	1.14	1454508	74.05	60	120	
Sc (IS)	45	1	HMI H2	21220280	0.36	26285642	80.73	60	120	
Sc (IS)	45	2	HMI He	782071	1.21	903775	86.53	60	120	
Sc (IS)	45	3	No Gas	34960888	0.26	48040283	72.77	60	120	
Ge Internal Standard	72	1	HMI H2	7678270	0.71	9879865	77.72	60	120	
Ge Internal Standard	72	2	HMI He	826946	0.74	957593	86.36	60	120	
In Internal Standard	115	2	HMI He	2638329	1.48	2903780	90.86	60	120	
Ho-165	165	2	HMI He	13003689	0.72	14207049	91.53	60	120	

Sample Report

Sample Table

Sample Name	280-116600-D-2-C
Data File Name	105SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:37:30-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437338 soil 6020
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	353.536	ppb	353.536	1.80	285627	500000	
Li	7	2	45	231.955	ppb	231.955	4.80	16867	500000	
Li	7	3	45	271.996	ppb	271.996	3.27	7359791	50000	
Be	9	1	6	4.695	ppb	4.695	14.32	1637	2000	
B	11	1	6	137.621	ppb	137.621	1.98	49760	2000	
Na	23	1	45	28657.758	ppb	28657.758	1.03	77871462	2000	>LDR
Na	23	2	45	26158.222	ppb	26158.222	3.24	5293083	400000	
Mg	24	2	45	42424.643	ppb	42424.643	3.70	3799859	400000	
Al	27	2	45	97800.267	ppb	97800.267	5.76	2210923	400000	
K	39	1	45	22104.473	ppb	22104.473	0.82	63145447	400000	
K	39	2	45	23015.999	ppb	23015.999	7.22	1001475	400000	
Ca	40	1	45	476971.472	ppb	476971.472	0.54	1832258159	400000	
Ca	44	2	45	529316.882	ppb	529316.882	6.40	1241131	400000	
Ti	47	2	45	171.991	ppb	171.991	7.98	3797	4000	
V	51	2	72	346.727	ppb	346.727	4.28	286390	2000	
Cr	52	2	72	364.199	ppb	364.199	4.25	392218	5000	
Mn	55	2	72	2595.967	ppb	2595.967	10.51	1042423	10000	
Fe	57	2	72	152421.104	ppb	152421.104	5.51	2979320	400000	
Co	59	2	72	49.647	ppb	49.647	4.52	92127	2000	
Ni	60	2	72	188.490	ppb	188.490	4.78	98598	5000	
Cu	63	2	72	668.893	ppb	668.893	3.28	965883	5000	
Zn	66	2	72	790.447	ppb	790.447	4.82	144520	5000	
As	75	2	72	49.027	ppb	49.027	5.51	6071	2000	
Se	78	1	72	14.433	ppb	14.433	2.45	2548	2000	
Sr	88	2	72	8252.543	ppb	8252.543	4.88	3369650	4000	
Zr	90	2	72	54818.443	ppb	54818.443	4.25	640663	1000	>LDR
Nb	93	2	72	3.355	ppb	3.355	2.50	7839	200	
Mo	95	2	115	51.330	ppb	51.330	2.93	36432	2000	
Pd	105	2	115	0.230	ppb	0.230	41.39	280	100	
Ag	107	2	115	-0.261	ppb	-0.261	-1.19	3521	100	
Cd	111	2	115	6.590	ppb	6.590	10.87	1967	2000	
Sn	120	2	115	1.969	ppb	1.969	12.81	1640	2000	
Sb	121	2	115	0.328	ppb	0.328	22.09	240	1000	
Ba	137	2	115	13326.510	ppb	13326.510	3.83	3175596	5000	
W	182	2	165	12.426	ppb	12.426	2.62	42134	100	
Pt	195	2	165	0.031	ppb	0.031	21.54	100	100	
Tl	205	2	165	2.788	ppb	2.788	5.20	16938	2000	
Pb	208	2	165	163.085	ppb	163.085	2.28	1302508	5000	
Th	232	2	165	32.079	ppb	32.079	3.88	304001	2000	
U	238	2	165	13.208	ppb	13.208	3.05	135695	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	995863	0.83	1454508	68.47	60	120	
Sc (IS)	45	1	HMI H2	20105539	0.71	26285642	76.49	60	120	
Sc (IS)	45	2	HMI He	739026	2.78	903775	81.77	60	120	
Sc (IS)	45	3	No Gas	32699294	0.39	48040283	68.07	60	120	
Ge Internal Standard	72	1	HMI H2	7240658	0.75	9879865	73.29	60	120	
Ge Internal Standard	72	2	HMI He	776372	2.68	957593	81.08	60	120	
In Internal Standard	115	2	HMI He	2516488	1.68	2903780	86.66	60	120	
Ho-165	165	2	HMI He	12445598	1.83	14207049	87.60	60	120	

Sample Report

Sample Table

Sample Name	280-116600-D-3-C
Data File Name	106SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:41:21-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437338 soil 6020
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	198.971	ppb	198.971	0.33	216692	500000	
Li	7	2	45	94.625	ppb	94.625	21.43	12890	500000	
Li	7	3	45	125.404	ppb	125.404	2.67	5473221	50000	
Be	9	1	6	4.802	ppb	4.802	10.44	1614	2000	
B	11	1	6	112.750	ppb	112.750	1.29	39413	2000	
Na	23	1	45	29556.215	ppb	29556.215	0.82	77548829	2000	>LDR
Na	23	2	45	26268.833	ppb	26268.833	0.65	5267195	400000	
Mg	24	2	45	32985.070	ppb	32985.070	0.73	2927828	400000	
Al	27	2	45	103691.782	ppb	103691.782	1.59	2324000	400000	
K	39	1	45	26715.298	ppb	26715.298	0.56	72208577	400000	
K	39	2	45	26585.132	ppb	26585.132	3.55	1145278	400000	
Ca	40	1	45	443719.829	ppb	443719.829	0.73	1645942162	400000	
Ca	44	2	45	440829.246	ppb	440829.246	1.20	1024880	400000	
Ti	47	2	45	465.792	ppb	465.792	2.27	10194	4000	
V	51	2	72	352.623	ppb	352.623	0.65	287690	2000	
Cr	52	2	72	178.967	ppb	178.967	1.86	190509	5000	
Mn	55	2	72	2118.929	ppb	2118.929	0.17	841405	10000	
Fe	57	2	72	127725.007	ppb	127725.007	0.35	2466841	400000	
Co	59	2	72	39.508	ppb	39.508	1.94	72428	2000	
Ni	60	2	72	343.555	ppb	343.555	1.04	177441	5000	
Cu	63	2	72	440.426	ppb	440.426	0.50	628546	5000	
Zn	66	2	72	815.702	ppb	815.702	1.24	147336	5000	
As	75	2	72	41.701	ppb	41.701	1.71	5104	2000	
Se	78	1	72	15.863	ppb	15.863	2.26	2714	2000	
Sr	88	2	72	4117.248	ppb	4117.248	0.58	1660920	4000	
Zr	90	2	72	18174.014	ppb	18174.014	0.18	209853	1000	>LDR
Nb	93	2	72	7.545	ppb	7.545	1.65	16684	200	
Mo	95	2	115	48.050	ppb	48.050	0.52	33742	2000	
Pd	105	2	115	0.125	ppb	0.125	64.69	163	100	
Ag	107	2	115	-0.324	ppb	-0.324	-33.24	3337	100	
Cd	111	2	115	4.942	ppb	4.942	9.00	1460	2000	
Sn	120	2	115	6.396	ppb	6.396	2.32	5065	2000	
Sb	121	2	115	0.464	ppb	0.464	7.50	330	1000	
Ba	137	2	115	18681.303	ppb	18681.303	1.04	4404502	5000	
W	182	2	165	6.022	ppb	6.022	1.11	20917	100	
Pt	195	2	165	0.016	ppb	0.016	43.76	60	100	
Tl	205	2	165	2.673	ppb	2.673	1.37	16371	2000	
Pb	208	2	165	204.195	ppb	204.195	0.33	1642151	5000	
Th	232	2	165	36.924	ppb	36.924	0.42	352433	2000	
U	238	2	165	13.208	ppb	13.208	1.17	136675	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	960335	0.57	1454508	66.02	60	120	
Sc (IS)	45	1	HMI H2	19414453	0.38	26285642	73.86	60	120	
Sc (IS)	45	2	HMI He	731875	0.46	903775	80.98	60	120	
Sc (IS)	45	3	No Gas	31534450	0.47	48040283	65.64	60	120	
Ge Internal Standard	72	1	HMI H2	7022570	0.52	9879865	71.08	60	120	
Ge Internal Standard	72	2	HMI He	766413	0.70	957593	80.04	60	120	
In Internal Standard	115	2	HMI He	2489056	1.62	2903780	85.72	60	120	
Ho-165	165	2	HMI He	12532471	0.96	14207049	88.21	60	120	

Sample Report

Sample Table

Sample Name	280-116600-D-4-C
Data File Name	107SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:45:10-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437338 soil 6020
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	132.231	ppb	132.231	2.05	184519	500000	
Li	7	2	45	53.581	ppb	53.581	25.13	11391	500000	
Li	7	3	45	72.439	ppb	72.439	6.03	4594178	50000	
Be	9	1	6	4.782	ppb	4.782	2.23	1520	2000	
B	11	1	6	130.401	ppb	130.401	2.86	43036	2000	
Na	23	1	45	27437.474	ppb	27437.474	0.87	69498031	2000	>LDR
Na	23	2	45	24706.011	ppb	24706.011	0.35	4804505	400000	
Mg	24	2	45	31790.262	ppb	31790.262	1.39	2736121	400000	
Al	27	2	45	95065.715	ppb	95065.715	0.77	2066001	400000	
K	39	1	45	17474.522	ppb	17474.522	0.63	47967801	400000	
K	39	2	45	17455.963	ppb	17455.963	0.86	733136	400000	
Ca	40	1	45	608704.580	ppb	608704.580	1.11	2179399701	400000	
Ca	44	2	45	705231.225	ppb	705231.225	0.95	1589865	400000	
Ti	47	2	45	360.457	ppb	360.457	3.93	7649	4000	
V	51	2	72	362.062	ppb	362.062	1.58	288170	2000	
Cr	52	2	72	156.392	ppb	156.392	1.80	162468	5000	
Mn	55	2	72	1816.129	ppb	1816.129	0.65	703670	10000	
Fe	57	2	72	101108.717	ppb	101108.717	0.83	1905409	400000	
Co	59	2	72	35.379	ppb	35.379	0.35	63295	2000	
Ni	60	2	72	136.642	ppb	136.642	2.17	68951	5000	
Cu	63	2	72	427.972	ppb	427.972	0.79	595978	5000	
Zn	66	2	72	558.476	ppb	558.476	0.20	98485	5000	
As	75	2	72	63.557	ppb	63.557	0.14	7584	2000	
Se	78	1	72	22.844	ppb	22.844	6.19	3765	2000	
Sr	88	2	72	19019.115	ppb	19019.115	0.35	7486608	4000	
Zr	90	2	72	9718.084	ppb	9718.084	2.51	109489	1000	>LDR
Nb	93	2	72	2.233	ppb	2.233	3.97	5215	200	
Mo	95	2	115	29.502	ppb	29.502	1.18	20402	2000	
Pd	105	2	115	0.362	ppb	0.362	10.86	413	100	
Ag	107	2	115	-0.369	ppb	-0.369	-8.33	3184	100	
Cd	111	2	115	7.072	ppb	7.072	6.27	2054	2000	
Sn	120	2	115	2.248	ppb	2.248	12.13	1814	2000	
Sb	121	2	115	0.522	ppb	0.522	22.01	363	1000	
Ba	137	2	115	20301.438	ppb	20301.438	0.75	4711153	5000	
W	182	2	165	2.740	ppb	2.740	2.47	9504	100	
Pt	195	2	165	0.008	ppb	0.008	67.33	37	100	
Tl	205	2	165	2.660	ppb	2.660	1.36	15653	2000	
Pb	208	2	165	146.136	ppb	146.136	0.77	1129899	5000	
Th	232	2	165	29.647	ppb	29.647	0.11	272037	2000	
U	238	2	165	15.780	ppb	15.780	1.61	156866	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	908639	1.84	1454508	62.47	60	120	
Sc (IS)	45	1	HMI H2	18739548	0.77	26285642	71.29	60	120	
Sc (IS)	45	2	HMI He	709711	0.73	903775	78.53	60	120	
Sc (IS)	45	3	No Gas	29650053	0.75	48040283	61.72	60	120	
Ge Internal Standard	72	1	HMI H2	6784384	0.63	9879865	68.67	60	120	
Ge Internal Standard	72	2	HMI He	747838	1.08	957593	78.10	60	120	
In Internal Standard	115	2	HMI He	2449667	0.98	2903780	84.36	60	120	
Ho-165	165	2	HMI He	12043119	0.37	14207049	84.77	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	108_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:48:58-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	440.719	ppb	0.966	320578	500	88.1	90	110	>+\-10%
Li	7	2	45	289.610	ppb	7.929	18519	500	57.9	90	110	>+\-10%
Li	7	3	45	344.255	ppb	1.610	7967654	500	68.9	90	110	>+\-10%
Be	9	1	6	48.171	ppb	3.181	17110	50	96.3	90	110	
B	11	1	6	53.059	ppb	0.744	20031	50	106.1	90	110	
Na	23	1	45	5048.132	ppb	0.214	13880105	5000	101.0	90	110	
Na	23	2	45	4466.613	ppb	0.442	917678	5000	89.3	90	110	>+\-10%
Mg	24	2	45	4717.386	ppb	0.997	423467	5000	94.3	90	110	
Al	27	2	45	5247.317	ppb	1.171	118969	5000	104.9	90	110	
K	39	1	45	5713.212	ppb	0.511	21819681	5000	114.3	90	110	>+\-10%
K	39	2	45	5073.501	ppb	1.668	230708	5000	101.5	90	110	
Ca	40	1	45	5423.655	ppb	1.010	20894509	5000	108.5	90	110	
Ca	44	2	45	5359.963	ppb	5.084	12629	5000	107.2	90	110	
Ti	47	2	45	48.973	ppb	15.118	1083	50	97.9	90	110	
V	51	2	72	44.706	ppb	2.160	39735	50	89.4	90	110	>+\-10%
Cr	52	2	72	45.231	ppb	0.899	50840	50	90.5	90	110	
Mn	55	2	72	48.676	ppb	2.120	20382	50	97.4	90	110	
Fe	57	2	72	4734.190	ppb	1.028	96282	5000	94.7	90	110	
Co	59	2	72	44.274	ppb	1.234	85371	50	88.5	90	110	>+\-10%
Ni	60	2	72	44.459	ppb	2.278	24274	50	88.9	90	110	>+\-10%
Cu	63	2	72	43.542	ppb	1.699	66447	50	87.1	90	110	>+\-10%
Zn	66	2	72	47.722	ppb	6.017	9240	50	95.4	90	110	
As	75	2	72	47.625	ppb	2.654	6129	50	95.3	90	110	
Se	78	1	72	48.358	ppb	1.089	8819	50	96.7	90	110	
Sr	88	2	72	57.604	ppb	1.629	24459	50	115.2	90	110	>+\-10%
Zr	90	2	72	164.678	ppb	11.444	2034	50	329.4	90	110	>+\-10%
Nb	93	2	72	81.094	ppb	0.135	182679	100	81.1	90	110	>+\-10%
Mo	95	2	115	42.603	ppb	1.455	31586	50	85.2	90	110	>+\-10%
Pd	105	2	115	45.386	ppb	1.379	51769	50	90.8	90	110	
Ag	107	2	115	41.327	ppb	2.485	104251	50	82.7	90	110	>+\-10%
Cd	111	2	115	45.469	ppb	2.962	14148	50	90.9	90	110	
Sn	120	2	115	48.165	ppb	1.713	39618	50	96.3	90	110	
Sb	121	2	115	49.011	ppb	1.072	35222	50	98.0	90	110	
Ba	137	2	115	59.453	ppb	3.520	14795	50	118.9	90	110	>+\-10%
W	182	2	165	45.178	ppb	0.608	156258	50	90.4	90	110	
Pt	195	2	165	44.088	ppb	0.372	125009	50	88.2	90	110	>+\-10%
Tl	205	2	165	48.070	ppb	0.970	297829	50	96.1	90	110	
Pb	208	2	165	48.292	ppb	0.441	399540	50	96.6	90	110	
Th	232	2	165	48.158	ppb	0.102	470873	50	96.3	90	110	
U	238	2	165	48.076	ppb	0.378	509081	50	96.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1021559	0.88	1454508	70.23	60	120	
Sc (IS)	45	1	HMI H2	20130427	0.53	26285642	76.58	60	120	
Sc (IS)	45	2	HMI He	740099	0.35	903775	81.89	60	120	
Sc (IS)	45	3	No Gas	31810480	0.29	48040283	66.22	60	120	
Ge Internal Standard	72	1	HMI H2	7533880	0.64	9879865	76.25	60	120	
Ge Internal Standard	72	2	HMI He	806094	0.16	957593	84.18	60	120	
In Internal Standard	115	2	HMI He	2627682	1.21	2903780	90.49	60	120	
Ho-165	165	2	HMI He	12842640	0.31	14207049	90.40	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	109_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:52:45-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-58.522	ppb	-2.4	3451422	10	
Be	9	1	6	0.013	ppb	116.2	17	0.5	
B	11	1	6	3.961	ppb	8.4	2040	0.5	>RL
Na	23	1	45	-0.393	ppb	-129.5	173954	25	
Na	23	2	45	-9.014	ppb	-21.6	12779	25	
Mg	24	2	45	5.291	ppb	4.5	537	25	
Al	27	2	45	5.027	ppb	38.1	167	15	
K	39	1	45	521.061	ppb	4.4	8645771	50	>RL
K	39	2	45	22.227	ppb	30.8	13053	50	
Ca	40	1	45	51.836	ppb	2.0	232411	50	>RL
Ca	44	2	45	34.900	ppb	22.2	110	25	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.097	ppb	-78.0	1497	1	
Cr	52	2	72	-0.088	ppb	-75.4	163	1	
Mn	55	2	72	0.190	ppb	49.9	133	0.5	
Fe	57	2	72	6.125	ppb	19.0	243	25	
Co	59	2	72	-0.004	ppb	-119.7	20	0.5	
Ni	60	2	72	-0.111	ppb	-50.2	80	1	
Cu	63	2	72	-0.128	ppb	-30.3	1020	1	
Zn	66	2	72	0.072	ppb	136.6	200	5	
As	75	2	72	0.065	ppb	53.0	22	1	
Se	78	1	72	-0.063	ppb	-0.8	16	1	
Sr	88	2	72	0.655	ppb	27.2	297	0.5	>RL
Zr	90	2	72	2.420	ppb	98.3	63	1	>RL
Nb	93	2	72	5.070	ppb	9.2	12052	2	>RL
Mo	95	2	115	0.091	ppb	21.8	103	0.5	
Pd	105	2	115	0.019	ppb	92.4	53	1	
Ag	107	2	115	-1.749	ppb	-0.9	80	1	
Cd	111	2	115	0.043	ppb	112.0	17	0.5	
Sn	120	2	115	0.268	ppb	3.5	327	1	
Sb	121	2	115	0.432	ppb	18.3	333	0.6	
Ba	137	2	115	2.578	ppb	9.2	657	0.5	>RL
W	182	2	165	0.205	ppb	16.9	1400	1	
Pt	195	2	165	0.002	ppb	347.9	20	1	
Tl	205	2	165	-0.005	ppb	-288.3	193	0.1	
Pb	208	2	165	-0.104	ppb	-29.4	1177	0.5	
Th	232	2	165	0.015	ppb	35.0	713	1	
U	238	2	165	0.047	ppb	15.0	777	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1031107	1.39	1454508	70.89	60	120	
Sc (IS)	45	1	HMI H2	19996386	0.55	26285642	76.07	60	120	
Sc (IS)	45	2	HMI He	746321	1.56	903775	82.58	60	120	
Sc (IS)	45	3	No Gas	31684396	0.45	48040283	65.95	60	120	
Ge Internal Standard	72	1	HMI H2	7510480	0.58	9879865	76.02	60	120	
Ge Internal Standard	72	2	HMI He	810031	0.71	957593	84.59	60	120	
In Internal Standard	115	2	HMI He	2689662	0.70	2903780	92.63	60	120	
Ho-165	165	2	HMI He	12771926	1.33	14207049	89.90	60	120	

Sample Report

Sample Table

Sample Name	280-116639-B-7-D
Data File Name	110SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T19:56:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437338 soil 6020
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-20.229	ppb	-20.229	-6.77	130851	500000	
Li	7	2	45	-88.038	ppb	-88.038	-3.35	7682	500000	
Li	7	3	45	-58.339	ppb	-58.339	-2.57	3364096	50000	
Be	9	1	6	0.034	ppb	0.034	269.55	23	2000	
B	11	1	6	60.629	ppb	60.629	2.42	22037	2000	
Na	23	1	45	2797.680	ppb	2797.680	1.33	7381867	2000	
Na	23	2	45	2425.569	ppb	2425.569	0.22	491528	400000	
Mg	24	2	45	9919.840	ppb	9919.840	0.18	866725	400000	
Al	27	2	45	30582.617	ppb	30582.617	0.42	674706	400000	
K	39	1	45	2022.407	ppb	2022.407	2.70	11871080	400000	
K	39	2	45	2890.299	ppb	2890.299	1.18	132955	400000	
Ca	40	1	45	72302.168	ppb	72302.168	0.92	264206736	400000	
Ca	44	2	45	73995.420	ppb	73995.420	0.80	169349	400000	
Ti	47	2	45	50.577	ppb	50.577	28.99	1090	4000	
V	51	2	72	16.879	ppb	16.879	1.68	15082	2000	
Cr	52	2	72	30.048	ppb	30.048	2.85	31949	5000	
Mn	55	2	72	285.461	ppb	285.461	0.75	112543	10000	
Fe	57	2	72	98543.701	ppb	98543.701	0.28	1888968	400000	
Co	59	2	72	3.159	ppb	3.159	5.32	5775	2000	
Ni	60	2	72	22.436	ppb	22.436	1.41	11625	5000	
Cu	63	2	72	1598.555	ppb	1598.555	1.69	2261071	5000	
Zn	66	2	72	1934.810	ppb	1934.810	2.00	346588	5000	
As	75	2	72	16.471	ppb	16.471	5.50	2008	2000	
Se	78	1	72	16.229	ppb	16.229	6.67	2771	2000	
Sr	88	2	72	1160.402	ppb	1160.402	0.67	464607	4000	
Zr	90	2	72	1989.827	ppb	1989.827	1.46	22830	1000	
Nb	93	2	72	17.725	ppb	17.725	3.13	38133	200	
Mo	95	2	115	15.707	ppb	15.707	7.60	11405	2000	
Pd	105	2	115	0.090	ppb	0.090	51.21	130	100	
Ag	107	2	115	3.143	ppb	3.143	4.10	11645	100	
Cd	111	2	115	1.151	ppb	1.151	20.35	353	2000	
Sn	120	2	115	4.182	ppb	4.182	4.42	3454	2000	
Sb	121	2	115	3.292	ppb	3.292	5.16	2327	1000	
Ba	137	2	115	1155.005	ppb	1155.005	1.57	281106	5000	
W	182	2	165	8.831	ppb	8.831	10.37	30733	100	
Pt	195	2	165	0.053	ppb	0.053	30.28	163	100	
Tl	205	2	165	0.111	ppb	0.111	23.33	903	2000	
Pb	208	2	165	14.484	ppb	14.484	0.51	119772	5000	
Th	232	2	165	0.553	ppb	0.553	6.95	5895	2000	
U	238	2	165	42.541	ppb	42.541	0.25	444983	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	986775	1.84	1454508	67.84	60	120	
Sc (IS)	45	1	HMI H2	19124018	0.76	26285642	72.75	60	120	
Sc (IS)	45	2	HMI He	720401	0.47	903775	79.71	60	120	
Sc (IS)	45	3	No Gas	30864757	0.59	48040283	64.25	60	120	
Ge Internal Standard	72	1	HMI H2	7010766	0.23	9879865	70.96	60	120	
Ge Internal Standard	72	2	HMI He	760665	0.94	957593	79.44	60	120	
In Internal Standard	115	2	HMI He	2569401	1.11	2903780	88.48	60	120	
Ho-165	165	2	HMI He	12685249	0.44	14207049	89.29	60	120	

Sample Report

Sample Table

Sample Name	280-116639-B-7-Dsd@5
Data File Name	111SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:00:19-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437338 soil 6020
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-21.068	ppb	-21.068	-34.06	136821	500000	
Li	7	2	45	-75.838	ppb	-75.838	-13.47	8209	500000	
Li	7	3	45	-54.010	ppb	-54.010	-4.40	3479811	50000	
Be	9	1	6	-0.015	ppb	-0.015	-215.70	7	2000	
B	11	1	6	12.732	ppb	12.732	0.64	5335	2000	
Na	23	1	45	566.779	ppb	566.779	0.85	1707477	2000	
Na	23	2	45	471.356	ppb	471.356	1.20	109474	400000	
Mg	24	2	45	1953.071	ppb	1953.071	1.56	174809	400000	
Al	27	2	45	5936.832	ppb	5936.832	1.56	134175	400000	
K	39	1	45	624.713	ppb	624.713	0.98	8927510	400000	
K	39	2	45	570.701	ppb	570.701	2.51	36480	400000	
Ca	40	1	45	13825.566	ppb	13825.566	0.93	52983963	400000	
Ca	44	2	45	14373.228	ppb	14373.228	2.63	33710	400000	
Ti	47	2	45	8.598	ppb	8.598	47.72	190	4000	
V	51	2	72	2.976	ppb	2.976	3.13	4031	2000	
Cr	52	2	72	5.726	ppb	5.726	8.66	6532	5000	
Mn	55	2	72	54.946	ppb	54.946	3.80	22538	10000	
Fe	57	2	72	17914.682	ppb	17914.682	0.81	356753	400000	
Co	59	2	72	0.531	ppb	0.531	17.77	1030	2000	
Ni	60	2	72	4.285	ppb	4.285	3.06	2417	5000	
Cu	63	2	72	309.505	ppb	309.505	0.99	455660	5000	
Zn	66	2	72	377.883	ppb	377.883	1.19	70453	5000	
As	75	2	72	3.104	ppb	3.104	8.36	404	2000	
Se	78	1	72	2.904	ppb	2.904	5.94	544	2000	
Sr	88	2	72	221.246	ppb	221.246	0.91	92018	4000	
Zr	90	2	72	375.806	ppb	375.806	11.93	4505	1000	
Nb	93	2	72	1.235	ppb	1.235	3.16	3311	200	
Mo	95	2	115	3.877	ppb	3.877	3.91	2929	2000	
Pd	105	2	115	0.011	ppb	0.011	163.12	43	100	
Ag	107	2	115	-0.840	ppb	-0.840	-11.46	2297	100	
Cd	111	2	115	0.150	ppb	0.150	64.54	50	2000	
Sn	120	2	115	0.874	ppb	0.874	18.81	823	2000	
Sb	121	2	115	0.531	ppb	0.531	31.04	400	1000	
Ba	137	2	115	225.917	ppb	225.917	1.29	56718	5000	
W	182	2	165	2.031	ppb	2.031	8.94	7676	100	
Pt	195	2	165	0.004	ppb	0.004	48.08	27	100	
Tl	205	2	165	0.010	ppb	0.010	91.50	287	2000	
Pb	208	2	165	2.783	ppb	2.783	2.99	24871	5000	
Th	232	2	165	0.056	ppb	0.056	9.99	1110	2000	
U	238	2	165	8.274	ppb	8.274	1.64	87583	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1040188	0.98	1454508	71.51	60	120	
Sc (IS)	45	1	HMI H2	20044605	0.34	26285642	76.26	60	120	
Sc (IS)	45	2	HMI He	737812	0.54	903775	81.64	60	120	
Sc (IS)	45	3	No Gas	31487059	0.61	48040283	65.54	60	120	
Ge Internal Standard	72	1	HMI H2	7382034	0.77	9879865	74.72	60	120	
Ge Internal Standard	72	2	HMI He	790036	0.61	957593	82.50	60	120	
In Internal Standard	115	2	HMI He	2650046	0.78	2903780	91.26	60	120	
Ho-165	165	2	HMI He	12804359	0.75	14207049	90.13	60	120	

Sample Report

Sample Table

Sample Name	280-116639-B-7-E MS
Data File Name	112SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:04:05-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437338 soil 6020
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	325.765	ppb	325.765	1.10	263469	500000	
Li	7	2	45	187.009	ppb	187.009	14.83	15552	500000	
Li	7	3	45	245.669	ppb	245.669	3.39	6844112	50000	
Be	9	1	6	182.971	ppb	182.971	2.61	61962	2000	
B	11	1	6	202.700	ppb	202.700	2.25	71457	2000	
Na	23	1	45	3208.738	ppb	3208.738	0.54	8514786	2000	
Na	23	2	45	2799.307	ppb	2799.307	0.14	577415	400000	
Mg	24	2	45	11264.095	ppb	11264.095	0.37	1005659	400000	
Al	27	2	45	36479.349	ppb	36479.349	1.09	822360	400000	
K	39	1	45	2610.957	ppb	2610.957	0.78	13397998	400000	
K	39	2	45	3378.240	ppb	3378.240	0.74	156786	400000	
Ca	40	1	45	82266.111	ppb	82266.111	0.19	303206329	400000	
Ca	44	2	45	84996.824	ppb	84996.824	0.65	198764	400000	
Ti	47	2	45	65.672	ppb	65.672	24.95	1444	4000	
V	51	2	72	193.731	ppb	193.731	1.00	161332	2000	
Cr	52	2	72	205.946	ppb	205.946	0.76	222787	5000	
Mn	55	2	72	512.731	ppb	512.731	1.27	206959	10000	
Fe	57	2	72	112113.499	ppb	112113.499	1.24	2200897	400000	
Co	59	2	72	174.040	ppb	174.040	0.68	324210	2000	
Ni	60	2	72	197.585	ppb	197.585	1.03	103776	5000	
Cu	63	2	72	1948.590	ppb	1948.590	0.74	2822411	5000	
Zn	66	2	72	2388.619	ppb	2388.619	0.40	438149	5000	
As	75	2	72	189.404	ppb	189.404	1.12	23515	2000	
Se	78	1	72	197.285	ppb	197.285	1.37	33343	2000	
Sr	88	2	72	1522.614	ppb	1522.614	0.77	624332	4000	
Zr	90	2	72	3049.373	ppb	3049.373	2.36	35812	1000	
Nb	93	2	72	2.895	ppb	2.895	13.79	6872	200	
Mo	95	2	115	180.331	ppb	180.331	1.60	130236	2000	
Pd	105	2	115	0.063	ppb	0.063	13.56	100	100	
Ag	107	2	115	172.608	ppb	172.608	1.04	411220	100	
Cd	111	2	115	173.150	ppb	173.150	1.35	52526	2000	
Sn	120	2	115	16.845	ppb	16.845	5.25	13568	2000	
Sb	121	2	115	156.339	ppb	156.339	1.23	109494	1000	
Ba	137	2	115	1531.490	ppb	1531.490	1.72	371625	5000	
W	182	2	165	126.614	ppb	126.614	1.52	433762	100	
Pt	195	2	165	0.038	ppb	0.038	34.86	123	100	
Tl	205	2	165	184.691	ppb	184.691	0.69	1136109	2000	
Pb	208	2	165	198.635	ppb	198.635	0.61	1626213	5000	
Th	232	2	165	148.864	ppb	148.864	4.30	1444759	2000	
U	238	2	165	256.530	ppb	256.530	0.49	2697227	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	974566	1.68	1454508	67.00	60	120	
Sc (IS)	45	1	HMI H2	19288156	0.41	26285642	73.38	60	120	
Sc (IS)	45	2	HMI He	736114	0.79	903775	81.45	60	120	
Sc (IS)	45	3	No Gas	31713352	0.89	48040283	66.01	60	120	
Ge Internal Standard	72	1	HMI H2	6999125	1.15	9879865	70.84	60	120	
Ge Internal Standard	72	2	HMI He	778949	0.93	957593	81.34	60	120	
In Internal Standard	115	2	HMI He	2561868	1.29	2903780	88.23	60	120	
Ho-165	165	2	HMI He	12757576	0.10	14207049	89.80	60	120	

Sample Report

Sample Table

Sample Name	280-116639-B-7-F MSD
Data File Name	113SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:07:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437338 soil 6020
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	323.967	ppb	323.967	2.07	267425	500000	
Li	7	2	45	193.548	ppb	193.548	14.60	15639	500000	
Li	7	3	45	243.568	ppb	243.568	1.83	7019259	50000	
Be	9	1	6	183.555	ppb	183.555	2.08	61684	2000	
B	11	1	6	220.935	ppb	220.935	0.92	77246	2000	
Na	23	1	45	3425.539	ppb	3425.539	0.81	9238906	2000	
Na	23	2	45	3041.220	ppb	3041.220	0.70	622254	400000	
Mg	24	2	45	12782.105	ppb	12782.105	2.56	1134037	400000	
Al	27	2	45	39365.120	ppb	39365.120	0.38	881967	400000	
K	39	1	45	2755.984	ppb	2755.984	3.22	13991114	400000	
K	39	2	45	3635.122	ppb	3635.122	2.44	166764	400000	
Ca	40	1	45	88571.225	ppb	88571.225	1.39	332192348	400000	
Ca	44	2	45	91924.712	ppb	91924.712	1.06	213662	400000	
Ti	47	2	45	62.483	ppb	62.483	1.88	1367	4000	
V	51	2	72	198.541	ppb	198.541	1.24	164268	2000	
Cr	52	2	72	213.087	ppb	213.087	1.49	229083	5000	
Mn	55	2	72	541.827	ppb	541.827	0.88	217356	10000	
Fe	57	2	72	122727.105	ppb	122727.105	0.77	2394084	400000	
Co	59	2	72	176.367	ppb	176.367	1.04	326492	2000	
Ni	60	2	72	197.083	ppb	197.083	1.12	102873	5000	
Cu	63	2	72	2145.674	ppb	2145.674	1.09	3088509	5000	
Zn	66	2	72	2589.979	ppb	2589.979	1.14	472128	5000	
As	75	2	72	192.453	ppb	192.453	2.12	23744	2000	
Se	78	1	72	198.250	ppb	198.250	0.69	34192	2000	
Sr	88	2	72	1619.354	ppb	1619.354	0.94	659849	4000	
Zr	90	2	72	3125.973	ppb	3125.973	4.51	36483	1000	
Nb	93	2	72	1.641	ppb	1.641	4.98	4121	200	
Mo	95	2	115	184.968	ppb	184.968	1.61	133816	2000	
Pd	105	2	115	0.048	ppb	0.048	19.66	83	100	
Ag	107	2	115	171.024	ppb	171.024	1.23	408171	100	
Cd	111	2	115	173.047	ppb	173.047	1.15	52586	2000	
Sn	120	2	115	15.386	ppb	15.386	2.52	12430	2000	
Sb	121	2	115	153.115	ppb	153.115	2.11	107418	1000	
Ba	137	2	115	1642.435	ppb	1642.435	0.73	399249	5000	
W	182	2	165	120.919	ppb	120.919	0.82	414170	100	
Pt	195	2	165	0.065	ppb	0.065	22.92	197	100	
Tl	205	2	165	183.087	ppb	183.087	0.64	1125932	2000	
Pb	208	2	165	203.773	ppb	203.773	0.82	1667767	5000	
Th	232	2	165	161.478	ppb	161.478	0.43	1566672	2000	
U	238	2	165	261.575	ppb	261.575	0.70	2749507	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	967000	1.49	1454508	66.48	60	120	
Sc (IS)	45	1	HMI H2	19628885	0.63	26285642	74.68	60	120	
Sc (IS)	45	2	HMI He	731639	0.99	903775	80.95	60	120	
Sc (IS)	45	3	No Gas	32633084	0.96	48040283	67.93	60	120	
Ge Internal Standard	72	1	HMI H2	7141718	0.50	9879865	72.29	60	120	
Ge Internal Standard	72	2	HMI He	774101	0.30	957593	80.84	60	120	
In Internal Standard	115	2	HMI He	2566171	1.36	2903780	88.37	60	120	
Ho-165	165	2	HMI He	12754063	0.04	14207049	89.77	60	120	

Sample Report

Sample Table

Sample Name	280-116639-B-7-D pds
Data File Name	114SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:11:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437338 soil 6020
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	170.185	ppb	170.185	2.42	211334	500000	
Li	7	2	45	85.711	ppb	85.711	22.57	12656	500000	
Li	7	3	45	115.422	ppb	115.422	1.40	5609965	50000	
Be	9	1	6	193.078	ppb	193.078	1.31	68018	2000	
B	11	1	6	62.849	ppb	62.849	1.92	23436	2000	
Na	23	1	45	2671.571	ppb	2671.571	0.14	7361291	2000	
Na	23	2	45	2375.922	ppb	2375.922	1.29	489883	400000	
Mg	24	2	45	9631.779	ppb	9631.779	1.14	855716	400000	
Al	27	2	45	30857.130	ppb	30857.130	1.75	692183	400000	
K	39	1	45	1745.347	ppb	1745.347	1.20	11689733	400000	
K	39	2	45	2746.663	ppb	2746.663	2.37	129061	400000	
Ca	40	1	45	69012.981	ppb	69012.981	0.14	263070469	400000	
Ca	44	2	45	71529.700	ppb	71529.700	0.41	166481	400000	
Ti	47	2	45	63.804	ppb	63.804	25.44	1400	4000	
V	51	2	72	207.790	ppb	207.790	2.64	173237	2000	
Cr	52	2	72	217.704	ppb	217.704	2.68	235924	5000	
Mn	55	2	72	479.616	ppb	479.616	1.72	193980	10000	
Fe	57	2	72	96508.773	ppb	96508.773	2.37	1897917	400000	
Co	59	2	72	191.367	ppb	191.367	1.62	357170	2000	
Ni	60	2	72	210.832	ppb	210.832	2.79	110928	5000	
Cu	63	2	72	1748.807	ppb	1748.807	2.68	2537717	5000	
Zn	66	2	72	2074.232	ppb	2074.232	1.98	381249	5000	
As	75	2	72	203.957	ppb	203.957	2.77	25364	2000	
Se	78	1	72	212.366	ppb	212.366	1.13	37434	2000	
Sr	88	2	72	1325.759	ppb	1325.759	1.22	544673	4000	
Zr	90	2	72	21173.902	ppb	21173.902	2.05	248967	1000	>LDR
Nb	93	2	72	3.009	ppb	3.009	7.47	7136	200	
Mo	95	2	115	194.927	ppb	194.927	1.38	140059	2000	
Pd	105	2	115	0.064	ppb	0.064	30.66	100	100	
Ag	107	2	115	44.481	ppb	44.481	2.80	108510	100	
Cd	111	2	115	191.982	ppb	191.982	1.34	57937	2000	
Sn	120	2	115	198.575	ppb	198.575	0.90	158138	2000	
Sb	121	2	115	205.487	ppb	205.487	1.09	143178	1000	
Ba	137	2	115	1335.933	ppb	1335.933	2.64	322487	5000	
W	182	2	165	193.013	ppb	193.013	0.59	664708	100	
Pt	195	2	165	0.096	ppb	0.096	10.82	287	100	
Tl	205	2	165	201.940	ppb	201.940	0.83	1249373	2000	
Pb	208	2	165	211.097	ppb	211.097	0.46	1738124	5000	
Th	232	2	165	248.955	ppb	248.955	3.81	2429344	2000	
U	238	2	165	268.936	ppb	268.936	0.69	2844028	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1013638	1.22	1454508	69.69	60	120	
Sc (IS)	45	1	HMI H2	19948271	0.40	26285642	75.89	60	120	
Sc (IS)	45	2	HMI He	732584	1.24	903775	81.06	60	120	
Sc (IS)	45	3	No Gas	32988523	0.39	48040283	68.67	60	120	
Ge Internal Standard	72	1	HMI H2	7299695	0.17	9879865	73.88	60	120	
Ge Internal Standard	72	2	HMI He	780639	2.21	957593	81.52	60	120	
In Internal Standard	115	2	HMI He	2548932	1.84	2903780	87.78	60	120	
Ho-165	165	2	HMI He	12831800	0.74	14207049	90.32	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	115_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:15:26-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	440.049	ppb	1.112	334888	500	88.0	90	110	>+\-10%
Li	7	2	45	286.302	ppb	8.796	18783	500	57.3	90	110	>+\-10%
Li	7	3	45	371.155	ppb	2.352	8886990	500	74.2	90	110	>+\-10%
Be	9	1	6	46.734	ppb	1.533	17337	50	93.5	90	110	
B	11	1	6	51.066	ppb	0.836	20154	50	102.1	90	110	
Na	23	1	45	4954.280	ppb	0.570	14245376	5000	99.1	90	110	
Na	23	2	45	4454.623	ppb	0.456	933132	5000	89.1	90	110	>+\-10%
Mg	24	2	45	4684.910	ppb	0.896	428758	5000	93.7	90	110	
Al	27	2	45	5086.043	ppb	0.489	117567	5000	101.7	90	110	
K	39	1	45	5521.720	ppb	0.729	22307033	5000	110.4	90	110	>+\-10%
K	39	2	45	5021.272	ppb	0.689	232919	5000	100.4	90	110	
Ca	40	1	45	5138.391	ppb	0.447	20699043	5000	102.8	90	110	
Ca	44	2	45	5196.168	ppb	0.657	12483	5000	103.9	90	110	
Ti	47	2	45	49.212	ppb	8.058	1110	50	98.4	90	110	
V	51	2	72	45.512	ppb	0.360	41213	50	91.0	90	110	
Cr	52	2	72	44.797	ppb	1.241	51338	50	89.6	90	110	>+\-10%
Mn	55	2	72	49.015	ppb	1.269	20923	50	98.0	90	110	
Fe	57	2	72	4695.024	ppb	1.380	97353	5000	93.9	90	110	
Co	59	2	72	45.247	ppb	1.153	88943	50	90.5	90	110	
Ni	60	2	72	44.279	ppb	1.463	24649	50	88.6	90	110	>+\-10%
Cu	63	2	72	44.774	ppb	3.419	69628	50	89.5	90	110	>+\-10%
Zn	66	2	72	50.585	ppb	2.497	9974	50	101.2	90	110	
As	75	2	72	48.409	ppb	1.227	6351	50	96.8	90	110	
Se	78	1	72	47.643	ppb	2.167	9063	50	95.3	90	110	
Sr	88	2	72	53.877	ppb	3.515	23320	50	107.8	90	110	
Zr	90	2	72	41.088	ppb	26.044	543	50	82.2	90	110	>+\-10%
Nb	93	2	72	81.570	ppb	0.849	187327	100	81.6	90	110	>+\-10%
Mo	95	2	115	43.121	ppb	3.690	32011	50	86.2	90	110	>+\-10%
Pd	105	2	115	46.412	ppb	3.738	52998	50	92.8	90	110	
Ag	107	2	115	42.646	ppb	2.052	107599	50	85.3	90	110	>+\-10%
Cd	111	2	115	45.269	ppb	5.110	14114	50	90.5	90	110	
Sn	120	2	115	48.133	ppb	2.802	39647	50	96.3	90	110	
Sb	121	2	115	49.317	ppb	1.496	35490	50	98.6	90	110	
Ba	137	2	115	48.587	ppb	2.773	12116	50	97.2	90	110	
W	182	2	165	45.926	ppb	0.722	159897	50	91.9	90	110	
Pt	195	2	165	45.467	ppb	1.359	129783	50	90.9	90	110	
Tl	205	2	165	49.024	ppb	0.902	305787	50	98.0	90	110	
Pb	208	2	165	48.713	ppb	0.996	405706	50	97.4	90	110	
Th	232	2	165	48.291	ppb	0.097	475349	50	96.6	90	110	
U	238	2	165	48.640	ppb	0.418	518512	50	97.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1066718	0.78	1454508	73.34	60	120	
Sc (IS)	45	1	HMI H2	21046776	0.15	26285642	80.07	60	120	
Sc (IS)	45	2	HMI He	754557	0.79	903775	83.49	60	120	
Sc (IS)	45	3	No Gas	34191900	0.78	48040283	71.17	60	120	
Ge Internal Standard	72	1	HMI H2	7858255	0.17	9879865	79.54	60	120	
Ge Internal Standard	72	2	HMI He	821811	0.48	957593	85.82	60	120	
In Internal Standard	115	2	HMI He	2631639	1.73	2903780	90.63	60	120	
Ho-165	165	2	HMI He	12929011	0.56	14207049	91.00	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	116_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:19:13-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-50.275	ppb	-11.9	3741416	10	
Be	9	1	6	0.020	ppb	127.7	20	0.5	
B	11	1	6	3.024	ppb	14.2	1767	0.5	>RL
Na	23	1	45	-13.634	ppb	-6.1	143176	25	
Na	23	2	45	-19.618	ppb	-2.0	10511	25	
Mg	24	2	45	3.973	ppb	20.1	413	25	
Al	27	2	45	4.938	ppb	45.3	163	15	
K	39	1	45	402.059	ppb	4.1	8644458	50	>RL
K	39	2	45	14.754	ppb	26.5	12603	50	
Ca	40	1	45	31.423	ppb	5.1	159945	50	
Ca	44	2	45	29.624	ppb	16.2	97	25	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.782	ppb	9.9	2240	1	
Cr	52	2	72	-0.093	ppb	-49.3	157	1	
Mn	55	2	72	0.136	ppb	35.6	110	0.5	
Fe	57	2	72	7.987	ppb	44.4	280	25	
Co	59	2	72	0.004	ppb	245.3	37	0.5	
Ni	60	2	72	-0.080	ppb	-117.0	97	1	
Cu	63	2	72	-0.232	ppb	-35.3	860	1	
Zn	66	2	72	0.516	ppb	31.3	283	5	
As	75	2	72	0.081	ppb	109.9	24	1	
Se	78	1	72	-0.059	ppb	-42.8	17	1	
Sr	88	2	72	0.125	ppb	50.0	70	0.5	
Zr	90	2	72	1.066	ppb	88.8	47	1	>RL
Nb	93	2	72	5.239	ppb	8.0	12376	2	>RL
Mo	95	2	115	0.120	ppb	57.7	123	0.5	
Pd	105	2	115	0.037	ppb	59.7	73	1	
Ag	107	2	115	-1.752	ppb	-0.2	70	1	
Cd	111	2	115	0.012	ppb	314.5	7	0.5	
Sn	120	2	115	0.269	ppb	9.5	323	1	
Sb	121	2	115	0.431	ppb	53.4	327	0.6	
Ba	137	2	115	0.280	ppb	75.2	70	0.5	
W	182	2	165	0.324	ppb	21.0	1797	1	
Pt	195	2	165	0.018	ppb	29.2	67	1	
Tl	205	2	165	0.004	ppb	408.7	250	0.1	
Pb	208	2	165	-0.114	ppb	-10.7	1087	0.5	
Th	232	2	165	0.029	ppb	8.3	843	1	
U	238	2	165	0.087	ppb	10.7	1197	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1075075	1.25	1454508	73.91	60	120	
Sc (IS)	45	1	HMI H2	20708370	0.60	26285642	78.78	60	120	
Sc (IS)	45	2	HMI He	738778	0.31	903775	81.74	60	120	
Sc (IS)	45	3	No Gas	33460576	1.24	48040283	69.65	60	120	
Ge Internal Standard	72	1	HMI H2	7798569	0.79	9879865	78.93	60	120	
Ge Internal Standard	72	2	HMI He	806469	0.22	957593	84.22	60	120	
In Internal Standard	115	2	HMI He	2651390	1.20	2903780	91.31	60	120	
Ho-165	165	2	HMI He	12701024	0.89	14207049	89.40	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	117WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:23:01-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.006	ppb	-438.0134875	10	0.5
Na	23	2	45	-20.255	ppb	-6.390418948	10444	25
Mg	24	2	45	5.092	ppb	25.12951652	517	25
Al	27	2	45	2.109	ppb	71.81043476	100	15
K	39	2	45	18.890	ppb	59.4606942	12856	50
Ca	44	2	45	11.025	ppb	44.03081517	53	25
V	51	2	72	0.737	ppb	7.692948104	2204	1
Cr	52	2	72	-0.084	ppb	-132.7192629	167	1
Mn	55	2	72	0.024	ppb	380.7466604	63	0.5
Fe	57	2	72	8.128	ppb	45.89643644	283	25
Co	59	2	72	-0.001	ppb	-1728.658092	27	0.5
Ni	60	2	72	-0.062	ppb	-44.00027941	107	1
Cu	63	2	72	-0.290	ppb	-27.44114739	773	1
Zn	66	2	72	0.216	ppb	95.34041967	227	5
As	75	2	72	0.107	ppb	114.0001628	27	1
Se	78	1	72	-0.071	ppb	-18.5467077	15	1
Nb	93	2	72	2.832	ppb	13.26576237	6975	2
Mo	95	2	115	0.027	ppb	78.64216694	53	0.5
Pd	105	2	115	-0.009	ppb	-189.1397516	20	1
Ag	107	2	115	-1.747	ppb	-0.373552466	83	1
Cd	111	2	115	0.001	ppb	1717.083277	3	0.5
Sn	120	2	115	0.109	ppb	21.6534809	190	1
Sb	121	2	115	0.126	ppb	27.92786345	107	0.6
Ba	137	2	115	0.240	ppb	33.99349746	60	0.5
W	182	2	165	0.185	ppb	15.56624854	1320	1
Pt	195	2	165	0.004	ppb	129.105572	27	1
Tl	205	2	165	-0.004	ppb	-83.84784129	197	0.1
Pb	208	2	165	-0.112	ppb	-8.825453235	1103	0.5
Th	232	2	165	-0.005	ppb	-51.44639517	510	1
U	238	2	165	0.023	ppb	39.72649859	520	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1054674	2.92	1454508	72.51	60	120	
Sc (IS)	45	1	HMI H2	20339596	2.56	26285642	77.38	60	120	
Sc (IS)	45	2	HMI He	743191	0.20	903775	82.23	60	120	
Sc (IS)	45	3	No Gas	33331822	1.07	48040283	69.38	60	120	
Ge Internal Standard	72	1	HMI H2	7632357	2.13	9879865	77.25	60	120	
Ge Internal Standard	72	2	HMI He	806992	0.61	957593	84.27	60	120	
In Internal Standard	115	2	HMI He	2645245	0.72	2903780	91.10	60	120	
Ho-165	165	2	HMI He	12662026	0.62	14207049	89.12	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	118WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:26:48-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.006	ppb	-443.4833786	10	0.5
Na	23	2	45	-19.938	ppb	-13.18439026	10511	25
Mg	24	2	45	5.512	ppb	35.80082928	553	25
Al	27	2	45	5.908	ppb	37.24681125	187	15
K	39	2	45	10.733	ppb	144.1487024	12499	50
Ca	44	2	45	8.297	ppb	209.0638307	47	25
V	51	2	72	0.362	ppb	74.10704868	1887	1
Cr	52	2	72	-0.067	ppb	-31.39696479	187	1
Mn	55	2	72	0.032	ppb	232.5589488	67	0.5
Fe	57	2	72	9.766	ppb	38.21645283	317	25
Co	59	2	72	0.003	ppb	407.986078	33	0.5
Ni	60	2	72	-0.136	ppb	-33.53185463	67	1
Cu	63	2	72	-0.257	ppb	-24.96900286	823	1
Zn	66	2	72	0.461	ppb	90.70890261	273	5
As	75	2	72	0.071	ppb	75.71145963	23	1
Se	78	1	72	-0.115	ppb	-29.00912599	7	1
Nb	93	2	72	1.861	ppb	17.96637448	4798	2
Mo	95	2	115	0.000	ppb	14408.99645	33	0.5
Pd	105	2	115	-0.009	ppb	-255.1672858	20	1
Ag	107	2	115	-1.763	ppb	-0.823456264	43	1
Cd	111	2	115	-0.010	ppb	0	0	0.5
Sn	120	2	115	0.005	ppb	1133.365476	103	1
Sb	121	2	115	0.127	ppb	27.1843108	107	0.6
Ba	137	2	115	0.067	ppb	91.81475867	17	0.5
W	182	2	165	0.081	ppb	55.03266489	977	1
Pt	195	2	165	-0.003	ppb	-69.65922267	7	1
Tl	205	2	165	-0.014	ppb	-45.98299152	137	0.1
Pb	208	2	165	-0.121	ppb	-3.979785619	1040	0.5
Th	232	2	165	-0.009	ppb	-99.80315384	473	1
U	238	2	165	0.008	ppb	121.3973941	367	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1074241	0.57	1454508	73.86	60	120	
Sc (IS)	45	1	HMI H2	20436846	0.94	26285642	77.75	60	120	
Sc (IS)	45	2	HMI He	743164	0.88	903775	82.23	60	120	
Sc (IS)	45	3	No Gas	33218847	0.62	48040283	69.15	60	120	
Ge Internal Standard	72	1	HMI H2	7676563	1.25	9879865	77.70	60	120	
Ge Internal Standard	72	2	HMI He	808605	0.66	957593	84.44	60	120	
In Internal Standard	115	2	HMI He	2628845	0.64	2903780	90.53	60	120	
Ho-165	165	2	HMI He	12792789	0.47	14207049	90.05	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	119WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:30:36-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	0.083	ppb	37.32829729	43	0.5
Na	23	2	45	-20.157	ppb	-12.95266131	10448	25
Mg	24	2	45	4.400	ppb	12.52271434	453	25
Al	27	2	45	4.312	ppb	34.7511985	150	15
K	39	2	45	21.404	ppb	120.330738	12940	50
Ca	44	2	45	4.103	ppb	365.1999887	37	25
V	51	2	72	0.432	ppb	81.18941102	1947	1
Cr	52	2	72	0.028	ppb	193.4315336	293	1
Mn	55	2	72	0.199	ppb	71.23275978	137	0.5
Fe	57	2	72	2.231	ppb	132.0963466	163	25
Co	59	2	72	0.003	ppb	304.6408983	33	0.5
Ni	60	2	72	-0.069	ppb	-68.71440916	103	1
Cu	63	2	72	-0.323	ppb	-6.28511994	727	1
Zn	66	2	72	0.248	ppb	44.5406254	233	5
As	75	2	72	0.116	ppb	171.5740898	29	1
Se	78	1	72	-0.065	ppb	-114.3889571	16	1
Nb	93	2	72	1.324	ppb	12.14662544	3597	2
Mo	95	2	115	0.013	ppb	219.1188646	43	0.5
Pd	105	2	115	-0.015	ppb	-65.95302297	13	1
Ag	107	2	115	-1.762	ppb	-0.265091282	47	1
Cd	111	2	115	-0.010	ppb	0	0	0.5
Sn	120	2	115	0.090	ppb	107.5667854	177	1
Sb	121	2	115	0.066	ppb	107.2835438	63	0.6
Ba	137	2	115	0.132	ppb	121.2162578	33	0.5
W	182	2	165	0.104	ppb	63.25640067	1047	1
Pt	195	2	165	-0.002	ppb	-207.5680232	10	1
Tl	205	2	165	-0.006	ppb	-33.50989052	187	0.1
Pb	208	2	165	-0.138	ppb	-11.46018274	893	0.5
Th	232	2	165	-0.020	ppb	-38.43542112	370	1
U	238	2	165	0.001	ppb	297.0982017	297	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1079041	0.81	1454508	74.19	60	120	
Sc (IS)	45	1	HMI H2	20748748	0.59	26285642	78.94	60	120	
Sc (IS)	45	2	HMI He	742275	1.35	903775	82.13	60	120	
Sc (IS)	45	3	No Gas	33414850	0.32	48040283	69.56	60	120	
Ge Internal Standard	72	1	HMI H2	7722079	0.47	9879865	78.16	60	120	
Ge Internal Standard	72	2	HMI He	809616	1.00	957593	84.55	60	120	
In Internal Standard	115	2	HMI He	2673400	0.15	2903780	92.07	60	120	
Ho-165	165	2	HMI He	12659429	0.89	14207049	89.11	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	120WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:34:25-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	006CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.015	ppb	-200.1147875	7	0.5
Na	23	2	45	-21.229	ppb	-5.329427827	10287	25
Mg	24	2	45	5.291	ppb	8.522447311	537	25
Al	27	2	45	3.119	ppb	63.93918537	123	15
K	39	2	45	15.476	ppb	32.74960047	12760	50
Ca	44	2	45	5.322	ppb	80.14391508	40	25
V	51	2	72	0.359	ppb	47.84232073	1887	1
Cr	52	2	72	-0.020	ppb	-156.9857239	240	1
Mn	55	2	72	0.071	ppb	108.0343933	83	0.5
Fe	57	2	72	4.178	ppb	119.0232641	203	25
Co	59	2	72	-0.003	ppb	-312.4249227	23	0.5
Ni	60	2	72	-0.081	ppb	-34.77492865	97	1
Cu	63	2	72	-0.287	ppb	-20.01365949	780	1
Zn	66	2	72	0.160	ppb	22.07883601	217	5
As	75	2	72	0.075	ppb	73.09367914	24	1
Se	78	1	72	-0.101	ppb	-67.7003399	9	1
Nb	93	2	72	0.821	ppb	18.58866066	2460	2
Mo	95	2	115	0.035	ppb	135.0493558	60	0.5
Pd	105	2	115	-0.009	ppb	-98.51526148	20	1
Ag	107	2	115	-1.754	ppb	-0.476428311	67	1
Cd	111	2	115	0.022	ppb	143.825978	10	0.5
Sn	120	2	115	0.069	ppb	27.45907232	157	1
Sb	121	2	115	0.076	ppb	16.69137297	70	0.6
Ba	137	2	115	0.134	ppb	92.22047978	33	0.5
W	182	2	165	0.090	ppb	40.22257363	1007	1
Pt	195	2	165	0.002	ppb	198.6880116	20	1
Tl	205	2	165	-0.021	ppb	-9.348867462	97	0.1
Pb	208	2	165	-0.130	ppb	-11.08322343	960	0.5
Th	232	2	165	-0.016	ppb	-15.05222228	407	1
U	238	2	165	-0.010	ppb	-37.19782231	183	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1068047	1.69	1454508	73.43	60	120	
Sc (IS)	45	1	HMI H2	20403128	1.77	26285642	77.62	60	120	
Sc (IS)	45	2	HMI He	746173	0.36	903775	82.56	60	120	
Sc (IS)	45	3	No Gas	33639858	1.02	48040283	70.02	60	120	
Ge Internal Standard	72	1	HMI H2	7668576	1.17	9879865	77.62	60	120	
Ge Internal Standard	72	2	HMI He	809727	0.48	957593	84.56	60	120	
In Internal Standard	115	2	HMI He	2644580	1.44	2903780	91.07	60	120	
Ho-165	165	2	HMI He	12767935	1.11	14207049	89.87	60	120	

Calibration Blank Report

Sample Table

Sample Name	ICIS-5427681
Data File Name	121CALB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:38:12-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	143039	0.00
Li	7	2	HMI He	8309	0.07
Li	7	3	No Gas	3759449	0.00
Be	9	1	HMI H2	10	1000.00
B	11	1	HMI H2	853	0.21
Na	23	1	HMI H2	127541	0.00
Na	23	2	HMI He	9567	0.03
Mg	24	2	HMI He	390	3.66
Al	27	2	HMI He	133	34.37
K	39	2	HMI He	12956	0.04
Ca	44	2	HMI He	33	187.35
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	2044	0.28
Cr	52	2	HMI He	233	7.42
Mn	55	2	HMI He	63	62.74
Fe	57	2	HMI He	167	12.64
Co	59	2	HMI He	40	216.51
Ni	60	2	HMI He	87	33.51
Cu	63	2	HMI He	787	2.87
Zn	66	2	HMI He	270	9.89
As	75	2	HMI He	20	50.97
Se	78	1	HMI H2	5	2148.08
Sr	88	2	HMI He	47	53.02
Zr	90	2	HMI He	43	162.69
Nb	93	2	HMI He	2110	0.58
Mo	95	2	HMI He	57	147.17
Pd	105	2	HMI He	23	280.57
Ag	107	2	HMI He	60	100.15
Cd	111	2	HMI He	3	5196.15
Sn	120	2	HMI He	113	44.27
Sb	121	2	HMI He	17	207.85
Ba	137	2	HMI He	10	1000.00
W	182	2	HMI He	850	1.40
Pt	195	2	HMI He	23	590.43
Tl	205	2	HMI He	140	17.67
Pb	208	2	HMI He	957	1.48
Th	232	2	HMI He	350	9.09
U	238	2	HMI He	210	10.39

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	1072135	0.23
Sc (IS)	45	1	HMI H2	20791913	1.30
Sc (IS)	45	2	HMI He	758535	0.75
Sc (IS)	45	3	No Gas	33963379	0.48
Ge Internal Standard	72	1	HMI H2	7701407	0.35
Ge Internal Standard	72	2	HMI He	818771	0.63
In Internal Standard	115	2	HMI He	2717298	1.28
Ho-165	165	2	HMI He	12871763	0.35

Calibration Standard Report

Sample Table

Sample Name	IC-5427682
Data File Name	122CALS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:42:00-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	527763	0.00
Li	7	2	HMI He	30068	0.01
Li	7	3	No Gas	13690133	0.00
Be	9	1	HMI H2	35095	0.01
B	11	1	HMI H2	37171	0.00
Na	23	1	HMI H2	28258296	0.00
Na	23	2	HMI He	1915402	0.00
Mg	24	2	HMI He	863185	0.00
Al	27	2	HMI He	237649	0.00
K	39	1	HMI H2	36227592	0.00
K	39	2	HMI He	459456	0.00
Ca	40	1	HMI H2	40442714	0.00
Ca	44	2	HMI He	24338	0.01
Ti	47	2	HMI He	2150	0.26
V	51	2	HMI He	82785	0.00
Cr	52	2	HMI He	103298	0.00
Mn	55	2	HMI He	41965	0.00
Fe	57	2	HMI He	192422	0.00
Co	59	2	HMI He	175437	0.00
Ni	60	2	HMI He	49552	0.00
Cu	63	2	HMI He	135556	0.00
Zn	66	2	HMI He	18319	0.02
As	75	2	HMI He	12457	0.02
Se	78	1	HMI H2	18129	0.00
Sr	88	2	HMI He	44611	0.00
Zr	90	2	HMI He	657	1.97
Nb	93	2	HMI He	443960	0.00
Mo	95	2	HMI He	64668	0.00
Pd	105	2	HMI He	97721	0.00
Ag	107	2	HMI He	211976	0.00
Cd	111	2	HMI He	28680	0.01
Sn	120	2	HMI He	78562	0.00
Sb	121	2	HMI He	69267	0.00
Ba	137	2	HMI He	24700	0.01
Nd	146	2	HMI He	91814	0.00
Sm	147	2	HMI He	76635	0.00
Sm	150	2	HMI He	73978	0.00
Gd	156	1	HMI H2	335428	0.00
Gd	157	1	HMI H2	252172	0.00
W	182	2	HMI He	320166	0.00
Pt	195	2	HMI He	256342	0.00
Tl	205	2	HMI He	603688	0.00
Pb	208	2	HMI He	797184	0.00
Th	232	2	HMI He	960658	0.00
U	238	2	HMI He	1022712	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1050420	1.25	1072135	97.97	60	120	
Sc (IS)	45	1	HMI H2	20879830	0.17	20791913	100.42	60	120	
Sc (IS)	45	2	HMI He	760009	0.53	758535	100.19	60	120	
Sc (IS)	45	3	No Gas	33311880	0.48	33963379	98.08	60	120	
Ge Internal Standard	72	1	HMI H2	7805951	0.55	7701407	101.36	60	120	
Ge Internal Standard	72	2	HMI He	820031	0.63	818771	100.15	60	120	
In Internal Standard	115	2	HMI He	2638631	0.52	2717298	97.10	60	120	
Ho-165	165	2	HMI He	12932444	0.54	12871763	100.47	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	123_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:45:46-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	503.543	ppb	1.830	333084	500	100.7	90	110	
Li	7	2	45	528.169	ppb	3.565	19680	500	105.6	90	110	
Li	7	3	45	504.135	ppb	1.320	8774856	500	100.8	90	110	
Be	9	1	6	49.802	ppb	1.227	17531	50	99.6	90	110	
B	11	1	6	53.938	ppb	3.042	20488	50	107.9	90	110	
Na	23	1	45	5071.300	ppb	0.447	14223545	5000	101.4	90	110	
Na	23	2	45	4924.683	ppb	0.352	941900	5000	98.5	90	110	
Mg	24	2	45	5062.915	ppb	0.202	434353	5000	101.3	90	110	
Al	27	2	45	5017.793	ppb	2.652	118535	5000	100.4	90	110	
K	39	1	45	5025.083	ppb	0.344	22413471	5000	100.5	90	110	
K	39	2	45	4948.148	ppb	1.480	232364	5000	99.0	90	110	
Ca	40	1	45	5073.820	ppb	0.369	20315753	5000	101.5	90	110	
Ca	44	2	45	5125.575	ppb	3.934	12409	5000	102.5	90	110	
Ti	47	2	45	45.718	ppb	13.044	977	50	91.4	90	110	
V	51	2	72	49.980	ppb	2.906	42028	50	100.0	90	110	
Cr	52	2	72	50.280	ppb	1.822	51599	50	100.6	90	110	
Mn	55	2	72	49.962	ppb	2.629	20816	50	99.9	90	110	
Fe	57	2	72	5022.639	ppb	1.723	95882	5000	100.5	90	110	
Co	59	2	72	50.064	ppb	1.361	87078	50	100.1	90	110	
Ni	60	2	72	51.000	ppb	3.037	25093	50	102.0	90	110	
Cu	63	2	72	50.053	ppb	1.496	67646	50	100.1	90	110	
Zn	66	2	72	50.844	ppb	4.221	9363	50	101.7	90	110	
As	75	2	72	49.329	ppb	1.155	6101	50	98.7	90	110	
Se	78	1	72	50.889	ppb	1.273	9126	50	101.8	90	110	
Sr	88	2	72	50.648	ppb	1.820	22418	50	101.3	90	110	
Zr	90	2	72	63.091	ppb	20.360	427	50	126.2	90	110	>+\-10%
Nb	93	2	72	105.461	ppb	0.253	233032	100	105.5	90	110	
Mo	95	2	115	49.464	ppb	2.104	31834	50	98.9	90	110	
Pd	105	2	115	53.757	ppb	0.782	52251	50	107.5	90	110	
Ag	107	2	115	50.218	ppb	1.050	105890	50	100.4	90	110	
Cd	111	2	115	49.998	ppb	2.001	14258	50	100.0	90	110	
Sn	120	2	115	50.712	ppb	1.514	39668	50	101.4	90	110	
Sb	121	2	115	52.514	ppb	1.884	36175	50	105.0	90	110	
Ba	137	2	115	50.918	ppb	5.412	12516	50	101.8	90	110	
W	182	2	165	50.496	ppb	1.182	159585	50	101.0	90	110	
Pt	195	2	165	50.298	ppb	0.858	126948	50	100.6	90	110	
Tl	205	2	165	51.034	ppb	0.009	303390	50	102.1	90	110	
Pb	208	2	165	51.280	ppb	0.965	402932	50	102.6	90	110	
Th	232	2	165	50.184	ppb	0.714	474816	50	100.4	90	110	
U	238	2	165	50.897	ppb	0.341	512574	50	101.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1053332	0.95	1072135	98.25	60	120	
Sc (IS)	45	1	HMI H2	20633022	0.49	20791913	99.24	60	120	
Sc (IS)	45	2	HMI He	754997	0.34	758535	99.53	60	120	
Sc (IS)	45	3	No Gas	33482116	0.16	33963379	98.58	60	120	
Ge Internal Standard	72	1	HMI H2	7719386	0.62	7701407	100.23	60	120	
Ge Internal Standard	72	2	HMI He	812822	0.51	818771	99.27	60	120	
In Internal Standard	115	2	HMI He	2623972	1.69	2717298	96.57	60	120	
Ho-165	165	2	HMI He	12732211	0.57	12871763	98.92	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	124_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:49:32-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	3.403	ppb	60.6	3755857	10	
Be	9	1	6	-0.009	ppb	-176.0	7	0.5	
B	11	1	6	2.374	ppb	33.1	1750	0.5	>RL
Na	23	1	45	7.372	ppb	5.8	145893	25	
Na	23	2	45	7.000	ppb	37.5	10741	25	
Mg	24	2	45	0.025	ppb	1688.7	387	25	
Al	27	2	45	0.079	ppb	3340.2	133	15	
K	39	1	45	0.303	ppb	11552.7	8821748	50	
K	39	2	45	-6.968	ppb	-66.2	12466	50	
Ca	40	1	45	15.920	ppb	0.8	140356	50	
Ca	44	2	45	11.412	ppb	97.6	60	25	
Ti	47	2	45	0.316	ppb	173.2	7	0.5	
V	51	2	72	0.273	ppb	80.8	2234	1	
Cr	52	2	72	-0.040	ppb	-150.7	190	1	
Mn	55	2	72	0.123	ppb	56.5	113	0.5	
Fe	57	2	72	3.119	ppb	113.4	223	25	
Co	59	2	72	0.008	ppb	148.6	53	0.5	
Ni	60	2	72	0.085	ppb	122.0	127	1	
Cu	63	2	72	0.104	ppb	94.7	913	1	
Zn	66	2	72	0.432	ppb	92.0	343	5	
As	75	2	72	0.034	ppb	124.8	24	1	
Se	78	1	72	0.068	ppb	37.5	17	1	
Sr	88	2	72	0.001	ppb	2375.7	47	0.5	
Zr	90	2	72	1.180	ppb	371.8	50	1	>RL
Nb	93	2	72	7.136	ppb	9.3	17615	2	>RL
Mo	95	2	115	0.155	ppb	13.3	157	0.5	
Pd	105	2	115	0.041	ppb	29.3	63	1	
Ag	107	2	115	0.004	ppb	191.7	67	1	
Cd	111	2	115	0.000	ppb	7502.9	3	0.5	
Sn	120	2	115	0.176	ppb	48.7	250	1	
Sb	121	2	115	0.510	ppb	31.3	373	0.6	
Ba	137	2	115	0.122	ppb	89.5	40	0.5	
W	182	2	165	0.172	ppb	30.0	1387	1	
Pt	195	2	165	0.000	ppb	6177.9	23	1	
Tl	205	2	165	0.007	ppb	159.3	180	0.1	
Pb	208	2	165	0.005	ppb	651.1	990	0.5	
Th	232	2	165	0.039	ppb	30.4	720	1	
U	238	2	165	0.066	ppb	26.3	880	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1081415	2.41	1072135	100.87	60	120	
Sc (IS)	45	1	HMI H2	20467568	0.66	20791913	98.44	60	120	
Sc (IS)	45	2	HMI He	747492	0.37	758535	98.54	60	120	
Sc (IS)	45	3	No Gas	33621109	0.26	33963379	98.99	60	120	
Ge Internal Standard	72	1	HMI H2	7619793	1.12	7701407	98.94	60	120	
Ge Internal Standard	72	2	HMI He	807977	0.16	818771	98.68	60	120	
In Internal Standard	115	2	HMI He	2663121	1.38	2717298	98.01	60	120	
Ho-165	165	2	HMI He	12783538	0.36	12871763	99.31	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	125LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:53:19-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	20.649	ppb	20.187	3922401	50	41.3	70	130	>+/-30%
Be	9	1	6	0.862	ppb	4.162	317	1	86.2	70	130	
Na	23	2	45	55.086	ppb	4.958	19824	50	110.2	70	130	
Mg	24	2	45	53.063	ppb	4.478	4904	50	106.1	70	130	
Al	27	2	45	31.051	ppb	8.715	860	30	103.5	70	130	
K	39	2	45	98.354	ppb	12.880	17151	100	98.4	70	130	
Ca	44	2	45	57.230	ppb	38.582	170	50	114.5	70	130	
V	51	2	72	4.764	ppb	8.366	5835	5	95.3	70	130	
Cr	52	2	72	2.060	ppb	14.497	2334	2	103.0	70	130	
Mn	55	2	72	1.248	ppb	25.812	580	1	124.8	70	130	
Fe	57	2	72	58.085	ppb	24.349	1270	50	116.2	70	130	
Co	59	2	72	1.013	ppb	21.264	1800	1	101.3	70	130	
Ni	60	2	72	1.947	ppb	6.080	1040	2	97.4	70	130	
Cu	63	2	72	2.121	ppb	5.069	3611	2	106.1	70	130	
Zn	66	2	72	10.526	ppb	5.626	2150	10	105.3	70	130	
As	75	2	72	4.675	ppb	8.312	595	5	93.5	70	130	
Se	78	1	72	4.832	ppb	14.545	865	5	96.6	70	130	
Sr	88	2	72	0.937	ppb	0.794	460	1	93.7	70	130	
Zr	90	2	72	3.879	ppb	23.894	67	0.5	775.7	70	130	>+/-30%
Nb	93	2	72	15.997	ppb	3.093	37100	2	799.8	70	130	>+/-30%
Mo	95	2	115	1.805	ppb	14.587	1227	2	90.3	70	130	
Pd	105	2	115	0.001	ppb	851.999	23	1	0.1	70	130	>+/-30%
Ag	107	2	115	4.971	ppb	2.249	10638	5	99.4	70	130	
Cd	111	2	115	0.868	ppb	26.121	253	1	86.8	70	130	
Sn	120	2	115	9.722	ppb	4.278	7766	10	97.2	70	130	
Sb	121	2	115	2.383	ppb	8.780	1674	2	119.2	70	130	
Ba	137	2	115	1.133	ppb	23.876	290	1	113.3	70	130	
W	182	2	165	4.672	ppb	0.628	15563	1	467.2	70	130	>+/-30%
Pt	195	2	165	0.028	ppb	64.744	93	1	2.8	70	130	>+/-30%
Tl	205	2	165	1.045	ppb	3.348	6365	1	104.5	70	130	
Pb	208	2	165	1.012	ppb	3.787	8902	1	101.2	70	130	
Th	232	2	165	2.103	ppb	1.522	20277	2	105.2	70	130	
U	238	2	165	1.064	ppb	0.705	10942	1	106.4	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1064968	0.80	1072135	99.33	60	120	
Sc (IS)	45	1	HMI H2	20478392	0.53	20791913	98.49	60	120	
Sc (IS)	45	2	HMI He	750156	0.53	758535	98.90	60	120	
Sc (IS)	45	3	No Gas	33557195	0.50	33963379	98.80	60	120	
Ge Internal Standard	72	1	HMI H2	7663354	0.97	7701407	99.51	60	120	
Ge Internal Standard	72	2	HMI He	812209	0.72	818771	99.20	60	120	
In Internal Standard	115	2	HMI He	2649363	1.56	2717298	97.50	60	120	
Ho-165	165	2	HMI He	12759677	0.52	12871763	99.13	60	120	

CRI Report

Sample Table

Sample Name	CRI
Data File Name	126RLST.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T20:57:07-07:00
Sample Type	CRI
Dilution	1
Comment	Ag @5
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	6.378	ppb	14.244	143749	10	63.8	80	120	>+\-20%
Li	7	2	45	-9.876	ppb	-114.921	7989	10	-98.8	80	120	>+\-20%
Li	7	3	45	7.338	ppb	55.708	3756185	10	73.4	80	120	>+\-20%
Be	9	1	6	0.028	ppb	102.402	20	1	2.8	80	120	>+\-20%
B	11	1	6	0.172	ppb	28.223	923	1	17.2	80	120	>+\-20%
Na	23	1	45	-0.107	ppb	-392.478	125723	100	-0.1	80	120	>+\-20%
Na	23	2	45	-0.236	ppb	-980.281	9397	100	-0.2	80	120	>+\-20%
Mg	24	2	45	-0.219	ppb	-300.967	367	100	-0.2	80	120	>+\-20%
Al	27	2	45	-0.937	ppb	-275.867	110	100	-0.9	80	120	>+\-20%
K	39	2	45	3.277	ppb	65.511	12930	100	3.3	80	120	>+\-20%
Ca	40	1	45	0.664	ppb	150.199	80270	100	0.7	80	120	>+\-20%
Ca	44	2	45	5.794	ppb	84.083	47	100	5.8	80	120	>+\-20%
Ti	47	2	45	0.158	ppb	173.205	3	1	15.8	80	120	>+\-20%
V	51	2	72	-0.020	ppb	-823.483	1994	1	-2.0	80	120	>+\-20%
Cr	52	2	72	-0.068	ppb	-40.083	160	1	-6.8	80	120	>+\-20%
Mn	55	2	72	0.076	ppb	35.037	93	1	7.6	80	120	>+\-20%
Fe	57	2	72	-1.267	ppb	-140.996	140	100	-1.3	80	120	>+\-20%
Co	59	2	72	0.000	ppb	1253.817	40	1	0.0	80	120	>+\-20%
Ni	60	2	72	0.058	ppb	167.830	113	1	5.8	80	120	>+\-20%
Cu	63	2	72	0.104	ppb	85.038	910	1	10.4	80	120	>+\-20%
Zn	66	2	72	1.098	ppb	20.297	460	1	109.8	80	120	
As	75	2	72	-0.002	ppb	-3374.838	19	1	-0.2	80	120	>+\-20%
Se	78	1	72	0.030	ppb	113.357	11	1	3.0	80	120	>+\-20%
Sr	88	2	72	0.063	ppb	150.491	73	1	6.3	80	120	>+\-20%
Zr	90	2	72	7.861	ppb	56.090	90	1	786.1	80	120	>+\-20%
Nb	93	2	72	1.272	ppb	19.129	4834	2	63.6	80	120	>+\-20%
Mo	95	2	115	-0.024	ppb	-116.393	40	1	-2.4	80	120	>+\-20%
Pd	105	2	115	-0.003	ppb	-358.950	20	1	-0.3	80	120	>+\-20%
Ag	107	2	115	5.292	ppb	2.765	11422	1	529.2	80	120	>+\-20%
Cd	111	2	115	-0.011	ppb	0.000	0	1	-1.1	80	120	>+\-20%
Sn	120	2	115	0.083	ppb	63.029	177	1	8.3	80	120	>+\-20%
Sb	121	2	115	0.058	ppb	54.058	57	1	5.8	80	120	>+\-20%
Ba	137	2	115	0.041	ppb	101.362	20	1	4.1	80	120	>+\-20%
W	182	2	165	-0.008	ppb	-640.964	817	1	-0.8	80	120	>+\-20%
Pt	195	2	165	0.003	ppb	253.187	30	1	0.3	80	120	>+\-20%
Tl	205	2	165	0.006	ppb	191.837	173	1	0.6	80	120	>+\-20%
Pb	208	2	165	-0.024	ppb	-27.640	760	1	-2.4	80	120	>+\-20%
Th	232	2	165	-0.002	ppb	-136.056	323	1	-0.2	80	120	>+\-20%
U	238	2	165	0.005	ppb	93.009	257	1	0.5	80	120	>+\-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1079102	1.41	1072135	100.65	60	120	
Sc (IS)	45	1	HMI H2	20541286	0.80	20791913	98.79	60	120	
Sc (IS)	45	2	HMI He	748337	0.89	758535	98.66	60	120	
Sc (IS)	45	3	No Gas	33272521	0.39	33963379	97.97	60	120	
Ge Internal Standard	72	1	HMI H2	7627495	0.82	7701407	99.04	60	120	
Ge Internal Standard	72	2	HMI He	805096	0.77	818771	98.33	60	120	
In Internal Standard	115	2	HMI He	2674143	1.78	2717298	98.41	60	120	
Ho-165	165	2	HMI He	12738660	0.16	12871763	98.97	60	120	

Interference Check Solution A (ICS-A) Report

Sample Table

Sample Name	icsa-5425629
Data File Name	127ICSA.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:00:54-07:00
Sample Type	ICSA
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-1.810	ppb	-195.2	3515894	1	
Be	9	1	6	0.012	ppb	387.9	13	1	
B	11	1	6	0.402	ppb	36.2	943	1	
Na	23	1	45	97953.017	ppb	0.3	259634436	100000	
K	39	1	45	99129.061	ppb	0.4	262678976	100000	
Ca	40	1	45	98121.338	ppb	0.6	373074421	100000	
Ti	47	2	45	1818.943	ppb	1.2	36510	1	>RL or LOD
V	51	2	72	-0.296	ppb	-78.7	1647	1	
Cr	52	2	72	0.203	ppb	34.2	403	1	
Mn	55	2	72	0.704	ppb	50.1	327	1	
Co	59	2	72	0.008	ppb	256.4	50	1	
Ni	60	2	72	0.283	ppb	26.5	207	1	
Cu	63	2	72	0.660	ppb	37.5	1530	1	
Zn	66	2	72	0.367	ppb	102.9	307	1	
As	75	2	72	0.055	ppb	172.2	24	1	
Se	78	1	72	0.602	ppb	25.7	105	1	
Sr	88	2	72	0.714	ppb	37.1	333	1	
Zr	90	2	72	12.549	ppb	74.9	110	1	>RL or LOD
Nb	93	2	72	2.587	ppb	10.5	7139	1	>RL or LOD
Mo	95	2	115	1984.157	ppb	0.9	1186273	2000	
Pd	105	2	115	-0.008	ppb	-77.2	13	1	
Ag	107	2	115	0.007	ppb	372.3	67	1	
Cd	111	2	115	0.340	ppb	26.6	93	1	
Sn	120	2	115	0.103	ppb	75.0	177	1	
Sb	121	2	115	0.107	ppb	48.6	83	1	
Ba	137	2	115	0.136	ppb	85.8	40	1	
W	182	2	165	0.260	ppb	16.4	1604	1	
Pt	195	2	165	0.006	ppb	107.7	37	1	
Tl	205	2	165	-0.005	ppb	-138.5	107	1	
Pb	208	2	165	0.076	ppb	45.7	1493	1	
Th	232	2	165	0.024	ppb	53.6	557	1	
U	238	2	165	0.001	ppb	1057.0	210	1	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1008873	1.86	1072135	94.10	60	120	
Sc (IS)	45	1	HMI H2	19664815	0.67	20791913	94.58	60	120	
Sc (IS)	45	2	HMI He	709571	1.25	758535	93.54	60	120	
Sc (IS)	45	3	No Gas	31920401	0.23	33963379	93.98	60	120	
Ge Internal Standard	72	1	HMI H2	7180777	0.40	7701407	93.24	60	120	
Ge Internal Standard	72	2	HMI He	747456	1.07	818771	91.29	60	120	
In Internal Standard	115	2	HMI He	2441545	1.51	2717298	89.85	60	120	
Ho-165	165	2	HMI He	12299767	0.78	12871763	95.56	60	120	

Interference Check Solution AB (ICS-AB) Report

Sample Table

Sample Name	icsab-5425630
Data File Name	128ICSB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:04:40-07:00
Sample Type	ICSB
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	909.612	ppb	2.012	463501	100	909.6	80	120	
Li	7	2	45	886.903	ppb	1.299	26150	100	886.9	80	120	
Li	7	3	45	867.679	ppb	1.430	12069502	100	867.7	80	120	
Be	9	1	6	92.749	ppb	2.529	29934	100	92.7	80	120	
B	11	1	6	73.977	ppb	1.245	25493	100	74.0	80	120	>+\-20%
Na	23	1	45	100660.352	ppb	0.379	266315316	100	100660.4	80	120	>+\-20%
K	39	1	45	102864.674	ppb	0.076	271762549	100	102864.7	80	120	>+\-20%
Ca	40	1	45	101822.228	ppb	0.347	386444834	100	101822.2	80	120	>+\-20%
V	51	2	72	88.000	ppb	1.380	68817	100	88.0	80	120	
Cr	52	2	72	89.418	ppb	1.850	86993	100	89.4	80	120	
Mn	55	2	72	90.384	ppb	0.516	35715	100	90.4	80	120	
Co	59	2	72	90.058	ppb	1.116	148747	100	90.1	80	120	
Ni	60	2	72	89.719	ppb	2.084	41865	100	89.7	80	120	
Cu	63	2	72	90.259	ppb	0.921	115253	100	90.3	80	120	
Zn	66	2	72	91.876	ppb	5.302	15869	100	91.9	80	120	
As	75	2	72	89.025	ppb	0.830	10442	100	89.0	80	120	
Se	78	1	72	91.573	ppb	1.494	15292	100	91.6	80	120	
Sr	88	2	72	98.870	ppb	2.206	41525	100	98.9	80	120	
Zr	90	2	72	13.721	ppb	83.079	120	100	13.7	80	120	>+\-20%
Nb	93	2	72	182.780	ppb	1.736	382125	100	182.8	80	120	
Mo	95	2	115	1971.258	ppb	0.314	1205039	100	1971.3	80	120	>+\-20%
Pd	105	2	115	91.132	ppb	1.306	84259	100	91.1	80	120	
Ag	107	2	115	87.218	ppb	0.391	174920	100	87.2	80	120	
Cd	111	2	115	89.487	ppb	3.195	24282	100	89.5	80	120	
Sn	120	2	115	94.730	ppb	1.948	70412	100	94.7	80	120	
Sb	121	2	115	101.095	ppb	0.839	66245	100	101.1	80	120	
Ba	137	2	115	91.969	ppb	3.730	21494	100	92.0	80	120	
W	182	2	165	91.480	ppb	1.170	283574	100	91.5	80	120	
Pt	195	2	165	89.248	ppb	0.229	221459	100	89.2	80	120	
Tl	205	2	165	86.714	ppb	0.694	506719	100	86.7	80	120	
Pb	208	2	165	87.730	ppb	0.541	677073	100	87.7	80	120	
Th	232	2	165	90.401	ppb	0.046	840668	100	90.4	80	120	
U	238	2	165	90.153	ppb	0.535	892486	100	90.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	966303	2.14	1072135	90.13	60	120	
Sc (IS)	45	1	HMI H2	19628717	0.27	20791913	94.41	60	120	
Sc (IS)	45	2	HMI He	719827	1.03	758535	94.90	60	120	
Sc (IS)	45	3	No Gas	32510841	0.46	33963379	95.72	60	120	
Ge Internal Standard	72	1	HMI H2	7190182	0.09	7701407	93.36	60	120	
Ge Internal Standard	72	2	HMI He	772017	0.76	818771	94.29	60	120	
In Internal Standard	115	2	HMI He	2496201	0.62	2717298	91.86	60	120	
Ho-165	165	2	HMI He	12518199	0.82	12871763	97.25	60	120	

Sample Report

Sample Table

Sample Name	rinse
Data File Name	129SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:08:29-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-7.845	ppb	-7.845	-61.97	139279	500000	
Li	7	2	45	-18.341	ppb	-18.341	-99.69	8029	500000	
Li	7	3	45	-9.045	ppb	-9.045	-17.36	3658583	50000	
Be	9	1	6	0.000	ppb	0.000	7531.35	10	2000	
B	11	1	6	0.907	ppb	0.907	25.58	1170	2000	
Na	23	1	45	114.679	ppb	114.679	4.07	446287	2000	
Na	23	2	45	78.806	ppb	78.806	5.46	24922	400000	
Mg	24	2	45	21.417	ppb	21.417	27.92	2264	400000	
Al	27	2	45	22.252	ppb	22.252	21.18	670	400000	
K	39	1	45	58.444	ppb	58.444	9.53	9068996	400000	
K	39	2	45	61.286	ppb	61.286	33.45	15923	400000	
Ca	40	1	45	32.476	ppb	32.476	4.56	207944	400000	
Ca	44	2	45	10.692	ppb	10.692	40.76	60	400000	
Ti	47	2	45	1.074	ppb	1.074	66.36	23	4000	
V	51	2	72	0.005	ppb	0.005	1437.54	2090	2000	
Cr	52	2	72	-0.055	ppb	-0.055	-60.28	180	5000	
Mn	55	2	72	0.028	ppb	0.028	91.53	77	10000	
Fe	57	2	72	29.650	ppb	29.650	30.64	750	400000	
Co	59	2	72	0.024	ppb	0.024	96.48	83	2000	
Ni	60	2	72	0.010	ppb	0.010	106.01	93	5000	
Cu	63	2	72	0.280	ppb	0.280	37.28	1187	5000	
Zn	66	2	72	-0.520	ppb	-0.520	-78.86	180	5000	
As	75	2	72	-0.019	ppb	-0.019	-151.91	18	2000	
Se	78	1	72	0.340	ppb	0.340	20.70	67	2000	
Sr	88	2	72	-0.046	ppb	-0.046	-140.83	27	4000	
Zr	90	2	72	0.381	ppb	0.381	657.80	47	1000	
Nb	93	2	72	5.019	ppb	5.019	13.24	13467	200	
Mo	95	2	115	3.336	ppb	3.336	4.18	2304	2000	
Pd	105	2	115	0.072	ppb	0.072	40.79	97	100	
Ag	107	2	115	0.006	ppb	0.006	493.64	73	100	
Cd	111	2	115	-0.011	ppb	-0.011	0.00	0	2000	
Sn	120	2	115	0.135	ppb	0.135	51.95	223	2000	
Sb	121	2	115	0.074	ppb	0.074	18.85	70	1000	
Ba	137	2	115	0.051	ppb	0.051	41.71	23	5000	
W	182	2	165	0.146	ppb	0.146	25.11	1330	100	
Pt	195	2	165	0.006	ppb	0.006	121.35	40	100	
Tl	205	2	165	0.042	ppb	0.042	18.75	400	2000	
Pb	208	2	165	0.007	ppb	0.007	164.17	1023	5000	
Th	232	2	165	0.051	ppb	0.051	7.68	847	2000	
U	238	2	165	0.092	ppb	0.092	32.85	1153	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1054879	1.11	1072135	98.39	60	120	
Sc (IS)	45	1	HMI H2	20676672	0.64	20791913	99.45	60	120	
Sc (IS)	45	2	HMI He	769869	1.29	758535	101.49	60	120	
Sc (IS)	45	3	No Gas	33884334	0.67	33963379	99.77	60	120	
Ge Internal Standard	72	1	HMI H2	7775737	0.85	7701407	100.97	60	120	
Ge Internal Standard	72	2	HMI He	835973	0.91	818771	102.10	60	120	
In Internal Standard	115	2	HMI He	2749342	2.38	2717298	101.18	60	120	
Ho-165	165	2	HMI He	13028124	1.22	12871763	101.21	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	130_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:12:16-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	488.733	ppb	0.831	328832	500	97.7	90	110	
Li	7	2	45	479.363	ppb	1.551	18839	500	95.9	90	110	
Li	7	3	45	484.090	ppb	1.781	8234427	500	96.8	90	110	
Be	9	1	6	50.619	ppb	6.172	17608	50	101.2	90	110	
B	11	1	6	49.732	ppb	6.096	18752	50	99.5	90	110	
Na	23	1	45	5132.716	ppb	0.963	14453746	5000	102.7	90	110	
Na	23	2	45	4885.610	ppb	1.032	945073	5000	97.7	90	110	
Mg	24	2	45	4965.392	ppb	0.167	430844	5000	99.3	90	110	
Al	27	2	45	5031.282	ppb	0.667	120203	5000	100.6	90	110	
K	39	1	45	5236.894	ppb	1.034	23078647	5000	104.7	90	110	
K	39	2	45	4991.252	ppb	0.272	236942	5000	99.8	90	110	
Ca	40	1	45	5120.782	ppb	0.923	20587882	5000	102.4	90	110	
Ca	44	2	45	5174.358	ppb	1.272	12669	5000	103.5	90	110	
Ti	47	2	45	51.672	ppb	7.283	1117	50	103.3	90	110	
V	51	2	72	47.463	ppb	2.566	40604	50	94.9	90	110	
Cr	52	2	72	48.798	ppb	0.329	50823	50	97.6	90	110	
Mn	55	2	72	51.550	ppb	2.690	21794	50	103.1	90	110	
Fe	57	2	72	5011.373	ppb	1.370	97080	5000	100.2	90	110	
Co	59	2	72	49.879	ppb	1.498	88047	50	99.8	90	110	
Ni	60	2	72	48.879	ppb	4.399	24408	50	97.8	90	110	
Cu	63	2	72	49.857	ppb	1.276	68373	50	99.7	90	110	
Zn	66	2	72	50.464	ppb	5.826	9437	50	100.9	90	110	
As	75	2	72	49.269	ppb	3.675	6182	50	98.5	90	110	
Se	78	1	72	49.309	ppb	3.175	8843	50	98.6	90	110	
Sr	88	2	72	50.736	ppb	1.736	22789	50	101.5	90	110	
Zr	90	2	72	44.812	ppb	6.528	320	50	89.6	90	110	>+\-10%
Nb	93	2	72	94.373	ppb	0.978	211821	100	94.4	90	110	
Mo	95	2	115	49.110	ppb	1.621	31764	50	98.2	90	110	
Pd	105	2	115	52.781	ppb	2.838	51543	50	105.6	90	110	
Ag	107	2	115	50.217	ppb	1.719	106393	50	100.4	90	110	
Cd	111	2	115	51.980	ppb	3.786	14895	50	104.0	90	110	
Sn	120	2	115	50.708	ppb	1.447	39865	50	101.4	90	110	
Sb	121	2	115	51.142	ppb	1.749	35403	50	102.3	90	110	
Ba	137	2	115	50.774	ppb	2.856	12536	50	101.5	90	110	
W	182	2	165	49.388	ppb	2.274	155983	50	98.8	90	110	
Pt	195	2	165	48.887	ppb	2.085	123299	50	97.8	90	110	
Tl	205	2	165	50.077	ppb	1.171	297465	50	100.2	90	110	
Pb	208	2	165	49.857	ppb	0.760	391477	50	99.7	90	110	
Th	232	2	165	48.886	ppb	1.320	462165	50	97.8	90	110	
U	238	2	165	49.399	ppb	0.324	497121	50	98.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1041430	1.40	1072135	97.14	60	120	
Sc (IS)	45	1	HMI H2	20719158	0.89	20791913	99.65	60	120	
Sc (IS)	45	2	HMI He	763587	1.05	758535	100.67	60	120	
Sc (IS)	45	3	No Gas	32158140	0.22	33963379	94.68	60	120	
Ge Internal Standard	72	1	HMI H2	7717954	0.86	7701407	100.21	60	120	
Ge Internal Standard	72	2	HMI He	824821	0.83	818771	100.74	60	120	
In Internal Standard	115	2	HMI He	2636950	1.80	2717298	97.04	60	120	
Ho-165	165	2	HMI He	12722623	0.60	12871763	98.84	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	131_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:16:03-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-3.203	ppb	-76.9	3599143	10	
Be	9	1	6	0.012	ppb	295.7	13	0.5	
B	11	1	6	1.414	ppb	14.6	1313	0.5	>RL
Na	23	1	45	33.433	ppb	1.9	213382	25	>RL
Na	23	2	45	25.475	ppb	7.5	14618	25	>RL
Mg	24	2	45	2.219	ppb	92.3	590	25	
Al	27	2	45	0.469	ppb	453.3	147	15	
K	39	1	45	164.279	ppb	50.7	9071773	50	>RL
K	39	2	45	9.440	ppb	82.1	13570	50	
Ca	40	1	45	17.911	ppb	4.6	145305	50	
Ca	44	2	45	28.232	ppb	70.2	103	25	>RL
Ti	47	2	45	0.307	ppb	86.6	7	0.5	
V	51	2	72	0.154	ppb	120.0	2190	1	
Cr	52	2	72	0.026	ppb	275.3	263	1	
Mn	55	2	72	0.116	ppb	149.0	113	0.5	
Fe	57	2	72	4.381	ppb	47.6	253	25	
Co	59	2	72	0.015	ppb	77.5	67	0.5	
Ni	60	2	72	-0.055	ppb	-61.2	60	1	
Cu	63	2	72	0.109	ppb	57.3	943	1	
Zn	66	2	72	0.094	ppb	209.5	290	5	
As	75	2	72	0.003	ppb	2691.1	20	1	
Se	78	1	72	0.070	ppb	83.7	17	1	
Sr	88	2	72	-0.045	ppb	-150.4	27	0.5	
Zr	90	2	72	0.440	ppb	208.0	47	1	
Nb	93	2	72	5.886	ppb	5.9	15259	2	>RL
Mo	95	2	115	0.364	ppb	20.0	300	0.5	
Pd	105	2	115	0.072	ppb	74.4	97	1	
Ag	107	2	115	0.018	ppb	50.8	100	1	
Cd	111	2	115	-0.011	ppb	0.0	0	0.5	
Sn	120	2	115	0.119	ppb	28.2	210	1	
Sb	121	2	115	0.437	ppb	34.5	330	0.6	
Ba	137	2	115	0.091	ppb	66.1	33	0.5	
W	182	2	165	0.130	ppb	25.5	1257	1	
Pt	195	2	165	-0.004	ppb	-150.7	13	1	
Tl	205	2	165	0.005	ppb	169.0	170	0.1	
Pb	208	2	165	-0.006	ppb	-361.9	903	0.5	
Th	232	2	165	0.023	ppb	58.4	563	1	
U	238	2	165	0.051	ppb	4.3	723	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1022778	2.45	1072135	95.40	60	120	
Sc (IS)	45	1	HMI H2	20058790	2.17	20791913	96.47	60	120	
Sc (IS)	45	2	HMI He	769334	0.64	758535	101.42	60	120	
Sc (IS)	45	3	No Gas	32801047	0.42	33963379	96.58	60	120	
Ge Internal Standard	72	1	HMI H2	7529605	2.20	7701407	97.77	60	120	
Ge Internal Standard	72	2	HMI He	827665	0.62	818771	101.09	60	120	
In Internal Standard	115	2	HMI He	2728275	0.54	2717298	100.40	60	120	
Ho-165	165	2	HMI He	12801958	1.19	12871763	99.46	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	132LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:19:52-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	8.965	ppb	31.222	3683916	50	17.9	70	130	>+/-30%
Be	9	1	6	0.970	ppb	6.824	347	1	97.0	70	130	
Na	23	2	45	63.914	ppb	4.918	21920	50	127.8	70	130	
Mg	24	2	45	52.907	ppb	5.328	4991	50	105.8	70	130	
Al	27	2	45	31.020	ppb	16.549	877	30	103.4	70	130	
K	39	2	45	115.713	ppb	14.179	18279	100	115.7	70	130	
Ca	44	2	45	73.488	ppb	28.804	213	50	147.0	70	130	>+/-30%
V	51	2	72	5.235	ppb	4.855	6318	5	104.7	70	130	
Cr	52	2	72	1.880	ppb	6.551	2187	2	94.0	70	130	
Mn	55	2	72	0.963	ppb	27.401	470	1	96.3	70	130	
Fe	57	2	72	49.338	ppb	18.379	1123	50	98.7	70	130	
Co	59	2	72	0.947	ppb	6.956	1714	1	94.7	70	130	
Ni	60	2	72	2.100	ppb	4.901	1133	2	105.0	70	130	
Cu	63	2	72	2.265	ppb	7.704	3867	2	113.3	70	130	
Zn	66	2	72	11.155	ppb	3.036	2300	10	111.6	70	130	
As	75	2	72	4.831	ppb	8.502	625	5	96.6	70	130	
Se	78	1	72	4.954	ppb	5.408	879	5	99.1	70	130	
Sr	88	2	72	0.950	ppb	9.889	473	1	95.0	70	130	
Zr	90	2	72	5.855	ppb	82.796	80	0.5	1171.0	70	130	>+/-30%
Nb	93	2	72	14.142	ppb	3.592	33594	2	707.1	70	130	>+/-30%
Mo	95	2	115	2.079	ppb	13.970	1453	2	104.0	70	130	
Pd	105	2	115	0.006	ppb	263.704	30	1	0.6	70	130	>+/-30%
Ag	107	2	115	4.956	ppb	3.728	11001	5	99.1	70	130	
Cd	111	2	115	0.946	ppb	29.317	287	1	94.6	70	130	
Sn	120	2	115	9.548	ppb	3.988	7916	10	95.5	70	130	
Sb	121	2	115	2.252	ppb	2.963	1640	2	112.6	70	130	
Ba	137	2	115	0.804	ppb	12.688	217	1	80.4	70	130	
W	182	2	165	4.821	ppb	3.064	16264	1	482.1	70	130	>+/-30%
Pt	195	2	165	0.016	ppb	167.517	63	1	1.6	70	130	>+/-30%
Tl	205	2	165	0.934	ppb	4.281	5785	1	93.4	70	130	
Pb	208	2	165	1.001	ppb	3.201	8938	1	100.1	70	130	
Th	232	2	165	2.099	ppb	1.159	20524	2	104.9	70	130	
U	238	2	165	1.000	ppb	2.214	10451	1	100.0	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1040267	0.61	1072135	97.03	60	120	
Sc (IS)	45	1	HMI H2	20289218	0.88	20791913	97.58	60	120	
Sc (IS)	45	2	HMI He	765344	0.35	758535	100.90	60	120	
Sc (IS)	45	3	No Gas	32491465	0.31	33963379	95.67	60	120	
Ge Internal Standard	72	1	HMI H2	7594317	0.64	7701407	98.61	60	120	
Ge Internal Standard	72	2	HMI He	825894	0.12	818771	100.87	60	120	
In Internal Standard	115	2	HMI He	2747278	2.00	2717298	101.10	60	120	
Ho-165	165	2	HMI He	12944773	0.29	12871763	100.57	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436754/1-A
Data File Name	133_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:23:40-07:00
Sample Type	Blank
Dilution	1
Comment	436754 6020
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-6.013	ppb	-29.56630109	137291	0.5
Li	7	2	45	-21.015	ppb	-120.2794282	7996	0.5
Li	7	3	45	-8.946	ppb	-12.97931069	3519066	10
Be	9	1	6	0.001	ppb	2789.394162	10	0.5
B	11	1	6	-0.215	ppb	-40.20065414	743	0.5
Na	23	1	45	4.916	ppb	7.697068992	137832	25
Na	23	2	45	1.517	ppb	43.05103991	10037	25
Mg	24	2	45	1.964	ppb	44.1396536	570	25
Al	27	2	45	2.369	ppb	69.37986075	193	15
K	39	1	45	-1399.692	ppb	-2.194264413	5038111	50
K	39	2	45	-3.712	ppb	-389.7504403	13030	50
Ca	40	1	45	2.397	ppb	31.75732434	86062	50
Ca	44	2	45	2.597	ppb	688.8573977	40	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	-0.932	ppb	-18.31844336	1307	1
Cr	52	2	72	0.080	ppb	90.75922419	320	1
Mn	55	2	72	0.219	ppb	34.18231822	157	0.5
Fe	57	2	72	5.580	ppb	29.19085643	277	25
Co	59	2	72	-0.017	ppb	-33.39101758	10	0.5
Ni	60	2	72	0.005	ppb	2152.407808	90	1
Cu	63	2	72	0.001	ppb	18523.32627	797	1
Zn	66	2	72	2.138	ppb	25.48121008	663	5
As	75	2	72	-0.022	ppb	-331.9216863	17	1
Se	78	1	72	0.024	ppb	57.16790167	9	1
Sr	88	2	72	-0.038	ppb	-171.1172352	30	0.5
Zr	90	2	72	1.500	ppb	119.7292259	53	1
Nb	93	2	72	1.333	ppb	7.807352721	5111	2
Mo	95	2	115	0.079	ppb	119.0143876	110	0.5
Pd	105	2	115	0.013	ppb	157.7344571	37	1
Ag	107	2	115	-0.002	ppb	-602.7174617	57	1
Cd	111	2	115	0.012	ppb	169.8719001	7	0.5
Sn	120	2	115	0.089	ppb	63.37120763	187	1
Sb	121	2	115	0.069	ppb	29.84816443	67	0.6
Ba	137	2	115	0.061	ppb	284.8286831	27	0.5
W	182	2	165	0.082	ppb	45.45364099	1110	1
Pt	195	2	165	-0.008	ppb	-28.83710525	3	1
Tl	205	2	165	0.002	ppb	533.8202675	153	0.1
Pb	208	2	165	0.028	ppb	50.12572498	1177	0.5
Th	232	2	165	0.028	ppb	35.12423898	613	1
U	238	2	165	0.007	ppb	113.6392978	277	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1029817	1.48	1072135	96.05	60	120	
Sc (IS)	45	1	HMI H2	20278642	0.73	20791913	97.53	60	120	
Sc (IS)	45	2	HMI He	772471	1.14	758535	101.84	60	120	
Sc (IS)	45	3	No Gas	32582440	0.65	33963379	95.93	60	120	
Ge Internal Standard	72	1	HMI H2	7509320	1.30	7701407	97.51	60	120	
Ge Internal Standard	72	2	HMI He	828470	1.17	818771	101.18	60	120	
In Internal Standard	115	2	HMI He	2732713	2.86	2717298	100.57	60	120	
Ho-165	165	2	HMI He	12872735	0.32	12871763	100.01	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436754/2-A
Data File Name	134_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:27:25-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436754 6020
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	77.860	77.860	ppb	6.582	168030	400	19.5	80	120	>+/-20%
Li	7	2	45	61.573	61.573	ppb	27.733	9874	400	15.4	80	120	>+/-20%
Li	7	3	45	68.495	68.495	ppb	6.249	4323001	400	17.1	80	120	>+/-20%
Be	9	1	6	41.794	41.794	ppb	5.663	14107	40	104.5	80	120	
Na	23	2	45	3.343	3.343	ppb	18.519	10444	40	8.4	80	120	>+/-20%
Mg	24	2	45	2.501	2.501	ppb	42.844	620	40	6.3	80	120	>+/-20%
Al	27	2	45	415.166	415.166	ppb	0.387	10211	40	1037.9	80	120	>+/-20%
K	39	2	45	-4.317	-4.317	ppb	-111.756	13070	40	-10.8	80	120	>+/-20%
Ca	44	2	45	220.032	220.032	ppb	12.213	580	40	550.1	80	120	>+/-20%
V	51	2	72	39.527	39.527	ppb	0.520	34358	40	98.8	80	120	
Cr	52	2	72	41.218	41.218	ppb	2.696	43219	40	103.0	80	120	
Mn	55	2	72	42.238	42.238	ppb	3.549	17968	40	105.6	80	120	
Fe	57	2	72	413.397	413.397	ppb	0.739	8209	40	1033.5	80	120	>+/-20%
Co	59	2	72	41.443	41.443	ppb	1.290	73584	40	103.6	80	120	
Ni	60	2	72	40.474	40.474	ppb	2.614	20345	40	101.2	80	120	
Cu	63	2	72	41.661	41.661	ppb	0.583	57599	40	104.2	80	120	
Zn	66	2	72	43.147	43.147	ppb	1.259	8153	40	107.9	80	120	
As	75	2	72	38.257	38.257	ppb	0.450	4834	40	95.6	80	120	
Se	78	1	72	38.488	38.488	ppb	4.554	6724	40	96.2	80	120	
Nb	93	2	72	0.939	0.939	ppb	13.548	4238	40	2.3	80	120	>+/-20%
Mo	95	2	115	39.712	39.712	ppb	1.146	26472	40	99.3	80	120	
Pd	105	2	115	-0.013	-0.013	ppb	-73.765	10	40	0.0	80	120	>+/-20%
Ag	107	2	115	42.417	42.417	ppb	1.342	92590	40	106.0	80	120	
Cd	111	2	115	40.231	40.231	ppb	7.056	11872	40	100.6	80	120	
Sn	120	2	115	40.278	40.278	ppb	2.702	32636	40	100.7	80	120	
Sb	121	2	115	38.418	38.418	ppb	2.480	27398	40	96.0	80	120	
Ba	137	2	115	39.254	39.254	ppb	5.625	9988	40	98.1	80	120	
W	182	2	165	37.724	37.724	ppb	0.422	120333	40	94.3	80	120	
Pt	195	2	165	-0.003	-0.003	ppb	-88.235	17	40	0.0	80	120	>+/-20%
Tl	205	2	165	41.475	41.475	ppb	0.641	248441	40	103.7	80	120	
Pb	208	2	165	41.598	41.598	ppb	0.888	329485	40	104.0	80	120	
Th	232	2	165	40.286	40.286	ppb	1.120	384070	40	100.7	80	120	
U	238	2	165	40.977	40.977	ppb	0.597	415820	40	102.4	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1010773	2.37	1072135	94.28	60	120	
Sc (IS)	45	1	HMI H2	20213657	0.93	20791913	97.22	60	120	
Sc (IS)	45	2	HMI He	776410	1.20	758535	102.36	60	120	
Sc (IS)	45	3	No Gas	32935230	0.28	33963379	96.97	60	120	
Ge Internal Standard	72	1	HMI H2	7519089	0.82	7701407	97.63	60	120	
Ge Internal Standard	72	2	HMI He	829619	0.37	818771	101.32	60	120	
In Internal Standard	115	2	HMI He	2716383	1.48	2717298	99.97	60	120	
Ho-165	165	2	HMI He	12827757	0.89	12871763	99.66	60	120	

Sample Report

Sample Table

Sample Name	280-116419-E-1-B
Data File Name	135SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:31:14-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	72.418	ppb	72.418	7.67	153006	500000	
Li	7	2	45	76.575	ppb	76.575	7.70	9420	500000	
Li	7	3	45	54.862	ppb	54.862	1.44	4056427	50000	
Be	9	1	6	0.006	ppb	0.006	939.20	10	2000	
B	11	1	6	29.773	ppb	29.773	1.00	9960	2000	
Na	23	1	45	421241.369	ppb	421241.369	0.37	1057462038	2000	>LDR
Na	23	2	45	407302.340	ppb	407302.340	0.92	73169596	400000	
Mg	24	2	45	68218.043	ppb	68218.043	0.72	5548024	400000	
Al	27	2	45	7.141	ppb	7.141	39.77	287	400000	
K	39	1	45	16919.974	ppb	16919.974	0.37	49138761	400000	
K	39	2	45	17647.765	ppb	17647.765	0.44	754895	400000	
Ca	40	1	45	666434.142	ppb	666434.142	0.28	2400414204	400000	
Ca	44	2	45	716938.265	ppb	716938.265	0.17	1642450	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-0.941	ppb	-0.941	-19.47	1173	2000	
Cr	52	2	72	0.305	ppb	0.305	19.12	500	5000	
Mn	55	2	72	47.019	ppb	47.019	5.17	18032	10000	
Fe	57	2	72	73.223	ppb	73.223	1.54	1437	400000	
Co	59	2	72	0.307	ppb	0.307	28.47	527	2000	
Ni	60	2	72	1.023	ppb	1.023	38.32	540	5000	
Cu	63	2	72	0.825	ppb	0.825	16.55	1734	5000	
Zn	66	2	72	4.992	ppb	4.992	15.79	1070	5000	
As	75	2	72	0.169	ppb	0.169	79.85	37	2000	
Se	78	1	72	173.629	ppb	173.629	1.76	27119	2000	
Sr	88	2	72	12547.495	ppb	12547.495	0.82	5103578	4000	
Zr	90	2	72	367.317	ppb	367.317	5.96	2094	1000	
Nb	93	2	72	0.984	ppb	0.984	9.24	3914	200	
Mo	95	2	115	0.260	ppb	0.260	15.74	207	2000	
Pd	105	2	115	0.260	ppb	0.260	57.32	257	100	
Ag	107	2	115	0.000	ppb	0.000	-4935.72	53	100	
Cd	111	2	115	0.001	ppb	0.001	1569.38	3	2000	
Sn	120	2	115	0.245	ppb	0.245	25.10	280	2000	
Sb	121	2	115	0.469	ppb	0.469	6.40	317	1000	
Ba	137	2	115	13.958	ppb	13.958	1.33	3207	5000	
W	182	2	165	0.149	ppb	0.149	23.25	1237	100	
Pt	195	2	165	-0.005	ppb	-0.005	-84.47	10	100	
Tl	205	2	165	0.019	ppb	0.019	54.40	237	2000	
Pb	208	2	165	0.018	ppb	0.018	83.31	1027	5000	
Th	232	2	165	0.212	ppb	0.212	11.96	2224	2000	
U	238	2	165	43.923	ppb	43.923	0.51	418248	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	897852	2.19	1072135	83.74	60	120	
Sc (IS)	45	1	HMI H2	18631594	1.31	20791913	89.61	60	120	
Sc (IS)	45	2	HMI He	716377	1.82	758535	94.44	60	120	
Sc (IS)	45	3	No Gas	31898749	0.48	33963379	93.92	60	120	
Ge Internal Standard	72	1	HMI H2	6727041	1.51	7701407	87.35	60	120	
Ge Internal Standard	72	2	HMI He	748392	1.10	818771	91.40	60	120	
In Internal Standard	115	2	HMI He	2448658	0.47	2717298	90.11	60	120	
Ho-165	165	2	HMI He	12037888	0.27	12871763	93.52	60	120	

Sample Report

Sample Table

Sample Name	280-116419-E-2-B
Data File Name	136SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:35:10-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	483.669	ppb	483.669	1.27	302434	500000	
Li	7	2	45	486.189	ppb	486.189	8.11	17845	500000	
Li	7	3	45	453.746	ppb	453.746	9.82	7894028	50000	
Be	9	1	6	0.166	ppb	0.166	12.19	57	2000	
B	11	1	6	2649.073	ppb	2649.073	2.56	802100	2000	
Na	23	1	45	899504.328	ppb	899504.328	0.79	2323022579	2000	>LDR
Na	23	2	45	875076.710	ppb	875076.710	0.92	157526261	400000	
Mg	24	2	45	201890.582	ppb	201890.582	0.41	16453579	400000	
Al	27	2	45	136.813	ppb	136.813	7.38	3194	400000	
K	39	1	45	10677.470	ppb	10677.470	0.62	34951412	400000	
K	39	2	45	11322.919	ppb	11322.919	0.34	489776	400000	
Ca	40	1	45	614092.551	ppb	614092.551	0.44	2275566366	400000	
Ca	44	2	45	688163.276	ppb	688163.276	2.01	1579843	400000	
Ti	47	2	45	1.313	ppb	1.313	21.43	27	4000	
V	51	2	72	-1.017	ppb	-1.017	-14.49	1103	2000	
Cr	52	2	72	0.312	ppb	0.312	19.92	500	5000	
Mn	55	2	72	19.082	ppb	19.082	0.94	7262	10000	
Fe	57	2	72	161.637	ppb	161.637	2.29	2950	400000	
Co	59	2	72	0.232	ppb	0.232	22.54	403	2000	
Ni	60	2	72	6.247	ppb	6.247	6.98	2864	5000	
Cu	63	2	72	2.408	ppb	2.408	2.22	3634	5000	
Zn	66	2	72	9.367	ppb	9.367	10.38	1767	5000	
As	75	2	72	0.315	ppb	0.315	40.29	53	2000	
Se	78	1	72	1640.484	ppb	1640.484	0.51	258709	2000	
Sr	88	2	72	15061.915	ppb	15061.915	0.53	6048245	4000	
Zr	90	2	72	221.632	ppb	221.632	7.80	1263	1000	
Nb	93	2	72	0.692	ppb	0.692	50.08	3284	200	
Mo	95	2	115	25.532	ppb	25.532	3.40	14822	2000	
Pd	105	2	115	0.365	ppb	0.365	17.22	340	100	
Ag	107	2	115	0.078	ppb	0.078	65.51	200	100	
Cd	111	2	115	0.261	ppb	0.261	29.34	70	2000	
Sn	120	2	115	0.335	ppb	0.335	9.88	333	2000	
Sb	121	2	115	0.922	ppb	0.922	23.79	587	1000	
Ba	137	2	115	14.711	ppb	14.711	5.63	3261	5000	
W	182	2	165	0.068	ppb	0.068	142.91	957	100	
Pt	195	2	165	0.002	ppb	0.002	271.66	27	100	
Tl	205	2	165	0.042	ppb	0.042	20.63	353	2000	
Pb	208	2	165	0.146	ppb	0.146	6.71	1903	5000	
Th	232	2	165	0.190	ppb	0.190	8.96	1947	2000	
U	238	2	165	16.887	ppb	16.887	1.74	154854	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	874798	1.66	1072135	81.59	60	120	
Sc (IS)	45	1	HMI H2	19168082	0.38	20791913	92.19	60	120	
Sc (IS)	45	2	HMI He	717864	1.25	758535	94.64	60	120	
Sc (IS)	45	3	No Gas	32024836	5.04	33963379	94.29	60	120	
Ge Internal Standard	72	1	HMI H2	6792215	0.38	7701407	88.19	60	120	
Ge Internal Standard	72	2	HMI He	738905	1.04	818771	90.25	60	120	
In Internal Standard	115	2	HMI He	2362599	0.70	2717298	86.95	60	120	
Ho-165	165	2	HMI He	11584903	1.04	12871763	90.00	60	120	

Sample Report

Sample Table

Sample Name	280-116419-E-3-B
Data File Name	137SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:39:03-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-10.388	ppb	-10.388	-38.69	137700	500000	
Li	7	2	45	-6.004	ppb	-6.004	-219.00	8106	500000	
Li	7	3	45	-8.835	ppb	-8.835	-27.55	3649027	50000	
Be	9	1	6	-0.008	ppb	-0.008	-395.64	7	2000	
B	11	1	6	67.613	ppb	67.613	3.77	25222	2000	
Na	23	1	45	832.825	ppb	832.825	7.58	2435476	2000	
Na	23	2	45	571.319	ppb	571.319	10.54	117073	400000	
Mg	24	2	45	25.360	ppb	25.360	25.41	2547	400000	
Al	27	2	45	-0.390	ppb	-0.390	-229.58	123	400000	
K	39	1	45	-1528.387	ppb	-1528.387	-0.64	4768955	400000	
K	39	2	45	7.548	ppb	7.548	125.64	13177	400000	
Ca	40	1	45	179.122	ppb	179.122	19.29	790251	400000	
Ca	44	2	45	90.263	ppb	90.263	20.96	250	400000	
Ti	47	2	45	0.462	ppb	0.462	173.21	10	4000	
V	51	2	72	-1.321	ppb	-1.321	-3.71	970	2000	
Cr	52	2	72	0.103	ppb	0.103	63.41	337	5000	
Mn	55	2	72	0.708	ppb	0.708	57.86	357	10000	
Fe	57	2	72	34.755	ppb	34.755	35.92	827	400000	
Co	59	2	72	-0.009	ppb	-0.009	-35.66	23	2000	
Ni	60	2	72	0.287	ppb	0.287	41.62	227	5000	
Cu	63	2	72	0.790	ppb	0.790	10.11	1834	5000	
Zn	66	2	72	1.747	ppb	1.747	16.22	580	5000	
As	75	2	72	0.023	ppb	0.023	569.68	22	2000	
Se	78	1	72	0.688	ppb	0.688	24.81	128	2000	
Sr	88	2	72	1.368	ppb	1.368	28.77	650	4000	
Zr	90	2	72	11.571	ppb	11.571	8.04	113	1000	
Nb	93	2	72	0.002	ppb	0.002	5491.10	2097	200	
Mo	95	2	115	0.050	ppb	0.050	181.59	87	2000	
Pd	105	2	115	-0.013	ppb	-0.013	-132.02	10	100	
Ag	107	2	115	0.004	ppb	0.004	256.61	67	100	
Cd	111	2	115	0.000	ppb	0.000	11657.75	3	2000	
Sn	120	2	115	0.102	ppb	0.102	97.28	190	2000	
Sb	121	2	115	0.101	ppb	0.101	97.71	87	1000	
Ba	137	2	115	3.861	ppb	3.861	5.19	960	5000	
W	182	2	165	0.063	ppb	0.063	30.23	1020	100	
Pt	195	2	165	-0.005	ppb	-0.005	-77.97	10	100	
Tl	205	2	165	0.001	ppb	0.001	1091.34	140	2000	
Pb	208	2	165	0.068	ppb	0.068	20.50	1453	5000	
Th	232	2	165	0.005	ppb	0.005	218.31	383	2000	
U	238	2	165	0.011	ppb	0.011	18.76	313	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1042612	1.35	1072135	97.25	60	120	
Sc (IS)	45	1	HMI H2	20584301	0.45	20791913	99.00	60	120	
Sc (IS)	45	2	HMI He	751693	1.54	758535	99.10	60	120	
Sc (IS)	45	3	No Gas	33776261	0.46	33963379	99.45	60	120	
Ge Internal Standard	72	1	HMI H2	7683981	0.78	7701407	99.77	60	120	
Ge Internal Standard	72	2	HMI He	812075	0.11	818771	99.18	60	120	
In Internal Standard	115	2	HMI He	2631076	2.42	2717298	96.83	60	120	
Ho-165	165	2	HMI He	12502137	0.59	12871763	97.13	60	120	

Sample Report

Sample Table

Sample Name	280-116419-E-4-B
Data File Name	138SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:42:52-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	495.426	ppb	495.426	0.70	298647	500000	
Li	7	2	45	484.550	ppb	484.550	7.03	17481	500000	
Li	7	3	45	455.413	ppb	455.413	1.06	7752053	50000	
Be	9	1	6	0.007	ppb	0.007	480.86	10	2000	
B	11	1	6	2722.463	ppb	2722.463	1.44	806756	2000	
Na	23	1	45	932360.901	ppb	932360.901	0.62	2345481992	2000	>LDR
Na	23	2	45	902359.636	ppb	902359.636	1.20	159411878	400000	
Mg	24	2	45	208697.692	ppb	208697.692	1.01	16691208	400000	
Al	27	2	45	129.439	ppb	129.439	8.76	2974	400000	
K	39	1	45	11034.777	ppb	11034.777	1.22	34914818	400000	
K	39	2	45	11665.811	ppb	11665.811	0.61	494829	400000	
Ca	40	1	45	631999.245	ppb	631999.245	0.59	2281269886	400000	
Ca	44	2	45	712365.327	ppb	712365.327	0.96	1605052	400000	
Ti	47	2	45	2.178	ppb	2.178	36.14	43	4000	
V	51	2	72	-0.950	ppb	-0.950	-14.69	1140	2000	
Cr	52	2	72	0.484	ppb	0.484	15.93	653	5000	
Mn	55	2	72	18.542	ppb	18.542	1.44	6982	10000	
Fe	57	2	72	144.695	ppb	144.695	16.72	2630	400000	
Co	59	2	72	0.278	ppb	0.278	11.37	470	2000	
Ni	60	2	72	6.607	ppb	6.607	6.18	2990	5000	
Cu	63	2	72	3.421	ppb	3.421	2.71	4811	5000	
Zn	66	2	72	9.174	ppb	9.174	6.06	1717	5000	
As	75	2	72	0.302	ppb	0.302	16.63	51	2000	
Se	78	1	72	1686.714	ppb	1686.714	0.28	259698	2000	
Sr	88	2	72	15333.192	ppb	15333.192	0.59	6091329	4000	
Zr	90	2	72	150.893	ppb	150.893	4.20	863	1000	
Nb	93	2	72	0.149	ppb	0.149	69.27	2177	200	
Mo	95	2	115	26.065	ppb	26.065	2.02	14902	2000	
Pd	105	2	115	0.313	ppb	0.313	39.59	290	100	
Ag	107	2	115	0.037	ppb	0.037	10.90	120	100	
Cd	111	2	115	0.348	ppb	0.348	70.12	90	2000	
Sn	120	2	115	0.197	ppb	0.197	13.79	233	2000	
Sb	121	2	115	0.783	ppb	0.783	9.25	493	1000	
Ba	137	2	115	15.343	ppb	15.343	6.98	3354	5000	
W	182	2	165	0.036	ppb	0.036	187.67	863	100	
Pt	195	2	165	0.005	ppb	0.005	168.57	33	100	
Tl	205	2	165	0.034	ppb	0.034	20.36	310	2000	
Pb	208	2	165	0.272	ppb	0.272	3.41	2787	5000	
Th	232	2	165	0.182	ppb	0.182	6.84	1870	2000	
U	238	2	165	17.233	ppb	17.233	1.68	157227	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	856035	1.25	1072135	79.84	60	120	
Sc (IS)	45	1	HMI H2	18672052	0.85	20791913	89.80	60	120	
Sc (IS)	45	2	HMI He	704520	1.35	758535	92.88	60	120	
Sc (IS)	45	3	No Gas	31328691	0.62	33963379	92.24	60	120	
Ge Internal Standard	72	1	HMI H2	6631297	0.12	7701407	86.11	60	120	
Ge Internal Standard	72	2	HMI He	730969	0.80	818771	89.28	60	120	
In Internal Standard	115	2	HMI He	2327751	2.24	2717298	85.66	60	120	
Ho-165	165	2	HMI He	11525677	0.52	12871763	89.54	60	120	

Sample Report

Sample Table

Sample Name	280-116419-E-5-B
Data File Name	139SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:46:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-13.833	ppb	-13.833	-16.38	136187	500000	
Li	7	2	45	4.965	ppb	4.965	213.97	8146	500000	
Li	7	3	45	-15.676	ppb	-15.676	-23.72	3534142	50000	
Be	9	1	6	-0.028	ppb	-0.028	0.00	0	2000	
B	11	1	6	80.502	ppb	80.502	7.20	29186	2000	
Na	23	1	45	834.178	ppb	834.178	6.61	2435413	2000	
Na	23	2	45	602.048	ppb	602.048	8.17	120007	400000	
Mg	24	2	45	27.963	ppb	27.963	24.19	2704	400000	
Al	27	2	45	0.186	ppb	0.186	841.97	133	400000	
K	39	1	45	-1543.258	ppb	-1543.258	-1.63	4721560	400000	
K	39	2	45	5.283	ppb	5.283	180.90	12773	400000	
Ca	40	1	45	179.137	ppb	179.137	21.07	788981	400000	
Ca	44	2	45	87.274	ppb	87.274	32.15	237	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-1.187	ppb	-1.187	-12.16	1053	2000	
Cr	52	2	72	0.096	ppb	0.096	109.29	323	5000	
Mn	55	2	72	0.112	ppb	0.112	93.26	107	10000	
Fe	57	2	72	0.428	ppb	0.428	862.29	170	400000	
Co	59	2	72	-0.009	ppb	-0.009	-133.74	23	2000	
Ni	60	2	72	0.006	ppb	0.006	940.16	87	5000	
Cu	63	2	72	1.666	ppb	1.666	8.85	2937	5000	
Zn	66	2	72	1.745	ppb	1.745	31.37	567	5000	
As	75	2	72	0.043	ppb	0.043	267.33	24	2000	
Se	78	1	72	0.687	ppb	0.687	27.64	127	2000	
Sr	88	2	72	1.497	ppb	1.497	42.12	690	4000	
Zr	90	2	72	6.373	ppb	6.373	26.62	80	1000	
Nb	93	2	72	-0.281	ppb	-0.281	-19.64	1447	200	
Mo	95	2	115	0.033	ppb	0.033	228.83	73	2000	
Pd	105	2	115	-0.023	ppb	-0.023	0.00	0	100	
Ag	107	2	115	0.003	ppb	0.003	579.24	63	100	
Cd	111	2	115	-0.011	ppb	-0.011	0.00	0	2000	
Sn	120	2	115	0.523	ppb	0.523	14.38	500	2000	
Sb	121	2	115	0.032	ppb	0.032	28.60	37	1000	
Ba	137	2	115	0.087	ppb	0.087	47.97	30	5000	
W	182	2	165	0.036	ppb	0.036	81.04	927	100	
Pt	195	2	165	-0.006	ppb	-0.006	-36.35	7	100	
Tl	205	2	165	0.005	ppb	0.005	304.37	163	2000	
Pb	208	2	165	0.074	ppb	0.074	11.48	1487	5000	
Th	232	2	165	0.005	ppb	0.005	72.45	380	2000	
U	238	2	165	0.005	ppb	0.005	125.87	250	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1019577	1.42	1072135	95.10	60	120	
Sc (IS)	45	1	HMI H2	20552604	0.53	20791913	98.85	60	120	
Sc (IS)	45	2	HMI He	734077	1.32	758535	96.78	60	120	
Sc (IS)	45	3	No Gas	33346641	0.64	33963379	98.18	60	120	
Ge Internal Standard	72	1	HMI H2	7621086	0.88	7701407	98.96	60	120	
Ge Internal Standard	72	2	HMI He	794481	0.99	818771	97.03	60	120	
In Internal Standard	115	2	HMI He	2534834	1.23	2717298	93.29	60	120	
Ho-165	165	2	HMI He	12377598	0.35	12871763	96.16	60	120	

Sample Report

Sample Table

Sample Name	280-116419-E-6-B
Data File Name	140SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:50:34-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-12.511	ppb	-12.511	-45.55	129843	500000	
Li	7	2	45	-11.161	ppb	-11.161	-137.50	7676	500000	
Li	7	3	45	-17.220	ppb	-17.220	-19.01	3337235	50000	
Be	9	1	6	-0.017	ppb	-0.017	-103.79	3	2000	
B	11	1	6	195.558	ppb	195.558	0.96	64499	2000	
Na	23	1	45	503082.520	ppb	503082.520	0.64	1323428487	2000	>LDR
Na	23	2	45	489516.127	ppb	489516.127	0.39	88587652	400000	
Mg	24	2	45	64657.721	ppb	64657.721	0.90	5297036	400000	
Al	27	2	45	79.793	ppb	79.793	3.44	1927	400000	
K	39	1	45	24205.667	ppb	24205.667	0.86	70044567	400000	
K	39	2	45	24801.370	ppb	24801.370	0.46	1063679	400000	
Ca	40	1	45	26568.419	ppb	26568.419	0.95	100350942	400000	
Ca	44	2	45	27281.288	ppb	27281.288	0.40	62986	400000	
Ti	47	2	45	2.631	ppb	2.631	94.56	53	4000	
V	51	2	72	153.409	ppb	153.409	1.01	117715	2000	
Cr	52	2	72	4.790	ppb	4.790	7.01	4834	5000	
Mn	55	2	72	1.091	ppb	1.091	21.54	487	10000	
Fe	57	2	72	66.261	ppb	66.261	7.03	1347	400000	
Co	59	2	72	0.044	ppb	0.044	13.83	110	2000	
Ni	60	2	72	0.718	ppb	0.718	32.84	413	5000	
Cu	63	2	72	1.183	ppb	1.183	7.89	2227	5000	
Zn	66	2	72	2.115	ppb	2.115	32.63	610	5000	
As	75	2	72	1.321	ppb	1.321	9.51	172	2000	
Se	78	1	72	1.703	ppb	1.703	27.01	285	2000	
Sr	88	2	72	351.889	ppb	351.889	1.56	146656	4000	
Zr	90	2	72	46.436	ppb	46.436	20.98	307	1000	
Nb	93	2	72	-0.172	ppb	-0.172	-79.55	1620	200	
Mo	95	2	115	6.334	ppb	6.334	2.57	3854	2000	
Pd	105	2	115	-0.012	ppb	-0.012	-90.46	10	100	
Ag	107	2	115	0.011	ppb	0.011	167.84	77	100	
Cd	111	2	115	0.001	ppb	0.001	1731.27	3	2000	
Sn	120	2	115	0.011	ppb	0.011	485.11	110	2000	
Sb	121	2	115	0.122	ppb	0.122	31.76	93	1000	
Ba	137	2	115	7.461	ppb	7.461	9.59	1720	5000	
W	182	2	165	1.128	ppb	1.128	5.81	4119	100	
Pt	195	2	165	-0.005	ppb	-0.005	-84.77	10	100	
Tl	205	2	165	-0.004	ppb	-0.004	-64.43	107	2000	
Pb	208	2	165	-0.006	ppb	-0.006	-44.89	847	5000	
Th	232	2	165	0.014	ppb	0.014	29.81	453	2000	
U	238	2	165	0.206	ppb	0.206	10.30	2144	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	942416	1.13	1072135	87.90	60	120	
Sc (IS)	45	1	HMI H2	19524738	0.72	20791913	93.91	60	120	
Sc (IS)	45	2	HMI He	721611	1.08	758535	95.13	60	120	
Sc (IS)	45	3	No Gas	31626570	0.14	33963379	93.12	60	120	
Ge Internal Standard	72	1	HMI H2	7100647	1.23	7701407	92.20	60	120	
Ge Internal Standard	72	2	HMI He	766648	0.30	818771	93.63	60	120	
In Internal Standard	115	2	HMI He	2451296	1.09	2717298	90.21	60	120	
Ho-165	165	2	HMI He	11950639	0.36	12871763	92.84	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	141_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:54:24-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	490.363	ppb	1.679	323593	500	98.1	90	110	
Li	7	2	45	472.782	ppb	1.728	18168	500	94.6	90	110	
Li	7	3	45	483.679	ppb	1.469	8429541	500	96.7	90	110	
Be	9	1	6	49.626	ppb	1.220	17124	50	99.3	90	110	
B	11	1	6	66.527	ppb	2.027	24578	50	133.1	90	110	>+\-10%
Na	23	1	45	5596.594	ppb	0.562	15469526	5000	111.9	90	110	>+\-10%
Na	23	2	45	5296.930	ppb	1.161	995041	5000	105.9	90	110	
Mg	24	2	45	5060.404	ppb	1.229	426712	5000	101.2	90	110	
Al	27	2	45	5134.453	ppb	1.734	119212	5000	102.7	90	110	
K	39	1	45	5058.624	ppb	0.381	22195757	5000	101.2	90	110	
K	39	2	45	5015.479	ppb	1.039	231322	5000	100.3	90	110	
Ca	40	1	45	5110.538	ppb	0.050	20182347	5000	102.2	90	110	
Ca	44	2	45	4927.526	ppb	3.879	11725	5000	98.6	90	110	
Ti	47	2	45	52.240	ppb	4.456	1097	50	104.5	90	110	
V	51	2	72	50.327	ppb	0.844	41336	50	100.7	90	110	
Cr	52	2	72	50.649	ppb	0.315	50786	50	101.3	90	110	
Mn	55	2	72	51.265	ppb	2.153	20866	50	102.5	90	110	
Fe	57	2	72	5030.805	ppb	0.998	93832	5000	100.6	90	110	
Co	59	2	72	50.925	ppb	0.999	86551	50	101.8	90	110	
Ni	60	2	72	50.709	ppb	2.892	24378	50	101.4	90	110	
Cu	63	2	72	50.906	ppb	0.633	67206	50	101.8	90	110	
Zn	66	2	72	48.306	ppb	1.524	8706	50	96.6	90	110	
As	75	2	72	50.752	ppb	1.844	6133	50	101.5	90	110	
Se	78	1	72	50.366	ppb	3.350	8858	50	100.7	90	110	
Sr	88	2	72	51.677	ppb	1.941	22349	50	103.4	90	110	
Zr	90	2	72	133.388	ppb	19.590	833	50	266.8	90	110	>+\-10%
Nb	93	2	72	85.126	ppb	0.958	184185	100	85.1	90	110	>+\-10%
Mo	95	2	115	49.694	ppb	3.971	31236	50	99.4	90	110	
Pd	105	2	115	52.723	ppb	2.621	50046	50	105.4	90	110	
Ag	107	2	115	49.664	ppb	1.740	102284	50	99.3	90	110	
Cd	111	2	115	49.262	ppb	1.926	13727	50	98.5	90	110	
Sn	120	2	115	51.291	ppb	0.969	39200	50	102.6	90	110	
Sb	121	2	115	50.771	ppb	1.902	34166	50	101.5	90	110	
Ba	137	2	115	49.953	ppb	2.045	11992	50	99.9	90	110	
W	182	2	165	49.097	ppb	0.341	151394	50	98.2	90	110	
Pt	195	2	165	50.052	ppb	2.137	123247	50	100.1	90	110	
Tl	205	2	165	50.324	ppb	0.258	291849	50	100.6	90	110	
Pb	208	2	165	50.739	ppb	0.896	388931	50	101.5	90	110	
Th	232	2	165	49.770	ppb	0.253	459372	50	99.5	90	110	
U	238	2	165	50.243	ppb	0.205	493618	50	100.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1032469	1.81	1072135	96.30	60	120	
Sc (IS)	45	1	HMI H2	20350657	0.44	20791913	97.88	60	120	
Sc (IS)	45	2	HMI He	742087	0.29	758535	97.83	60	120	
Sc (IS)	45	3	No Gas	32937301	0.64	33963379	96.98	60	120	
Ge Internal Standard	72	1	HMI H2	7571241	0.82	7701407	98.31	60	120	
Ge Internal Standard	72	2	HMI He	794222	0.61	818771	97.00	60	120	
In Internal Standard	115	2	HMI He	2563169	1.68	2717298	94.33	60	120	
Ho-165	165	2	HMI He	12420653	0.35	12871763	96.50	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	142_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T21:58:11-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	1.834	ppb	183.2	3646498	10	
Be	9	1	6	0.039	ppb	42.5	23	0.5	
B	11	1	6	12.041	ppb	7.7	5168	0.5	>RL
Na	23	1	45	210.599	ppb	2.2	691609	25	>RL
Na	23	2	45	198.461	ppb	1.4	46086	25	>RL
Mg	24	2	45	7.308	ppb	4.9	993	25	
Al	27	2	45	-1.287	ppb	-124.6	100	15	
K	39	1	45	-31.397	ppb	-132.4	8556188	50	
K	39	2	45	11.748	ppb	55.2	13133	50	
Ca	40	1	45	23.267	ppb	7.4	165885	50	
Ca	44	2	45	38.324	ppb	52.5	123	25	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.373	ppb	29.4	2267	1	
Cr	52	2	72	0.011	ppb	695.8	237	1	
Mn	55	2	72	0.112	ppb	51.0	107	0.5	
Fe	57	2	72	1.911	ppb	115.0	197	25	
Co	59	2	72	0.011	ppb	62.3	57	0.5	
Ni	60	2	72	0.076	ppb	101.1	120	1	
Cu	63	2	72	0.211	ppb	71.1	1033	1	
Zn	66	2	72	-0.045	ppb	-837.2	253	5	
As	75	2	72	-0.054	ppb	-137.1	12	1	
Se	78	1	72	0.149	ppb	16.9	31	1	
Sr	88	2	72	0.104	ppb	38.7	90	0.5	
Zr	90	2	72	4.729	ppb	36.2	70	1	>RL
Nb	93	2	72	5.238	ppb	8.2	13213	2	>RL
Mo	95	2	115	0.153	ppb	54.5	153	0.5	
Pd	105	2	115	0.042	ppb	50.4	63	1	
Ag	107	2	115	0.026	ppb	12.1	113	1	
Cd	111	2	115	-0.011	ppb	0.0	0	0.5	
Sn	120	2	115	0.125	ppb	56.3	207	1	
Sb	121	2	115	0.475	ppb	29.6	343	0.6	
Ba	137	2	115	0.069	ppb	90.1	27	0.5	
W	182	2	165	0.110	ppb	27.5	1153	1	
Pt	195	2	165	-0.001	ppb	-1028.1	20	1	
Tl	205	2	165	0.003	ppb	74.8	150	0.1	
Pb	208	2	165	0.001	ppb	318.4	927	0.5	
Th	232	2	165	0.050	ppb	28.4	793	1	
U	238	2	165	0.051	ppb	11.7	700	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1041542	0.28	1072135	97.15	60	120	
Sc (IS)	45	1	HMI H2	20044135	0.83	20791913	96.40	60	120	
Sc (IS)	45	2	HMI He	738828	1.23	758535	97.40	60	120	
Sc (IS)	45	3	No Gas	32779387	0.43	33963379	96.51	60	120	
Ge Internal Standard	72	1	HMI H2	7390660	0.93	7701407	95.97	60	120	
Ge Internal Standard	72	2	HMI He	791855	0.60	818771	96.71	60	120	
In Internal Standard	115	2	HMI He	2624154	0.92	2717298	96.57	60	120	
Ho-165	165	2	HMI He	12353227	1.25	12871763	95.97	60	120	

Sample Report

Sample Table

Sample Name	280-116334-E-2-D
Data File Name	143SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:01:59-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-0.796	ppb	-0.796	-309.42	128403	500000	
Li	7	2	45	-5.102	ppb	-5.102	-275.00	7586	500000	
Li	7	3	45	-11.655	ppb	-11.655	-47.09	3244559	50000	
Be	9	1	6	0.073	ppb	0.073	138.11	30	2000	
B	11	1	6	194.411	ppb	194.411	2.85	61182	2000	
Na	23	1	45	567666.297	ppb	567666.297	0.72	1430392352	2000	>LDR
Na	23	2	45	548456.501	ppb	548456.501	0.60	96503445	400000	
Mg	24	2	45	76344.825	ppb	76344.825	0.48	6081510	400000	
Al	27	2	45	232.045	ppb	232.045	1.60	5211	400000	
K	39	1	45	28366.374	ppb	28366.374	0.29	77239889	400000	
K	39	2	45	29671.272	ppb	29671.272	1.71	1234822	400000	
Ca	40	1	45	33417.106	ppb	33417.106	0.34	120885328	400000	
Ca	44	2	45	34168.293	ppb	34168.293	0.46	76694	400000	
Ti	47	2	45	18.121	ppb	18.121	13.75	360	4000	
V	51	2	72	151.960	ppb	151.960	1.07	112669	2000	
Cr	52	2	72	6.926	ppb	6.926	0.84	6659	5000	
Mn	55	2	72	7.249	ppb	7.249	3.88	2800	10000	
Fe	57	2	72	219.945	ppb	219.945	5.42	3971	400000	
Co	59	2	72	0.148	ppb	0.148	19.57	270	2000	
Ni	60	2	72	0.936	ppb	0.936	19.36	497	5000	
Cu	63	2	72	6.416	ppb	6.416	4.99	8520	5000	
Zn	66	2	72	3.677	ppb	3.677	15.88	843	5000	
As	75	2	72	1.099	ppb	1.099	9.48	141	2000	
Se	78	1	72	2.491	ppb	2.491	3.41	399	2000	
Sr	88	2	72	420.024	ppb	420.024	1.23	169110	4000	
Zr	90	2	72	106.805	ppb	106.805	30.26	630	1000	
Nb	93	2	72	4.102	ppb	4.102	13.56	10097	200	
Mo	95	2	115	9.892	ppb	9.892	7.69	5828	2000	
Pd	105	2	115	0.011	ppb	0.011	101.95	30	100	
Ag	107	2	115	0.002	ppb	0.002	1184.79	57	100	
Cd	111	2	115	0.040	ppb	0.040	221.04	13	2000	
Sn	120	2	115	0.260	ppb	0.260	15.15	283	2000	
Sb	121	2	115	0.253	ppb	0.253	41.69	173	1000	
Ba	137	2	115	12.447	ppb	12.447	1.22	2787	5000	
W	182	2	165	1.266	ppb	1.266	10.26	4434	100	
Pt	195	2	165	-0.003	ppb	-0.003	-286.05	13	100	
Tl	205	2	165	0.012	ppb	0.012	54.68	193	2000	
Pb	208	2	165	0.121	ppb	0.121	17.38	1747	5000	
Th	232	2	165	0.142	ppb	0.142	7.03	1550	2000	
U	238	2	165	0.330	ppb	0.330	4.02	3244	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	899387	1.82	1072135	83.89	60	120	
Sc (IS)	45	1	HMI H2	18701614	0.53	20791913	89.95	60	120	
Sc (IS)	45	2	HMI He	701641	1.21	758535	92.50	60	120	
Sc (IS)	45	3	No Gas	30269787	0.31	33963379	89.12	60	120	
Ge Internal Standard	72	1	HMI H2	6810829	0.15	7701407	88.44	60	120	
Ge Internal Standard	72	2	HMI He	740680	0.69	818771	90.46	60	120	
In Internal Standard	115	2	HMI He	2385506	1.03	2717298	87.79	60	120	
Ho-165	165	2	HMI He	11716496	0.49	12871763	91.02	60	120	

Sample Report

Sample Table

Sample Name	280-116334-E-2-Dsd@5
Data File Name	144SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:05:52-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-12.071	ppb	-12.071	-17.74	124144	500000	
Li	7	2	45	-25.216	ppb	-25.216	-95.30	7169	500000	
Li	7	3	45	-18.934	ppb	-18.934	-8.11	3139931	50000	
Be	9	1	6	-0.028	ppb	-0.028	0.00	0	2000	
B	11	1	6	218.374	ppb	218.374	1.90	67519	2000	
Na	23	1	45	625645.372	ppb	625645.372	0.22	1571642003	2000	>LDR
Na	23	2	45	607022.108	ppb	607022.108	0.57	106620442	400000	
Mg	24	2	45	82331.320	ppb	82331.320	0.78	6546747	400000	
Al	27	2	45	109.094	ppb	109.094	7.95	2510	400000	
K	39	1	45	30975.365	ppb	30975.365	0.55	83346492	400000	
K	39	2	45	32188.670	ppb	32188.670	1.80	1336255	400000	
Ca	40	1	45	35408.413	ppb	35408.413	0.41	127688961	400000	
Ca	44	2	45	36274.180	ppb	36274.180	0.65	81279	400000	
Ti	47	2	45	1.176	ppb	1.176	64.88	23	4000	
V	51	2	72	152.018	ppb	152.018	1.54	113421	2000	
Cr	52	2	72	8.022	ppb	8.022	4.92	7729	5000	
Mn	55	2	72	3.241	ppb	3.241	25.69	1293	10000	
Fe	57	2	72	104.772	ppb	104.772	13.35	1984	400000	
Co	59	2	72	0.073	ppb	0.073	4.88	153	2000	
Ni	60	2	72	1.121	ppb	1.121	27.40	583	5000	
Cu	63	2	72	1.095	ppb	1.095	6.36	2057	5000	
Zn	66	2	72	5.854	ppb	5.854	12.42	1207	5000	
As	75	2	72	1.263	ppb	1.263	18.17	161	2000	
Se	78	1	72	2.383	ppb	2.383	18.77	379	2000	
Sr	88	2	72	458.495	ppb	458.495	0.38	185771	4000	
Zr	90	2	72	22.818	ppb	22.818	18.30	167	1000	
Nb	93	2	72	2.372	ppb	2.372	11.36	6685	200	
Mo	95	2	115	8.922	ppb	8.922	1.45	5355	2000	
Pd	105	2	115	-0.005	ppb	-0.005	-279.26	17	100	
Ag	107	2	115	-0.002	ppb	-0.002	-1169.23	50	100	
Cd	111	2	115	0.027	ppb	0.027	141.66	10	2000	
Sn	120	2	115	0.368	ppb	0.368	18.81	367	2000	
Sb	121	2	115	0.186	ppb	0.186	27.11	133	1000	
Ba	137	2	115	11.437	ppb	11.437	10.69	2607	5000	
W	182	2	165	1.160	ppb	1.160	14.47	4131	100	
Pt	195	2	165	-0.008	ppb	-0.008	-32.24	3	100	
Tl	205	2	165	-0.005	ppb	-0.005	-201.20	100	2000	
Pb	208	2	165	0.193	ppb	0.193	30.81	2267	5000	
Th	232	2	165	0.040	ppb	0.040	21.27	667	2000	
U	238	2	165	0.290	ppb	0.290	8.11	2877	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	884512	1.01	1072135	82.50	60	120	
Sc (IS)	45	1	HMI H2	18644353	0.72	20791913	89.67	60	120	
Sc (IS)	45	2	HMI He	700409	1.18	758535	92.34	60	120	
Sc (IS)	45	3	No Gas	29902539	0.41	33963379	88.04	60	120	
Ge Internal Standard	72	1	HMI H2	6760388	0.50	7701407	87.78	60	120	
Ge Internal Standard	72	2	HMI He	745393	0.64	818771	91.04	60	120	
In Internal Standard	115	2	HMI He	2427563	0.25	2717298	89.34	60	120	
Ho-165	165	2	HMI He	11719862	0.29	12871763	91.05	60	120	

Sample Report

Sample Table

Sample Name	280-116334-E-2-E MS
Data File Name	145SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:09:42-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-11.265	ppb	-11.265	-13.13	120868	500000	
Li	7	2	45	-3.552	ppb	-3.552	-332.93	7459	500000	
Li	7	3	45	-15.159	ppb	-15.159	-33.31	3040927	50000	
Be	9	1	6	-0.016	ppb	-0.016	-120.83	3	2000	
B	11	1	6	221.905	ppb	221.905	2.70	67165	2000	
Na	23	1	45	635116.435	ppb	635116.435	0.94	1549775284	2000	>LDR
Na	23	2	45	612803.579	ppb	612803.579	0.60	105592705	400000	
Mg	24	2	45	84932.802	ppb	84932.802	1.38	6625075	400000	
Al	27	2	45	194.558	ppb	194.558	7.93	4301	400000	
K	39	1	45	31516.252	ppb	31516.252	0.81	82239345	400000	
K	39	2	45	32668.653	ppb	32668.653	1.70	1330320	400000	
Ca	40	1	45	36585.394	ppb	36585.394	0.50	128160701	400000	
Ca	44	2	45	37140.885	ppb	37140.885	0.35	81637	400000	
Ti	47	2	45	3.607	ppb	3.607	38.09	70	4000	
V	51	2	72	498.490	ppb	498.490	0.66	358831	2000	
Cr	52	2	72	7622.872	ppb	7622.872	0.75	6969499	5000	
Mn	55	2	72	145.010	ppb	145.010	2.67	53955	10000	
Fe	57	2	72	24421.347	ppb	24421.347	0.85	416614	400000	
Co	59	2	72	15.692	ppb	15.692	2.65	24448	2000	
Ni	60	2	72	605.180	ppb	605.180	1.03	265634	5000	
Cu	63	2	72	60.088	ppb	60.088	0.37	72529	5000	
Zn	66	2	72	6.538	ppb	6.538	4.76	1287	5000	
As	75	2	72	4.541	ppb	4.541	10.34	518	2000	
Se	78	1	72	2.703	ppb	2.703	9.30	412	2000	
Sr	88	2	72	478.083	ppb	478.083	0.40	189034	4000	
Zr	90	2	72	27.819	ppb	27.819	36.42	190	1000	
Nb	93	2	72	3.132	ppb	3.132	9.11	8013	200	
Mo	95	2	115	75.645	ppb	75.645	2.57	43769	2000	
Pd	105	2	115	0.004	ppb	0.004	702.49	23	100	
Ag	107	2	115	0.001	ppb	0.001	2072.21	53	100	
Cd	111	2	115	0.080	ppb	0.080	57.07	23	2000	
Sn	120	2	115	3.724	ppb	3.724	3.95	2710	2000	
Sb	121	2	115	0.536	ppb	0.536	11.07	347	1000	
Ba	137	2	115	14.806	ppb	14.806	9.04	3277	5000	
W	182	2	165	9.722	ppb	9.722	1.64	28752	100	
Pt	195	2	165	-0.006	ppb	-0.006	-79.02	7	100	
Tl	205	2	165	0.009	ppb	0.009	82.54	173	2000	
Pb	208	2	165	0.458	ppb	0.458	4.37	4150	5000	
Th	232	2	165	0.059	ppb	0.059	32.97	827	2000	
U	238	2	165	0.544	ppb	0.544	5.37	5201	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	866182	1.19	1072135	80.79	60	120	
Sc (IS)	45	1	HMI H2	18111411	0.72	20791913	87.11	60	120	
Sc (IS)	45	2	HMI He	687114	1.09	758535	90.58	60	120	
Sc (IS)	45	3	No Gas	28651211	0.24	33963379	84.36	60	120	
Ge Internal Standard	72	1	HMI H2	6495024	0.51	7701407	84.34	60	120	
Ge Internal Standard	72	2	HMI He	727411	0.60	818771	88.84	60	120	
In Internal Standard	115	2	HMI He	2360160	1.48	2717298	86.86	60	120	
Ho-165	165	2	HMI He	11656087	0.54	12871763	90.56	60	120	

Sample Report

Sample Table

Sample Name	280-116334-E-2-F MSD
Data File Name	146SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:13:32-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-3.933	ppb	-3.933	-66.36	126732	500000	
Li	7	2	45	-5.029	ppb	-5.029	-231.20	7602	500000	
Li	7	3	45	-13.133	ppb	-13.133	-22.84	3161723	50000	
Be	9	1	6	-0.028	ppb	-0.028	0.00	0	2000	
B	11	1	6	11.673	ppb	11.673	12.07	4554	2000	
Na	23	1	45	1070.079	ppb	1070.079	2.98	2797507	2000	
Na	23	2	45	887.442	ppb	887.442	2.05	165317	400000	
Mg	24	2	45	16.060	ppb	16.060	11.58	1644	400000	
Al	27	2	45	13.032	ppb	13.032	32.05	410	400000	
K	39	1	45	-1455.941	ppb	-1455.941	-2.02	4488143	400000	
K	39	2	45	25.535	ppb	25.535	21.42	13066	400000	
Ca	40	1	45	123.353	ppb	123.353	2.10	514216	400000	
Ca	44	2	45	116.771	ppb	116.771	52.55	293	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-1.141	ppb	-1.141	-5.34	1043	2000	
Cr	52	2	72	1.143	ppb	1.143	16.49	1310	5000	
Mn	55	2	72	0.535	ppb	0.535	23.18	267	10000	
Fe	57	2	72	52.659	ppb	52.659	16.13	1093	400000	
Co	59	2	72	-0.008	ppb	-0.008	-166.17	23	2000	
Ni	60	2	72	0.217	ppb	0.217	44.34	180	5000	
Cu	63	2	72	0.200	ppb	0.200	14.25	980	5000	
Zn	66	2	72	1.827	ppb	1.827	13.42	557	5000	
As	75	2	72	-0.016	ppb	-0.016	-154.90	16	2000	
Se	78	1	72	0.196	ppb	0.196	58.57	36	2000	
Sr	88	2	72	0.330	ppb	0.330	43.75	180	4000	
Zr	90	2	72	2.856	ppb	2.856	197.03	57	1000	
Nb	93	2	72	0.736	ppb	0.736	17.37	3467	200	
Mo	95	2	115	0.129	ppb	0.129	157.99	133	2000	
Pd	105	2	115	-0.005	ppb	-0.005	-301.00	17	100	
Ag	107	2	115	0.005	ppb	0.005	111.41	67	100	
Cd	111	2	115	-0.011	ppb	-0.011	0.00	0	2000	
Sn	120	2	115	0.813	ppb	0.813	15.48	720	2000	
Sb	121	2	115	0.032	ppb	0.032	72.58	37	1000	
Ba	137	2	115	2.146	ppb	2.146	22.58	520	5000	
W	182	2	165	0.046	ppb	0.046	114.41	937	100	
Pt	195	2	165	-0.002	ppb	-0.002	-287.00	17	100	
Tl	205	2	165	0.007	ppb	0.007	27.64	173	2000	
Pb	208	2	165	0.008	ppb	0.008	197.86	963	5000	
Th	232	2	165	0.009	ppb	0.009	55.95	407	2000	
U	238	2	165	-0.007	ppb	-0.007	-79.75	130	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	942096	0.57	1072135	87.87	60	120	
Sc (IS)	45	1	HMI H2	18614784	1.01	20791913	89.53	60	120	
Sc (IS)	45	2	HMI He	703022	0.03	758535	92.68	60	120	
Sc (IS)	45	3	No Gas	29619528	0.37	33963379	87.21	60	120	
Ge Internal Standard	72	1	HMI H2	6854172	0.49	7701407	89.00	60	120	
Ge Internal Standard	72	2	HMI He	760455	0.52	818771	92.88	60	120	
In Internal Standard	115	2	HMI He	2543369	0.19	2717298	93.60	60	120	
Ho-165	165	2	HMI He	12114570	0.70	12871763	94.12	60	120	

Sample Report

Sample Table

Sample Name	280-116334-E-2-D pds
Data File Name	147SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:17:22-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436754 6020
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-6.516	ppb	-6.516	-25.48	119558	500000	
Li	7	2	45	-23.026	ppb	-23.026	-16.23	6909	500000	
Li	7	3	45	-15.922	ppb	-15.922	-12.89	3007883	50000	
Be	9	1	6	0.041	ppb	0.041	165.97	20	2000	
B	11	1	6	213.581	ppb	213.581	1.12	63609	2000	
Na	23	1	45	634212.901	ppb	634212.901	0.36	1511091551	2000	>LDR
Na	23	2	45	611202.948	ppb	611202.948	0.44	102824595	400000	
Mg	24	2	45	84998.499	ppb	84998.499	0.45	6473606	400000	
Al	27	2	45	195.521	ppb	195.521	5.70	4218	400000	
K	39	1	45	31383.835	ppb	31383.835	0.84	79994389	400000	
K	39	2	45	33214.942	ppb	33214.942	0.80	1320380	400000	
Ca	40	1	45	36645.672	ppb	36645.672	0.88	125341485	400000	
Ca	44	2	45	37487.699	ppb	37487.699	0.64	80448	400000	
Ti	47	2	45	4.214	ppb	4.214	78.06	80	4000	
V	51	2	72	477.293	ppb	477.293	0.93	337209	2000	
Cr	52	2	72	7296.220	ppb	7296.220	0.34	6545963	5000	
Mn	55	2	72	145.171	ppb	145.171	0.50	53004	10000	
Fe	57	2	72	23344.145	ppb	23344.145	1.37	390773	400000	
Co	59	2	72	15.841	ppb	15.841	1.60	24218	2000	
Ni	60	2	72	594.223	ppb	594.223	0.89	255952	5000	
Cu	63	2	72	58.929	ppb	58.929	0.83	69812	5000	
Zn	66	2	72	15.439	ppb	15.439	8.20	2660	5000	
As	75	2	72	4.827	ppb	4.827	7.31	540	2000	
Se	78	1	72	3.130	ppb	3.130	6.69	468	2000	
Sr	88	2	72	470.579	ppb	470.579	0.88	182581	4000	
Zr	90	2	72	22.887	ppb	22.887	21.50	160	1000	
Nb	93	2	72	2.267	ppb	2.267	5.27	6198	200	
Mo	95	2	115	70.546	ppb	70.546	1.26	40235	2000	
Pd	105	2	115	0.008	ppb	0.008	225.92	27	100	
Ag	107	2	115	-0.012	ppb	-0.012	-93.40	30	100	
Cd	111	2	115	-0.011	ppb	-0.011	0.00	0	2000	
Sn	120	2	115	3.340	ppb	3.340	7.79	2407	2000	
Sb	121	2	115	0.506	ppb	0.506	8.24	323	1000	
Ba	137	2	115	15.706	ppb	15.706	2.52	3427	5000	
W	182	2	165	8.885	ppb	8.885	1.81	25652	100	
Pt	195	2	165	-0.002	ppb	-0.002	-683.54	17	100	
Tl	205	2	165	0.001	ppb	0.001	1480.64	127	2000	
Pb	208	2	165	0.745	ppb	0.745	3.42	6054	5000	
Th	232	2	165	0.032	ppb	0.032	15.80	580	2000	
U	238	2	165	0.586	ppb	0.586	4.40	5448	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	851913	2.22	1072135	79.46	60	120	
Sc (IS)	45	1	HMI H2	17683851	0.33	20791913	85.05	60	120	
Sc (IS)	45	2	HMI He	670823	0.24	758535	88.44	60	120	
Sc (IS)	45	3	No Gas	28400942	0.58	33963379	83.62	60	120	
Ge Internal Standard	72	1	HMI H2	6379853	0.21	7701407	82.84	60	120	
Ge Internal Standard	72	2	HMI He	713777	0.63	818771	87.18	60	120	
In Internal Standard	115	2	HMI He	2326245	0.26	2717298	85.61	60	120	
Ho-165	165	2	HMI He	11352629	1.05	12871763	88.20	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	148_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:21:13-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	492.910	ppb	3.307	301198	500	98.6	90	110	
Li	7	2	45	496.638	ppb	4.962	17915	500	99.3	90	110	
Li	7	3	45	475.486	ppb	2.515	7669200	500	95.1	90	110	
Be	9	1	6	49.731	ppb	3.395	16023	50	99.5	90	110	
B	11	1	6	57.233	ppb	4.242	19854	50	114.5	90	110	>+\-10%
Na	23	1	45	5783.548	ppb	0.770	14832455	5000	115.7	90	110	>+\-10%
Na	23	2	45	5379.508	ppb	0.882	969408	5000	107.6	90	110	
Mg	24	2	45	5069.712	ppb	0.538	410150	5000	101.4	90	110	
Al	27	2	45	5196.183	ppb	1.792	115749	5000	103.9	90	110	
K	39	1	45	5063.471	ppb	0.920	20611578	5000	101.3	90	110	
K	39	2	45	4983.665	ppb	0.826	220609	5000	99.7	90	110	
Ca	40	1	45	5111.292	ppb	0.731	18733518	5000	102.2	90	110	
Ca	44	2	45	5030.730	ppb	1.278	11485	5000	100.6	90	110	
Ti	47	2	45	48.827	ppb	1.028	983	50	97.7	90	110	
V	51	2	72	48.430	ppb	2.870	38301	50	96.9	90	110	
Cr	52	2	72	50.978	ppb	1.891	49134	50	102.0	90	110	
Mn	55	2	72	49.329	ppb	5.172	19304	50	98.7	90	110	
Fe	57	2	72	5015.591	ppb	0.626	89917	5000	100.3	90	110	
Co	59	2	72	50.276	ppb	2.374	82133	50	100.6	90	110	
Ni	60	2	72	49.285	ppb	1.112	22779	50	98.6	90	110	
Cu	63	2	72	49.918	ppb	1.089	63360	50	99.8	90	110	
Zn	66	2	72	51.867	ppb	0.707	8967	50	103.7	90	110	
As	75	2	72	49.799	ppb	1.410	5784	50	99.6	90	110	
Se	78	1	72	48.748	ppb	1.258	7837	50	97.5	90	110	
Sr	88	2	72	51.346	ppb	4.558	21340	50	102.7	90	110	
Zr	90	2	72	74.091	ppb	6.650	463	50	148.2	90	110	>+\-10%
Nb	93	2	72	86.272	ppb	0.566	179389	100	86.3	90	110	>+\-10%
Mo	95	2	115	47.089	ppb	1.128	29084	50	94.2	90	110	
Pd	105	2	115	51.593	ppb	2.913	48103	50	103.2	90	110	
Ag	107	2	115	48.345	ppb	1.802	97806	50	96.7	90	110	
Cd	111	2	115	48.506	ppb	3.276	13270	50	97.0	90	110	
Sn	120	2	115	49.207	ppb	1.656	36937	50	98.4	90	110	
Sb	121	2	115	49.193	ppb	3.467	32506	50	98.4	90	110	
Ba	137	2	115	50.119	ppb	4.692	11809	50	100.2	90	110	
W	182	2	165	48.833	ppb	1.281	146637	50	97.7	90	110	
Pt	195	2	165	49.190	ppb	0.840	117940	50	98.4	90	110	
Tl	205	2	165	50.242	ppb	1.209	283731	50	100.5	90	110	
Pb	208	2	165	50.020	ppb	1.586	373351	50	100.0	90	110	
Th	232	2	165	49.395	ppb	0.339	443969	50	98.8	90	110	
U	238	2	165	50.026	ppb	0.952	478584	50	100.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	964598	2.67	1072135	89.97	60	120	
Sc (IS)	45	1	HMI H2	18887601	0.66	20791913	90.84	60	120	
Sc (IS)	45	2	HMI He	711995	0.92	758535	93.86	60	120	
Sc (IS)	45	3	No Gas	30256112	0.61	33963379	89.08	60	120	
Ge Internal Standard	72	1	HMI H2	6920075	0.25	7701407	89.85	60	120	
Ge Internal Standard	72	2	HMI He	763376	0.74	818771	93.23	60	120	
In Internal Standard	115	2	HMI He	2517873	2.41	2717298	92.66	60	120	
Ho-165	165	2	HMI He	12095405	1.07	12871763	93.97	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	149_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:25:01-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-5.902	ppb	-28.5	3336795	10	
Be	9	1	6	0.002	ppb	1233.8	10	0.5	
B	11	1	6	6.015	ppb	3.6	2830	0.5	>RL
Na	23	1	45	354.966	ppb	0.3	1031368	25	>RL
Na	23	2	45	343.071	ppb	3.1	71449	25	>RL
Mg	24	2	45	3.257	ppb	32.2	640	25	
Al	27	2	45	-0.765	ppb	-157.3	110	15	
K	39	1	45	8.044	ppb	153.8	8258262	50	
K	39	2	45	15.953	ppb	31.5	13053	50	
Ca	40	1	45	17.740	ppb	6.5	137786	50	
Ca	44	2	45	15.077	ppb	17.2	67	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.050	ppb	256.0	1970	1	
Cr	52	2	72	0.109	ppb	101.2	327	1	
Mn	55	2	72	-0.017	ppb	-458.6	53	0.5	
Fe	57	2	72	3.267	ppb	60.7	217	25	
Co	59	2	72	0.009	ppb	322.8	53	0.5	
Ni	60	2	72	0.060	ppb	34.0	110	1	
Cu	63	2	72	0.097	ppb	131.7	867	1	
Zn	66	2	72	-0.071	ppb	-133.6	243	5	
As	75	2	72	-0.030	ppb	-88.1	15	1	
Se	78	1	72	0.069	ppb	95.1	16	1	
Sr	88	2	72	0.046	ppb	107.4	63	0.5	
Zr	90	2	72	-4.221	ppb	-85.4	17	1	
Nb	93	2	72	5.701	ppb	10.5	13891	2	>RL
Mo	95	2	115	0.196	ppb	53.5	180	0.5	
Pd	105	2	115	-0.002	ppb	-717.7	20	1	
Ag	107	2	115	-0.005	ppb	-197.2	47	1	
Cd	111	2	115	-0.011	ppb	0.0	0	0.5	
Sn	120	2	115	0.106	ppb	34.7	190	1	
Sb	121	2	115	0.356	ppb	35.4	260	0.6	
Ba	137	2	115	0.148	ppb	173.4	47	0.5	
W	182	2	165	0.098	ppb	19.2	1090	1	
Pt	195	2	165	0.005	ppb	282.8	33	1	
Tl	205	2	165	0.007	ppb	92.7	170	0.1	
Pb	208	2	165	0.006	ppb	413.4	943	0.5	
Th	232	2	165	0.030	ppb	23.3	597	1	
U	238	2	165	0.045	ppb	4.6	630	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	983833	0.51	1072135	91.76	60	120	
Sc (IS)	45	1	HMI H2	19114531	0.68	20791913	91.93	60	120	
Sc (IS)	45	2	HMI He	724233	0.65	758535	95.48	60	120	
Sc (IS)	45	3	No Gas	30635697	0.12	33963379	90.20	60	120	
Ge Internal Standard	72	1	HMI H2	6992681	0.86	7701407	90.80	60	120	
Ge Internal Standard	72	2	HMI He	774269	0.58	818771	94.56	60	120	
In Internal Standard	115	2	HMI He	2608546	1.89	2717298	96.00	60	120	
Ho-165	165	2	HMI He	12087796	0.30	12871763	93.91	60	120	

Blank Report

Sample Table

Sample Name	mb 280-436762/1-a
Data File Name	150_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:28:49-07:00
Sample Type	Blank
Dilution	1
Comment	436762 200.8
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	7.599	ppb	35.57519167	134721	0.5
Li	7	2	45	-10.790	ppb	-232.5845059	7622	0.5
Li	7	3	45	3.896	ppb	234.7529502	3358084	10
Be	9	1	6	-0.008	ppb	-433.6117827	7	0.5
B	11	1	6	4.612	ppb	8.828716827	2394	0.5
Na	23	1	45	374.321	ppb	0.289406609	1085534	25
Na	23	2	45	363.296	ppb	2.40455208	74235	25
Mg	24	2	45	1.499	ppb	22.43793982	490	25
Al	27	2	45	17.310	ppb	33.29348694	513	15
K	39	1	45	2116.461	ppb	3.016346118	13566269	50
K	39	2	45	21.579	ppb	21.50857396	13136	50
Ca	40	1	45	4.589	ppb	18.01989377	89542	50
Ca	44	2	45	9.581	ppb	139.3944274	53	25
Ti	47	2	45	0.328	ppb	173.2050808	7	0.5
V	51	2	72	1.116	ppb	20.33562917	2744	1
Cr	52	2	72	0.131	ppb	55.2996144	343	1
Mn	55	2	72	0.396	ppb	15.29685329	213	0.5
Fe	57	2	72	2.871	ppb	29.60541647	207	25
Co	59	2	72	-0.013	ppb	-74.54877993	17	0.5
Ni	60	2	72	0.165	ppb	50.22213076	157	1
Cu	63	2	72	0.242	ppb	18.51196419	1037	1
Zn	66	2	72	1.816	ppb	31.64527741	557	5
As	75	2	72	0.034	ppb	207.9313516	22	1
Se	78	1	72	0.150	ppb	24.58577668	29	1
Sr	88	2	72	-0.024	ppb	-250.5541057	33	0.5
Zr	90	2	72	-1.267	ppb	-208.991401	33	1
Nb	93	2	72	3.118	ppb	12.27344243	8383	2
Mo	95	2	115	17.362	ppb	0.189104084	10788	0.5
Pd	105	2	115	0.016	ppb	102.7674744	37	1
Ag	107	2	115	0.004	ppb	163.643953	63	1
Cd	111	2	115	0.001	ppb	2046.94673	3	0.5
Sn	120	2	115	0.300	ppb	16.68946019	330	1
Sb	121	2	115	0.147	ppb	31.25527397	113	0.6
Ba	137	2	115	0.045	ppb	189.1919802	20	0.5
W	182	2	165	0.037	ppb	42.81697284	910	1
Pt	195	2	165	-0.001	ppb	-489.2589383	20	1
Tl	205	2	165	-0.005	ppb	-73.40281935	103	0.1
Pb	208	2	165	0.008	ppb	146.2407293	960	0.5
Th	232	2	165	0.032	ppb	18.15389673	617	1
U	238	2	165	0.004	ppb	70.69979778	240	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1001101	1.06	1072135	93.37	60	120	
Sc (IS)	45	1	HMI H2	19190743	1.33	20791913	92.30	60	120	
Sc (IS)	45	2	HMI He	715762	0.27	758535	94.36	60	120	
Sc (IS)	45	3	No Gas	30020293	0.19	33963379	88.39	60	120	
Ge Internal Standard	72	1	HMI H2	7039958	0.56	7701407	91.41	60	120	
Ge Internal Standard	72	2	HMI He	763470	0.42	818771	93.25	60	120	
In Internal Standard	115	2	HMI He	2524916	1.32	2717298	92.92	60	120	
Ho-165	165	2	HMI He	12098303	0.45	12871763	93.99	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-436762/2-a
Data File Name	151_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:32:36-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436762 200.8
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	68.619	68.619	ppb	5.998	154653	400	17.2	80	120	>+/-20%
Li	7	2	45	65.020	65.020	ppb	35.371	9097	400	16.3	80	120	>+/-20%
Li	7	3	45	67.435	67.435	ppb	3.579	3921472	400	16.9	80	120	>+/-20%
Be	9	1	6	29.005	29.005	ppb	2.659	9864	40	72.5	80	120	>+/-20%
Na	23	2	45	350.989	350.989	ppb	1.068	71412	40	877.5	80	120	>+/-20%
Mg	24	2	45	2.379	2.379	ppb	38.528	557	40	5.9	80	120	>+/-20%
Al	27	2	45	332.085	332.085	ppb	9.875	7489	40	830.2	80	120	>+/-20%
K	39	2	45	8.077	8.077	ppb	96.386	12463	40	20.2	80	120	>+/-20%
Ca	44	2	45	130.329	130.329	ppb	39.407	327	40	325.8	80	120	>+/-20%
V	51	2	72	31.248	31.248	ppb	1.322	25203	40	78.1	80	120	>+/-20%
Cr	52	2	72	31.448	31.448	ppb	1.241	30166	40	78.6	80	120	>+/-20%
Mn	55	2	72	32.055	32.055	ppb	1.419	12469	40	80.1	80	120	
Fe	57	2	72	328.715	328.715	ppb	5.768	5991	40	821.8	80	120	>+/-20%
Co	59	2	72	31.688	31.688	ppb	0.857	51392	40	79.2	80	120	>+/-20%
Ni	60	2	72	31.549	31.549	ppb	2.018	14498	40	78.9	80	120	>+/-20%
Cu	63	2	72	32.202	32.202	ppb	2.727	40818	40	80.5	80	120	
Zn	66	2	72	33.068	33.068	ppb	1.774	5765	40	82.7	80	120	
As	75	2	72	30.579	30.579	ppb	2.541	3532	40	76.4	80	120	>+/-20%
Se	78	1	72	30.206	30.206	ppb	5.424	4902	40	75.5	80	120	>+/-20%
Nb	93	2	72	1.997	1.997	ppb	12.479	6032	40	5.0	80	120	>+/-20%
Mo	95	2	115	31.415	31.415	ppb	3.197	19120	40	78.5	80	120	>+/-20%
Pd	105	2	115	0.002	0.002	ppb	722.194	23	40	0.0	80	120	>+/-20%
Ag	107	2	115	32.464	32.464	ppb	2.924	64689	40	81.2	80	120	
Cd	111	2	115	31.212	31.212	ppb	6.413	8410	40	78.0	80	120	>+/-20%
Sn	120	2	115	32.133	32.133	ppb	2.080	23788	40	80.3	80	120	
Sb	121	2	115	32.725	32.725	ppb	1.211	21311	40	81.8	80	120	
Ba	137	2	115	31.422	31.422	ppb	5.984	7296	40	78.6	80	120	>+/-20%
W	182	2	165	29.272	29.272	ppb	1.766	87126	40	73.2	80	120	>+/-20%
Pt	195	2	165	-0.004	-0.004	ppb	-264.175	13	40	0.0	80	120	>+/-20%
Tl	205	2	165	31.786	31.786	ppb	1.228	177342	40	79.5	80	120	>+/-20%
Pb	208	2	165	32.429	32.429	ppb	1.596	239394	40	81.1	80	120	
Th	232	2	165	31.253	31.253	ppb	2.116	277535	40	78.1	80	120	>+/-20%
U	238	2	165	31.973	31.973	ppb	2.738	302151	40	79.9	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1017271	0.83	1072135	94.88	60	120	
Sc (IS)	45	1	HMI H2	18992756	0.58	20791913	91.35	60	120	
Sc (IS)	45	2	HMI He	709683	0.54	758535	93.56	60	120	
Sc (IS)	45	3	No Gas	29948212	0.53	33963379	88.18	60	120	
Ge Internal Standard	72	1	HMI H2	6984129	1.08	7701407	90.69	60	120	
Ge Internal Standard	72	2	HMI He	757643	1.02	818771	92.53	60	120	
In Internal Standard	115	2	HMI He	2479451	1.40	2717298	91.25	60	120	
Ho-165	165	2	HMI He	11947393	1.54	12871763	92.82	60	120	

Sample Report

Sample Table

Sample Name	280-116491-d-2-b
Data File Name	152SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:36:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436762 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	14.200	ppb	14.200	26.34	134579	500000	
Li	7	2	45	-0.677	ppb	-0.677	-2700.53	7706	500000	
Li	7	3	45	9.503	ppb	9.503	31.85	3453990	50000	
Be	9	1	6	0.032	ppb	0.032	3.17	20	2000	
B	11	1	6	22.198	ppb	22.198	1.33	8526	2000	
Na	23	1	45	18047.151	ppb	18047.151	0.66	45932889	2000	>LDR
Na	23	2	45	17769.532	ppb	17769.532	0.77	3148725	400000	
Mg	24	2	45	2228.729	ppb	2228.729	0.21	178659	400000	
Al	27	2	45	1320.670	ppb	1320.670	2.81	29207	400000	
K	39	1	45	2986.945	ppb	2986.945	1.48	15461515	400000	
K	39	2	45	836.286	ppb	836.286	0.54	46658	400000	
Ca	40	1	45	5000.216	ppb	5000.216	0.54	18286263	400000	
Ca	44	2	45	4810.410	ppb	4810.410	2.53	10871	400000	
Ti	47	2	45	23.384	ppb	23.384	24.99	467	4000	
V	51	2	72	11.002	ppb	11.002	3.22	9947	2000	
Cr	52	2	72	0.989	ppb	0.989	13.21	1140	5000	
Mn	55	2	72	105.196	ppb	105.196	1.07	40177	10000	
Fe	57	2	72	6330.083	ppb	6330.083	0.76	110907	400000	
Co	59	2	72	1.220	ppb	1.220	9.58	1984	2000	
Ni	60	2	72	2.030	ppb	2.030	11.28	993	5000	
Cu	63	2	72	1.506	ppb	1.506	7.10	2564	5000	
Zn	66	2	72	9.810	ppb	9.810	8.70	1857	5000	
As	75	2	72	0.710	ppb	0.710	37.15	98	2000	
Se	78	1	72	0.161	ppb	0.161	49.48	31	2000	
Sr	88	2	72	41.145	ppb	41.145	1.66	16731	4000	
Zr	90	2	72	686.604	ppb	686.604	8.69	3871	1000	
Nb	93	2	72	3.928	ppb	3.928	5.72	9824	200	
Mo	95	2	115	0.202	ppb	0.202	34.62	173	2000	
Pd	105	2	115	-0.001	ppb	-0.001	-2237.96	20	100	
Ag	107	2	115	0.009	ppb	0.009	203.45	73	100	
Cd	111	2	115	0.038	ppb	0.038	111.84	13	2000	
Sn	120	2	115	0.314	ppb	0.314	39.47	333	2000	
Sb	121	2	115	0.249	ppb	0.249	33.89	177	1000	
Ba	137	2	115	16.296	ppb	16.296	8.54	3777	5000	
W	182	2	165	0.124	ppb	0.124	44.55	1160	100	
Pt	195	2	165	0.001	ppb	0.001	1047.21	23	100	
Tl	205	2	165	0.016	ppb	0.016	79.02	220	2000	
Pb	208	2	165	0.444	ppb	0.444	11.68	4177	5000	
Th	232	2	165	0.191	ppb	0.191	12.63	2034	2000	
U	238	2	165	0.037	ppb	0.037	14.15	550	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1006186	1.70	1072135	93.85	60	120	
Sc (IS)	45	1	HMI H2	18844682	0.98	20791913	90.63	60	120	
Sc (IS)	45	2	HMI He	704665	0.84	758535	92.90	60	120	
Sc (IS)	45	3	No Gas	30420788	1.07	33963379	89.57	60	120	
Ge Internal Standard	72	1	HMI H2	6932933	0.71	7701407	90.02	60	120	
Ge Internal Standard	72	2	HMI He	746291	1.02	818771	91.15	60	120	
In Internal Standard	115	2	HMI He	2470867	0.30	2717298	90.93	60	120	
Ho-165	165	2	HMI He	12017473	0.95	12871763	93.36	60	120	

Sample Report

Sample Table

Sample Name	280-116491-d-3-d
Data File Name	153SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:40:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436762 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	5.312	ppb	5.312	49.45	131735	500000	
Li	7	2	45	1.855	ppb	1.855	768.92	7712	500000	
Li	7	3	45	1.468	ppb	1.468	284.97	3371553	50000	
Be	9	1	6	0.052	ppb	0.052	174.85	27	2000	
B	11	1	6	7.203	ppb	7.203	3.52	3257	2000	
Na	23	1	45	8317.060	ppb	8317.060	0.12	21267881	2000	
Na	23	2	45	8481.056	ppb	8481.056	0.75	1498533	400000	
Mg	24	2	45	1334.396	ppb	1334.396	1.22	106486	400000	
Al	27	2	45	109.922	ppb	109.922	8.09	2530	400000	
K	39	1	45	2740.793	ppb	2740.793	0.95	14882418	400000	
K	39	2	45	466.200	ppb	466.200	3.29	31151	400000	
Ca	40	1	45	6695.654	ppb	6695.654	0.86	24504535	400000	
Ca	44	2	45	6548.937	ppb	6548.937	3.15	14698	400000	
Ti	47	2	45	1.009	ppb	1.009	86.55	20	4000	
V	51	2	72	2.361	ppb	2.361	7.79	3657	2000	
Cr	52	2	72	0.322	ppb	0.322	32.79	523	5000	
Mn	55	2	72	37.778	ppb	37.778	1.83	14705	10000	
Fe	57	2	72	269.814	ppb	269.814	3.12	4954	400000	
Co	59	2	72	0.251	ppb	0.251	12.30	443	2000	
Ni	60	2	72	0.655	ppb	0.655	37.52	380	5000	
Cu	63	2	72	1.407	ppb	1.407	15.94	2484	5000	
Zn	66	2	72	3.311	ppb	3.311	9.76	803	5000	
As	75	2	72	0.223	ppb	0.223	59.74	44	2000	
Se	78	1	72	0.175	ppb	0.175	52.72	33	2000	
Sr	88	2	72	50.107	ppb	50.107	2.68	20703	4000	
Zr	90	2	72	50.528	ppb	50.528	11.92	327	1000	
Nb	93	2	72	0.315	ppb	0.315	56.44	2600	200	
Mo	95	2	115	0.509	ppb	0.509	10.13	363	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-78.09	7	100	
Ag	107	2	115	-0.013	ppb	-0.013	-39.35	30	100	
Cd	111	2	115	0.050	ppb	0.050	112.23	17	2000	
Sn	120	2	115	0.179	ppb	0.179	61.72	237	2000	
Sb	121	2	115	0.088	ppb	0.088	43.39	73	1000	
Ba	137	2	115	5.604	ppb	5.604	5.50	1320	5000	
W	182	2	165	-0.013	ppb	-0.013	-209.16	747	100	
Pt	195	2	165	-0.001	ppb	-0.001	-640.80	20	100	
Tl	205	2	165	0.003	ppb	0.003	131.58	147	2000	
Pb	208	2	165	0.191	ppb	0.191	1.68	2274	5000	
Th	232	2	165	0.034	ppb	0.034	42.26	623	2000	
U	238	2	165	0.010	ppb	0.010	11.56	283	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	990684	1.19	1072135	92.40	60	120	
Sc (IS)	45	1	HMI H2	18876921	0.70	20791913	90.79	60	120	
Sc (IS)	45	2	HMI He	700488	0.93	758535	92.35	60	120	
Sc (IS)	45	3	No Gas	30338547	0.34	33963379	89.33	60	120	
Ge Internal Standard	72	1	HMI H2	6983343	0.70	7701407	90.68	60	120	
Ge Internal Standard	72	2	HMI He	758759	0.65	818771	92.67	60	120	
In Internal Standard	115	2	HMI He	2499673	0.27	2717298	91.99	60	120	
Ho-165	165	2	HMI He	11862439	0.45	12871763	92.16	60	120	

Sample Report

Sample Table

Sample Name	280-116491-d-3-e ms
Data File Name	154SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:43:56-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436762 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	63.837	ppb	63.837	10.11	153020	500000	
Li	7	2	45	52.156	ppb	52.156	11.37	8736	500000	
Li	7	3	45	68.564	ppb	68.564	2.85	3981228	50000	
Be	9	1	6	30.053	ppb	30.053	5.15	10017	2000	
B	11	1	6	29.611	ppb	29.611	1.58	11008	2000	
Na	23	1	45	7817.147	ppb	7817.147	0.34	20123979	2000	
Na	23	2	45	7945.854	ppb	7945.854	0.48	1406993	400000	
Mg	24	2	45	1274.156	ppb	1274.156	0.92	101860	400000	
Al	27	2	45	451.865	ppb	451.865	3.26	10034	400000	
K	39	1	45	2689.108	ppb	2689.108	1.79	14848636	400000	
K	39	2	45	463.213	ppb	463.213	3.48	31081	400000	
Ca	40	1	45	6266.791	ppb	6266.791	0.55	23085492	400000	
Ca	44	2	45	6281.304	ppb	6281.304	2.32	14124	400000	
Ti	47	2	45	0.674	ppb	0.674	86.61	13	4000	
V	51	2	72	33.561	ppb	33.561	3.49	26709	2000	
Cr	52	2	72	32.242	ppb	32.242	0.78	30673	5000	
Mn	55	2	72	70.372	ppb	70.372	4.36	27090	10000	
Fe	57	2	72	572.450	ppb	572.450	4.71	10241	400000	
Co	59	2	72	32.409	ppb	32.409	0.94	52138	2000	
Ni	60	2	72	32.584	ppb	32.584	3.75	14852	5000	
Cu	63	2	72	32.593	ppb	32.593	1.17	40982	5000	
Zn	66	2	72	35.502	ppb	35.502	2.14	6122	5000	
As	75	2	72	29.735	ppb	29.735	4.31	3407	2000	
Se	78	1	72	30.070	ppb	30.070	3.10	4882	2000	
Sr	88	2	72	82.445	ppb	82.445	1.99	33718	4000	
Zr	90	2	72	5561.660	ppb	5561.660	2.46	31282	1000	>LDR
Nb	93	2	72	0.277	ppb	0.277	33.50	2497	200	
Mo	95	2	115	30.426	ppb	30.426	1.14	18283	2000	
Pd	105	2	115	0.006	ppb	0.006	363.93	27	100	
Ag	107	2	115	32.740	ppb	32.740	0.87	64398	100	
Cd	111	2	115	31.774	ppb	31.774	4.45	8453	2000	
Sn	120	2	115	31.803	ppb	31.803	2.24	23240	2000	
Sb	121	2	115	33.446	ppb	33.446	1.60	21494	1000	
Ba	137	2	115	36.815	ppb	36.815	4.92	8440	5000	
W	182	2	165	29.835	ppb	29.835	0.88	88130	100	
Pt	195	2	165	-0.002	ppb	-0.002	-411.08	17	100	
Tl	205	2	165	31.929	ppb	31.929	0.97	176791	2000	
Pb	208	2	165	32.392	ppb	32.392	0.26	237323	5000	
Th	232	2	165	31.096	ppb	31.096	0.52	274083	2000	
U	238	2	165	32.365	ppb	32.365	0.93	303574	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	997140	0.53	1072135	93.01	60	120	
Sc (IS)	45	1	HMI H2	18997111	1.00	20791913	91.37	60	120	
Sc (IS)	45	2	HMI He	701705	0.80	758535	92.51	60	120	
Sc (IS)	45	3	No Gas	30325956	0.44	33963379	89.29	60	120	
Ge Internal Standard	72	1	HMI H2	6988236	1.62	7701407	90.74	60	120	
Ge Internal Standard	72	2	HMI He	751604	0.57	818771	91.80	60	120	
In Internal Standard	115	2	HMI He	2447032	0.81	2717298	90.05	60	120	
Ho-165	165	2	HMI He	11856018	0.87	12871763	92.11	60	120	

Sample Report

Sample Table

Sample Name	280-116491-d-3-f msd
Data File Name	155SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:47:44-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436762 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	68.123	ppb	68.123	4.37	152965	500000	
Li	7	2	45	76.598	ppb	76.598	17.96	9123	500000	
Li	7	3	45	71.045	ppb	71.045	7.97	3931602	50000	
Be	9	1	6	31.311	ppb	31.311	5.32	10251	2000	
B	11	1	6	29.438	ppb	29.438	3.91	10754	2000	
Na	23	1	45	7933.815	ppb	7933.815	1.58	20217972	2000	
Na	23	2	45	8049.504	ppb	8049.504	2.03	1409418	400000	
Mg	24	2	45	1277.403	ppb	1277.403	2.16	100988	400000	
Al	27	2	45	439.260	ppb	439.260	3.82	9647	400000	
K	39	1	45	2608.479	ppb	2608.479	0.79	14502434	400000	
K	39	2	45	459.328	ppb	459.328	0.74	30586	400000	
Ca	40	1	45	6293.251	ppb	6293.251	0.81	22950929	400000	
Ca	44	2	45	6206.027	ppb	6206.027	4.17	13797	400000	
Ti	47	2	45	2.183	ppb	2.183	95.08	43	4000	
V	51	2	72	32.678	ppb	32.678	4.07	25734	2000	
Cr	52	2	72	31.809	ppb	31.809	6.17	29875	5000	
Mn	55	2	72	67.142	ppb	67.142	1.25	25527	10000	
Fe	57	2	72	562.598	ppb	562.598	1.65	9944	400000	
Co	59	2	72	31.395	ppb	31.395	2.35	49881	2000	
Ni	60	2	72	32.821	ppb	32.821	2.48	14782	5000	
Cu	63	2	72	33.230	ppb	33.230	1.67	41254	5000	
Zn	66	2	72	34.434	ppb	34.434	4.71	5871	5000	
As	75	2	72	28.580	ppb	28.580	0.92	3236	2000	
Se	78	1	72	29.834	ppb	29.834	3.37	4794	2000	
Sr	88	2	72	80.549	ppb	80.549	3.44	32539	4000	
Zr	90	2	72	5638.109	ppb	5638.109	3.25	31319	1000	>LDR
Nb	93	2	72	0.069	ppb	0.069	209.18	2054	200	
Mo	95	2	115	29.622	ppb	29.622	3.72	17675	2000	
Pd	105	2	115	-0.012	ppb	-0.012	-1.18	10	100	
Ag	107	2	115	32.582	ppb	32.582	2.67	63665	100	
Cd	111	2	115	30.819	ppb	30.819	2.88	8143	2000	
Sn	120	2	115	30.760	ppb	30.760	1.46	22329	2000	
Sb	121	2	115	33.510	ppb	33.510	3.77	21387	1000	
Ba	137	2	115	37.249	ppb	37.249	7.08	8476	5000	
W	182	2	165	29.484	ppb	29.484	2.45	86040	100	
Pt	195	2	165	0.007	ppb	0.007	150.30	37	100	
Tl	205	2	165	31.827	ppb	31.827	1.67	174103	2000	
Pb	208	2	165	32.121	ppb	32.121	1.64	232503	5000	
Th	232	2	165	31.341	ppb	31.341	2.45	272894	2000	
U	238	2	165	31.818	ppb	31.818	2.39	294837	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	979687	2.20	1072135	91.38	60	120	
Sc (IS)	45	1	HMI H2	18806150	0.50	20791913	90.45	60	120	
Sc (IS)	45	2	HMI He	694066	2.04	758535	91.50	60	120	
Sc (IS)	45	3	No Gas	29780016	0.36	33963379	87.68	60	120	
Ge Internal Standard	72	1	HMI H2	6916315	1.43	7701407	89.81	60	120	
Ge Internal Standard	72	2	HMI He	742413	1.47	818771	90.67	60	120	
In Internal Standard	115	2	HMI He	2430330	1.27	2717298	89.44	60	120	
Ho-165	165	2	HMI He	11713471	0.65	12871763	91.00	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	156_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:51:30-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	502.147	ppb	0.422	304459	500	100.4	90	110	
Li	7	2	45	493.581	ppb	9.157	17738	500	98.7	90	110	
Li	7	3	45	496.951	ppb	0.927	7754479	500	99.4	90	110	
Be	9	1	6	50.335	ppb	1.348	16470	50	100.7	90	110	
B	11	1	6	49.151	ppb	3.962	17427	50	98.3	90	110	
Na	23	1	45	5339.443	ppb	1.165	13702788	5000	106.8	90	110	
Na	23	2	45	5177.441	ppb	0.512	927622	5000	103.5	90	110	
Mg	24	2	45	5079.109	ppb	1.135	408336	5000	101.6	90	110	
Al	27	2	45	5142.861	ppb	1.707	113867	5000	102.9	90	110	
K	39	1	45	5217.231	ppb	1.245	20991513	5000	104.3	90	110	
K	39	2	45	5070.966	ppb	0.846	222869	5000	101.4	90	110	
Ca	40	1	45	5083.189	ppb	0.587	18632768	5000	101.7	90	110	
Ca	44	2	45	5127.266	ppb	5.472	11628	5000	102.5	90	110	
Ti	47	2	45	50.913	ppb	12.415	1020	50	101.8	90	110	
V	51	2	72	49.626	ppb	3.575	38532	50	99.3	90	110	
Cr	52	2	72	50.058	ppb	2.855	47432	50	100.1	90	110	
Mn	55	2	72	50.991	ppb	2.424	19611	50	102.0	90	110	
Fe	57	2	72	5042.293	ppb	0.886	88854	5000	100.8	90	110	
Co	59	2	72	48.964	ppb	0.814	78620	50	97.9	90	110	
Ni	60	2	72	51.634	ppb	3.656	23453	50	103.3	90	110	
Cu	63	2	72	49.772	ppb	1.910	62090	50	99.5	90	110	
Zn	66	2	72	48.600	ppb	5.068	8273	50	97.2	90	110	
As	75	2	72	49.780	ppb	0.955	5683	50	99.6	90	110	
Se	78	1	72	49.429	ppb	0.940	7937	50	98.9	90	110	
Sr	88	2	72	52.284	ppb	2.098	21360	50	104.6	90	110	
Zr	90	2	72	317.944	ppb	4.668	1824	50	635.9	90	110	>+\-10%
Nb	93	2	72	85.490	ppb	1.284	174741	100	85.5	90	110	>+\-10%
Mo	95	2	115	46.904	ppb	1.972	29007	50	93.8	90	110	
Pd	105	2	115	50.187	ppb	5.241	46823	50	100.4	90	110	
Ag	107	2	115	47.828	ppb	3.662	96846	50	95.7	90	110	
Cd	111	2	115	48.203	ppb	5.695	13197	50	96.4	90	110	
Sn	120	2	115	48.244	ppb	5.124	36235	50	96.5	90	110	
Sb	121	2	115	49.852	ppb	5.204	32970	50	99.7	90	110	
Ba	137	2	115	46.064	ppb	4.594	10885	50	92.1	90	110	
W	182	2	165	49.197	ppb	1.373	144296	50	98.4	90	110	
Pt	195	2	165	50.324	ppb	1.085	117865	50	100.6	90	110	
Tl	205	2	165	50.750	ppb	2.160	279956	50	101.5	90	110	
Pb	208	2	165	51.035	ppb	0.925	372114	50	102.1	90	110	
Th	232	2	165	50.484	ppb	0.855	443225	50	101.0	90	110	
U	238	2	165	50.948	ppb	0.199	476143	50	101.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	979085	0.57	1072135	91.32	60	120	
Sc (IS)	45	1	HMI H2	18889543	1.38	20791913	90.85	60	120	
Sc (IS)	45	2	HMI He	707576	1.16	758535	93.28	60	120	
Sc (IS)	45	3	No Gas	29834210	0.18	33963379	87.84	60	120	
Ge Internal Standard	72	1	HMI H2	6912017	0.74	7701407	89.75	60	120	
Ge Internal Standard	72	2	HMI He	750347	0.96	818771	91.64	60	120	
In Internal Standard	115	2	HMI He	2522269	4.47	2717298	92.82	60	120	
Ho-165	165	2	HMI He	11815589	1.38	12871763	91.79	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	157_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:55:18-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	5.747	ppb	72.9	3364036	10	
Be	9	1	6	0.033	ppb	184.9	20	0.5	
B	11	1	6	3.853	ppb	2.8	2080	0.5	>RL
Na	23	1	45	202.340	ppb	2.1	626381	25	>RL
Na	23	2	45	201.947	ppb	4.2	44668	25	>RL
Mg	24	2	45	5.442	ppb	27.9	800	25	
Al	27	2	45	-0.943	ppb	-203.0	103	15	
K	39	1	45	105.663	ppb	52.5	8342335	50	>RL
K	39	2	45	16.732	ppb	61.3	12759	50	
Ca	40	1	45	17.259	ppb	3.2	133487	50	
Ca	44	2	45	21.649	ppb	60.2	80	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.853	ppb	19.1	2517	1	
Cr	52	2	72	0.026	ppb	466.4	240	1	
Mn	55	2	72	0.064	ppb	342.2	83	0.5	
Fe	57	2	72	1.513	ppb	266.2	180	25	
Co	59	2	72	0.025	ppb	126.0	77	0.5	
Ni	60	2	72	0.074	ppb	106.9	113	1	
Cu	63	2	72	0.044	ppb	108.7	780	1	
Zn	66	2	72	-0.075	ppb	-188.1	237	5	
As	75	2	72	0.030	ppb	93.8	22	1	
Se	78	1	72	0.070	ppb	93.8	16	1	
Sr	88	2	72	0.042	ppb	103.0	60	0.5	
Zr	90	2	72	4.135	ppb	89.9	63	1	>RL
Nb	93	2	72	5.430	ppb	6.7	12990	2	>RL
Mo	95	2	115	0.186	ppb	29.5	167	0.5	
Pd	105	2	115	0.020	ppb	107.3	40	1	
Ag	107	2	115	0.007	ppb	116.9	70	1	
Cd	111	2	115	-0.011	ppb	0.0	0	0.5	
Sn	120	2	115	0.178	ppb	50.7	237	1	
Sb	121	2	115	0.286	ppb	18.3	203	0.6	
Ba	137	2	115	0.046	ppb	163.0	20	0.5	
W	182	2	165	0.127	ppb	15.1	1150	1	
Pt	195	2	165	0.006	ppb	136.9	37	1	
Tl	205	2	165	0.015	ppb	39.1	213	0.1	
Pb	208	2	165	0.005	ppb	340.3	913	0.5	
Th	232	2	165	0.044	ppb	50.4	707	1	
U	238	2	165	0.053	ppb	23.9	690	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	977297	1.14	1072135	91.15	60	120	
Sc (IS)	45	1	HMI H2	18758116	0.80	20791913	90.22	60	120	
Sc (IS)	45	2	HMI He	706259	0.68	758535	93.11	60	120	
Sc (IS)	45	3	No Gas	29925272	0.66	33963379	88.11	60	120	
Ge Internal Standard	72	1	HMI H2	6884257	1.11	7701407	89.39	60	120	
Ge Internal Standard	72	2	HMI He	754751	0.79	818771	92.18	60	120	
In Internal Standard	115	2	HMI He	2510230	1.06	2717298	92.38	60	120	
Ho-165	165	2	HMI He	11815307	0.54	12871763	91.79	60	120	

Blank Report

Sample Table

Sample Name	mb 280-437099/1-a
Data File Name	158_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T22:59:05-07:00
Sample Type	Blank
Dilution	1
Comment	437099 200.8
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	10.048	ppb	20.09699231	129899	0.5
Li	7	2	45	-4.744	ppb	-285.0887241	7712	0.5
Li	7	3	45	7.190	ppb	48.75049217	3343092	10
Be	9	1	6	0.023	ppb	201.8881687	17	0.5
B	11	1	6	2.392	ppb	26.93172854	1570	0.5
Na	23	1	45	189.706	ppb	0.303284564	582678	25
Na	23	2	45	179.608	ppb	0.243272811	41091	25
Mg	24	2	45	4.573	ppb	38.16712173	737	25
Al	27	2	45	63.814	ppb	6.649648805	1547	15
K	39	1	45	-78.151	ppb	-64.05644806	7735857	50
K	39	2	45	17.569	ppb	22.81589432	12913	50
Ca	40	1	45	1.102	ppb	71.63508339	73401	50
Ca	44	2	45	-0.520	ppb	-2244.319336	30	25
Ti	47	2	45	0.332	ppb	86.60262037	7	0.5
V	51	2	72	0.573	ppb	65.18727438	2324	1
Cr	52	2	72	0.084	ppb	79.23049713	297	1
Mn	55	2	72	0.081	ppb	84.54641159	90	0.5
Fe	57	2	72	1.995	ppb	184.1132232	190	25
Co	59	2	72	0.004	ppb	90.02880452	43	0.5
Ni	60	2	72	0.028	ppb	194.1818877	93	1
Cu	63	2	72	0.060	ppb	115.2649881	803	1
Zn	66	2	72	7.337	ppb	1.842623964	1477	5
As	75	2	72	0.007	ppb	1143.322311	19	1
Se	78	1	72	0.080	ppb	36.5261202	17	1
Sr	88	2	72	-0.016	ppb	-88.52839539	37	0.5
Zr	90	2	72	9.348	ppb	93.18917037	93	1
Nb	93	2	72	2.595	ppb	20.31612099	7266	2
Mo	95	2	115	-0.014	ppb	-238.1728845	43	0.5
Pd	105	2	115	-0.009	ppb	-281.1579541	13	1
Ag	107	2	115	-0.003	ppb	-658.3338504	50	1
Cd	111	2	115	0.026	ppb	248.2209582	10	0.5
Sn	120	2	115	0.088	ppb	53.18452419	170	1
Sb	121	2	115	0.139	ppb	27.79099427	107	0.6
Ba	137	2	115	0.131	ppb	64.85667563	40	0.5
W	182	2	165	0.015	ppb	138.6757865	833	1
Pt	195	2	165	0.004	ppb	208.4202969	30	1
Tl	205	2	165	0.001	ppb	1060.923744	137	0.1
Pb	208	2	165	-0.028	ppb	-20.02126327	683	0.5
Th	232	2	165	0.009	ppb	115.1241662	400	1
U	238	2	165	-0.002	ppb	-119.6452101	173	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	968316	1.43	1072135	90.32	60	120	
Sc (IS)	45	1	HMI H2	18385416	1.01	20791913	88.43	60	120	
Sc (IS)	45	2	HMI He	712744	0.57	758535	93.96	60	120	
Sc (IS)	45	3	No Gas	29625065	0.68	33963379	87.23	60	120	
Ge Internal Standard	72	1	HMI H2	6818398	0.92	7701407	88.53	60	120	
Ge Internal Standard	72	2	HMI He	759400	0.14	818771	92.75	60	120	
In Internal Standard	115	2	HMI He	2504032	0.64	2717298	92.15	60	120	
Ho-165	165	2	HMI He	11926179	0.45	12871763	92.65	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-437099/2-a
Data File Name	159_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:02:53-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	437099 200.8
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	70.761	70.761	ppb	10.736	151865	400	17.7	80	120	>+/-20%
Li	7	2	45	54.358	54.358	ppb	30.748	8846	400	13.6	80	120	>+/-20%
Li	7	3	45	67.369	67.369	ppb	10.773	3905813	400	16.8	80	120	>+/-20%
Be	9	1	6	31.216	31.216	ppb	1.462	10081	40	78.0	80	120	>+/-20%
Na	23	2	45	161.729	161.729	ppb	0.491	37595	40	404.3	80	120	>+/-20%
Mg	24	2	45	3.567	3.567	ppb	8.545	650	40	8.9	80	120	>+/-20%
Al	27	2	45	326.614	326.614	ppb	2.287	7342	40	816.5	80	120	>+/-20%
K	39	2	45	9.082	9.082	ppb	114.162	12459	40	22.7	80	120	>+/-20%
Ca	44	2	45	133.726	133.726	ppb	14.984	333	40	334.3	80	120	>+/-20%
V	51	2	72	31.541	31.541	ppb	3.510	25269	40	78.9	80	120	>+/-20%
Cr	52	2	72	31.151	31.151	ppb	1.501	29701	40	77.9	80	120	>+/-20%
Mn	55	2	72	31.039	31.039	ppb	1.541	12002	40	77.6	80	120	>+/-20%
Fe	57	2	72	308.166	308.166	ppb	2.952	5595	40	770.4	80	120	>+/-20%
Co	59	2	72	31.434	31.434	ppb	1.865	50673	40	78.6	80	120	>+/-20%
Ni	60	2	72	31.912	31.912	ppb	1.492	14578	40	79.8	80	120	>+/-20%
Cu	63	2	72	31.552	31.552	ppb	2.962	39776	40	78.9	80	120	>+/-20%
Zn	66	2	72	32.860	32.860	ppb	2.606	5695	40	82.1	80	120	
As	75	2	72	29.426	29.426	ppb	1.227	3379	40	73.6	80	120	>+/-20%
Se	78	1	72	29.696	29.696	ppb	2.173	4709	40	74.2	80	120	>+/-20%
Nb	93	2	72	1.762	1.762	ppb	15.684	5518	40	4.4	80	120	>+/-20%
Mo	95	2	115	30.095	30.095	ppb	3.701	18142	40	75.2	80	120	>+/-20%
Pd	105	2	115	-0.012	-0.012	ppb	-159.589	10	40	0.0	80	120	>+/-20%
Ag	107	2	115	29.872	29.872	ppb	1.918	58978	40	74.7	80	120	>+/-20%
Cd	111	2	115	30.725	30.725	ppb	2.773	8203	40	76.8	80	120	>+/-20%
Sn	120	2	115	31.163	31.163	ppb	2.641	22853	40	77.9	80	120	>+/-20%
Sb	121	2	115	32.063	32.063	ppb	2.771	20676	40	80.2	80	120	
Ba	137	2	115	32.126	32.126	ppb	5.148	7386	40	80.3	80	120	
W	182	2	165	29.393	29.393	ppb	1.054	87200	40	73.5	80	120	>+/-20%
Pt	195	2	165	-0.005	-0.005	ppb	-150.245	10	40	0.0	80	120	>+/-20%
Tl	205	2	165	31.405	31.405	ppb	1.785	174624	40	78.5	80	120	>+/-20%
Pb	208	2	165	32.207	32.207	ppb	0.853	236982	40	80.5	80	120	
Th	232	2	165	30.710	30.710	ppb	1.378	271828	40	76.8	80	120	>+/-20%
U	238	2	165	31.347	31.347	ppb	1.113	295299	40	78.4	80	120	>+/-20%

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	965855	1.05	1072135	90.09	60	120	
Sc (IS)	45	1	HMI H2	18558225	1.04	20791913	89.26	60	120	
Sc (IS)	45	2	HMI He	707104	0.71	758535	93.22	60	120	
Sc (IS)	45	3	No Gas	29830865	0.82	33963379	87.83	60	120	
Ge Internal Standard	72	1	HMI H2	6823447	1.47	7701407	88.60	60	120	
Ge Internal Standard	72	2	HMI He	753084	0.61	818771	91.98	60	120	
In Internal Standard	115	2	HMI He	2457104	3.87	2717298	90.42	60	120	
Ho-165	165	2	HMI He	11907178	1.15	12871763	92.51	60	120	

Sample Report

Sample Table

Sample Name	280-116616-b-1-b
Data File Name	160SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:06:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437099 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	57.402	ppb	57.402	18.31	132052	500000	
Li	7	2	45	44.871	ppb	44.871	20.64	7829	500000	
Li	7	3	45	42.989	ppb	42.989	6.59	3294107	50000	
Be	9	1	6	0.043	ppb	0.043	83.40	20	2000	
B	11	1	6	2780.669	ppb	2780.669	4.58	819189	2000	
Na	23	1	45	953876.595	ppb	953876.595	4.91	2137028661	2000	>LDR
Na	23	2	45	893835.212	ppb	893835.212	0.99	143359238	400000	
Mg	24	2	45	8805.694	ppb	8805.694	1.28	639690	400000	
Al	27	2	45	323.981	ppb	323.981	8.54	6589	400000	
K	39	1	45	20600.298	ppb	20600.298	5.49	51839046	400000	
K	39	2	45	18325.262	ppb	18325.262	0.81	699425	400000	
Ca	40	1	45	42659.159	ppb	42659.159	5.40	137176561	400000	
Ca	44	2	45	40592.532	ppb	40592.532	1.98	83046	400000	
Ti	47	2	45	10.692	ppb	10.692	57.10	193	4000	
V	51	2	72	0.810	ppb	0.810	22.26	2194	2000	
Cr	52	2	72	5.256	ppb	5.256	7.46	4591	5000	
Mn	55	2	72	906.165	ppb	906.165	0.33	308520	10000	
Fe	57	2	72	127244.526	ppb	127244.526	0.81	1987478	400000	
Co	59	2	72	9.655	ppb	9.655	2.60	13791	2000	
Ni	60	2	72	55.665	ppb	55.665	3.11	22442	5000	
Cu	63	2	72	20.218	ppb	20.218	4.19	22775	5000	
Zn	66	2	72	272.520	ppb	272.520	1.88	40180	5000	
As	75	2	72	0.793	ppb	0.793	34.57	96	2000	
Se	78	1	72	0.642	ppb	0.642	36.93	93	2000	
Sr	88	2	72	257.067	ppb	257.067	1.01	93107	4000	
Zr	90	2	72	3074.085	ppb	3074.085	2.35	15342	1000	
Nb	93	2	72	2.035	ppb	2.035	9.90	5368	200	
Mo	95	2	115	64.190	ppb	64.190	2.07	34223	2000	
Pd	105	2	115	0.027	ppb	0.027	168.42	40	100	
Ag	107	2	115	0.095	ppb	0.095	38.72	213	100	
Cd	111	2	115	0.652	ppb	0.652	35.64	157	2000	
Sn	120	2	115	1.892	ppb	1.892	7.87	1313	2000	
Sb	121	2	115	7.847	ppb	7.847	3.30	4491	1000	
Ba	137	2	115	75.092	ppb	75.092	4.00	15286	5000	
W	182	2	165	3.001	ppb	3.001	3.02	8763	100	
Pt	195	2	165	-0.008	ppb	-0.008	-35.05	3	100	
Tl	205	2	165	0.008	ppb	0.008	109.22	157	2000	
Pb	208	2	165	6.059	ppb	6.059	1.28	41314	5000	
Th	232	2	165	0.404	ppb	0.404	9.90	3554	2000	
U	238	2	165	0.808	ppb	0.808	4.29	7109	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	851459	2.03	1072135	79.42	60	120	
Sc (IS)	45	1	HMI H2	16646254	3.29	20791913	80.06	60	120	
Sc (IS)	45	2	HMI He	639560	0.19	758535	84.32	60	120	
Sc (IS)	45	3	No Gas	26650721	0.60	33963379	78.47	60	120	
Ge Internal Standard	72	1	HMI H2	6018576	2.82	7701407	78.15	60	120	
Ge Internal Standard	72	2	HMI He	666185	0.05	818771	81.36	60	120	
In Internal Standard	115	2	HMI He	2174202	0.21	2717298	80.01	60	120	
Ho-165	165	2	HMI He	10858074	0.55	12871763	84.36	60	120	

Sample Report

Sample Table

Sample Name	280-116663-e-1-a
Data File Name	161SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:10:32-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437099 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	26.405	ppb	26.405	12.68	128471	500000	
Li	7	2	45	16.850	ppb	16.850	74.22	7536	500000	
Li	7	3	45	19.983	ppb	19.983	23.38	3221531	50000	
Be	9	1	6	0.018	ppb	0.018	107.76	13	2000	
B	11	1	6	246.951	ppb	246.951	2.03	75128	2000	
Na	23	1	45	173036.418	ppb	173036.418	0.56	406675154	2000	>LDR
Na	23	2	45	167814.524	ppb	167814.524	1.54	27721925	400000	
Mg	24	2	45	27104.586	ppb	27104.586	0.60	2027012	400000	
Al	27	2	45	74.038	ppb	74.038	2.23	1640	400000	
K	39	1	45	6179.859	ppb	6179.859	0.80	21571247	400000	
K	39	2	45	5873.101	ppb	5873.101	0.74	238506	400000	
Ca	40	1	45	133660.078	ppb	133660.078	0.61	450690727	400000	
Ca	44	2	45	136251.263	ppb	136251.263	1.19	286979	400000	
Ti	47	2	45	2.147	ppb	2.147	1.44	40	4000	
V	51	2	72	0.925	ppb	0.925	17.60	2390	2000	
Cr	52	2	72	0.238	ppb	0.238	37.77	410	5000	
Mn	55	2	72	100.628	ppb	100.628	1.15	36133	10000	
Fe	57	2	72	205.538	ppb	205.538	3.49	3524	400000	
Co	59	2	72	0.461	ppb	0.461	17.09	727	2000	
Ni	60	2	72	1.776	ppb	1.776	20.58	827	5000	
Cu	63	2	72	1.900	ppb	1.900	10.61	2864	5000	
Zn	66	2	72	10.052	ppb	10.052	12.22	1784	5000	
As	75	2	72	0.832	ppb	0.832	21.77	105	2000	
Se	78	1	72	5.828	ppb	5.828	5.26	867	2000	
Sr	88	2	72	1810.404	ppb	1810.404	0.17	690380	4000	
Zr	90	2	72	55.140	ppb	55.140	31.67	327	1000	
Nb	93	2	72	0.815	ppb	0.815	32.51	3351	200	
Mo	95	2	115	6.134	ppb	6.134	6.01	3501	2000	
Pd	105	2	115	0.012	ppb	0.012	255.71	30	100	
Ag	107	2	115	0.023	ppb	0.023	11.48	93	100	
Cd	111	2	115	0.081	ppb	0.081	197.05	23	2000	
Sn	120	2	115	0.159	ppb	0.159	49.45	203	2000	
Sb	121	2	115	0.298	ppb	0.298	27.07	193	1000	
Ba	137	2	115	59.342	ppb	59.342	2.81	12763	5000	
W	182	2	165	0.112	ppb	0.112	74.33	1077	100	
Pt	195	2	165	-0.003	ppb	-0.003	-203.30	13	100	
Tl	205	2	165	-0.001	ppb	-0.001	-735.02	120	2000	
Pb	208	2	165	0.185	ppb	0.185	14.13	2160	5000	
Th	232	2	165	0.057	ppb	0.057	20.79	800	2000	
U	238	2	165	17.766	ppb	17.766	0.44	161326	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	871507	1.36	1072135	81.29	60	120	
Sc (IS)	45	1	HMI H2	17439986	0.09	20791913	83.88	60	120	
Sc (IS)	45	2	HMI He	658657	1.45	758535	86.83	60	120	
Sc (IS)	45	3	No Gas	27607885	0.24	33963379	81.29	60	120	
Ge Internal Standard	72	1	HMI H2	6370782	0.73	7701407	82.72	60	120	
Ge Internal Standard	72	2	HMI He	701655	0.71	818771	85.70	60	120	
In Internal Standard	115	2	HMI He	2297457	1.07	2717298	84.55	60	120	
Ho-165	165	2	HMI He	11471606	0.58	12871763	89.12	60	120	

Sample Report

Sample Table

Sample Name	280-116663-e-2-a
Data File Name	162SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:14:18-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437099 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	28.965	ppb	28.965	11.14	132586	500000	
Li	7	2	45	7.787	ppb	7.787	221.20	7442	500000	
Li	7	3	45	26.160	ppb	26.160	5.82	3316467	50000	
Be	9	1	6	-0.028	ppb	-0.028	0.00	0	2000	
B	11	1	6	176.766	ppb	176.766	2.07	56712	2000	
Na	23	1	45	171181.839	ppb	171181.839	0.68	412564874	2000	>LDR
Na	23	2	45	167468.028	ppb	167468.028	5.13	27929605	400000	
Mg	24	2	45	29543.862	ppb	29543.862	7.05	2229337	400000	
Al	27	2	45	89.270	ppb	89.270	12.68	1970	400000	
K	39	1	45	6432.675	ppb	6432.675	0.76	22710335	400000	
K	39	2	45	6088.839	ppb	6088.839	4.95	249205	400000	
Ca	40	1	45	143739.979	ppb	143739.979	0.63	497020473	400000	
Ca	44	2	45	148619.371	ppb	148619.371	5.48	316007	400000	
Ti	47	2	45	2.447	ppb	2.447	51.63	47	4000	
V	51	2	72	1.205	ppb	1.205	37.08	2577	2000	
Cr	52	2	72	0.192	ppb	0.192	60.65	367	5000	
Mn	55	2	72	73.811	ppb	73.811	7.33	26492	10000	
Fe	57	2	72	192.245	ppb	192.245	2.18	3307	400000	
Co	59	2	72	0.488	ppb	0.488	4.26	767	2000	
Ni	60	2	72	1.659	ppb	1.659	21.44	773	5000	
Cu	63	2	72	2.185	ppb	2.185	4.32	3194	5000	
Zn	66	2	72	12.579	ppb	12.579	12.50	2170	5000	
As	75	2	72	0.590	ppb	0.590	36.28	79	2000	
Se	78	1	72	4.241	ppb	4.241	13.44	647	2000	
Sr	88	2	72	1995.553	ppb	1995.553	5.95	760379	4000	
Zr	90	2	72	53.269	ppb	53.269	10.60	317	1000	
Nb	93	2	72	0.530	ppb	0.530	29.69	2815	200	
Mo	95	2	115	4.279	ppb	4.279	10.65	2464	2000	
Pd	105	2	115	0.036	ppb	0.036	72.37	50	100	
Ag	107	2	115	0.017	ppb	0.017	127.13	83	100	
Cd	111	2	115	0.017	ppb	0.017	289.07	7	2000	
Sn	120	2	115	0.141	ppb	0.141	8.53	193	2000	
Sb	121	2	115	0.236	ppb	0.236	59.43	157	1000	
Ba	137	2	115	49.885	ppb	49.885	8.64	10771	5000	
W	182	2	165	0.024	ppb	0.024	61.83	823	100	
Pt	195	2	165	-0.003	ppb	-0.003	-226.99	13	100	
Tl	205	2	165	0.004	ppb	0.004	89.51	147	2000	
Pb	208	2	165	0.239	ppb	0.239	9.19	2527	5000	
Th	232	2	165	0.044	ppb	0.044	18.07	683	2000	
U	238	2	165	21.346	ppb	21.346	5.71	192639	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	915787	1.90	1072135	85.42	60	120	
Sc (IS)	45	1	HMI H2	17884392	0.25	20791913	86.02	60	120	
Sc (IS)	45	2	HMI He	665747	3.86	758535	87.77	60	120	
Sc (IS)	45	3	No Gas	27976589	0.65	33963379	82.37	60	120	
Ge Internal Standard	72	1	HMI H2	6519082	1.10	7701407	84.65	60	120	
Ge Internal Standard	72	2	HMI He	702177	4.10	818771	85.76	60	120	
In Internal Standard	115	2	HMI He	2310927	4.37	2717298	85.05	60	120	
Ho-165	165	2	HMI He	11419392	3.74	12871763	88.72	60	120	

Sample Report

Sample Table

Sample Name	280-116663-e-2-b ms
Data File Name	163SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:18:04-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437099 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	86.004	ppb	86.004	6.57	152953	500000	
Li	7	2	45	72.553	ppb	72.553	36.50	8820	500000	
Li	7	3	45	81.062	ppb	81.062	3.47	3777673	50000	
Be	9	1	6	31.330	ppb	31.330	2.26	9530	2000	
B	11	1	6	187.978	ppb	187.978	0.61	59880	2000	
Na	23	1	45	163213.180	ppb	163213.180	0.05	397525927	2000	>LDR
Na	23	2	45	159072.357	ppb	159072.357	0.50	26992174	400000	
Mg	24	2	45	27402.016	ppb	27402.016	0.64	2104720	400000	
Al	27	2	45	422.007	ppb	422.007	1.80	9040	400000	
K	39	1	45	5957.583	ppb	5957.583	0.22	21830697	400000	
K	39	2	45	5704.557	ppb	5704.557	1.59	238231	400000	
Ca	40	1	45	137085.868	ppb	137085.868	0.14	479027433	400000	
Ca	44	2	45	141376.225	ppb	141376.225	0.70	305855	400000	
Ti	47	2	45	1.394	ppb	1.394	77.73	27	4000	
V	51	2	72	32.271	ppb	32.271	1.40	24635	2000	
Cr	52	2	72	30.890	ppb	30.890	1.97	28115	5000	
Mn	55	2	72	97.457	ppb	97.457	1.12	35852	10000	
Fe	57	2	72	487.934	ppb	487.934	1.31	8369	400000	
Co	59	2	72	31.264	ppb	31.264	2.40	48101	2000	
Ni	60	2	72	32.669	ppb	32.669	4.57	14241	5000	
Cu	63	2	72	32.644	ppb	32.644	2.71	39251	5000	
Zn	66	2	72	40.686	ppb	40.686	3.03	6675	5000	
As	75	2	72	30.377	ppb	30.377	4.38	3329	2000	
Se	78	1	72	35.014	ppb	35.014	1.38	5337	2000	
Sr	88	2	72	1912.196	ppb	1912.196	1.17	747063	4000	
Zr	90	2	72	5289.279	ppb	5289.279	2.14	28459	1000	>LDR
Nb	93	2	72	0.445	ppb	0.445	59.03	2714	200	
Mo	95	2	115	33.942	ppb	33.942	1.04	19738	2000	
Pd	105	2	115	0.038	ppb	0.038	77.36	53	100	
Ag	107	2	115	30.919	ppb	30.919	0.50	58878	100	
Cd	111	2	115	30.500	ppb	30.500	5.52	7856	2000	
Sn	120	2	115	29.938	ppb	29.938	2.43	21184	2000	
Sb	121	2	115	32.210	ppb	32.210	2.43	20042	1000	
Ba	137	2	115	76.464	ppb	76.464	2.39	16958	5000	
W	182	2	165	29.826	ppb	29.826	0.35	86543	100	
Pt	195	2	165	0.000	ppb	0.000	-1580.43	20	100	
Tl	205	2	165	30.346	ppb	30.346	1.60	165056	2000	
Pb	208	2	165	30.754	ppb	30.754	0.51	221387	5000	
Th	232	2	165	30.061	ppb	30.061	1.32	260285	2000	
U	238	2	165	51.889	ppb	51.889	0.65	478005	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	909770	0.73	1072135	84.86	60	120	
Sc (IS)	45	1	HMI H2	18073354	0.49	20791913	86.92	60	120	
Sc (IS)	45	2	HMI He	676481	1.19	758535	89.18	60	120	
Sc (IS)	45	3	No Gas	27976136	0.32	33963379	82.37	60	120	
Ge Internal Standard	72	1	HMI H2	6559296	0.34	7701407	85.17	60	120	
Ge Internal Standard	72	2	HMI He	718837	0.54	818771	87.79	60	120	
In Internal Standard	115	2	HMI He	2368883	0.99	2717298	87.18	60	120	
Ho-165	165	2	HMI He	11646669	0.97	12871763	90.48	60	120	

Sample Report

Sample Table

Sample Name	280-116663-e-2-c msd
Data File Name	164SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:21:52-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437099 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	80.994	ppb	80.994	7.36	151577	500000	
Li	7	2	45	72.557	ppb	72.557	11.09	8880	500000	
Li	7	3	45	85.150	ppb	85.150	1.96	3835583	50000	
Be	9	1	6	33.149	ppb	33.149	4.24	10060	2000	
B	11	1	6	187.488	ppb	187.488	1.36	59599	2000	
Na	23	1	45	168123.173	ppb	168123.173	1.98	410246061	2000	>LDR
Na	23	2	45	162392.750	ppb	162392.750	0.93	27752936	400000	
Mg	24	2	45	28591.565	ppb	28591.565	2.49	2211718	400000	
Al	27	2	45	405.072	ppb	405.072	5.47	8743	400000	
K	39	1	45	6145.769	ppb	6145.769	2.12	22316987	400000	
K	39	2	45	5836.052	ppb	5836.052	0.54	245236	400000	
Ca	40	1	45	141719.125	ppb	141719.125	1.34	496159193	400000	
Ca	44	2	45	144745.260	ppb	144745.260	0.25	315405	400000	
Ti	47	2	45	3.117	ppb	3.117	29.37	60	4000	
V	51	2	72	33.035	ppb	33.035	1.69	25286	2000	
Cr	52	2	72	32.528	ppb	32.528	2.24	29725	5000	
Mn	55	2	72	99.603	ppb	99.603	1.74	36801	10000	
Fe	57	2	72	488.470	ppb	488.470	7.86	8416	400000	
Co	59	2	72	31.331	ppb	31.331	1.13	48422	2000	
Ni	60	2	72	32.794	ppb	32.794	0.41	14361	5000	
Cu	63	2	72	32.147	ppb	32.147	3.64	38830	5000	
Zn	66	2	72	40.917	ppb	40.917	1.84	6742	5000	
As	75	2	72	30.217	ppb	30.217	2.52	3326	2000	
Se	78	1	72	34.361	ppb	34.361	7.35	5250	2000	
Sr	88	2	72	1950.187	ppb	1950.187	0.94	765235	4000	
Zr	90	2	72	5647.643	ppb	5647.643	1.54	30517	1000	>LDR
Nb	93	2	72	0.171	ppb	0.171	17.41	2194	200	
Mo	95	2	115	34.028	ppb	34.028	7.19	19858	2000	
Pd	105	2	115	0.022	ppb	0.022	202.31	40	100	
Ag	107	2	115	31.566	ppb	31.566	1.99	60364	100	
Cd	111	2	115	31.551	ppb	31.551	1.20	8159	2000	
Sn	120	2	115	30.253	ppb	30.253	2.18	21494	2000	
Sb	121	2	115	33.209	ppb	33.209	2.55	20756	1000	
Ba	137	2	115	78.948	ppb	78.948	1.17	17582	5000	
W	182	2	165	30.636	ppb	30.636	1.88	89445	100	
Pt	195	2	165	-0.001	ppb	-0.001	-1509.97	20	100	
Tl	205	2	165	30.842	ppb	30.842	0.49	168857	2000	
Pb	208	2	165	31.127	ppb	31.127	0.37	225518	5000	
Th	232	2	165	30.631	ppb	30.631	0.98	266936	2000	
U	238	2	165	52.535	ppb	52.535	0.12	487093	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	907846	0.45	1072135	84.68	60	120	
Sc (IS)	45	1	HMI H2	18109970	1.36	20791913	87.10	60	120	
Sc (IS)	45	2	HMI He	681344	1.07	758535	89.82	60	120	
Sc (IS)	45	3	No Gas	28149143	0.44	33963379	82.88	60	120	
Ge Internal Standard	72	1	HMI H2	6577905	0.74	7701407	85.41	60	120	
Ge Internal Standard	72	2	HMI He	722034	1.01	818771	88.19	60	120	
In Internal Standard	115	2	HMI He	2379132	1.86	2717298	87.56	60	120	
Ho-165	165	2	HMI He	11721962	0.23	12871763	91.07	60	120	

Sample Report

Sample Table

Sample Name	280-116653-c-1-a
Data File Name	165SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:25:38-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437099 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	1.461	ppb	1.461	135.68	127673	500000	
Li	7	2	45	2.650	ppb	2.650	354.20	7602	500000	
Li	7	3	45	0.687	ppb	0.687	144.56	3113529	50000	
Be	9	1	6	0.035	ppb	0.035	2.19	20	2000	
B	11	1	6	28.048	ppb	28.048	4.67	9997	2000	
Na	23	1	45	137120.045	ppb	137120.045	0.26	341566035	2000	>LDR
Na	23	2	45	132494.984	ppb	132494.984	0.72	22902959	400000	
Mg	24	2	45	961.421	ppb	961.421	1.96	75562	400000	
Al	27	2	45	234.635	ppb	234.635	1.36	5174	400000	
K	39	1	45	70099.161	ppb	70099.161	0.64	176925904	400000	
K	39	2	45	69569.255	ppb	69569.255	1.04	2828065	400000	
Ca	40	1	45	3232.210	ppb	3232.210	0.23	11618892	400000	
Ca	44	2	45	3229.520	ppb	3229.520	5.38	7145	400000	
Ti	47	2	45	4.785	ppb	4.785	15.84	93	4000	
V	51	2	72	0.076	ppb	0.076	508.29	1860	2000	
Cr	52	2	72	2.488	ppb	2.488	7.60	2470	5000	
Mn	55	2	72	3.579	ppb	3.579	15.40	1380	10000	
Fe	57	2	72	170.806	ppb	170.806	13.56	3047	400000	
Co	59	2	72	0.703	ppb	0.703	14.32	1123	2000	
Ni	60	2	72	2.742	ppb	2.742	21.04	1273	5000	
Cu	63	2	72	21.649	ppb	21.649	0.94	26452	5000	
Zn	66	2	72	99.600	ppb	99.600	1.71	16110	5000	
As	75	2	72	0.366	ppb	0.366	12.67	58	2000	
Se	78	1	72	0.349	ppb	0.349	27.95	59	2000	
Sr	88	2	72	25.129	ppb	25.129	0.30	9927	4000	
Zr	90	2	72	303.486	ppb	303.486	8.45	1680	1000	
Nb	93	2	72	0.246	ppb	0.246	55.32	2344	200	
Mo	95	2	115	1.473	ppb	1.473	11.00	907	2000	
Pd	105	2	115	-0.016	ppb	-0.016	-83.32	7	100	
Ag	107	2	115	0.023	ppb	0.023	47.41	97	100	
Cd	111	2	115	-0.011	ppb	-0.011	0.00	0	2000	
Sn	120	2	115	4.481	ppb	4.481	4.40	3267	2000	
Sb	121	2	115	0.387	ppb	0.387	41.68	257	1000	
Ba	137	2	115	8.498	ppb	8.498	5.21	1900	5000	
W	182	2	165	0.630	ppb	0.630	10.04	2617	100	
Pt	195	2	165	-0.005	ppb	-0.005	-87.72	10	100	
Tl	205	2	165	0.018	ppb	0.018	67.56	230	2000	
Pb	208	2	165	0.206	ppb	0.206	7.30	2374	5000	
Th	232	2	165	0.132	ppb	0.132	13.15	1480	2000	
U	238	2	165	0.114	ppb	0.114	8.59	1257	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	952578	1.23	1072135	88.85	60	120	
Sc (IS)	45	1	HMI H2	18483384	0.53	20791913	88.90	60	120	
Sc (IS)	45	2	HMI He	689082	0.52	758535	90.84	60	120	
Sc (IS)	45	3	No Gas	28075636	0.84	33963379	82.66	60	120	
Ge Internal Standard	72	1	HMI H2	6661925	0.08	7701407	86.50	60	120	
Ge Internal Standard	72	2	HMI He	723914	0.45	818771	88.41	60	120	
In Internal Standard	115	2	HMI He	2378011	0.79	2717298	87.51	60	120	
Ho-165	165	2	HMI He	11804830	0.59	12871763	91.71	60	120	

Sample Report

Sample Table

Sample Name	280-116726-h-1-b
Data File Name	166SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:29:24-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437099 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	70.714	ppb	70.714	9.49	129610	500000	
Li	7	2	45	38.305	ppb	38.305	78.07	7422	500000	
Li	7	3	45	35.422	ppb	35.422	6.61	3027649	50000	
Be	9	1	6	0.070	ppb	0.070	34.38	23	2000	
B	11	1	6	816.486	ppb	816.486	2.81	201569	2000	
Na	23	1	45	OR	ppb	OR	#VALUE!	OR	2000	
Na	23	2	45	3076013.074	ppb	3076013.074	0.32	474968126	400000	>LDR
Mg	24	2	45	669997.239	ppb	669997.239	0.27	46836106	400000	
Al	27	2	45	139.028	ppb	139.028	4.43	2784	400000	
K	39	1	45	158901.291	ppb	158901.291	0.67	335076742	400000	
K	39	2	45	151521.025	ppb	151521.025	1.35	5491491	400000	
Ca	40	1	45	OR	ppb	OR	#VALUE!	OR	400000	
Ca	44	2	45	1906621.404	ppb	1906621.404	0.65	3754287	400000	
Ti	47	2	45	7.461	ppb	7.461	57.95	130	4000	
V	51	2	72	14.550	ppb	14.550	7.23	10117	2000	
Cr	52	2	72	4.373	ppb	4.373	5.56	3477	5000	
Mn	55	2	72	11739.468	ppb	11739.468	1.04	3608679	10000	
Fe	57	2	72	1868.593	ppb	1868.593	2.18	26475	400000	
Co	59	2	72	1.068	ppb	1.068	6.61	1403	2000	
Ni	60	2	72	14.663	ppb	14.663	3.21	5385	5000	
Cu	63	2	72	2.866	ppb	2.866	3.21	3411	5000	
Zn	66	2	72	3.332	ppb	3.332	20.60	640	5000	
As	75	2	72	14.626	ppb	14.626	5.63	1349	2000	
Se	78	1	72	3.627	ppb	3.627	12.49	452	2000	
Sr	88	2	72	31829.457	ppb	31829.457	0.48	10406137	4000	>LDR
Zr	90	2	72	2289.749	ppb	2289.749	3.65	10328	1000	
Nb	93	2	72	0.913	ppb	0.913	11.54	3030	200	
Mo	95	2	115	1.407	ppb	1.407	14.66	687	2000	
Pd	105	2	115	0.743	ppb	0.743	18.55	533	100	
Ag	107	2	115	0.061	ppb	0.061	77.73	133	100	
Cd	111	2	115	0.054	ppb	0.054	209.18	13	2000	
Sn	120	2	115	0.272	ppb	0.272	46.45	230	2000	
Sb	121	2	115	0.328	ppb	0.328	19.00	173	1000	
Ba	137	2	115	3174.541	ppb	3174.541	0.48	558473	5000	
W	182	2	165	0.605	ppb	0.605	6.42	2004	100	
Pt	195	2	165	0.002	ppb	0.002	1139.70	20	100	
Tl	205	2	165	0.020	ppb	0.020	59.15	190	2000	
Pb	208	2	165	0.615	ppb	0.615	7.30	4214	5000	
Th	232	2	165	0.169	ppb	0.169	22.75	1424	2000	
U	238	2	165	16.264	ppb	16.264	0.74	119784	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	711798	0.98	1072135	66.39	60	120	
Sc (IS)	45	1	HMI H2	15841124	0.41	20791913	76.19	60	120	
Sc (IS)	45	2	HMI He	615744	0.24	758535	81.18	60	120	
Sc (IS)	45	3	No Gas	24954117	0.29	33963379	73.47	60	120	
Ge Internal Standard	72	1	HMI H2	5324094	0.61	7701407	69.13	60	120	
Ge Internal Standard	72	2	HMI He	601568	0.74	818771	73.47	60	120	
In Internal Standard	115	2	HMI He	1880041	0.34	2717298	69.19	60	120	
Ho-165	165	2	HMI He	9303242	0.27	12871763	72.28	60	120	

Sample Report

Sample Table

Sample Name	280-116759-a-3-a
Data File Name	167SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:33:11-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437099 200.8
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-18.689	ppb	-18.689	-38.95	107217	500000	
Li	7	2	45	-42.106	ppb	-42.106	-12.89	6165	500000	
Li	7	3	45	-20.971	ppb	-20.971	-10.91	2470977	50000	
Be	9	1	6	0.023	ppb	0.023	96.77	13	2000	
B	11	1	6	597.250	ppb	597.250	0.79	163739	2000	
Na	23	1	45	548286.444	ppb	548286.444	0.45	1211732569	2000	>LDR
Na	23	2	45	522038.505	ppb	522038.505	0.83	82759590	400000	
Mg	24	2	45	6449.479	ppb	6449.479	1.36	463160	400000	
Al	27	2	45	1157.192	ppb	1157.192	1.20	22972	400000	
K	39	1	45	192479.812	ppb	192479.812	0.46	418785194	400000	
K	39	2	45	185119.758	ppb	185119.758	0.79	6885233	400000	
Ca	40	1	45	10028.785	ppb	10028.785	0.76	31861720	400000	
Ca	44	2	45	9458.569	ppb	9458.569	1.49	19150	400000	
Ti	47	2	45	15.470	ppb	15.470	48.39	277	4000	
V	51	2	72	-0.122	ppb	-0.122	-59.03	1600	2000	
Cr	52	2	72	2.270	ppb	2.270	6.34	2114	5000	
Mn	55	2	72	7.742	ppb	7.742	7.82	2717	10000	
Fe	57	2	72	165.928	ppb	165.928	8.54	2757	400000	
Co	59	2	72	0.176	ppb	0.176	13.50	287	2000	
Ni	60	2	72	3.122	ppb	3.122	4.74	1340	5000	
Cu	63	2	72	3.947	ppb	3.947	11.62	5018	5000	
Zn	66	2	72	14.083	ppb	14.083	4.72	2310	5000	
As	75	2	72	3.999	ppb	3.999	10.60	425	2000	
Se	78	1	72	2.094	ppb	2.094	0.95	291	2000	
Sr	88	2	72	88.681	ppb	88.681	1.91	32505	4000	
Zr	90	2	72	98.801	ppb	98.801	23.95	533	1000	
Nb	93	2	72	-0.104	ppb	-0.104	-64.86	1547	200	
Mo	95	2	115	3.785	ppb	3.785	15.72	2070	2000	
Pd	105	2	115	0.002	ppb	0.002	13.12	20	100	
Ag	107	2	115	-0.014	ppb	-0.014	-61.31	23	100	
Cd	111	2	115	0.003	ppb	0.003	829.19	3	2000	
Sn	120	2	115	0.178	ppb	0.178	38.20	207	2000	
Sb	121	2	115	1.624	ppb	1.624	18.46	943	1000	
Ba	137	2	115	24.413	ppb	24.413	2.04	4996	5000	
W	182	2	165	0.860	ppb	0.860	5.51	3007	100	
Pt	195	2	165	-0.005	ppb	-0.005	-102.69	10	100	
Tl	205	2	165	-0.015	ppb	-0.015	-21.03	43	2000	
Pb	208	2	165	0.093	ppb	0.093	6.58	1420	5000	
Th	232	2	165	0.086	ppb	0.086	15.64	980	2000	
U	238	2	165	0.468	ppb	0.468	4.68	4174	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	789502	0.27	1072135	73.64	60	120	
Sc (IS)	45	1	HMI H2	16402734	0.51	20791913	78.89	60	120	
Sc (IS)	45	2	HMI He	632157	0.84	758535	83.34	60	120	
Sc (IS)	45	3	No Gas	23670273	0.32	33963379	69.69	60	120	
Ge Internal Standard	72	1	HMI H2	5894041	0.24	7701407	76.53	60	120	
Ge Internal Standard	72	2	HMI He	673692	0.47	818771	82.28	60	120	
In Internal Standard	115	2	HMI He	2183512	0.87	2717298	80.36	60	120	
Ho-165	165	2	HMI He	10803550	0.68	12871763	83.93	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	168_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:37:04-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	464.791	ppb	1.066	265871	500	93.0	90	110	
Li	7	2	45	422.759	ppb	6.817	15412	500	84.6	90	110	>+\-10%
Li	7	3	45	441.339	ppb	3.118	6120755	500	88.3	90	110	>+\-10%
Be	9	1	6	50.308	ppb	5.546	14054	50	100.6	90	110	
B	11	1	6	70.256	ppb	5.587	20972	50	140.5	90	110	>+\-10%
Na	23	1	45	6090.061	ppb	0.803	14242423	5000	121.8	90	110	>+\-10%
Na	23	2	45	5636.653	ppb	1.735	953303	5000	112.7	90	110	>+\-10%
Mg	24	2	45	5027.306	ppb	0.673	381903	5000	100.5	90	110	
Al	27	2	45	5180.322	ppb	0.289	108353	5000	103.6	90	110	
K	39	1	45	5493.026	ppb	0.323	19767903	5000	109.9	90	110	
K	39	2	45	5084.687	ppb	0.840	211106	5000	101.7	90	110	
Ca	40	1	45	5138.204	ppb	0.570	17179166	5000	102.8	90	110	
Ca	44	2	45	5197.826	ppb	1.531	11141	5000	104.0	90	110	
Ti	47	2	45	50.417	ppb	9.637	953	50	100.8	90	110	
V	51	2	72	47.860	ppb	2.532	35976	50	95.7	90	110	
Cr	52	2	72	48.084	ppb	1.459	44021	50	96.2	90	110	
Mn	55	2	72	50.163	ppb	3.333	18636	50	100.3	90	110	
Fe	57	2	72	4941.428	ppb	1.646	84141	5000	98.8	90	110	
Co	59	2	72	48.813	ppb	1.964	75735	50	97.6	90	110	
Ni	60	2	72	47.422	ppb	4.988	20812	50	94.8	90	110	
Cu	63	2	72	48.545	ppb	1.672	58530	50	97.1	90	110	
Zn	66	2	72	48.876	ppb	7.769	8036	50	97.8	90	110	
As	75	2	72	49.358	ppb	3.131	5444	50	98.7	90	110	
Se	78	1	72	49.391	ppb	0.597	7274	50	98.8	90	110	
Sr	88	2	72	52.501	ppb	0.523	20726	50	105.0	90	110	
Zr	90	2	72	148.504	ppb	5.571	843	50	297.0	90	110	>+\-10%
Nb	93	2	72	84.680	ppb	1.142	167258	100	84.7	90	110	>+\-10%
Mo	95	2	115	46.861	ppb	1.920	28002	50	93.7	90	110	
Pd	105	2	115	50.207	ppb	2.632	45291	50	100.4	90	110	
Ag	107	2	115	47.533	ppb	3.465	92997	50	95.1	90	110	
Cd	111	2	115	47.422	ppb	2.365	12553	50	94.8	90	110	
Sn	120	2	115	48.785	ppb	5.372	35420	50	97.6	90	110	
Sb	121	2	115	49.823	ppb	3.488	31847	50	99.6	90	110	
Ba	137	2	115	49.251	ppb	6.342	11222	50	98.5	90	110	
W	182	2	165	47.804	ppb	0.515	137159	50	95.6	90	110	
Pt	195	2	165	48.577	ppb	1.253	111277	50	97.2	90	110	
Tl	205	2	165	49.687	ppb	1.918	268017	50	99.4	90	110	
Pb	208	2	165	50.405	ppb	2.013	359375	50	100.8	90	110	
Th	232	2	165	50.014	ppb	1.234	429403	50	100.0	90	110	
U	238	2	165	50.232	ppb	1.340	459041	50	100.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	835906	1.06	1072135	77.97	60	120	
Sc (IS)	45	1	HMI H2	17229817	0.61	20791913	82.87	60	120	
Sc (IS)	45	2	HMI He	668528	0.72	758535	88.13	60	120	
Sc (IS)	45	3	No Gas	25167619	0.79	33963379	74.10	60	120	
Ge Internal Standard	72	1	HMI H2	6339212	0.20	7701407	82.31	60	120	
Ge Internal Standard	72	2	HMI He	724971	0.67	818771	88.54	60	120	
In Internal Standard	115	2	HMI He	2436236	3.21	2717298	89.66	60	120	
Ho-165	165	2	HMI He	11554856	1.60	12871763	89.77	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	169_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:40:52-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-17.529	ppb	-15.3	2678948	10	
Be	9	1	6	0.051	ppb	37.9	23	0.5	
B	11	1	6	12.017	ppb	6.0	4394	0.5	>RL
Na	23	1	45	547.056	ppb	1.2	1381459	25	>RL
Na	23	2	45	481.899	ppb	1.4	91783	25	>RL
Mg	24	2	45	8.661	ppb	4.0	1030	25	
Al	27	2	45	-2.067	ppb	-71.9	77	15	
K	39	1	45	332.458	ppb	6.1	8207990	50	>RL
K	39	2	45	37.480	ppb	56.2	13267	50	
Ca	40	1	45	10.444	ppb	6.4	100339	50	
Ca	44	2	45	19.621	ppb	34.9	73	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.179	ppb	23.1	2724	1	>RL
Cr	52	2	72	-0.003	ppb	-2874.3	210	1	
Mn	55	2	72	0.278	ppb	45.3	163	0.5	
Fe	57	2	72	-0.271	ppb	-658.5	147	25	
Co	59	2	72	-0.006	ppb	-161.3	27	0.5	
Ni	60	2	72	0.180	ppb	100.2	160	1	
Cu	63	2	72	0.303	ppb	34.3	1087	1	
Zn	66	2	72	0.086	ppb	419.6	260	5	
As	75	2	72	0.062	ppb	253.0	25	1	
Se	78	1	72	0.078	ppb	35.8	16	1	
Sr	88	2	72	0.142	ppb	75.4	100	0.5	
Zr	90	2	72	8.488	ppb	68.7	87	1	>RL
Nb	93	2	72	4.682	ppb	10.2	11315	2	>RL
Mo	95	2	115	0.108	ppb	103.9	117	0.5	
Pd	105	2	115	0.039	ppb	141.1	57	1	
Ag	107	2	115	0.003	ppb	319.8	60	1	
Cd	111	2	115	-0.011	ppb	0.0	0	0.5	
Sn	120	2	115	0.196	ppb	52.0	247	1	
Sb	121	2	115	0.368	ppb	13.4	253	0.6	
Ba	137	2	115	-0.011	ppb	-454.1	7	0.5	
W	182	2	165	0.120	ppb	32.2	1117	1	
Pt	195	2	165	0.001	ppb	1512.5	23	1	
Tl	205	2	165	0.004	ppb	211.0	147	0.1	
Pb	208	2	165	-0.025	ppb	-50.2	687	0.5	
Th	232	2	165	0.042	ppb	16.6	683	1	
U	238	2	165	0.043	ppb	28.0	590	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	886857	1.26	1072135	82.72	60	120	
Sc (IS)	45	1	HMI H2	17304005	0.43	20791913	83.22	60	120	
Sc (IS)	45	2	HMI He	687728	0.37	758535	90.67	60	120	
Sc (IS)	45	3	No Gas	25410268	0.71	33963379	74.82	60	120	
Ge Internal Standard	72	1	HMI H2	6375280	1.06	7701407	82.78	60	120	
Ge Internal Standard	72	2	HMI He	744720	0.56	818771	90.96	60	120	
In Internal Standard	115	2	HMI He	2467123	0.65	2717298	90.79	60	120	
Ho-165	165	2	HMI He	11668426	0.08	12871763	90.65	60	120	

Blank Report

Sample Table

Sample Name	MB 280-435473/1-A
Data File Name	170_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:44:39-07:00
Sample Type	Blank
Dilution	1
Comment	435473 6020a
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-6.836	ppb	-55.60496984	114977	0.5
Li	7	2	45	-52.392	ppb	-15.98626675	6458	0.5
Li	7	3	45	-18.518	ppb	-8.76791811	2501423	10
Be	9	1	6	-0.028	ppb	0	0	0.5
B	11	1	6	8.733	ppb	8.539464178	3227	0.5
Na	23	1	45	488.935	ppb	0.841044275	1225674	25
Na	23	2	45	424.848	ppb	0.582462367	81349	25
Mg	24	2	45	9.233	ppb	16.2401945	1067	25
Al	27	2	45	4.368	ppb	22.56765049	213	15
K	39	1	45	-1183.631	ppb	-2.147977175	4708881	50
K	39	2	45	43.037	ppb	45.63044474	13390	50
Ca	40	1	45	6.719	ppb	16.67509208	86438	50
Ca	44	2	45	16.783	ppb	95.35564574	67	25
Ti	47	2	45	0.173	ppb	173.2050808	3	0.5
V	51	2	72	-0.216	ppb	-87.66672299	1684	1
Cr	52	2	72	0.057	ppb	125.4278652	263	1
Mn	55	2	72	0.557	ppb	15.88065328	267	0.5
Fe	57	2	72	39.202	ppb	21.29260525	827	25
Co	59	2	72	0.003	ppb	250.4393648	40	0.5
Ni	60	2	72	0.088	ppb	149.3232365	117	1
Cu	63	2	72	0.260	ppb	13.33648059	1023	1
Zn	66	2	72	0.889	ppb	89.86332153	387	5
As	75	2	72	0.018	ppb	459.2542387	20	1
Se	78	1	72	0.034	ppb	166.4296006	9	1
Sr	88	2	72	0.045	ppb	109.3064073	60	0.5
Zr	90	2	72	0.124	ppb	3831.842405	40	1
Nb	93	2	72	3.186	ppb	14.55592139	8229	2
Mo	95	2	115	0.056	ppb	185.4522924	87	0.5
Pd	105	2	115	-0.019	ppb	-32.48977399	3	1
Ag	107	2	115	-0.013	ppb	-37.58820169	30	1
Cd	111	2	115	-0.011	ppb	-1.47216E-06	0	0.5
Sn	120	2	115	0.087	ppb	80.68882525	167	1
Sb	121	2	115	0.140	ppb	15.47747877	107	0.6
Ba	137	2	115	2.933	ppb	19.77585002	690	0.5
W	182	2	165	0.089	ppb	8.933878852	1023	1
Pt	195	2	165	0.002	ppb	687.884921	27	1
Tl	205	2	165	-0.007	ppb	-98.34182895	90	0.1
Pb	208	2	165	0.029	ppb	20.01466435	1070	0.5
Th	232	2	165	0.048	ppb	40.11151731	727	1
U	238	2	165	-0.002	ppb	-190.2493131	173	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	845635	1.40	1072135	78.87	60	120	
Sc (IS)	45	1	HMI H2	17021676	0.48	20791913	81.87	60	120	
Sc (IS)	45	2	HMI He	682758	0.36	758535	90.01	60	120	
Sc (IS)	45	3	No Gas	23793450	0.37	33963379	70.06	60	120	
Ge Internal Standard	72	1	HMI H2	6260122	0.63	7701407	81.29	60	120	
Ge Internal Standard	72	2	HMI He	737375	1.01	818771	90.06	60	120	
In Internal Standard	115	2	HMI He	2483031	1.88	2717298	91.38	60	120	
Ho-165	165	2	HMI He	11618063	0.36	12871763	90.26	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-435473/2-A
Data File Name	171_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:48:29-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	435473 6020a
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	81.076	81.076	ppb	8.029	140619	400	20.3	80	120	>+/-20%
Li	7	2	45	38.226	38.226	ppb	31.941	8156	400	9.6	80	120	>+/-20%
Li	7	3	45	63.002	63.002	ppb	6.095	3027539	400	15.8	80	120	>+/-20%
Be	9	1	6	40.159	40.159	ppb	1.619	11418	40	100.4	80	120	
Na	23	2	45	335.277	335.277	ppb	1.881	65441	40	838.2	80	120	>+/-20%
Mg	24	2	45	9.789	9.789	ppb	21.413	1100	40	24.5	80	120	>+/-20%
Al	27	2	45	456.411	456.411	ppb	2.677	9774	40	1141.0	80	120	>+/-20%
K	39	2	45	33.827	33.827	ppb	83.727	12910	40	84.6	80	120	
Ca	44	2	45	200.380	200.380	ppb	10.939	463	40	500.9	80	120	>+/-20%
V	51	2	72	38.386	38.386	ppb	2.250	29234	40	96.0	80	120	
Cr	52	2	72	39.898	39.898	ppb	1.127	36597	40	99.7	80	120	
Mn	55	2	72	42.882	42.882	ppb	1.182	15956	40	107.2	80	120	
Fe	57	2	72	427.281	427.281	ppb	6.019	7416	40	1068.2	80	120	>+/-20%
Co	59	2	72	39.459	39.459	ppb	0.761	61280	40	98.6	80	120	
Ni	60	2	72	40.574	40.574	ppb	4.018	17838	40	101.4	80	120	
Cu	63	2	72	39.959	39.959	ppb	2.427	48352	40	99.9	80	120	
Zn	66	2	72	39.872	39.872	ppb	2.467	6608	40	99.7	80	120	
As	75	2	72	38.008	38.008	ppb	1.917	4200	40	95.0	80	120	
Se	78	1	72	39.492	39.492	ppb	4.545	5648	40	98.7	80	120	
Nb	93	2	72	2.155	2.155	ppb	7.910	6082	40	5.4	80	120	>+/-20%
Mo	95	2	115	37.028	37.028	ppb	3.165	21825	40	92.6	80	120	
Pd	105	2	115	0.025	0.025	ppb	107.514	43	40	0.1	80	120	>+/-20%
Ag	107	2	115	40.659	40.659	ppb	3.597	78462	40	101.6	80	120	
Cd	111	2	115	40.431	40.431	ppb	0.389	10561	40	101.1	80	120	
Sn	120	2	115	41.015	41.015	ppb	4.115	29385	40	102.5	80	120	
Sb	121	2	115	41.228	41.228	ppb	4.427	25995	40	103.1	80	120	
Ba	137	2	115	43.105	43.105	ppb	6.218	9691	40	107.8	80	120	
W	182	2	165	15.096	15.096	ppb	2.480	43248	40	37.7	80	120	>+/-20%
Pt	195	2	165	0.001	0.001	ppb	446.231	23	40	0.0	80	120	>+/-20%
Tl	205	2	165	41.952	41.952	ppb	1.509	223327	40	104.9	80	120	
Pb	208	2	165	42.241	42.241	ppb	1.540	297324	40	105.6	80	120	
Th	232	2	165	41.032	41.032	ppb	0.759	347662	40	102.6	80	120	
U	238	2	165	41.388	41.388	ppb	1.202	373244	40	103.5	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	850549	1.42	1072135	79.33	60	120	
Sc (IS)	45	1	HMI H2	16797584	1.02	20791913	80.79	60	120	
Sc (IS)	45	2	HMI He	676824	0.34	758535	89.23	60	120	
Sc (IS)	45	3	No Gas	23358752	0.18	33963379	68.78	60	120	
Ge Internal Standard	72	1	HMI H2	6153876	0.74	7701407	79.91	60	120	
Ge Internal Standard	72	2	HMI He	725642	0.66	818771	88.63	60	120	
In Internal Standard	115	2	HMI He	2402809	3.07	2717298	88.43	60	120	
Ho-165	165	2	HMI He	11400504	0.50	12871763	88.57	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-D@5
Data File Name	172SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:52:17-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	7.267	ppb	7.267	118.82	111578	500000	
Li	7	2	45	-29.674	ppb	-29.674	-30.31	6422	500000	
Li	7	3	45	1.856	ppb	1.856	179.16	2549444	50000	
Be	9	1	6	0.108	ppb	0.108	52.90	37	2000	
B	11	1	6	189.020	ppb	189.020	1.91	53727	2000	
Na	23	1	45	570110.427	ppb	570110.427	0.93	1221805822	2000	>LDR
Na	23	2	45	530478.297	ppb	530478.297	1.13	84503655	400000	
Mg	24	2	45	1436.959	ppb	1436.959	0.95	103955	400000	
Al	27	2	45	125.393	ppb	125.393	7.81	2600	400000	
K	39	1	45	51269.637	ppb	51269.637	0.24	113203298	400000	
K	39	2	45	51054.473	ppb	51054.473	0.49	1916035	400000	
Ca	40	1	45	3094.232	ppb	3094.232	0.94	9574494	400000	
Ca	44	2	45	3373.994	ppb	3373.994	2.17	6882	400000	
Ti	47	2	45	2.781	ppb	2.781	19.59	50	4000	
V	51	2	72	209.765	ppb	209.765	1.34	141593	2000	
Cr	52	2	72	7.007	ppb	7.007	2.46	6158	5000	
Mn	55	2	72	9.501	ppb	9.501	9.00	3341	10000	
Fe	57	2	72	826.720	ppb	826.720	4.93	13267	400000	
Co	59	2	72	4.584	ppb	4.584	6.72	6675	2000	
Ni	60	2	72	156.300	ppb	156.300	1.80	63942	5000	
Cu	63	2	72	53.025	ppb	53.025	1.18	59680	5000	
Zn	66	2	72	38.846	ppb	38.846	9.43	6015	5000	
As	75	2	72	4.117	ppb	4.117	5.96	439	2000	
Se	78	1	72	2.728	ppb	2.728	3.26	367	2000	
Sr	88	2	72	60.367	ppb	60.367	1.43	22262	4000	
Zr	90	2	72	701.385	ppb	701.385	3.43	3587	1000	
Nb	93	2	72	3.215	ppb	3.215	13.63	7613	200	
Mo	95	2	115	883.395	ppb	883.395	1.18	484617	2000	
Pd	105	2	115	-0.011	ppb	-0.011	-191.22	10	100	
Ag	107	2	115	0.074	ppb	0.074	34.63	183	100	
Cd	111	2	115	0.236	ppb	0.236	114.38	60	2000	
Sn	120	2	115	0.941	ppb	0.941	5.98	720	2000	
Sb	121	2	115	1.913	ppb	1.913	25.88	1137	1000	
Ba	137	2	115	2.774	ppb	2.774	8.23	590	5000	
W	182	2	165	51.447	ppb	51.447	2.35	139487	100	
Pt	195	2	165	0.063	ppb	0.063	27.94	157	100	
Tl	205	2	165	0.031	ppb	0.031	45.09	277	2000	
Pb	208	2	165	1.066	ppb	1.066	3.27	7981	5000	
Th	232	2	165	0.158	ppb	0.158	4.35	1577	2000	
U	238	2	165	0.307	ppb	0.307	6.99	2830	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	811819	0.53	1072135	75.72	60	120	
Sc (IS)	45	1	HMI H2	15906491	0.61	20791913	76.50	60	120	
Sc (IS)	45	2	HMI He	635212	0.58	758535	83.74	60	120	
Sc (IS)	45	3	No Gas	22916971	0.24	33963379	67.48	60	120	
Ge Internal Standard	72	1	HMI H2	5725233	0.30	7701407	74.34	60	120	
Ge Internal Standard	72	2	HMI He	677386	0.18	818771	82.73	60	120	
In Internal Standard	115	2	HMI He	2240103	0.83	2717298	82.44	60	120	
Ho-165	165	2	HMI He	10923802	0.23	12871763	84.87	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-Dsd@25
Data File Name	173SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:56:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	0.645	ppb	0.645	801.58	113848	500000	
Li	7	2	45	-43.958	ppb	-43.958	-57.20	6342	500000	
Li	7	3	45	-10.196	ppb	-10.196	-11.17	2541889	50000	
Be	9	1	6	-0.004	ppb	-0.004	-981.30	7	2000	
B	11	1	6	49.393	ppb	49.393	2.83	15065	2000	
Na	23	1	45	125238.225	ppb	125238.225	1.17	278798716	2000	>LDR
Na	23	2	45	117657.794	ppb	117657.794	1.25	19295427	400000	
Mg	24	2	45	324.933	ppb	324.933	4.10	24458	400000	
Al	27	2	45	29.125	ppb	29.125	5.19	710	400000	
K	39	1	45	11399.588	ppb	11399.588	1.53	31673353	400000	
K	39	2	45	10868.136	ppb	10868.136	0.51	428542	400000	
Ca	40	1	45	704.425	ppb	704.425	2.01	2311655	400000	
Ca	44	2	45	657.345	ppb	657.345	7.56	1403	400000	
Ti	47	2	45	2.160	ppb	2.160	24.31	40	4000	
V	51	2	72	44.326	ppb	44.326	3.16	32567	2000	
Cr	52	2	72	1.611	ppb	1.611	4.79	1630	5000	
Mn	55	2	72	0.615	ppb	0.615	32.06	277	10000	
Fe	57	2	72	58.807	ppb	58.807	4.65	1117	400000	
Co	59	2	72	1.093	ppb	1.093	14.24	1684	2000	
Ni	60	2	72	34.931	ppb	34.931	1.89	14948	5000	
Cu	63	2	72	11.597	ppb	11.597	7.95	14128	5000	
Zn	66	2	72	8.003	ppb	8.003	14.69	1477	5000	
As	75	2	72	0.722	ppb	0.722	36.33	94	2000	
Se	78	1	72	0.655	ppb	0.655	37.90	96	2000	
Sr	88	2	72	12.401	ppb	12.401	2.80	4798	4000	
Zr	90	2	72	87.053	ppb	87.053	5.82	497	1000	
Nb	93	2	72	0.143	ppb	0.143	44.67	2090	200	
Mo	95	2	115	192.742	ppb	192.742	2.05	111040	2000	
Pd	105	2	115	0.004	ppb	0.004	654.01	23	100	
Ag	107	2	115	0.011	ppb	0.011	177.86	73	100	
Cd	111	2	115	0.067	ppb	0.067	0.92	20	2000	
Sn	120	2	115	0.323	ppb	0.323	7.19	323	2000	
Sb	121	2	115	0.409	ppb	0.409	18.52	267	1000	
Ba	137	2	115	0.566	ppb	0.566	8.96	133	5000	
W	182	2	165	11.296	ppb	11.296	3.00	32050	100	
Pt	195	2	165	0.018	ppb	0.018	116.01	60	100	
Tl	205	2	165	0.007	ppb	0.007	104.65	160	2000	
Pb	208	2	165	0.202	ppb	0.202	11.23	2230	5000	
Th	232	2	165	0.018	ppb	0.018	32.87	457	2000	
U	238	2	165	0.064	ppb	0.064	15.38	750	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	842580	0.84	1072135	78.59	60	120	
Sc (IS)	45	1	HMI H2	16518271	0.61	20791913	79.45	60	120	
Sc (IS)	45	2	HMI He	653741	0.86	758535	86.18	60	120	
Sc (IS)	45	3	No Gas	23617152	0.60	33963379	69.54	60	120	
Ge Internal Standard	72	1	HMI H2	6036736	0.18	7701407	78.38	60	120	
Ge Internal Standard	72	2	HMI He	705861	0.49	818771	86.21	60	120	
In Internal Standard	115	2	HMI He	2351775	0.79	2717298	86.55	60	120	
Ho-165	165	2	HMI He	11224884	0.26	12871763	87.21	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-E MS@5
Data File Name	174SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-14T23:59:58-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	32.163	ppb	32.163	7.09	115631	500000	
Li	7	2	45	4.381	ppb	4.381	557.06	6852	500000	
Li	7	3	45	21.388	ppb	21.388	5.92	2602739	50000	
Be	9	1	6	8.154	ppb	8.154	3.18	2200	2000	
B	11	1	6	198.623	ppb	198.623	0.86	55955	2000	
Na	23	1	45	592658.016	ppb	592658.016	0.47	1235679128	2000	>LDR
Na	23	2	45	549117.292	ppb	549117.292	0.19	85134639	400000	
Mg	24	2	45	1470.057	ppb	1470.057	1.26	103495	400000	
Al	27	2	45	217.150	ppb	217.150	2.16	4304	400000	
K	39	1	45	53245.698	ppb	53245.698	0.27	114118842	400000	
K	39	2	45	52071.863	ppb	52071.863	0.80	1901642	400000	
Ca	40	1	45	3191.784	ppb	3191.784	0.28	9606832	400000	
Ca	44	2	45	3152.113	ppb	3152.113	8.24	6258	400000	
Ti	47	2	45	4.389	ppb	4.389	74.40	77	4000	
V	51	2	72	221.064	ppb	221.064	0.73	145283	2000	
Cr	52	2	72	17.992	ppb	17.992	3.76	15112	5000	
Mn	55	2	72	10.784	ppb	10.784	9.90	3687	10000	
Fe	57	2	72	353.466	ppb	353.466	6.69	5601	400000	
Co	59	2	72	12.765	ppb	12.765	3.17	18052	2000	
Ni	60	2	72	172.604	ppb	172.604	1.25	68784	5000	
Cu	63	2	72	73.125	ppb	73.125	2.85	79931	5000	
Zn	66	2	72	45.301	ppb	45.301	3.39	6799	5000	
As	75	2	72	11.209	ppb	11.209	6.98	1138	2000	
Se	78	1	72	9.888	ppb	9.888	2.10	1285	2000	
Sr	88	2	72	69.501	ppb	69.501	0.77	24963	4000	
Zr	90	2	72	1728.684	ppb	1728.684	2.60	8563	1000	
Nb	93	2	72	1.030	ppb	1.030	11.84	3531	200	
Mo	95	2	115	967.735	ppb	967.735	0.52	513448	2000	
Pd	105	2	115	0.047	ppb	0.047	65.61	57	100	
Ag	107	2	115	7.507	ppb	7.507	2.87	13110	100	
Cd	111	2	115	7.987	ppb	7.987	13.64	1884	2000	
Sn	120	2	115	8.396	ppb	8.396	1.47	5498	2000	
Sb	121	2	115	10.556	ppb	10.556	2.19	6015	1000	
Ba	137	2	115	10.633	ppb	10.633	4.93	2164	5000	
W	182	2	165	56.597	ppb	56.597	0.65	149188	100	
Pt	195	2	165	0.072	ppb	0.072	35.52	170	100	
Tl	205	2	165	7.875	ppb	7.875	0.18	39166	2000	
Pb	208	2	165	9.068	ppb	9.068	2.25	60117	5000	
Th	232	2	165	6.646	ppb	6.646	1.45	52728	2000	
U	238	2	165	8.442	ppb	8.442	1.06	71093	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	805052	0.50	1072135	75.09	60	120	
Sc (IS)	45	1	HMI H2	15474751	0.39	20791913	74.43	60	120	
Sc (IS)	45	2	HMI He	618207	0.23	758535	81.50	60	120	
Sc (IS)	45	3	No Gas	22224376	0.52	33963379	65.44	60	120	
Ge Internal Standard	72	1	HMI H2	5582449	0.41	7701407	72.49	60	120	
Ge Internal Standard	72	2	HMI He	659924	0.68	818771	80.60	60	120	
In Internal Standard	115	2	HMI He	2166435	0.39	2717298	79.73	60	120	
Ho-165	165	2	HMI He	10625499	0.56	12871763	82.55	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-F MSD@5
Data File Name	175SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:03:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	30.223	ppb	30.223	27.46	114899	500000	
Li	7	2	45	-5.685	ppb	-5.685	-149.38	6628	500000	
Li	7	3	45	20.864	ppb	20.864	9.77	2562544	50000	
Be	9	1	6	7.828	ppb	7.828	2.91	2107	2000	
B	11	1	6	197.232	ppb	197.232	1.03	55423	2000	
Na	23	1	45	576295.591	ppb	576295.591	0.96	1199678675	2000	>LDR
Na	23	2	45	533461.332	ppb	533461.332	0.35	82152095	400000	
Mg	24	2	45	1442.618	ppb	1442.618	1.56	100887	400000	
Al	27	2	45	210.346	ppb	210.346	6.89	4144	400000	
K	39	1	45	51527.962	ppb	51527.962	0.63	110478635	400000	
K	39	2	45	51230.583	ppb	51230.583	1.21	1858597	400000	
Ca	40	1	45	3083.138	ppb	3083.138	0.46	9267176	400000	
Ca	44	2	45	2952.711	ppb	2952.711	2.54	5825	400000	
Ti	47	2	45	3.447	ppb	3.447	86.24	60	4000	
V	51	2	72	215.155	ppb	215.155	1.69	141051	2000	
Cr	52	2	72	13.626	ppb	13.626	5.49	11458	5000	
Mn	55	2	72	9.692	ppb	9.692	11.56	3311	10000	
Fe	57	2	72	338.588	ppb	338.588	5.22	5358	400000	
Co	59	2	72	12.386	ppb	12.386	2.95	17468	2000	
Ni	60	2	72	170.044	ppb	170.044	0.74	67578	5000	
Cu	63	2	72	70.831	ppb	70.831	0.65	77236	5000	
Zn	66	2	72	43.384	ppb	43.384	4.64	6502	5000	
As	75	2	72	11.120	ppb	11.120	5.11	1126	2000	
Se	78	1	72	9.689	ppb	9.689	5.55	1261	2000	
Sr	88	2	72	66.165	ppb	66.165	2.03	23701	4000	
Zr	90	2	72	1689.016	ppb	1689.016	1.04	8343	1000	
Nb	93	2	72	0.485	ppb	0.485	61.26	2554	200	
Mo	95	2	115	1000.946	ppb	1000.946	0.59	526391	2000	
Pd	105	2	115	0.002	ppb	0.002	612.87	20	100	
Ag	107	2	115	7.163	ppb	7.163	4.10	12403	100	
Cd	111	2	115	8.003	ppb	8.003	10.24	1870	2000	
Sn	120	2	115	8.827	ppb	8.827	3.29	5725	2000	
Sb	121	2	115	10.029	ppb	10.029	5.01	5665	1000	
Ba	137	2	115	9.867	ppb	9.867	5.95	1990	5000	
W	182	2	165	55.042	ppb	55.042	0.78	144966	100	
Pt	195	2	165	0.091	ppb	0.091	13.76	210	100	
Tl	205	2	165	7.645	ppb	7.645	2.10	37986	2000	
Pb	208	2	165	8.675	ppb	8.675	0.13	57488	5000	
Th	232	2	165	6.381	ppb	6.381	0.93	50586	2000	
U	238	2	165	8.118	ppb	8.118	1.40	68304	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	802976	0.27	1072135	74.90	60	120	
Sc (IS)	45	1	HMI H2	15450461	0.23	20791913	74.31	60	120	
Sc (IS)	45	2	HMI He	614056	0.43	758535	80.95	60	120	
Sc (IS)	45	3	No Gas	21910916	0.84	33963379	64.51	60	120	
Ge Internal Standard	72	1	HMI H2	5591423	0.66	7701407	72.60	60	120	
Ge Internal Standard	72	2	HMI He	658087	0.34	818771	80.37	60	120	
In Internal Standard	115	2	HMI He	2147330	0.26	2717298	79.02	60	120	
Ho-165	165	2	HMI He	10615065	0.47	12871763	82.47	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-1-D pds@5
Data File Name	176SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:07:43-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	232.193	ppb	232.193	0.39	169325	500000	
Li	7	2	45	171.261	ppb	171.261	7.56	9647	500000	
Li	7	3	45	209.527	ppb	209.527	1.76	3762398	50000	
Be	9	1	6	204.905	ppb	204.905	1.34	54011	2000	
B	11	1	6	198.249	ppb	198.249	0.60	54738	2000	
Na	23	1	45	585349.619	ppb	585349.619	0.81	1197426222	2000	>LDR
Na	23	2	45	540018.698	ppb	540018.698	0.25	82394514	400000	
Mg	24	2	45	1463.453	ppb	1463.453	0.57	101395	400000	
Al	27	2	45	2357.398	ppb	2357.398	1.99	44932	400000	
K	39	1	45	52242.531	ppb	52242.531	0.73	109979465	400000	
K	39	2	45	51569.532	ppb	51569.532	1.26	1853483	400000	
Ca	40	1	45	3173.314	ppb	3173.314	1.19	9371035	400000	
Ca	44	2	45	4231.651	ppb	4231.651	4.14	8259	400000	
Ti	47	2	45	7.743	ppb	7.743	41.13	133	4000	
V	51	2	72	414.313	ppb	414.313	0.49	266454	2000	
Cr	52	2	72	209.797	ppb	209.797	2.61	171364	5000	
Mn	55	2	72	214.433	ppb	214.433	0.61	71188	10000	
Fe	57	2	72	2302.210	ppb	2302.210	2.27	35174	400000	
Co	59	2	72	203.897	ppb	203.897	1.02	283169	2000	
Ni	60	2	72	349.981	ppb	349.981	0.99	137135	5000	
Cu	63	2	72	249.946	ppb	249.946	0.55	267292	5000	
Zn	66	2	72	257.398	ppb	257.398	0.55	36995	5000	
As	75	2	72	205.373	ppb	205.373	0.99	20238	2000	
Se	78	1	72	203.682	ppb	203.682	1.67	25921	2000	
Sr	88	2	72	284.793	ppb	284.793	0.50	100523	4000	
Zr	90	2	72	39486.929	ppb	39486.929	0.71	191642	1000	>LDR
Nb	93	2	72	11.421	ppb	11.421	5.56	21657	200	
Mo	95	2	115	1124.563	ppb	1124.563	0.78	584253	2000	
Pd	105	2	115	0.032	ppb	0.032	98.96	43	100	
Ag	107	2	115	45.724	ppb	45.724	0.89	77960	100	
Cd	111	2	115	203.439	ppb	203.439	0.35	46906	2000	
Sn	120	2	115	212.159	ppb	212.159	1.24	133919	2000	
Sb	121	2	115	207.564	ppb	207.564	1.18	115570	1000	
Ba	137	2	115	216.490	ppb	216.490	3.35	42978	5000	
W	182	2	165	257.120	ppb	257.120	0.49	673268	100	
Pt	195	2	165	0.123	ppb	0.123	28.17	277	100	
Tl	205	2	165	204.516	ppb	204.516	0.96	1011248	2000	
Pb	208	2	165	208.070	ppb	208.070	0.43	1357897	5000	
Th	232	2	165	264.124	ppb	264.124	0.43	2078077	2000	
U	238	2	165	239.414	ppb	239.414	0.45	2005518	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	789022	0.20	1072135	73.59	60	120	
Sc (IS)	45	1	HMI H2	15183189	0.70	20791913	73.02	60	120	
Sc (IS)	45	2	HMI He	608394	0.66	758535	80.21	60	120	
Sc (IS)	45	3	No Gas	21671820	0.45	33963379	63.81	60	120	
Ge Internal Standard	72	1	HMI H2	5480519	0.26	7701407	71.16	60	120	
Ge Internal Standard	72	2	HMI He	649225	1.24	818771	79.29	60	120	
In Internal Standard	115	2	HMI He	2121463	0.95	2717298	78.07	60	120	
Ho-165	165	2	HMI He	10593871	0.64	12871763	82.30	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	177_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:11:32-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	512.106	ppb	1.604	261699	500	102.4	90	110	
Li	7	2	45	406.444	ppb	6.797	14668	500	81.3	90	110	>+\-10%
Li	7	3	45	478.860	ppb	0.272	5923762	500	95.8	90	110	
Be	9	1	6	48.480	ppb	0.495	13663	50	97.0	90	110	
B	11	1	6	53.537	ppb	3.798	16283	50	107.1	90	110	
Na	23	1	45	6010.772	ppb	0.505	13098898	5000	120.2	90	110	>+\-10%
Na	23	2	45	5434.821	ppb	1.048	893212	5000	108.7	90	110	
Mg	24	2	45	5050.872	ppb	1.590	372679	5000	101.0	90	110	
Al	27	2	45	5284.288	ppb	0.670	107366	5000	105.7	90	110	
K	39	1	45	5481.953	ppb	0.622	18395787	5000	109.6	90	110	
K	39	2	45	5084.819	ppb	1.570	205063	5000	101.7	90	110	
Ca	40	1	45	5228.692	ppb	0.902	16287573	5000	104.6	90	110	
Ca	44	2	45	5036.435	ppb	3.826	10484	5000	100.7	90	110	
Ti	47	2	45	46.771	ppb	27.994	857	50	93.5	90	110	
V	51	2	72	48.057	ppb	1.837	34649	50	96.1	90	110	
Cr	52	2	72	48.628	ppb	1.229	42714	50	97.3	90	110	
Mn	55	2	72	49.736	ppb	3.033	17735	50	99.5	90	110	
Fe	57	2	72	4980.644	ppb	1.095	81361	5000	99.6	90	110	
Co	59	2	72	47.959	ppb	3.077	71380	50	95.9	90	110	
Ni	60	2	72	49.217	ppb	1.986	20726	50	98.4	90	110	
Cu	63	2	72	48.127	ppb	1.041	55685	50	96.3	90	110	
Zn	66	2	72	50.517	ppb	4.258	7966	50	101.0	90	110	
As	75	2	72	48.673	ppb	3.762	5151	50	97.3	90	110	
Se	78	1	72	51.331	ppb	1.779	7006	50	102.7	90	110	
Sr	88	2	72	53.831	ppb	1.909	20389	50	107.7	90	110	
Zr	90	2	72	73.041	ppb	2.864	417	50	146.1	90	110	>+\-10%
Nb	93	2	72	82.471	ppb	0.519	156338	100	82.5	90	110	>+\-10%
Mo	95	2	115	47.779	ppb	3.849	27264	50	95.6	90	110	
Pd	105	2	115	50.529	ppb	2.842	43535	50	101.1	90	110	
Ag	107	2	115	47.377	ppb	1.726	88559	50	94.8	90	110	
Cd	111	2	115	49.051	ppb	6.628	12403	50	98.1	90	110	
Sn	120	2	115	51.476	ppb	2.848	35694	50	103.0	90	110	
Sb	121	2	115	50.431	ppb	2.106	30798	50	100.9	90	110	
Ba	137	2	115	48.685	ppb	2.916	10605	50	97.4	90	110	
W	182	2	165	48.758	ppb	1.293	135752	50	97.5	90	110	
Pt	195	2	165	48.702	ppb	1.483	108269	50	97.4	90	110	
Tl	205	2	165	51.742	ppb	0.347	270926	50	103.5	90	110	
Pb	208	2	165	51.871	ppb	0.749	358967	50	103.7	90	110	
Th	232	2	165	51.331	ppb	1.200	427761	50	102.7	90	110	
U	238	2	165	51.920	ppb	0.296	460544	50	103.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	843323	1.83	1072135	78.66	60	120	
Sc (IS)	45	1	HMI H2	16053886	0.40	20791913	77.21	60	120	
Sc (IS)	45	2	HMI He	649454	1.67	758535	85.62	60	120	
Sc (IS)	45	3	No Gas	23277261	0.18	33963379	68.54	60	120	
Ge Internal Standard	72	1	HMI H2	5874311	1.28	7701407	76.28	60	120	
Ge Internal Standard	72	2	HMI He	695606	0.85	818771	84.96	60	120	
In Internal Standard	115	2	HMI He	2326078	0.79	2717298	85.60	60	120	
Ho-165	165	2	HMI He	11214329	0.49	12871763	87.12	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	178_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:15:19-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	3.433	ppb	49.8	2582554	10	
Be	9	1	6	-0.005	ppb	-417.2	7	0.5	
B	11	1	6	6.244	ppb	17.6	2550	0.5	>RL
Na	23	1	45	604.719	ppb	1.2	1434656	25	>RL
Na	23	2	45	560.594	ppb	2.0	98541	25	>RL
Mg	24	2	45	8.203	ppb	7.5	930	25	
Al	27	2	45	-1.647	ppb	-132.3	80	15	
K	39	1	45	179.431	ppb	16.8	7441428	50	>RL
K	39	2	45	36.888	ppb	3.8	12386	50	
Ca	40	1	45	9.795	ppb	7.7	92899	50	
Ca	44	2	45	-0.767	ppb	-1942.4	27	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	1.030	ppb	14.9	2424	1	>RL
Cr	52	2	72	-0.008	ppb	-647.1	190	1	
Mn	55	2	72	-0.038	ppb	-75.8	40	0.5	
Fe	57	2	72	0.798	ppb	181.1	153	25	
Co	59	2	72	0.009	ppb	160.9	47	0.5	
Ni	60	2	72	0.041	ppb	157.1	90	1	
Cu	63	2	72	0.012	ppb	968.9	677	1	
Zn	66	2	72	-0.359	ppb	-84.9	173	5	
As	75	2	72	0.049	ppb	243.0	22	1	
Se	78	1	72	0.066	ppb	100.6	13	1	
Sr	88	2	72	0.099	ppb	107.2	77	0.5	
Zr	90	2	72	4.500	ppb	170.6	60	1	>RL
Nb	93	2	72	4.383	ppb	19.7	9927	2	>RL
Mo	95	2	115	0.655	ppb	10.3	427	0.5	>RL
Pd	105	2	115	0.000	ppb	-10911.4	20	1	
Ag	107	2	115	0.003	ppb	679.0	57	1	
Cd	111	2	115	0.014	ppb	307.6	7	0.5	
Sn	120	2	115	0.271	ppb	32.5	287	1	
Sb	121	2	115	0.489	ppb	14.2	317	0.6	
Ba	137	2	115	0.037	ppb	261.7	17	0.5	
W	182	2	165	0.166	ppb	29.5	1190	1	
Pt	195	2	165	0.011	ppb	181.2	43	1	
Tl	205	2	165	0.017	ppb	51.2	210	0.1	
Pb	208	2	165	-0.021	ppb	-60.1	683	0.5	
Th	232	2	165	0.070	ppb	12.8	877	1	
U	238	2	165	0.076	ppb	5.0	853	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	863843	1.38	1072135	80.57	60	120	
Sc (IS)	45	1	HMI H2	16377661	1.16	20791913	78.77	60	120	
Sc (IS)	45	2	HMI He	643339	0.98	758535	84.81	60	120	
Sc (IS)	45	3	No Gas	23116340	0.78	33963379	68.06	60	120	
Ge Internal Standard	72	1	HMI H2	5997540	1.11	7701407	77.88	60	120	
Ge Internal Standard	72	2	HMI He	690561	0.64	818771	84.34	60	120	
In Internal Standard	115	2	HMI He	2354856	1.71	2717298	86.66	60	120	
Ho-165	165	2	HMI He	11119357	1.26	12871763	86.39	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	179LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:19:06-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	17.800	ppb	8.504	2705486	50	35.6	70	130	>+/-30%
Be	9	1	6	0.996	ppb	32.004	297	1	99.6	70	130	
Na	23	2	45	627.029	ppb	12.000	104882	50	1254.1	70	130	>+/-30%
Mg	24	2	45	65.061	ppb	25.143	4851	50	130.1	70	130	>+/-30%
Al	27	2	45	36.087	ppb	11.799	807	30	120.3	70	130	
K	39	2	45	144.700	ppb	38.180	15789	100	144.7	70	130	>+/-30%
Ca	44	2	45	112.536	ppb	44.211	247	50	225.1	70	130	>+/-30%
V	51	2	72	5.956	ppb	18.093	5585	5	119.1	70	130	
Cr	52	2	72	1.971	ppb	6.155	1850	2	98.6	70	130	
Mn	55	2	72	1.460	ppb	39.607	547	1	146.0	70	130	>+/-30%
Fe	57	2	72	51.661	ppb	29.608	940	50	103.3	70	130	
Co	59	2	72	1.021	ppb	6.261	1497	1	102.1	70	130	
Ni	60	2	72	2.277	ppb	2.898	993	2	113.8	70	130	
Cu	63	2	72	2.188	ppb	14.704	3044	2	109.4	70	130	
Zn	66	2	72	10.997	ppb	13.291	1837	10	110.0	70	130	
As	75	2	72	4.541	ppb	13.016	476	5	90.8	70	130	
Se	78	1	72	5.179	ppb	3.159	715	5	103.6	70	130	
Sr	88	2	72	0.920	ppb	51.570	367	1	92.0	70	130	
Zr	90	2	72	20.134	ppb	77.334	133	0.5	4026.8	70	130	>+/-30%
Nb	93	2	72	10.865	ppb	18.278	21227	2	543.3	70	130	>+/-30%
Mo	95	2	115	2.008	ppb	22.418	1163	2	100.4	70	130	
Pd	105	2	115	0.005	ppb	189.288	23	1	0.5	70	130	>+/-30%
Ag	107	2	115	5.111	ppb	14.308	9397	5	102.2	70	130	
Cd	111	2	115	1.156	ppb	30.236	287	1	115.6	70	130	
Sn	120	2	115	9.941	ppb	9.709	6842	10	99.4	70	130	
Sb	121	2	115	2.573	ppb	18.322	1550	2	128.6	70	130	
Ba	137	2	115	0.980	ppb	32.340	217	1	98.0	70	130	
W	182	2	165	4.968	ppb	6.876	13934	1	496.8	70	130	>+/-30%
Pt	195	2	165	0.026	ppb	91.134	73	1	2.6	70	130	>+/-30%
Tl	205	2	165	1.025	ppb	9.931	5265	1	102.5	70	130	
Pb	208	2	165	1.084	ppb	19.104	7961	1	108.4	70	130	
Th	232	2	165	2.276	ppb	7.796	18501	2	113.8	70	130	
U	238	2	165	1.129	ppb	14.383	9768	1	112.9	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	868956	1.18	1072135	81.05	60	120	
Sc (IS)	45	1	HMI H2	16267018	0.24	20791913	78.24	60	120	
Sc (IS)	45	2	HMI He	620633	6.94	758535	81.82	60	120	
Sc (IS)	45	3	No Gas	23316065	0.15	33963379	68.65	60	120	
Ge Internal Standard	72	1	HMI H2	5910268	0.63	7701407	76.74	60	120	
Ge Internal Standard	72	2	HMI He	671152	6.46	818771	81.97	60	120	
In Internal Standard	115	2	HMI He	2292434	7.18	2717298	84.36	60	120	
Ho-165	165	2	HMI He	10806982	6.40	12871763	83.96	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-3-B@5
Data File Name	180SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:22:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	26.961	ppb	26.961	30.40	110584	500000	
Li	7	2	45	7.792	ppb	7.792	525.42	6762	500000	
Li	7	3	45	10.348	ppb	10.348	35.31	2419581	50000	
Be	9	1	6	0.073	ppb	0.073	59.52	27	2000	
B	11	1	6	196.036	ppb	196.036	1.42	54446	2000	
Na	23	1	45	616884.441	ppb	616884.441	0.31	1246061235	2000	>LDR
Na	23	2	45	570878.650	ppb	570878.650	0.73	86625885	400000	
Mg	24	2	45	1530.128	ppb	1530.128	2.77	105419	400000	
Al	27	2	45	125.591	ppb	125.591	7.29	2480	400000	
K	39	1	45	54963.343	ppb	54963.343	0.29	113914525	400000	
K	39	2	45	54229.517	ppb	54229.517	1.47	1937915	400000	
Ca	40	1	45	3158.837	ppb	3158.837	0.12	9211406	400000	
Ca	44	2	45	3262.925	ppb	3262.925	4.08	6338	400000	
Ti	47	2	45	4.284	ppb	4.284	31.45	73	4000	
V	51	2	72	221.729	ppb	221.729	0.64	140852	2000	
Cr	52	2	72	7.150	ppb	7.150	4.46	5915	5000	
Mn	55	2	72	1.086	ppb	1.086	1.88	403	10000	
Fe	57	2	72	174.413	ppb	174.413	10.47	2737	400000	
Co	59	2	72	5.476	ppb	5.476	5.05	7502	2000	
Ni	60	2	72	175.098	ppb	175.098	1.48	67447	5000	
Cu	63	2	72	38.488	ppb	38.488	2.27	40959	5000	
Zn	66	2	72	10.709	ppb	10.709	13.02	1714	5000	
As	75	2	72	4.728	ppb	4.728	8.77	473	2000	
Se	78	1	72	2.862	ppb	2.862	14.46	363	2000	
Sr	88	2	72	64.012	ppb	64.012	1.46	22228	4000	
Zr	90	2	72	275.508	ppb	275.508	20.54	1347	1000	
Nb	93	2	72	2.483	ppb	2.483	22.86	5915	200	
Mo	95	2	115	1087.879	ppb	1087.879	0.77	566542	2000	
Pd	105	2	115	0.002	ppb	0.002	1107.78	20	100	
Ag	107	2	115	0.129	ppb	0.129	32.53	267	100	
Cd	111	2	115	0.278	ppb	0.278	40.13	67	2000	
Sn	120	2	115	0.740	ppb	0.740	11.72	557	2000	
Sb	121	2	115	2.009	ppb	2.009	8.21	1133	1000	
Ba	137	2	115	2.455	ppb	2.455	8.20	497	5000	
W	182	2	165	57.498	ppb	57.498	2.54	149256	100	
Pt	195	2	165	0.076	ppb	0.076	6.18	177	100	
Tl	205	2	165	0.008	ppb	0.008	101.85	153	2000	
Pb	208	2	165	1.095	ppb	1.095	4.00	7838	5000	
Th	232	2	165	0.026	ppb	0.026	15.81	490	2000	
U	238	2	165	0.307	ppb	0.307	5.34	2710	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	793594	0.28	1072135	74.02	60	120	
Sc (IS)	45	1	HMI H2	14991718	0.34	20791913	72.10	60	120	
Sc (IS)	45	2	HMI He	605087	1.05	758535	79.77	60	120	
Sc (IS)	45	3	No Gas	21262981	1.09	33963379	62.61	60	120	
Ge Internal Standard	72	1	HMI H2	5405438	0.91	7701407	70.19	60	120	
Ge Internal Standard	72	2	HMI He	637901	0.58	818771	77.91	60	120	
In Internal Standard	115	2	HMI He	2126595	1.33	2717298	78.26	60	120	
Ho-165	165	2	HMI He	10465395	0.99	12871763	81.31	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-4-D@5
Data File Name	181SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:26:45-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	27.275	ppb	27.275	24.00	109973	500000	
Li	7	2	45	0.984	ppb	0.984	670.78	6508	500000	
Li	7	3	45	13.207	ppb	13.207	21.76	2451488	50000	
Be	9	1	6	0.075	ppb	0.075	129.73	27	2000	
B	11	1	6	229.539	ppb	229.539	1.90	62220	2000	
Na	23	1	45	685155.736	ppb	685155.736	0.64	1375164780	2000	>LDR
Na	23	2	45	638773.314	ppb	638773.314	1.02	94899572	400000	
Mg	24	2	45	1801.845	ppb	1801.845	0.83	121493	400000	
Al	27	2	45	81.171	ppb	81.171	4.06	1607	400000	
K	39	1	45	57674.178	ppb	57674.178	0.34	118459842	400000	
K	39	2	45	57013.693	ppb	57013.693	0.54	1994253	400000	
Ca	40	1	45	1620.021	ppb	1620.021	0.89	4721549	400000	
Ca	44	2	45	1688.295	ppb	1688.295	5.69	3224	400000	
Ti	47	2	45	2.587	ppb	2.587	14.01	43	4000	
V	51	2	72	197.435	ppb	197.435	0.70	122843	2000	
Cr	52	2	72	7.253	ppb	7.253	8.10	5868	5000	
Mn	55	2	72	1.648	ppb	1.648	3.68	573	10000	
Fe	57	2	72	179.266	ppb	179.266	8.88	2750	400000	
Co	59	2	72	2.976	ppb	2.976	8.29	4004	2000	
Ni	60	2	72	137.831	ppb	137.831	3.30	51937	5000	
Cu	63	2	72	13.760	ppb	13.760	2.42	14708	5000	
Zn	66	2	72	6.806	ppb	6.806	7.36	1140	5000	
As	75	2	72	3.341	ppb	3.341	13.08	331	2000	
Se	78	1	72	2.436	ppb	2.436	29.94	307	2000	
Sr	88	2	72	42.483	ppb	42.483	1.01	14441	4000	
Zr	90	2	72	364.630	ppb	364.630	1.66	1734	1000	
Nb	93	2	72	0.775	ppb	0.775	30.40	2907	200	
Mo	95	2	115	515.554	ppb	515.554	1.20	261689	2000	
Pd	105	2	115	0.016	ppb	0.016	141.25	30	100	
Ag	107	2	115	0.028	ppb	0.028	87.62	93	100	
Cd	111	2	115	0.049	ppb	0.049	213.09	13	2000	
Sn	120	2	115	0.283	ppb	0.283	48.17	260	2000	
Sb	121	2	115	0.804	ppb	0.804	1.37	450	1000	
Ba	137	2	115	0.837	ppb	0.837	37.42	170	5000	
W	182	2	165	55.799	ppb	55.799	1.32	141644	100	
Pt	195	2	165	0.096	ppb	0.096	13.24	213	100	
Tl	205	2	165	-0.003	ppb	-0.003	-389.49	97	2000	
Pb	208	2	165	0.384	ppb	0.384	6.94	3177	5000	
Th	232	2	165	0.012	ppb	0.012	33.41	367	2000	
U	238	2	165	0.303	ppb	0.303	3.39	2620	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	775852	0.37	1072135	72.37	60	120	
Sc (IS)	45	1	HMI H2	14896881	0.51	20791913	71.65	60	120	
Sc (IS)	45	2	HMI He	592414	0.66	758535	78.10	60	120	
Sc (IS)	45	3	No Gas	21381591	0.70	33963379	62.95	60	120	
Ge Internal Standard	72	1	HMI H2	5357103	0.40	7701407	69.56	60	120	
Ge Internal Standard	72	2	HMI He	623926	0.99	818771	76.20	60	120	
In Internal Standard	115	2	HMI He	2072571	0.90	2717298	76.27	60	120	
Ho-165	165	2	HMI He	10231292	0.61	12871763	79.49	60	120	

Sample Table

Sample Name	280-116218-P-4-E MS@5
Data File Name	182SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:30:35-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	39.480	ppb	39.480	18.45	112166	500000	
Li	7	2	45	2.554	ppb	2.554	785.34	6458	500000	
Li	7	3	45	20.223	ppb	20.223	18.41	2504292	50000	
Be	9	1	6	7.156	ppb	7.156	6.72	1857	2000	
B	11	1	6	217.817	ppb	217.817	0.79	58926	2000	
Na	23	1	45	640548.538	ppb	640548.538	0.35	1272624568	2000	>LDR
Na	23	2	45	594464.924	ppb	594464.924	0.83	87323695	400000	
Mg	24	2	45	1705.755	ppb	1705.755	2.04	113726	400000	
Al	27	2	45	161.575	ppb	161.575	9.30	3060	400000	
K	39	1	45	54336.644	ppb	54336.644	0.19	110841852	400000	
K	39	2	45	53400.018	ppb	53400.018	0.61	1847580	400000	
Ca	40	1	45	1510.312	ppb	1510.312	0.54	4360970	400000	
Ca	44	2	45	1645.618	ppb	1645.618	5.77	3107	400000	
Ti	47	2	45	4.205	ppb	4.205	64.66	70	4000	
V	51	2	72	187.722	ppb	187.722	0.25	116600	2000	
Cr	52	2	72	13.859	ppb	13.859	2.96	11021	5000	
Mn	55	2	72	8.671	ppb	8.671	10.23	2807	10000	
Fe	57	2	72	220.659	ppb	220.659	4.33	3347	400000	
Co	59	2	72	10.642	ppb	10.642	5.76	14194	2000	
Ni	60	2	72	156.722	ppb	156.722	0.14	58914	5000	
Cu	63	2	72	28.824	ppb	28.824	3.25	30079	5000	
Zn	66	2	72	13.174	ppb	13.174	0.70	2010	5000	
As	75	2	72	11.789	ppb	11.789	6.78	1128	2000	
Se	78	1	72	9.107	ppb	9.107	2.34	1133	2000	
Sr	88	2	72	46.904	ppb	46.904	2.75	15900	4000	
Zr	90	2	72	1639.895	ppb	1639.895	2.56	7662	1000	
Nb	93	2	72	0.218	ppb	0.218	87.28	1970	200	
Mo	95	2	115	795.718	ppb	795.718	1.15	402587	2000	
Pd	105	2	115	0.008	ppb	0.008	268.34	23	100	
Ag	107	2	115	6.712	ppb	6.712	2.89	11182	100	
Cd	111	2	115	6.920	ppb	6.920	19.33	1557	2000	
Sn	120	2	115	7.529	ppb	7.529	7.14	4708	2000	
Sb	121	2	115	8.588	ppb	8.588	3.17	4668	1000	
Ba	137	2	115	8.160	ppb	8.160	8.45	1587	5000	
W	182	2	165	56.461	ppb	56.461	0.49	143358	100	
Pt	195	2	165	0.094	ppb	0.094	59.52	210	100	
Tl	205	2	165	7.293	ppb	7.293	4.41	34947	2000	
Pb	208	2	165	7.927	ppb	7.927	0.64	50711	5000	
Th	232	2	165	5.986	ppb	5.986	1.59	45765	2000	
U	238	2	165	7.744	ppb	7.744	0.80	62830	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	773897	0.23	1072135	72.18	60	120	
Sc (IS)	45	1	HMI H2	14745772	0.43	20791913	70.92	60	120	
Sc (IS)	45	2	HMI He	585781	1.39	758535	77.23	60	120	
Sc (IS)	45	3	No Gas	21447451	0.63	33963379	63.15	60	120	
Ge Internal Standard	72	1	HMI H2	5342201	0.74	7701407	69.37	60	120	
Ge Internal Standard	72	2	HMI He	622435	0.77	818771	76.02	60	120	
In Internal Standard	115	2	HMI He	2066071	1.79	2717298	76.03	60	120	
Ho-165	165	2	HMI He	10234242	0.75	12871763	79.51	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-4-F MSD@5
Data File Name	183SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:34:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	32.025	ppb	32.025	4.37	111624	500000	
Li	7	2	45	-18.678	ppb	-18.678	-116.69	6252	500000	
Li	7	3	45	19.325	ppb	19.325	5.98	2485508	50000	
Be	9	1	6	7.101	ppb	7.101	11.65	1837	2000	
B	11	1	6	242.976	ppb	242.976	0.74	65484	2000	
Na	23	1	45	688917.835	ppb	688917.835	0.41	1387062006	2000	>LDR
Na	23	2	45	643501.294	ppb	643501.294	0.39	96804082	400000	
Mg	24	2	45	1816.800	ppb	1816.800	0.97	124035	400000	
Al	27	2	45	195.371	ppb	195.371	9.38	3767	400000	
K	39	1	45	58420.717	ppb	58420.717	0.91	120284135	400000	
K	39	2	45	57774.707	ppb	57774.707	0.70	2046191	400000	
Ca	40	1	45	1635.836	ppb	1635.836	1.02	4782016	400000	
Ca	44	2	45	1660.306	ppb	1660.306	3.84	3211	400000	
Ti	47	2	45	3.334	ppb	3.334	44.12	57	4000	
V	51	2	72	206.197	ppb	206.197	1.18	130718	2000	
Cr	52	2	72	14.686	ppb	14.686	3.34	11922	5000	
Mn	55	2	72	8.938	ppb	8.938	4.19	2954	10000	
Fe	57	2	72	279.718	ppb	279.718	2.12	4301	400000	
Co	59	2	72	11.786	ppb	11.786	3.85	16063	2000	
Ni	60	2	72	179.490	ppb	179.490	1.91	68934	5000	
Cu	63	2	72	33.935	ppb	33.935	1.60	36086	5000	
Zn	66	2	72	18.916	ppb	18.916	7.05	2857	5000	
As	75	2	72	12.203	ppb	12.203	2.57	1192	2000	
Se	78	1	72	9.630	ppb	9.630	3.64	1199	2000	
Sr	88	2	72	51.978	ppb	51.978	4.42	18005	4000	
Zr	90	2	72	1738.421	ppb	1738.421	12.36	8293	1000	
Nb	93	2	72	-0.050	ppb	-0.050	-78.64	1554	200	
Mo	95	2	115	979.249	ppb	979.249	0.70	513529	2000	
Pd	105	2	115	0.002	ppb	0.002	1555.54	20	100	
Ag	107	2	115	6.972	ppb	6.972	3.60	12039	100	
Cd	111	2	115	7.940	ppb	7.940	12.50	1850	2000	
Sn	120	2	115	7.967	ppb	7.967	6.92	5161	2000	
Sb	121	2	115	9.125	ppb	9.125	2.96	5141	1000	
Ba	137	2	115	9.493	ppb	9.493	16.05	1910	5000	
W	182	2	165	61.561	ppb	61.561	1.24	159836	100	
Pt	195	2	165	0.070	ppb	0.070	35.31	163	100	
Tl	205	2	165	7.717	ppb	7.717	1.25	37822	2000	
Pb	208	2	165	8.500	ppb	8.500	2.95	55568	5000	
Th	232	2	165	6.360	ppb	6.360	1.87	49727	2000	
U	238	2	165	8.247	ppb	8.247	1.74	68438	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	771814	0.69	1072135	71.99	60	120	
Sc (IS)	45	1	HMI H2	14943422	0.23	20791913	71.87	60	120	
Sc (IS)	45	2	HMI He	599865	0.91	758535	79.08	60	120	
Sc (IS)	45	3	No Gas	21336005	0.48	33963379	62.82	60	120	
Ge Internal Standard	72	1	HMI H2	5344170	0.56	7701407	69.39	60	120	
Ge Internal Standard	72	2	HMI He	636062	0.88	818771	77.68	60	120	
In Internal Standard	115	2	HMI He	2141281	0.17	2717298	78.80	60	120	
Ho-165	165	2	HMI He	10469949	0.36	12871763	81.34	60	120	

Sample Report

Sample Table

Sample Name	280-116218-P-5-B@2
Data File Name	184SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:38:20-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435473 6020a
ISTD Ref FileName	121CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	60.556	ppb	60.556	11.98	184713	500000	
Li	7	2	45	1.507	ppb	1.507	303.24	10694	500000	
Li	7	3	45	40.770	ppb	40.770	14.02	5232287	50000	
Be	9	1	6	-0.028	ppb	-0.028	0.00	0	2000	
B	11	1	6	9.211	ppb	9.211	15.42	5648	2000	
Na	23	1	45	7313.862	ppb	7313.862	97.65	23880147	2000	
Na	23	2	45	141808.369	ppb	141808.369	133.65	30577891	400000	
Mg	24	2	45	409.285	ppb	409.285	134.29	40414	400000	
Al	27	2	45	27.976	ppb	27.976	137.07	920	400000	
K	39	1	45	-1159.063	ppb	-1159.063	-52.24	6550279	400000	
K	39	2	45	12188.064	ppb	12188.064	137.70	629589	400000	
Ca	40	1	45	12.401	ppb	12.401	97.87	144879	400000	
Ca	44	2	45	350.468	ppb	350.468	129.35	1010	400000	
Ti	47	2	45	0.285	ppb	0.285	173.21	7	4000	
V	51	2	72	40.574	ppb	40.574	139.86	38811	2000	
Cr	52	2	72	1.653	ppb	1.653	135.80	2187	5000	
Mn	55	2	72	0.312	ppb	0.312	170.79	220	10000	
Fe	57	2	72	46.718	ppb	46.718	137.43	1207	400000	
Co	59	2	72	0.977	ppb	0.977	149.06	1927	2000	
Ni	60	2	72	40.061	ppb	40.061	132.93	22180	5000	
Cu	63	2	72	7.306	ppb	7.306	133.49	11955	5000	
Zn	66	2	72	1.858	ppb	1.858	185.15	697	5000	
As	75	2	72	0.849	ppb	0.849	132.23	142	2000	
Se	78	1	72	0.078	ppb	0.078	77.62	21	2000	
Sr	88	2	72	8.897	ppb	8.897	135.52	4463	4000	
Zr	90	2	72	94.791	ppb	94.791	105.58	720	1000	
Nb	93	2	72	-0.013	ppb	-0.013	-7768.50	2384	200	
Mo	95	2	115	222.690	ppb	222.690	138.99	161925	2000	
Pd	105	2	115	0.024	ppb	0.024	210.29	53	100	
Ag	107	2	115	0.023	ppb	0.023	252.37	123	100	
Cd	111	2	115	0.029	ppb	0.029	169.04	13	2000	
Sn	120	2	115	0.230	ppb	0.230	121.98	347	2000	
Sb	121	2	115	0.378	ppb	0.378	145.52	313	1000	
Ba	137	2	115	0.324	ppb	0.324	133.23	103	5000	
W	182	2	165	11.853	ppb	11.853	139.88	44172	100	
Pt	195	2	165	-0.003	ppb	-0.003	-314.62	17	100	
Tl	205	2	165	0.007	ppb	0.007	138.39	233	2000	
Pb	208	2	165	0.125	ppb	0.125	192.48	2327	5000	
Th	232	2	165	0.183	ppb	0.183	102.50	2538	2000	
U	238	2	165	0.061	ppb	0.061	157.78	977	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	1411888	5.54	1072135	131.69	60	120	IS Failed
Sc (IS)	45	1	HMI H2	23121768	6.96	20791913	111.21	60	120	
Sc (IS)	45	2	HMI He	972553	13.04	758535	128.21	60	120	IS Failed
Sc (IS)	45	3	No Gas	42572131	2.60	33963379	125.35	60	120	IS Failed
Ge Internal Standard	72	1	HMI H2	8405272	7.16	7701407	109.14	60	120	
Ge Internal Standard	72	2	HMI He	1037172	13.50	818771	126.67	60	120	IS Failed
In Internal Standard	115	2	HMI He	3382502	13.29	2717298	124.48	60	120	IS Failed
Ho-165	165	2	HMI He	16847267	13.60	12871763	130.89	60	120	IS Failed

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	185_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:42:06-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	536.849	ppb	1.713	260908	500	107.4	90	110	
Li	7	2	45	477.789	ppb	9.723	15102	500	95.6	90	110	
Li	7	3	45	503.907	ppb	1.641	5961308	500	100.8	90	110	
Be	9	1	6	48.527	ppb	1.272	13393	50	97.1	90	110	
B	11	1	6	46.490	ppb	1.856	13937	50	93.0	90	110	
Na	23	1	45	6350.721	ppb	0.627	13417614	5000	127.0	90	110	>+\-10%
Na	23	2	45	5857.020	ppb	0.644	908551	5000	117.1	90	110	>+\-10%
Mg	24	2	45	5109.113	ppb	0.770	356058	5000	102.2	90	110	
Al	27	2	45	5248.276	ppb	0.579	100711	5000	105.0	90	110	
K	39	1	45	5321.517	ppb	0.868	17515944	5000	106.4	90	110	
K	39	2	45	5065.456	ppb	1.850	192977	5000	101.3	90	110	
Ca	40	1	45	5172.371	ppb	0.333	15627912	5000	103.4	90	110	
Ca	44	2	45	5105.660	ppb	3.215	10041	5000	102.1	90	110	
Ti	47	2	45	48.814	ppb	7.680	847	50	97.6	90	110	
V	51	2	72	48.683	ppb	1.691	32922	50	97.4	90	110	
Cr	52	2	72	49.189	ppb	2.282	40544	50	98.4	90	110	
Mn	55	2	72	50.172	ppb	5.663	16787	50	100.3	90	110	
Fe	57	2	72	4921.919	ppb	1.326	75463	5000	98.4	90	110	
Co	59	2	72	48.602	ppb	3.088	67900	50	97.2	90	110	
Ni	60	2	72	50.118	ppb	2.675	19808	50	100.2	90	110	
Cu	63	2	72	48.306	ppb	0.940	52453	50	96.6	90	110	
Zn	66	2	72	49.091	ppb	8.816	7269	50	98.2	90	110	
As	75	2	72	48.852	ppb	1.956	4852	50	97.7	90	110	
Se	78	1	72	48.337	ppb	1.482	6428	50	96.7	90	110	
Sr	88	2	72	52.742	ppb	2.140	18750	50	105.5	90	110	
Zr	90	2	72	40.050	ppb	18.742	230	50	80.1	90	110	>+\-10%
Nb	93	2	72	83.790	ppb	0.722	149044	100	83.8	90	110	>+\-10%
Mo	95	2	115	49.203	ppb	3.911	26299	50	98.4	90	110	
Pd	105	2	115	50.395	ppb	2.265	40690	50	100.8	90	110	
Ag	107	2	115	47.658	ppb	3.511	83461	50	95.3	90	110	
Cd	111	2	115	50.169	ppb	5.012	11882	50	100.3	90	110	
Sn	120	2	115	50.246	ppb	4.310	32639	50	100.5	90	110	
Sb	121	2	115	50.020	ppb	2.029	28627	50	100.0	90	110	
Ba	137	2	115	50.196	ppb	1.433	10248	50	100.4	90	110	
W	182	2	165	48.854	ppb	1.826	129589	50	97.7	90	110	
Pt	195	2	165	49.552	ppb	0.791	104962	50	99.1	90	110	
Tl	205	2	165	51.096	ppb	1.378	254908	50	102.2	90	110	
Pb	208	2	165	51.907	ppb	0.689	342269	50	103.8	90	110	
Th	232	2	165	51.670	ppb	0.749	410254	50	103.3	90	110	
U	238	2	165	52.568	ppb	1.186	444267	50	105.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	825798	1.05	1072135	77.02	60	120	
Sc (IS)	45	1	HMI H2	15570656	0.42	20791913	74.89	60	120	
Sc (IS)	45	2	HMI He	613334	0.66	758535	80.86	60	120	
Sc (IS)	45	3	No Gas	22753305	0.68	33963379	66.99	60	120	
Ge Internal Standard	72	1	HMI H2	5724402	0.50	7701407	74.33	60	120	
Ge Internal Standard	72	2	HMI He	652820	0.29	818771	79.73	60	120	
In Internal Standard	115	2	HMI He	2180573	3.15	2717298	80.25	60	120	
Ho-165	165	2	HMI He	10685637	1.09	12871763	83.02	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	186_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:45:52-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	7.031	ppb	33.8	2599132	10	
Be	9	1	6	0.043	ppb	284.8	20	0.5	
B	11	1	6	6.751	ppb	2.8	2634	0.5	>RL
Na	23	1	45	838.408	ppb	1.9	1864725	25	>RL
Na	23	2	45	782.752	ppb	0.9	128012	25	>RL
Mg	24	2	45	10.759	ppb	35.5	1063	25	
Al	27	2	45	-1.457	ppb	-106.2	80	15	
K	39	1	45	156.832	ppb	22.0	7069003	50	>RL
K	39	2	45	43.926	ppb	45.1	12049	50	
Ca	40	1	45	7.773	ppb	9.9	82710	50	
Ca	44	2	45	25.394	ppb	22.4	77	25	>RL
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.995	ppb	47.4	2307	1	
Cr	52	2	72	-0.003	ppb	-720.4	187	1	
Mn	55	2	72	0.075	ppb	89.5	77	0.5	
Fe	57	2	72	1.181	ppb	172.4	153	25	
Co	59	2	72	0.001	ppb	557.3	33	0.5	
Ni	60	2	72	0.049	ppb	219.0	90	1	
Cu	63	2	72	0.015	ppb	249.0	653	1	
Zn	66	2	72	-0.127	ppb	-469.4	200	5	
As	75	2	72	0.134	ppb	62.0	29	1	
Se	78	1	72	0.020	ppb	309.2	7	1	
Sr	88	2	72	-0.040	ppb	-104.6	23	0.5	
Zr	90	2	72	-4.407	ppb	-27.0	13	1	
Nb	93	2	72	4.829	ppb	11.7	10338	2	>RL
Mo	95	2	115	0.909	ppb	2.7	553	0.5	>RL
Pd	105	2	115	0.025	ppb	51.6	40	1	
Ag	107	2	115	-0.002	ppb	-597.3	47	1	
Cd	111	2	115	0.016	ppb	145.7	7	0.5	
Sn	120	2	115	0.102	ppb	58.8	163	1	
Sb	121	2	115	0.324	ppb	29.1	207	0.6	
Ba	137	2	115	0.008	ppb	597.4	10	0.5	
W	182	2	165	0.150	ppb	15.3	1127	1	
Pt	195	2	165	-0.001	ppb	-178.5	17	1	
Tl	205	2	165	-0.008	ppb	-66.1	80	0.1	
Pb	208	2	165	-0.020	ppb	-16.0	680	0.5	
Th	232	2	165	0.039	ppb	23.6	610	1	
U	238	2	165	0.057	ppb	8.1	673	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	841313	1.83	1072135	78.47	60	120	
Sc (IS)	45	1	HMI H2	15659236	0.74	20791913	75.31	60	120	
Sc (IS)	45	2	HMI He	612778	0.48	758535	80.78	60	120	
Sc (IS)	45	3	No Gas	23041996	0.38	33963379	67.84	60	120	
Ge Internal Standard	72	1	HMI H2	5728527	0.34	7701407	74.38	60	120	
Ge Internal Standard	72	2	HMI He	663366	0.73	818771	81.02	60	120	
In Internal Standard	115	2	HMI He	2273483	4.52	2717298	83.67	60	120	
Ho-165	165	2	HMI He	10917749	0.80	12871763	84.82	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	187LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:49:39-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	16.259	ppb	16.356	2654171	50	32.5	70	130	>+/-30%
Be	9	1	6	1.012	ppb	19.926	293	1	101.2	70	130	
Na	23	2	45	752.537	ppb	1.714	122174	50	1505.1	70	130	>+/-30%
Mg	24	2	45	61.967	ppb	7.685	4581	50	123.9	70	130	
Al	27	2	45	35.102	ppb	21.880	773	30	117.0	70	130	
K	39	2	45	139.094	ppb	10.121	15325	100	139.1	70	130	>+/-30%
Ca	44	2	45	56.777	ppb	38.413	137	50	113.6	70	130	
V	51	2	72	5.891	ppb	11.776	5458	5	117.8	70	130	
Cr	52	2	72	1.777	ppb	21.059	1657	2	88.9	70	130	
Mn	55	2	72	0.979	ppb	31.574	380	1	97.9	70	130	
Fe	57	2	72	54.653	ppb	8.149	977	50	109.3	70	130	
Co	59	2	72	0.982	ppb	18.915	1413	1	98.2	70	130	
Ni	60	2	72	2.059	ppb	21.317	887	2	102.9	70	130	
Cu	63	2	72	2.129	ppb	10.351	2934	2	106.4	70	130	
Zn	66	2	72	11.878	ppb	8.278	1937	10	118.8	70	130	
As	75	2	72	4.492	ppb	8.436	464	5	89.8	70	130	
Se	78	1	72	5.254	ppb	9.428	707	5	105.1	70	130	
Sr	88	2	72	1.061	ppb	8.233	417	1	106.1	70	130	
Zr	90	2	72	18.642	ppb	55.680	127	0.5	3728.5	70	130	>+/-30%
Nb	93	2	72	10.776	ppb	7.345	20793	2	538.8	70	130	>+/-30%
Mo	95	2	115	2.284	ppb	13.428	1287	2	114.2	70	130	
Pd	105	2	115	-0.003	ppb	-500.242	17	1	-0.3	70	130	>+/-30%
Ag	107	2	115	5.110	ppb	6.823	9143	5	102.2	70	130	
Cd	111	2	115	1.097	ppb	15.786	267	1	109.7	70	130	
Sn	120	2	115	9.963	ppb	5.883	6662	10	99.6	70	130	
Sb	121	2	115	2.160	ppb	6.381	1270	2	108.0	70	130	
Ba	137	2	115	0.972	ppb	28.904	210	1	97.2	70	130	
W	182	2	165	4.983	ppb	1.190	13758	1	498.3	70	130	>+/-30%
Pt	195	2	165	0.024	ppb	68.669	70	1	2.4	70	130	>+/-30%
Tl	205	2	165	1.062	ppb	6.935	5378	1	106.2	70	130	
Pb	208	2	165	1.054	ppb	5.547	7675	1	105.4	70	130	
Th	232	2	165	2.262	ppb	0.983	18110	2	113.1	70	130	
U	238	2	165	1.102	ppb	8.152	9414	1	110.2	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	847491	3.15	1072135	79.05	60	120	
Sc (IS)	45	1	HMI H2	15563746	0.26	20791913	74.85	60	120	
Sc (IS)	45	2	HMI He	606887	0.92	758535	80.01	60	120	
Sc (IS)	45	3	No Gas	22965555	0.37	33963379	67.62	60	120	
Ge Internal Standard	72	1	HMI H2	5759563	0.30	7701407	74.79	60	120	
Ge Internal Standard	72	2	HMI He	657895	0.25	818771	80.35	60	120	
In Internal Standard	115	2	HMI He	2216823	1.44	2717298	81.58	60	120	
Ho-165	165	2	HMI He	10612683	0.76	12871763	82.45	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	188WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:53:25-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.028	ppb	0	0	0.5
Na	23	2	45	622.285	ppb	1.820249094	102616	25
Mg	24	2	45	10.234	ppb	7.284290913	1020	25
Al	27	2	45	-3.706	ppb	-21.43742893	37	15
K	39	2	45	22.623	ppb	33.8441095	11205	50
Ca	44	2	45	8.497	ppb	211.6572849	43	25
V	51	2	72	0.798	ppb	24.4760062	2154	1
Cr	52	2	72	-0.061	ppb	-68.70905135	137	1
Mn	55	2	72	0.028	ppb	217.6909446	60	0.5
Fe	57	2	72	-2.609	ppb	-14.30647449	93	25
Co	59	2	72	-0.016	ppb	-79.70823909	10	0.5
Ni	60	2	72	-0.024	ppb	-412.4951209	60	1
Cu	63	2	72	0.009	ppb	859.37647	640	1
Zn	66	2	72	-0.507	ppb	-33.57241784	143	5
As	75	2	72	0.111	ppb	87.71234228	27	1
Se	78	1	72	0.030	ppb	99.62791998	8	1
Nb	93	2	72	0.558	ppb	29.1829804	2677	2
Mo	95	2	115	0.272	ppb	35.25345638	197	0.5
Pd	105	2	115	0.001	ppb	1893.693346	20	1
Ag	107	2	115	-0.009	ppb	-185.955794	33	1
Cd	111	2	115	0.003	ppb	910.4587559	3	0.5
Sn	120	2	115	0.060	ppb	166.3976881	133	1
Sb	121	2	115	0.038	ppb	131.2879701	37	0.6
Ba	137	2	115	-0.023	ppb	-118.9141011	3	0.5
W	182	2	165	0.023	ppb	85.04798459	763	1
Pt	195	2	165	-0.001	ppb	-214.8306512	17	1
Tl	205	2	165	-0.007	ppb	-138.0591368	80	0.1
Pb	208	2	165	-0.029	ppb	-30.17032147	603	0.5
Th	232	2	165	0.004	ppb	105.6433538	323	1
U	238	2	165	-0.004	ppb	-134.7254903	140	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	828998	2.11	1072135	77.32	60	120	
Sc (IS)	45	1	HMI H2	15621067	0.51	20791913	75.13	60	120	
Sc (IS)	45	2	HMI He	608422	0.76	758535	80.21	60	120	
Sc (IS)	45	3	No Gas	22974799	0.46	33963379	67.65	60	120	
Ge Internal Standard	72	1	HMI H2	5766977	0.40	7701407	74.88	60	120	
Ge Internal Standard	72	2	HMI He	656265	0.69	818771	80.15	60	120	
In Internal Standard	115	2	HMI He	2241653	2.04	2717298	82.50	60	120	
Ho-165	165	2	HMI He	10653999	0.62	12871763	82.77	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	189WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T00:57:13-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.016	ppb	-129.8662518	3	0.5
Na	23	2	45	559.852	ppb	2.428687915	93493	25
Mg	24	2	45	8.638	ppb	17.43326544	913	25
Al	27	2	45	-3.005	ppb	-69.81589298	50	15
K	39	2	45	19.835	ppb	60.37584491	11151	50
Ca	44	2	45	3.420	ppb	487.0638105	33	25
V	51	2	72	0.994	ppb	15.246926	2290	1
Cr	52	2	72	-0.082	ppb	-0.843537119	120	1
Mn	55	2	72	-0.013	ppb	-135.878795	47	0.5
Fe	57	2	72	-4.367	ppb	-74.15377386	67	25
Co	59	2	72	-0.009	ppb	-83.39416806	20	0.5
Ni	60	2	72	0.018	ppb	716.2627471	77	1
Cu	63	2	72	-0.024	ppb	-185.9700133	607	1
Zn	66	2	72	-0.396	ppb	-29.02732306	160	5
As	75	2	72	0.064	ppb	216.4578775	22	1
Se	78	1	72	0.010	ppb	164.4866994	5	1
Nb	93	2	72	0.038	ppb	275.2824254	1767	2
Mo	95	2	115	0.220	ppb	26.4283156	167	0.5
Pd	105	2	115	0.001	ppb	2120.756658	20	1
Ag	107	2	115	-0.005	ppb	-382.8126003	40	1
Cd	111	2	115	-0.011	ppb	-1.47216E-06	0	0.5
Sn	120	2	115	0.052	ppb	88.43839732	127	1
Sb	121	2	115	0.067	ppb	61.92329471	53	0.6
Ba	137	2	115	-0.024	ppb	-114.0925911	3	0.5
W	182	2	165	-0.017	ppb	-56.13562239	660	1
Pt	195	2	165	-0.004	ppb	-183.5611267	10	1
Tl	205	2	165	-0.015	ppb	-15.7508418	43	0.1
Pb	208	2	165	-0.037	ppb	-32.16687896	550	0.5
Th	232	2	165	0.004	ppb	114.9287215	323	1
U	238	2	165	-0.007	ppb	-77.78690716	113	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	826398	2.80	1072135	77.08	60	120	
Sc (IS)	45	1	HMI H2	15712410	0.99	20791913	75.57	60	120	
Sc (IS)	45	2	HMI He	611098	0.94	758535	80.56	60	120	
Sc (IS)	45	3	No Gas	22991456	0.46	33963379	67.69	60	120	
Ge Internal Standard	72	1	HMI H2	5702740	1.32	7701407	74.05	60	120	
Ge Internal Standard	72	2	HMI He	659297	0.48	818771	80.52	60	120	
In Internal Standard	115	2	HMI He	2231248	1.37	2717298	82.11	60	120	
Ho-165	165	2	HMI He	10661885	0.29	12871763	82.83	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	190WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:01:00-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.028	ppb	0	0	0.5
Na	23	2	45	537.039	ppb	1.035091558	90723	25
Mg	24	2	45	7.193	ppb	19.94871707	820	25
Al	27	2	45	0.090	ppb	3056.89346	110	15
K	39	2	45	24.804	ppb	49.10277691	11422	50
Ca	44	2	45	4.856	ppb	299.360245	37	25
V	51	2	72	0.968	ppb	35.85338033	2290	1
Cr	52	2	72	-0.063	ppb	-66.89437217	137	1
Mn	55	2	72	-0.033	ppb	-88.45717403	40	0.5
Fe	57	2	72	-4.607	ppb	-35.16827092	63	25
Co	59	2	72	-0.006	ppb	-255.452986	23	0.5
Ni	60	2	72	0.041	ppb	449.0879477	87	1
Cu	63	2	72	-0.037	ppb	-269.1357325	597	1
Zn	66	2	72	-0.290	ppb	-108.3739263	177	5
As	75	2	72	0.030	ppb	296.2544899	19	1
Se	78	1	72	0.060	ppb	131.0399187	12	1
Nb	93	2	72	-0.133	ppb	-31.84812271	1473	2
Mo	95	2	115	0.248	ppb	53.68995138	187	0.5
Pd	105	2	115	0.008	ppb	212.5424812	27	1
Ag	107	2	115	-0.022	ppb	-24.74831563	10	1
Cd	111	2	115	-0.011	ppb	-1.47216E-06	0	0.5
Sn	120	2	115	0.024	ppb	305.3765424	110	1
Sb	121	2	115	0.037	ppb	131.5088861	37	0.6
Ba	137	2	115	0.038	ppb	67.39907771	17	0.5
W	182	2	165	0.028	ppb	55.54584663	790	1
Pt	195	2	165	-0.009	ppb	0	0	1
Tl	205	2	165	-0.010	ppb	-39.39827912	67	0.1
Pb	208	2	165	-0.026	ppb	-35.80165199	633	0.5
Th	232	2	165	-0.001	ppb	-543.8440433	290	1
U	238	2	165	-0.010	ppb	-18.30098947	93	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	830572	1.41	1072135	77.47	60	120	
Sc (IS)	45	1	HMI H2	15613013	0.37	20791913	75.09	60	120	
Sc (IS)	45	2	HMI He	615994	0.54	758535	81.21	60	120	
Sc (IS)	45	3	No Gas	23325424	0.27	33963379	68.68	60	120	
Ge Internal Standard	72	1	HMI H2	5739438	1.10	7701407	74.52	60	120	
Ge Internal Standard	72	2	HMI He	664110	0.10	818771	81.11	60	120	
In Internal Standard	115	2	HMI He	2288161	3.35	2717298	84.21	60	120	
Ho-165	165	2	HMI He	10814179	1.04	12871763	84.01	60	120	

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Sample Table

Sample Name	rinse-5425028
Data File Name	191WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:04:47-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.028	ppb	0	0	0.5
Na	23	2	45	475.437	ppb	1.703871257	81698	25
Mg	24	2	45	7.272	ppb	16.45249468	830	25
Al	27	2	45	-2.710	ppb	-38.70301273	57	15
K	39	2	45	31.084	ppb	28.02209304	11719	50
Ca	44	2	45	-7.002	ppb	-40.67576968	13	25
V	51	2	72	0.481	ppb	52.99286268	1974	1
Cr	52	2	72	-0.007	ppb	-1311.644561	183	1
Mn	55	2	72	-0.004	ppb	-7.98991831	50	0.5
Fe	57	2	72	-4.615	ppb	-62.4876188	63	25
Co	59	2	72	-0.009	ppb	-161.9801568	20	0.5
Ni	60	2	72	-0.042	ppb	-90.37855099	53	1
Cu	63	2	72	0.053	ppb	79.59032247	697	1
Zn	66	2	72	-0.429	ppb	-128.2913754	157	5
As	75	2	72	0.004	ppb	2852.947551	16	1
Se	78	1	72	-0.010	ppb	-351.10028	3	1
Nb	93	2	72	-0.227	ppb	-43.46885236	1307	2
Mo	95	2	115	0.152	ppb	54.58138368	133	0.5
Pd	105	2	115	-0.007	ppb	-381.2010363	13	1
Ag	107	2	115	0.003	ppb	669.9322125	57	1
Cd	111	2	115	-0.011	ppb	-1.47216E-06	0	0.5
Sn	120	2	115	0.007	ppb	970.158009	100	1
Sb	121	2	115	0.049	ppb	54.5177361	43	0.6
Ba	137	2	115	0.101	ppb	3.019897156	30	0.5
W	182	2	165	0.020	ppb	83.79694175	767	1
Pt	195	2	165	-0.003	ppb	-180.9181779	13	1
Tl	205	2	165	-0.008	ppb	-51.07541919	77	0.1
Pb	208	2	165	-0.021	ppb	-82.6437581	667	0.5
Th	232	2	165	-0.003	ppb	-306.2321309	270	1
U	238	2	165	-0.011	ppb	-16.64427433	87	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	832218	1.05	1072135	77.62	60	120	
Sc (IS)	45	1	HMI H2	15739989	0.14	20791913	75.70	60	120	
Sc (IS)	45	2	HMI He	619698	0.78	758535	81.70	60	120	
Sc (IS)	45	3	No Gas	23422883	0.45	33963379	68.97	60	120	
Ge Internal Standard	72	1	HMI H2	5731336	0.35	7701407	74.42	60	120	
Ge Internal Standard	72	2	HMI He	664853	0.22	818771	81.20	60	120	
In Internal Standard	115	2	HMI He	2288003	2.19	2717298	84.20	60	120	
Ho-165	165	2	HMI He	10805512	0.65	12871763	83.95	60	120	

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Sample Table

Sample Name	rinse-5425028
Data File Name	192WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:08:34-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.016	ppb	-128.1386796	3	0.5
Na	23	2	45	429.111	ppb	0.951071145	74410	25
Mg	24	2	45	7.522	ppb	18.7079613	847	25
Al	27	2	45	-0.282	ppb	-913.6210077	103	15
K	39	2	45	25.690	ppb	44.77575757	11508	50
Ca	44	2	45	8.178	ppb	71.38984103	43	25
V	51	2	72	0.721	ppb	55.39547148	2124	1
Cr	52	2	72	-0.058	ppb	-75.89825025	140	1
Mn	55	2	72	-0.043	ppb	-39.21209818	37	0.5
Fe	57	2	72	-2.232	ppb	-77.87222082	100	25
Co	59	2	72	-0.009	ppb	-160.7284145	20	0.5
Ni	60	2	72	-0.076	ppb	-117.8399955	40	1
Cu	63	2	72	0.050	ppb	295.9007766	690	1
Zn	66	2	72	-0.335	ppb	-105.6905959	170	5
As	75	2	72	0.063	ppb	92.51195654	22	1
Se	78	1	72	0.010	ppb	184.9389513	5	1
Nb	93	2	72	-0.433	ppb	-12.24011025	933	2
Mo	95	2	115	0.077	ppb	70.67481048	90	0.5
Pd	105	2	115	-0.019	ppb	-35.95659979	3	1
Ag	107	2	115	-0.009	ppb	-237.264422	33	1
Cd	111	2	115	0.002	ppb	986.032512	3	0.5
Sn	120	2	115	-0.056	ppb	-81.68186275	57	1
Sb	121	2	115	0.044	ppb	76.67740461	40	0.6
Ba	137	2	115	-0.008	ppb	-667.7999314	7	0.5
W	182	2	165	0.012	ppb	62.66737216	747	1
Pt	195	2	165	-0.005	ppb	-103.4582581	10	1
Tl	205	2	165	-0.003	ppb	-149.7079172	100	0.1
Pb	208	2	165	-0.050	ppb	-18.8400827	470	0.5
Th	232	2	165	-0.009	ppb	-93.75832088	220	1
U	238	2	165	-0.008	ppb	-22.03605456	107	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	846615	0.72	1072135	78.97	60	120	
Sc (IS)	45	1	HMI H2	15812000	1.04	20791913	76.05	60	120	
Sc (IS)	45	2	HMI He	618957	0.45	758535	81.60	60	120	
Sc (IS)	45	3	No Gas	23365300	1.16	33963379	68.80	60	120	
Ge Internal Standard	72	1	HMI H2	5843000	1.66	7701407	75.87	60	120	
Ge Internal Standard	72	2	HMI He	662742	0.70	818771	80.94	60	120	
In Internal Standard	115	2	HMI He	2267141	0.30	2717298	83.43	60	120	
Ho-165	165	2	HMI He	10816180	0.12	12871763	84.03	60	120	

Blank Report

Sample Table

Sample Name	rinse-5425028
Data File Name	193WASH.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:12:23-07:00
Sample Type	WASH
Dilution	1
Comment	
ISTD Ref File Name	121CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Be	9	1	6	-0.016	ppb	-128.8260465	3	0.5
Na	23	2	45	384.815	ppb	2.692312139	67300	25
Mg	24	2	45	5.038	ppb	22.70805635	670	25
Al	27	2	45	-4.075	ppb	-12.63456773	30	15
K	39	2	45	31.540	ppb	20.88782098	11682	50
Ca	44	2	45	14.998	ppb	51.23231962	57	25
V	51	2	72	0.683	ppb	17.18052056	2097	1
Cr	52	2	72	-0.018	ppb	-188.5497165	173	1
Mn	55	2	72	0.016	ppb	552.9654882	57	0.5
Fe	57	2	72	-2.018	ppb	-111.9042491	103	25
Co	59	2	72	-0.011	ppb	-74.21337262	17	0.5
Ni	60	2	72	-0.042	ppb	-192.0557125	53	1
Cu	63	2	72	0.050	ppb	305.3640449	690	1
Zn	66	2	72	-0.446	ppb	-54.03058043	153	5
As	75	2	72	0.037	ppb	208.9830844	20	1
Se	78	1	72	0.040	ppb	87.03085707	9	1
Nb	93	2	72	-0.403	ppb	-29.94248677	987	2
Mo	95	2	115	0.095	ppb	49.37602253	100	0.5
Pd	105	2	115	-0.011	ppb	-105.2410173	10	1
Ag	107	2	115	-0.007	ppb	-184.5563721	37	1
Cd	111	2	115	-0.011	ppb	-1.47216E-06	0	0.5
Sn	120	2	115	0.003	ppb	904.0274302	97	1
Sb	121	2	115	0.021	ppb	92.42829349	27	0.6
Ba	137	2	115	0.007	ppb	625.8861543	10	0.5
W	182	2	165	-0.057	ppb	-43.09663214	563	1
Pt	195	2	165	-0.006	ppb	-88.35110198	7	1
Tl	205	2	165	-0.004	ppb	-208.2423938	97	0.1
Pb	208	2	165	-0.041	ppb	-5.95468478	533	0.5
Th	232	2	165	-0.011	ppb	-54.41234552	210	1
U	238	2	165	-0.006	ppb	-36.0310933	130	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	837002	1.66	1072135	78.07	60	120	
Sc (IS)	45	1	HMI H2	15846159	0.90	20791913	76.21	60	120	
Sc (IS)	45	2	HMI He	616834	0.40	758535	81.32	60	120	
Sc (IS)	45	3	No Gas	23520256	0.71	33963379	69.25	60	120	
Ge Internal Standard	72	1	HMI H2	5796168	0.54	7701407	75.26	60	120	
Ge Internal Standard	72	2	HMI He	661942	0.08	818771	80.85	60	120	
In Internal Standard	115	2	HMI He	2271663	0.80	2717298	83.60	60	120	
Ho-165	165	2	HMI He	10856614	0.31	12871763	84.34	60	120	

Calibration Blank Report

Sample Table

Sample Name	ICIS-5427681
Data File Name	194CALB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:16:10-07:00
Sample Type	CalBlk
Level	1
Dilution	1
Comment	

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	114240	0.00
Li	7	2	HMI He	6308	0.07
Li	7	3	No Gas	2677210	0.00
Be	9	1	HMI H2	0	#VALUE!
B	11	1	HMI H2	1283	0.91
Na	23	1	HMI H2	885843	0.00
Na	23	2	HMI He	62402	0.00
Mg	24	2	HMI He	757	0.90
Al	27	2	HMI He	77	54.69
K	39	2	HMI He	11605	0.02
Ca	44	2	HMI He	43	81.35
Ti	47	2	HMI He	0	#VALUE!
V	51	2	HMI He	2264	0.44
Cr	52	2	HMI He	203	13.75
Mn	55	2	HMI He	80	15.63
Fe	57	2	HMI He	63	76.16
Co	59	2	HMI He	17	207.85
Ni	60	2	HMI He	100	10.00
Cu	63	2	HMI He	683	1.08
Zn	66	2	HMI He	207	2.70
As	75	2	HMI He	22	219.09
Se	78	1	HMI H2	8	1250.00
Sr	88	2	HMI He	37	214.72
Zr	90	2	HMI He	37	85.89
Nb	93	2	HMI He	647	2.03
Mo	95	2	HMI He	90	44.52
Pd	105	2	HMI He	0	#VALUE!
Ag	107	2	HMI He	33	137.48
Cd	111	2	HMI He	0	#VALUE!
Sn	120	2	HMI He	113	19.59
Sb	121	2	HMI He	17	549.91
Ba	137	2	HMI He	27	324.76
W	182	2	HMI He	687	0.68
Pt	195	2	HMI He	23	462.23
Tl	205	2	HMI He	77	59.75
Pb	208	2	HMI He	583	2.53
Th	232	2	HMI He	233	10.12
U	238	2	HMI He	90	32.67

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li-6 Internal Standard	6	1	HMI H2	842608	2.14
Sc (IS)	45	1	HMI H2	15887657	0.53
Sc (IS)	45	2	HMI He	621989	0.60
Sc (IS)	45	3	No Gas	23999890	0.74
Ge Internal Standard	72	1	HMI H2	5840960	0.53
Ge Internal Standard	72	2	HMI He	667191	0.18
In Internal Standard	115	2	HMI He	2291045	1.28
Ho-165	165	2	HMI He	10885907	0.97

Calibration Standard Report

Sample Table

Sample Name	IC-5427682
Data File Name	195CALS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:19:57-07:00
Sample Type	CalStd
Level	2
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD
Li	7	1	HMI H2	413486	0.00
Li	7	2	HMI He	23960	0.01
Li	7	3	No Gas	9837352	0.00
Be	9	1	HMI H2	27543	0.01
B	11	1	HMI H2	28916	0.01
Na	23	1	HMI H2	23371521	0.00
Na	23	2	HMI He	1644843	0.00
Mg	24	2	HMI He	725289	0.00
Al	27	2	HMI He	203812	0.00
K	39	1	HMI H2	28777655	0.00
K	39	2	HMI He	382010	0.00
Ca	40	1	HMI H2	32042390	0.00
Ca	44	2	HMI He	20782	0.01
Ti	47	2	HMI He	1680	0.31
V	51	2	HMI He	68133	0.00
Cr	52	2	HMI He	82677	0.00
Mn	55	2	HMI He	34599	0.01
Fe	57	2	HMI He	157766	0.00
Co	59	2	HMI He	140971	0.00
Ni	60	2	HMI He	38843	0.00
Cu	63	2	HMI He	108252	0.00
Zn	66	2	HMI He	15129	0.00
As	75	2	HMI He	10083	0.03
Se	78	1	HMI H2	13671	0.00
Sr	88	2	HMI He	39075	0.00
Zr	90	2	HMI He	490	4.80
Nb	93	2	HMI He	357179	0.00
Mo	95	2	HMI He	52589	0.00
Pd	105	2	HMI He	79230	0.00
Ag	107	2	HMI He	172812	0.00
Cd	111	2	HMI He	23327	0.01
Sn	120	2	HMI He	67393	0.00
Sb	121	2	HMI He	58373	0.00
Ba	137	2	HMI He	21311	0.01
Nd	146	2	HMI He	77959	0.00
Sm	147	2	HMI He	65939	0.00
Sm	150	2	HMI He	63753	0.00
Gd	156	1	HMI H2	260521	0.00
Gd	157	1	HMI H2	196761	0.00
W	182	2	HMI He	271392	0.00
Pt	195	2	HMI He	216895	0.00
Tl	205	2	HMI He	523175	0.00
Pb	208	2	HMI He	698967	0.00
Th	232	2	HMI He	851220	0.00
U	238	2	HMI He	913494	0.00

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	813790	1.47	842608	96.58	60	120	
Sc (IS)	45	1	HMI H2	15938887	0.38	15887657	100.32	60	120	
Sc (IS)	45	2	HMI He	625006	0.39	621989	100.49	60	120	
Sc (IS)	45	3	No Gas	24031390	0.20	23999890	100.13	60	120	
Ge Internal Standard	72	1	HMI H2	5805084	0.50	5840960	99.39	60	120	
Ge Internal Standard	72	2	HMI He	670200	0.67	667191	100.45	60	120	
In Internal Standard	115	2	HMI He	2238290	0.98	2291045	97.70	60	120	
Ho-165	165	2	HMI He	10912709	0.05	10885907	100.25	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	196_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:23:43-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	497.338	ppb	2.007	265504	500	99.5	90	110	
Li	7	2	45	497.541	ppb	1.906	15045	500	99.5	90	110	
Li	7	3	45	514.743	ppb	1.606	6397315	500	102.9	90	110	
Be	9	1	6	50.249	ppb	3.926	14141	50	100.5	90	110	
B	11	1	6	47.340	ppb	3.720	14651	50	94.7	90	110	
Na	23	1	45	4988.468	ppb	1.034	12207431	5000	99.8	90	110	
Na	23	2	45	4929.866	ppb	0.466	839299	5000	98.6	90	110	
Mg	24	2	45	5119.329	ppb	0.373	370177	5000	102.4	90	110	
Al	27	2	45	5047.953	ppb	0.119	102509	5000	101.0	90	110	
K	39	1	45	5057.467	ppb	0.625	18248195	5000	101.1	90	110	
K	39	2	45	5103.643	ppb	0.525	199866	5000	102.1	90	110	
Ca	40	1	45	5057.197	ppb	0.997	16372400	5000	101.1	90	110	
Ca	44	2	45	4960.243	ppb	4.167	10291	5000	99.2	90	110	
Ti	47	2	45	50.610	ppb	24.582	847	50	101.2	90	110	
V	51	2	72	51.023	ppb	2.156	35762	50	102.0	90	110	
Cr	52	2	72	49.539	ppb	1.769	40928	50	99.1	90	110	
Mn	55	2	72	50.399	ppb	2.136	17421	50	100.8	90	110	
Fe	57	2	72	5103.208	ppb	0.813	80288	5000	102.1	90	110	
Co	59	2	72	50.451	ppb	0.676	70901	50	100.9	90	110	
Ni	60	2	72	52.263	ppb	3.714	20282	50	104.5	90	110	
Cu	63	2	72	51.230	ppb	0.458	55615	50	102.5	90	110	
Zn	66	2	72	51.968	ppb	0.723	7936	50	103.9	90	110	
As	75	2	72	48.578	ppb	3.418	4894	50	97.2	90	110	
Se	78	1	72	49.818	ppb	0.698	6910	50	99.6	90	110	
Sr	88	2	72	50.041	ppb	1.751	19508	50	100.1	90	110	
Zr	90	2	72	42.791	ppb	4.926	230	50	85.6	90	110	>+\-10%
Nb	93	2	72	107.764	ppb	1.192	192135	100	107.8	90	110	
Mo	95	2	115	50.174	ppb	1.602	26215	50	100.3	90	110	
Pd	105	2	115	54.482	ppb	4.722	42786	50	109.0	90	110	
Ag	107	2	115	51.431	ppb	1.607	88190	50	102.9	90	110	
Cd	111	2	115	52.485	ppb	7.771	12129	50	105.0	90	110	
Sn	120	2	115	51.868	ppb	6.854	34688	50	103.7	90	110	
Sb	121	2	115	51.884	ppb	3.926	30034	50	103.8	90	110	
Ba	137	2	115	49.766	ppb	6.397	10528	50	99.5	90	110	
W	182	2	165	50.001	ppb	1.038	136205	50	100.0	90	110	
Pt	195	2	165	50.243	ppb	0.815	109115	50	100.5	90	110	
Tl	205	2	165	50.413	ppb	0.803	264100	50	100.8	90	110	
Pb	208	2	165	50.357	ppb	0.774	352688	50	100.7	90	110	
Th	232	2	165	49.639	ppb	0.060	423156	50	99.3	90	110	
U	238	2	165	50.109	ppb	0.559	458327	50	100.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	831523	0.67	842608	98.68	60	120	
Sc (IS)	45	1	HMI H2	16075776	1.25	15887657	101.18	60	120	
Sc (IS)	45	2	HMI He	622495	0.40	621989	100.08	60	120	
Sc (IS)	45	3	No Gas	24155335	0.77	23999890	100.65	60	120	
Ge Internal Standard	72	1	HMI H2	5886329	0.48	5840960	100.78	60	120	
Ge Internal Standard	72	2	HMI He	668018	0.28	667191	100.12	60	120	
In Internal Standard	115	2	HMI He	2221134	3.62	2291045	96.95	60	120	
Ho-165	165	2	HMI He	10925549	0.13	10885907	100.36	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	197_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:27:31-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	1.007	ppb	141.3	2758697	10	
Be	9	1	6	0.081	ppb	65.5	23	0.5	
B	11	1	6	1.895	ppb	29.8	1857	0.5	>RL
Na	23	1	45	-66.205	ppb	-6.7	746690	25	
Na	23	2	45	-72.266	ppb	-10.9	50871	25	
Mg	24	2	45	1.180	ppb	135.4	840	25	
Al	27	2	45	-1.130	ppb	-70.2	53	15	
K	39	1	45	4.125	ppb	429.9	7234879	50	
K	39	2	45	3.202	ppb	375.0	11685	50	
Ca	40	1	45	4.646	ppb	12.8	75176	50	
Ca	44	2	45	9.866	ppb	188.0	63	25	
Ti	47	2	45	42.476	ppb	173.2	698	0.5	>RL
V	51	2	72	1.224	ppb	18.2	3074	1	>RL
Cr	52	2	72	-0.054	ppb	-241.1	160	1	
Mn	55	2	72	-0.039	ppb	-278.6	67	0.5	
Fe	57	2	72	3.806	ppb	11.3	123	25	
Co	59	2	72	0.000	ppb	-23905.9	17	0.5	
Ni	60	2	72	-0.087	ppb	-67.4	67	1	
Cu	63	2	72	0.052	ppb	151.6	740	1	
Zn	66	2	72	-0.026	ppb	-784.1	203	5	
As	75	2	72	-0.001	ppb	-16206.3	22	1	
Se	78	1	72	0.076	ppb	87.9	19	1	
Sr	88	2	72	-0.043	ppb	-155.8	20	0.5	
Zr	90	2	72	1.441	ppb	173.0	43	1	>RL
Nb	93	2	72	7.586	ppb	7.8	14148	2	>RL
Mo	95	2	115	0.101	ppb	90.4	143	0.5	
Pd	105	2	115	0.099	ppb	44.9	80	1	
Ag	107	2	115	0.024	ppb	104.3	77	1	
Cd	111	2	115	0.056	ppb	43.0	13	0.5	
Sn	120	2	115	0.165	ppb	60.0	227	1	
Sb	121	2	115	0.482	ppb	6.8	303	0.6	
Ba	137	2	115	0.000	ppb	-528090.5	27	0.5	
W	182	2	165	0.160	ppb	30.5	1120	1	
Pt	195	2	165	-0.002	ppb	-766.3	20	1	
Tl	205	2	165	0.009	ppb	118.0	123	0.1	
Pb	208	2	165	0.016	ppb	57.1	697	0.5	
Th	232	2	165	0.051	ppb	13.1	663	1	
U	238	2	165	0.050	ppb	6.3	550	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	855995	0.17	842608	101.59	60	120	
Sc (IS)	45	1	HMI H2	16087110	0.86	15887657	101.26	60	120	
Sc (IS)	45	2	HMI He	620118	1.28	621989	99.70	60	120	
Sc (IS)	45	3	No Gas	24662398	0.30	23999890	102.76	60	120	
Ge Internal Standard	72	1	HMI H2	5913432	0.83	5840960	101.24	60	120	
Ge Internal Standard	72	2	HMI He	668730	0.78	667191	100.23	60	120	
In Internal Standard	115	2	HMI He	2282605	1.54	2291045	99.63	60	120	
Ho-165	165	2	HMI He	10894714	0.77	10885907	100.08	60	120	

Low Level Continuing Calibration Verification (LLCCV) Report

Sample Table

Sample Name	CCVL-5427685
Data File Name	198LCCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:31:18-07:00
Sample Type	LLCCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	3	45	11.924	ppb	35.321	2866087	50	23.8	70	130	>+/-30%
Be	9	1	6	1.066	ppb	11.487	313	1	106.6	70	130	
Na	23	2	45	-33.720	ppb	-9.283	58111	50	-67.4	70	130	>+/-30%
Mg	24	2	45	51.664	ppb	3.536	4561	50	103.3	70	130	
Al	27	2	45	35.958	ppb	10.165	820	30	119.9	70	130	
K	39	2	45	85.373	ppb	16.573	15012	100	85.4	70	130	
Ca	44	2	45	56.802	ppb	53.574	163	50	113.6	70	130	
V	51	2	72	5.604	ppb	2.606	6032	5	112.1	70	130	
Cr	52	2	72	1.999	ppb	14.461	1874	2	99.9	70	130	
Mn	55	2	72	0.990	ppb	7.392	427	1	99.0	70	130	
Fe	57	2	72	59.929	ppb	10.599	1020	50	119.9	70	130	
Co	59	2	72	1.041	ppb	4.323	1500	1	104.1	70	130	
Ni	60	2	72	1.987	ppb	7.888	880	2	99.4	70	130	
Cu	63	2	72	2.448	ppb	6.046	3357	2	122.4	70	130	
Zn	66	2	72	13.082	ppb	7.432	2184	10	130.8	70	130	>+/-30%
As	75	2	72	5.001	ppb	2.723	531	5	100.0	70	130	
Se	78	1	72	5.333	ppb	3.641	767	5	106.7	70	130	
Sr	88	2	72	1.020	ppb	13.860	440	1	102.0	70	130	
Zr	90	2	72	4.963	ppb	43.724	60	0.5	992.5	70	130	>+/-30%
Nb	93	2	72	17.412	ppb	5.635	32044	2	870.6	70	130	>+/-30%
Mo	95	2	115	2.066	ppb	5.138	1197	2	103.3	70	130	
Pd	105	2	115	0.029	ppb	88.922	23	1	2.9	70	130	>+/-30%
Ag	107	2	115	5.366	ppb	2.464	9494	5	107.3	70	130	
Cd	111	2	115	1.104	ppb	33.637	263	1	110.4	70	130	
Sn	120	2	115	9.885	ppb	6.108	6902	10	98.8	70	130	
Sb	121	2	115	2.491	ppb	3.270	1500	2	124.5	70	130	
Ba	137	2	115	0.921	ppb	24.811	227	1	92.1	70	130	
W	182	2	165	5.010	ppb	2.299	14368	1	501.0	70	130	>+/-30%
Pt	195	2	165	0.038	ppb	50.164	107	1	3.8	70	130	>+/-30%
Tl	205	2	165	1.015	ppb	2.186	5428	1	101.5	70	130	
Pb	208	2	165	1.042	ppb	2.468	7928	1	104.2	70	130	
Th	232	2	165	2.046	ppb	5.249	17790	2	102.3	70	130	
U	238	2	165	1.017	ppb	4.865	9451	1	101.7	70	130	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	869174	1.27	842608	103.15	60	120	
Sc (IS)	45	1	HMI H2	16337504	0.98	15887657	102.83	60	120	
Sc (IS)	45	2	HMI He	633033	0.36	621989	101.78	60	120	
Sc (IS)	45	3	No Gas	24898837	0.16	23999890	103.75	60	120	
Ge Internal Standard	72	1	HMI H2	6042577	1.17	5840960	103.45	60	120	
Ge Internal Standard	72	2	HMI He	677685	0.10	667191	101.57	60	120	
In Internal Standard	115	2	HMI He	2284230	0.93	2291045	99.70	60	120	
Ho-165	165	2	HMI He	11001257	0.97	10885907	101.06	60	120	

Blank Report

Sample Table

Sample Name	MB 280-435547/1-A
Data File Name	199_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:35:07-07:00
Sample Type	Blank
Dilution	1
Comment	435547 6020
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-12.258	ppb	-59.5888271	112246	0.5
Li	7	2	45	11.943	ppb	214.3516548	6595	0.5
Li	7	3	45	-4.149	ppb	-246.5260499	2608994	10
Be	9	1	6	0.023	ppb	173.2050808	7	0.5
B	11	1	6	-0.701	ppb	-114.3985511	1087	0.5
Na	23	1	45	-103.875	ppb	-0.1977681	662851	25
Na	23	2	45	-98.028	ppb	-2.082797099	47551	25
Mg	24	2	45	7.928	ppb	47.79082897	1343	25
Al	27	2	45	10.197	ppb	10.81858388	287	15
K	39	1	45	-1438.926	ppb	-1.727849949	4096019	50
K	39	2	45	-3.729	ppb	-300.1742398	11609	50
Ca	40	1	45	27.979	ppb	4.6702257	150877	50
Ca	44	2	45	18.797	ppb	80.05085187	83	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	-1.062	ppb	-35.77510889	1590	1
Cr	52	2	72	0.200	ppb	26.95740275	373	1
Mn	55	2	72	0.169	ppb	148.5881482	140	0.5
Fe	57	2	72	11.844	ppb	28.36152937	253	25
Co	59	2	72	0.012	ppb	127.0424634	33	0.5
Ni	60	2	72	-0.063	ppb	-154.622121	77	1
Cu	63	2	72	0.126	ppb	91.03116843	830	1
Zn	66	2	72	1.240	ppb	18.40351674	397	5
As	75	2	72	-0.132	ppb	-59.20832581	8	1
Se	78	1	72	0.037	ppb	322.7136845	13	1
Sr	88	2	72	0.024	ppb	323.7552439	47	0.5
Zr	90	2	72	1.338	ppb	251.5278504	43	1
Nb	93	2	72	2.160	ppb	13.16120569	4551	2
Mo	95	2	115	0.011	ppb	1083.039462	97	0.5
Pd	105	2	115	0.033	ppb	113.7029703	27	1
Ag	107	2	115	-0.002	ppb	-456.8397902	30	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	-0.036	ppb	-135.3169527	90	1
Sb	121	2	115	0.072	ppb	102.9895872	60	0.6
Ba	137	2	115	0.318	ppb	22.0307111	97	0.5
W	182	2	165	0.026	ppb	110.9829102	773	1
Pt	195	2	165	-0.005	ppb	-147.5797674	13	1
Tl	205	2	165	0.007	ppb	15.38402704	117	0.1
Pb	208	2	165	0.031	ppb	28.45400319	817	0.5
Th	232	2	165	0.013	ppb	49.87691876	353	1
U	238	2	165	0.012	ppb	13.78372557	207	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	845589	0.85	842608	100.35	60	120	
Sc (IS)	45	1	HMI H2	16125661	0.52	15887657	101.50	60	120	
Sc (IS)	45	2	HMI He	629637	0.84	621989	101.23	60	120	
Sc (IS)	45	3	No Gas	23654810	1.44	23999890	98.56	60	120	
Ge Internal Standard	72	1	HMI H2	5919748	0.71	5840960	101.35	60	120	
Ge Internal Standard	72	2	HMI He	677470	0.60	667191	101.54	60	120	
In Internal Standard	115	2	HMI He	2313412	1.40	2291045	100.98	60	120	
Ho-165	165	2	HMI He	11101681	0.50	10885907	101.98	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-435547/2-A
Data File Name	200_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:38:57-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	435547 6020
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	71.027	71.027	ppb	10.058	136708	400	17.8	80	120	>+/-20%
Li	7	2	45	89.837	89.837	ppb	17.635	8006	400	22.5	80	120	>+/-20%
Li	7	3	45	73.121	73.121	ppb	3.241	3149805	400	18.3	80	120	>+/-20%
Be	9	1	6	38.565	38.565	ppb	2.236	10841	40	96.4	80	120	
Na	23	2	45	-126.286	-126.286	ppb	-3.882	43187	40	-315.7	80	120	>+/-20%
Mg	24	2	45	-1.979	-1.979	ppb	-69.811	623	40	-4.9	80	120	>+/-20%
Al	27	2	45	473.451	473.451	ppb	3.118	9827	40	1183.6	80	120	>+/-20%
K	39	2	45	-13.824	-13.824	ppb	-108.012	11268	40	-34.6	80	120	>+/-20%
Ca	44	2	45	198.435	198.435	ppb	10.423	460	40	496.1	80	120	>+/-20%
V	51	2	72	38.274	38.274	ppb	3.401	28028	40	95.7	80	120	
Cr	52	2	72	40.685	40.685	ppb	0.965	34435	40	101.7	80	120	
Mn	55	2	72	40.203	40.203	ppb	0.608	14238	40	100.5	80	120	
Fe	57	2	72	449.472	449.472	ppb	5.486	7296	40	1123.7	80	120	>+/-20%
Co	59	2	72	40.062	40.062	ppb	0.951	57622	40	100.2	80	120	
Ni	60	2	72	40.391	40.391	ppb	3.704	16066	40	101.0	80	120	
Cu	63	2	72	40.585	40.585	ppb	0.947	45235	40	101.5	80	120	
Zn	66	2	72	41.882	41.882	ppb	3.393	6585	40	104.7	80	120	
As	75	2	72	38.184	38.184	ppb	2.655	3941	40	95.5	80	120	
Se	78	1	72	39.947	39.947	ppb	2.396	5568	40	99.9	80	120	
Nb	93	2	72	1.583	1.583	ppb	20.933	3544	40	4.0	80	120	>+/-20%
Mo	95	2	115	38.000	38.000	ppb	4.674	20559	40	95.0	80	120	
Pd	105	2	115	0.033	0.033	ppb	77.803	27	40	0.1	80	120	>+/-20%
Ag	107	2	115	42.359	42.359	ppb	4.387	75138	40	105.9	80	120	
Cd	111	2	115	39.377	39.377	ppb	2.374	9434	40	98.4	80	120	
Sn	120	2	115	39.528	39.528	ppb	3.043	27408	40	98.8	80	120	
Sb	121	2	115	38.533	38.533	ppb	0.813	23100	40	96.3	80	120	
Ba	137	2	115	44.046	44.046	ppb	3.221	9654	40	110.1	80	120	
W	182	2	165	12.736	12.736	ppb	1.804	35742	40	31.8	80	120	>+/-20%
Pt	195	2	165	-0.005	-0.005	ppb	-55.273	13	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.697	40.697	ppb	0.743	216459	40	101.7	80	120	
Pb	208	2	165	40.754	40.754	ppb	0.327	289885	40	101.9	80	120	
Th	232	2	165	39.149	39.149	ppb	0.898	338869	40	97.9	80	120	
U	238	2	165	39.612	39.612	ppb	0.549	367852	40	99.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	830649	1.29	842608	98.58	60	120	
Sc (IS)	45	1	HMI H2	16042889	0.84	15887657	100.98	60	120	
Sc (IS)	45	2	HMI He	631684	0.13	621989	101.56	60	120	
Sc (IS)	45	3	No Gas	23623038	0.41	23999890	98.43	60	120	
Ge Internal Standard	72	1	HMI H2	5913245	0.14	5840960	101.24	60	120	
Ge Internal Standard	72	2	HMI He	683630	0.80	667191	102.46	60	120	
In Internal Standard	115	2	HMI He	2297851	1.75	2291045	100.30	60	120	
Ho-165	165	2	HMI He	11092000	0.25	10885907	101.89	60	120	

Sample Report

Sample Table

Sample Name	280-116198-S-1-A
Data File Name	201SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:42:45-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435547 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	34.099	ppb	34.099	18.84	119021	500000	
Li	7	2	45	26.247	ppb	26.247	68.79	6435	500000	
Li	7	3	45	38.236	ppb	38.236	9.51	2735388	50000	
Be	9	1	6	0.051	ppb	0.051	114.39	13	2000	
B	11	1	6	1874.542	ppb	1874.542	0.30	493176	2000	
Na	23	1	45	288702.568	ppb	288702.568	0.65	619920604	2000	>LDR
Na	23	2	45	280680.529	ppb	280680.529	0.68	42075315	400000	
Mg	24	2	45	102858.806	ppb	102858.806	1.12	7051525	400000	
Al	27	2	45	84.425	ppb	84.425	5.54	1700	400000	
K	39	1	45	24132.735	ppb	24132.735	1.04	56585421	400000	
K	39	2	45	25089.466	ppb	25089.466	0.39	890171	400000	
Ca	40	1	45	258417.769	ppb	258417.769	0.94	788323348	400000	
Ca	44	2	45	253130.621	ppb	253130.621	0.41	496771	400000	
Ti	47	2	45	2.724	ppb	2.724	34.96	43	4000	
V	51	2	72	-0.114	ppb	-0.114	-358.89	2057	2000	
Cr	52	2	72	61.012	ppb	61.012	1.03	47268	5000	
Mn	55	2	72	1016.930	ppb	1016.930	0.76	328503	10000	
Fe	57	2	72	5989.060	ppb	5989.060	1.25	88433	400000	
Co	59	2	72	1.715	ppb	1.715	8.82	2277	2000	
Ni	60	2	72	14.218	ppb	14.218	7.75	5248	5000	
Cu	63	2	72	2.499	ppb	2.499	15.48	3157	5000	
Zn	66	2	72	7.325	ppb	7.325	5.85	1217	5000	
As	75	2	72	9.656	ppb	9.656	5.89	929	2000	
Se	78	1	72	0.402	ppb	0.402	94.82	60	2000	
Sr	88	2	72	1163.310	ppb	1163.310	0.67	424902	4000	
Zr	90	2	72	664.970	ppb	664.970	4.77	2854	1000	
Nb	93	2	72	1.645	ppb	1.645	14.38	3351	200	
Mo	95	2	115	24.259	ppb	24.259	4.88	12172	2000	
Pd	105	2	115	0.049	ppb	0.049	16.30	37	100	
Ag	107	2	115	0.010	ppb	0.010	71.40	47	100	
Cd	111	2	115	0.030	ppb	0.030	173.21	7	2000	
Sn	120	2	115	0.785	ppb	0.785	19.97	607	2000	
Sb	121	2	115	0.568	ppb	0.568	28.24	330	1000	
Ba	137	2	115	69.779	ppb	69.779	5.69	14128	5000	
W	182	2	165	0.366	ppb	0.366	5.44	1617	100	
Pt	195	2	165	0.002	ppb	0.002	609.52	27	100	
Tl	205	2	165	0.023	ppb	0.023	79.07	190	2000	
Pb	208	2	165	0.254	ppb	0.254	20.70	2274	5000	
Th	232	2	165	0.210	ppb	0.210	10.04	1947	2000	
U	238	2	165	0.506	ppb	0.506	5.80	4541	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	771901	0.25	842608	91.61	60	120	
Sc (IS)	45	1	HMI H2	15202159	0.89	15887657	95.69	60	120	
Sc (IS)	45	2	HMI He	591348	0.44	621989	95.07	60	120	
Sc (IS)	45	3	No Gas	22249493	0.56	23999890	92.71	60	120	
Ge Internal Standard	72	1	HMI H2	5516222	0.71	5840960	94.44	60	120	
Ge Internal Standard	72	2	HMI He	627027	0.16	667191	93.98	60	120	
In Internal Standard	115	2	HMI He	2125201	0.80	2291045	92.76	60	120	
Ho-165	165	2	HMI He	10513724	0.20	10885907	96.58	60	120	

Sample Report

Sample Table

Sample Name	280-116203-P-1-A
Data File Name	202SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:46:31-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435547 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-9.250	ppb	-9.250	-40.78	106958	500000	
Li	7	2	45	-21.290	ppb	-21.290	-110.37	5685	500000	
Li	7	3	45	-10.487	ppb	-10.487	-23.42	2419450	50000	
Be	9	1	6	0.038	ppb	0.038	0.38	10	2000	
B	11	1	6	308.091	ppb	308.091	0.68	83298	2000	
Na	23	1	45	67950.571	ppb	67950.571	0.44	146952664	2000	>LDR
Na	23	2	45	66098.357	ppb	66098.357	1.70	10030998	400000	
Mg	24	2	45	52286.703	ppb	52286.703	0.60	3612952	400000	
Al	27	2	45	49.084	ppb	49.084	6.54	1027	400000	
K	39	1	45	57343.657	ppb	57343.657	0.36	125399811	400000	
K	39	2	45	59974.311	ppb	59974.311	1.08	2129016	400000	
Ca	40	1	45	173810.170	ppb	173810.170	0.17	531680592	400000	
Ca	44	2	45	167341.553	ppb	167341.553	1.09	330998	400000	
Ti	47	2	45	1.239	ppb	1.239	173.21	20	4000	
V	51	2	72	1.540	ppb	1.540	3.24	3137	2000	
Cr	52	2	72	2.595	ppb	2.595	12.98	2237	5000	
Mn	55	2	72	25.784	ppb	25.784	2.66	8570	10000	
Fe	57	2	72	2062.725	ppb	2062.725	1.30	31101	400000	
Co	59	2	72	0.643	ppb	0.643	12.12	880	2000	
Ni	60	2	72	11.154	ppb	11.154	11.50	4221	5000	
Cu	63	2	72	3.929	ppb	3.929	1.65	4688	5000	
Zn	66	2	72	25.310	ppb	25.310	5.29	3801	5000	
As	75	2	72	2.820	ppb	2.820	11.85	292	2000	
Se	78	1	72	0.460	ppb	0.460	27.15	68	2000	
Sr	88	2	72	266.857	ppb	266.857	1.08	99433	4000	
Zr	90	2	72	99.915	ppb	99.915	36.68	467	1000	
Nb	93	2	72	1.342	ppb	1.342	11.77	2904	200	
Mo	95	2	115	16.375	ppb	16.375	5.69	8369	2000	
Pd	105	2	115	0.026	ppb	0.026	100.84	20	100	
Ag	107	2	115	0.009	ppb	0.009	164.55	47	100	
Cd	111	2	115	0.015	ppb	0.015	173.21	3	2000	
Sn	120	2	115	0.806	ppb	0.806	2.02	630	2000	
Sb	121	2	115	1.419	ppb	1.419	19.43	813	1000	
Ba	137	2	115	50.129	ppb	50.129	2.87	10314	5000	
W	182	2	165	0.420	ppb	0.420	8.44	1794	100	
Pt	195	2	165	-0.003	ppb	-0.003	-246.38	17	100	
Tl	205	2	165	0.007	ppb	0.007	106.75	113	2000	
Pb	208	2	165	0.947	ppb	0.947	2.55	7064	5000	
Th	232	2	165	0.068	ppb	0.068	12.08	793	2000	
U	238	2	165	1.824	ppb	1.824	0.39	16445	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	783728	0.38	842608	93.01	60	120	
Sc (IS)	45	1	HMI H2	15242721	0.46	15887657	95.94	60	120	
Sc (IS)	45	2	HMI He	595978	0.85	621989	95.82	60	120	
Sc (IS)	45	3	No Gas	22313137	0.94	23999890	92.97	60	120	
Ge Internal Standard	72	1	HMI H2	5573360	0.97	5840960	95.42	60	120	
Ge Internal Standard	72	2	HMI He	639460	0.50	667191	95.84	60	120	
In Internal Standard	115	2	HMI He	2158182	1.26	2291045	94.20	60	120	
Ho-165	165	2	HMI He	10711761	0.98	10885907	98.40	60	120	

Sample Report

Sample Table

Sample Name	280-116203-P-1-Asd@5
Data File Name	203SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:50:19-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435547 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-14.003	ppb	-14.003	-29.12	111169	500000	
Li	7	2	45	-1.294	ppb	-1.294	-951.34	6255	500000	
Li	7	3	45	-7.266	ppb	-7.266	-29.29	2594668	50000	
Be	9	1	6	0.048	ppb	0.048	173.21	13	2000	
B	11	1	6	73.296	ppb	73.296	2.61	21814	2000	
Na	23	1	45	13859.942	ppb	13859.942	0.48	32267255	2000	>LDR
Na	23	2	45	13859.008	ppb	13859.008	1.22	2233748	400000	
Mg	24	2	45	10771.591	ppb	10771.591	0.89	773685	400000	
Al	27	2	45	6.642	ppb	6.642	58.96	210	400000	
K	39	1	45	11706.719	ppb	11706.719	0.96	32686730	400000	
K	39	2	45	12091.494	ppb	12091.494	1.28	455050	400000	
Ca	40	1	45	35578.456	ppb	35578.456	0.22	114623115	400000	
Ca	44	2	45	34814.424	ppb	34814.424	2.47	71552	400000	
Ti	47	2	45	0.400	ppb	0.400	173.21	7	4000	
V	51	2	72	-0.724	ppb	-0.724	-2.39	1804	2000	
Cr	52	2	72	0.497	ppb	0.497	19.98	617	5000	
Mn	55	2	72	5.577	ppb	5.577	13.98	2014	10000	
Fe	57	2	72	427.219	ppb	427.219	9.60	6829	400000	
Co	59	2	72	0.165	ppb	0.165	20.33	250	2000	
Ni	60	2	72	2.037	ppb	2.037	13.06	893	5000	
Cu	63	2	72	0.833	ppb	0.833	20.06	1587	5000	
Zn	66	2	72	5.510	ppb	5.510	16.08	1033	5000	
As	75	2	72	0.523	ppb	0.523	39.66	75	2000	
Se	78	1	72	0.112	ppb	0.112	49.56	24	2000	
Sr	88	2	72	52.550	ppb	52.550	1.56	20622	4000	
Zr	90	2	72	14.549	ppb	14.549	67.01	103	1000	
Nb	93	2	72	0.558	ppb	0.558	10.65	1650	200	
Mo	95	2	115	3.892	ppb	3.892	3.24	2140	2000	
Pd	105	2	115	0.008	ppb	0.008	173.21	7	100	
Ag	107	2	115	0.000	ppb	0.000	-88633.33	33	100	
Cd	111	2	115	0.014	ppb	0.014	173.21	3	2000	
Sn	120	2	115	0.345	ppb	0.345	61.25	347	2000	
Sb	121	2	115	0.400	ppb	0.400	28.00	250	1000	
Ba	137	2	115	10.423	ppb	10.423	8.65	2254	5000	
W	182	2	165	0.090	ppb	0.090	74.19	940	100	
Pt	195	2	165	-0.005	ppb	-0.005	-147.93	13	100	
Tl	205	2	165	0.001	ppb	0.001	97.53	83	2000	
Pb	208	2	165	0.211	ppb	0.211	5.05	2070	5000	
Th	232	2	165	0.006	ppb	0.006	57.79	287	2000	
U	238	2	165	0.381	ppb	0.381	8.41	3601	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	824733	0.42	842608	97.88	60	120	
Sc (IS)	45	1	HMI H2	16046724	0.51	15887657	101.00	60	120	
Sc (IS)	45	2	HMI He	619015	0.40	621989	99.52	60	120	
Sc (IS)	45	3	No Gas	23718641	0.41	23999890	98.83	60	120	
Ge Internal Standard	72	1	HMI H2	5964708	0.83	5840960	102.12	60	120	
Ge Internal Standard	72	2	HMI He	672585	0.69	667191	100.81	60	120	
In Internal Standard	115	2	HMI He	2249433	2.59	2291045	98.18	60	120	
Ho-165	165	2	HMI He	10994899	0.92	10885907	101.00	60	120	

Sample Report

Sample Table

Sample Name	280-116203-P-1-B MS
Data File Name	204SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:54:06-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435547 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	61.476	ppb	61.476	15.82	128545	500000	
Li	7	2	45	64.957	ppb	64.957	35.93	7195	500000	
Li	7	3	45	65.348	ppb	65.348	17.77	2896825	50000	
Be	9	1	6	37.986	ppb	37.986	2.40	10101	2000	
B	11	1	6	280.387	ppb	280.387	0.66	76103	2000	
Na	23	1	45	65637.293	ppb	65637.293	0.85	143520588	2000	>LDR
Na	23	2	45	64379.088	ppb	64379.088	0.49	9853766	400000	
Mg	24	2	45	50934.733	ppb	50934.733	0.59	3548982	400000	
Al	27	2	45	449.279	ppb	449.279	9.17	8876	400000	
K	39	1	45	55797.206	ppb	55797.206	0.78	123531875	400000	
K	39	2	45	58275.306	ppb	58275.306	0.29	2086331	400000	
Ca	40	1	45	170002.523	ppb	170002.523	0.62	525691126	400000	
Ca	44	2	45	165663.189	ppb	165663.189	0.36	330399	400000	
Ti	47	2	45	1.648	ppb	1.648	77.85	27	4000	
V	51	2	72	41.550	ppb	41.550	2.85	28713	2000	
Cr	52	2	72	43.054	ppb	43.054	1.65	34599	5000	
Mn	55	2	72	64.408	ppb	64.408	1.50	21617	10000	
Fe	57	2	72	2451.611	ppb	2451.611	1.83	37520	400000	
Co	59	2	72	39.922	ppb	39.922	1.22	54537	2000	
Ni	60	2	72	52.064	ppb	52.064	3.85	19637	5000	
Cu	63	2	72	43.219	ppb	43.219	2.16	45710	5000	
Zn	66	2	72	62.903	ppb	62.903	3.05	9293	5000	
As	75	2	72	41.288	ppb	41.288	5.68	4046	2000	
Se	78	1	72	39.519	ppb	39.519	3.93	5237	2000	
Sr	88	2	72	301.728	ppb	301.728	1.79	114151	4000	
Zr	90	2	72	7495.915	ppb	7495.915	4.01	32946	1000	>LDR
Nb	93	2	72	0.911	ppb	0.911	12.23	2204	200	
Mo	95	2	115	53.529	ppb	53.529	4.83	27674	2000	
Pd	105	2	115	0.013	ppb	0.013	99.75	10	100	
Ag	107	2	115	39.275	ppb	39.275	3.08	66665	100	
Cd	111	2	115	38.205	ppb	38.205	1.00	8753	2000	
Sn	120	2	115	38.837	ppb	38.837	3.51	25765	2000	
Sb	121	2	115	43.052	ppb	43.052	3.88	24690	1000	
Ba	137	2	115	90.084	ppb	90.084	2.61	18857	5000	
W	182	2	165	10.676	ppb	10.676	3.66	29510	100	
Pt	195	2	165	-0.005	ppb	-0.005	-57.29	13	100	
Tl	205	2	165	38.868	ppb	38.868	0.66	202870	2000	
Pb	208	2	165	39.492	ppb	39.492	2.06	275667	5000	
Th	232	2	165	35.374	ppb	35.374	0.15	300489	2000	
U	238	2	165	41.895	ppb	41.895	1.80	381768	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	785685	0.34	842608	93.24	60	120	
Sc (IS)	45	1	HMI H2	15408755	0.57	15887657	96.99	60	120	
Sc (IS)	45	2	HMI He	600936	0.35	621989	96.62	60	120	
Sc (IS)	45	3	No Gas	22113774	1.03	23999890	92.14	60	120	
Ge Internal Standard	72	1	HMI H2	5622472	0.33	5840960	96.26	60	120	
Ge Internal Standard	72	2	HMI He	649296	0.43	667191	97.32	60	120	
In Internal Standard	115	2	HMI He	2198013	0.86	2291045	95.94	60	120	
Ho-165	165	2	HMI He	10884828	0.48	10885907	99.99	60	120	

Sample Report

Sample Table

Sample Name	280-116203-P-1-C MSD
Data File Name	205SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T01:57:51-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435547 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	63.604	ppb	63.604	6.66	128319	500000	
Li	7	2	45	93.129	ppb	93.129	18.95	7639	500000	
Li	7	3	45	56.654	ppb	56.654	7.74	2833001	50000	
Be	9	1	6	39.992	ppb	39.992	1.92	10487	2000	
B	11	1	6	293.749	ppb	293.749	0.99	78582	2000	
Na	23	1	45	67101.234	ppb	67101.234	0.46	145740044	2000	>LDR
Na	23	2	45	65244.567	ppb	65244.567	0.24	9943709	400000	
Mg	24	2	45	51792.500	ppb	51792.500	1.06	3593503	400000	
Al	27	2	45	440.969	ppb	440.969	2.80	8676	400000	
K	39	1	45	57272.464	ppb	57272.464	0.76	125782821	400000	
K	39	2	45	60053.313	ppb	60053.313	0.81	2140596	400000	
Ca	40	1	45	173388.702	ppb	173388.702	0.64	532634645	400000	
Ca	44	2	45	167113.469	ppb	167113.469	1.19	331884	400000	
Ti	47	2	45	3.520	ppb	3.520	19.77	57	4000	
V	51	2	72	40.595	ppb	40.595	3.68	27868	2000	
Cr	52	2	72	41.716	ppb	41.716	0.52	33246	5000	
Mn	55	2	72	65.078	ppb	65.078	4.04	21657	10000	
Fe	57	2	72	2439.763	ppb	2439.763	1.09	37025	400000	
Co	59	2	72	39.103	ppb	39.103	1.27	52964	2000	
Ni	60	2	72	52.390	ppb	52.390	2.24	19594	5000	
Cu	63	2	72	43.353	ppb	43.353	0.77	45459	5000	
Zn	66	2	72	63.237	ppb	63.237	0.90	9263	5000	
As	75	2	72	42.434	ppb	42.434	2.58	4123	2000	
Se	78	1	72	39.234	ppb	39.234	3.24	5166	2000	
Sr	88	2	72	309.449	ppb	309.449	1.31	116077	4000	
Zr	90	2	72	7503.585	ppb	7503.585	1.83	32699	1000	>LDR
Nb	93	2	72	0.724	ppb	0.724	18.43	1864	200	
Mo	95	2	115	53.364	ppb	53.364	4.72	27788	2000	
Pd	105	2	115	0.004	ppb	0.004	173.21	3	100	
Ag	107	2	115	38.298	ppb	38.298	2.78	65480	100	
Cd	111	2	115	39.571	ppb	39.571	7.33	9127	2000	
Sn	120	2	115	38.526	ppb	38.526	1.16	25751	2000	
Sb	121	2	115	43.413	ppb	43.413	1.73	25074	1000	
Ba	137	2	115	88.179	ppb	88.179	1.47	18593	5000	
W	182	2	165	12.052	ppb	12.052	2.59	32908	100	
Pt	195	2	165	-0.009	ppb	-0.009	-29.07	3	100	
Tl	205	2	165	39.384	ppb	39.384	0.49	203615	2000	
Pb	208	2	165	40.209	ppb	40.209	1.03	278005	5000	
Th	232	2	165	36.734	ppb	36.734	1.20	309056	2000	
U	238	2	165	42.038	ppb	42.038	0.91	379435	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	774905	0.37	842608	91.97	60	120	
Sc (IS)	45	1	HMI H2	15307309	0.28	15887657	96.35	60	120	
Sc (IS)	45	2	HMI He	598427	0.55	621989	96.21	60	120	
Sc (IS)	45	3	No Gas	22059246	0.44	23999890	91.91	60	120	
Ge Internal Standard	72	1	HMI H2	5585858	0.71	5840960	95.63	60	120	
Ge Internal Standard	72	2	HMI He	643800	0.17	667191	96.49	60	120	
In Internal Standard	115	2	HMI He	2214180	1.44	2291045	96.65	60	120	
Ho-165	165	2	HMI He	10781698	1.02	10885907	99.04	60	120	

Sample Report

Sample Table

Sample Name	280-116203-P-1-A pds
Data File Name	206SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:01:38-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435547 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	185.107	ppb	185.107	0.70	162071	500000	
Li	7	2	45	170.267	ppb	170.267	2.78	8806	500000	
Li	7	3	45	178.202	ppb	178.202	4.04	3537204	50000	
Be	9	1	6	199.447	ppb	199.447	2.97	51553	2000	
B	11	1	6	259.570	ppb	259.570	2.33	68577	2000	
Na	23	1	45	65258.864	ppb	65258.864	0.98	140781515	2000	>LDR
Na	23	2	45	64142.162	ppb	64142.162	0.51	9629173	400000	
Mg	24	2	45	50569.917	ppb	50569.917	0.75	3455909	400000	
Al	27	2	45	2008.253	ppb	2008.253	2.74	38655	400000	
K	39	1	45	55710.708	ppb	55710.708	0.94	121693405	400000	
K	39	2	45	58363.041	ppb	58363.041	0.86	2049334	400000	
Ca	40	1	45	169163.421	ppb	169163.421	0.91	516065539	400000	
Ca	44	2	45	164937.666	ppb	164937.666	0.49	322639	400000	
Ti	47	2	45	5.265	ppb	5.265	81.71	83	4000	
V	51	2	72	203.835	ppb	203.835	0.27	129688	2000	
Cr	52	2	72	206.595	ppb	206.595	0.75	162044	5000	
Mn	55	2	72	230.328	ppb	230.328	0.37	75606	10000	
Fe	57	2	72	3961.580	ppb	3961.580	2.24	59406	400000	
Co	59	2	72	200.709	ppb	200.709	0.74	268765	2000	
Ni	60	2	72	211.122	ppb	211.122	2.43	77796	5000	
Cu	63	2	72	203.847	ppb	203.847	0.82	208952	5000	
Zn	66	2	72	231.652	ppb	231.652	1.35	33029	5000	
As	75	2	72	199.827	ppb	199.827	0.30	19123	2000	
Se	78	1	72	196.255	ppb	196.255	0.98	25825	2000	
Sr	88	2	72	467.989	ppb	467.989	1.72	173574	4000	
Zr	90	2	72	42389.713	ppb	42389.713	1.07	182507	1000	>LDR
Nb	93	2	72	12.747	ppb	12.747	4.01	22208	200	
Mo	95	2	115	214.292	ppb	214.292	1.51	109901	2000	
Pd	105	2	115	0.034	ppb	0.034	93.53	27	100	
Ag	107	2	115	37.687	ppb	37.687	1.93	63595	100	
Cd	111	2	115	201.403	ppb	201.403	3.44	45859	2000	
Sn	120	2	115	200.763	ppb	200.763	1.02	131969	2000	
Sb	121	2	115	197.310	ppb	197.310	1.17	112414	1000	
Ba	137	2	115	257.477	ppb	257.477	2.06	53535	5000	
W	182	2	165	202.719	ppb	202.719	1.36	542470	100	
Pt	195	2	165	0.059	ppb	0.059	51.09	150	100	
Tl	205	2	165	198.924	ppb	198.924	0.14	1027440	2000	
Pb	208	2	165	196.238	ppb	196.238	0.10	1353680	5000	
Th	232	2	165	250.777	ppb	250.777	1.67	2107357	2000	
U	238	2	165	229.912	ppb	229.912	0.75	2073519	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	763793	0.21	842608	90.65	60	120	
Sc (IS)	45	1	HMI H2	15201754	0.44	15887657	95.68	60	120	
Sc (IS)	45	2	HMI He	589397	0.48	621989	94.76	60	120	
Sc (IS)	45	3	No Gas	21485998	0.30	23999890	89.53	60	120	
Ge Internal Standard	72	1	HMI H2	5589258	0.22	5840960	95.69	60	120	
Ge Internal Standard	72	2	HMI He	636652	0.91	667191	95.42	60	120	
In Internal Standard	115	2	HMI He	2185152	1.54	2291045	95.38	60	120	
Ho-165	165	2	HMI He	10774262	0.51	10885907	98.97	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	207_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:05:25-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	469.814	ppb	1.806	257626	500	94.0	90	110	
Li	7	2	45	475.638	ppb	3.484	14671	500	95.1	90	110	
Li	7	3	45	465.581	ppb	0.865	5902455	500	93.1	90	110	
Be	9	1	6	50.545	ppb	1.080	13940	50	101.1	90	110	
B	11	1	6	56.032	ppb	1.083	16770	50	112.1	90	110	>+\-10%
Na	23	1	45	4841.286	ppb	0.634	11893914	5000	96.8	90	110	
Na	23	2	45	4715.848	ppb	0.485	806206	5000	94.3	90	110	
Mg	24	2	45	5012.095	ppb	0.566	362714	5000	100.2	90	110	
Al	27	2	45	5011.355	ppb	1.008	101845	5000	100.2	90	110	
K	39	1	45	4923.562	ppb	0.181	17985710	5000	98.5	90	110	
K	39	2	45	5088.032	ppb	0.312	199445	5000	101.8	90	110	
Ca	40	1	45	5060.488	ppb	0.837	16410724	5000	101.2	90	110	
Ca	44	2	45	5179.497	ppb	7.963	10751	5000	103.6	90	110	
Ti	47	2	45	49.962	ppb	5.471	837	50	99.9	90	110	
V	51	2	72	48.409	ppb	2.577	34124	50	96.8	90	110	
Cr	52	2	72	51.186	ppb	1.654	42383	50	102.4	90	110	
Mn	55	2	72	49.641	ppb	0.372	17201	50	99.3	90	110	
Fe	57	2	72	5020.879	ppb	1.507	79184	5000	100.4	90	110	
Co	59	2	72	50.428	ppb	2.643	71038	50	100.9	90	110	
Ni	60	2	72	52.807	ppb	1.729	20542	50	105.6	90	110	
Cu	63	2	72	51.350	ppb	3.224	55873	50	102.7	90	110	
Zn	66	2	72	51.082	ppb	0.590	7823	50	102.2	90	110	
As	75	2	72	49.128	ppb	2.430	4961	50	98.3	90	110	
Se	78	1	72	49.134	ppb	2.588	6858	50	98.3	90	110	
Sr	88	2	72	50.616	ppb	6.655	19781	50	101.2	90	110	
Zr	90	2	72	80.258	ppb	17.574	400	50	160.5	90	110	>+\-10%
Nb	93	2	72	87.878	ppb	0.590	157175	100	87.9	90	110	>+\-10%
Mo	95	2	115	49.934	ppb	3.809	26837	50	99.9	90	110	
Pd	105	2	115	54.254	ppb	1.108	43880	50	108.5	90	110	
Ag	107	2	115	50.776	ppb	3.076	89554	50	101.6	90	110	
Cd	111	2	115	51.320	ppb	4.309	12216	50	102.6	90	110	
Sn	120	2	115	50.116	ppb	1.375	34534	50	100.2	90	110	
Sb	121	2	115	52.482	ppb	2.053	31270	50	105.0	90	110	
Ba	137	2	115	50.700	ppb	4.740	11042	50	101.4	90	110	
W	182	2	165	51.026	ppb	2.836	141140	50	102.1	90	110	
Pt	195	2	165	50.164	ppb	1.495	110633	50	100.3	90	110	
Tl	205	2	165	50.836	ppb	1.430	270443	50	101.7	90	110	
Pb	208	2	165	50.495	ppb	1.159	359136	50	101.0	90	110	
Th	232	2	165	49.424	ppb	0.790	427867	50	98.8	90	110	
U	238	2	165	50.166	ppb	1.380	465962	50	100.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	815052	1.45	842608	96.73	60	120	
Sc (IS)	45	1	HMI H2	16101993	0.41	15887657	101.35	60	120	
Sc (IS)	45	2	HMI He	622978	0.26	621989	100.16	60	120	
Sc (IS)	45	3	No Gas	23589983	0.17	23999890	98.29	60	120	
Ge Internal Standard	72	1	HMI H2	5923739	0.71	5840960	101.42	60	120	
Ge Internal Standard	72	2	HMI He	669606	0.38	667191	100.36	60	120	
In Internal Standard	115	2	HMI He	2284578	1.76	2291045	99.72	60	120	
Ho-165	165	2	HMI He	11095322	0.42	10885907	101.92	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	208_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:09:12-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-12.679	ppb	-48.2	2561363	10	
Be	9	1	6	0.108	ppb	57.9	30	0.5	
B	11	1	6	6.367	ppb	23.0	3030	0.5	>RL
Na	23	1	45	-178.052	ppb	-2.1	492645	25	
Na	23	2	45	-184.226	ppb	-1.9	33609	25	
Mg	24	2	45	3.111	ppb	32.5	987	25	
Al	27	2	45	0.961	ppb	76.7	97	15	
K	39	1	45	-67.435	ppb	-46.6	7074919	50	
K	39	2	45	-5.597	ppb	-397.7	11465	50	
Ca	40	1	45	24.378	ppb	20.9	138757	50	
Ca	44	2	45	9.434	ppb	104.3	63	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.403	ppb	-55.6	2040	1	
Cr	52	2	72	-0.045	ppb	-47.1	170	1	
Mn	55	2	72	-0.081	ppb	-108.0	53	0.5	
Fe	57	2	72	2.833	ppb	44.5	110	25	
Co	59	2	72	0.021	ppb	136.4	47	0.5	
Ni	60	2	72	-0.141	ppb	-68.2	47	1	
Cu	63	2	72	0.067	ppb	132.8	770	1	
Zn	66	2	72	-0.138	ppb	-344.3	190	5	
As	75	2	72	-0.107	ppb	-10.2	11	1	
Se	78	1	72	0.028	ppb	108.1	12	1	
Sr	88	2	72	-0.002	ppb	-4185.0	37	0.5	
Zr	90	2	72	-0.894	ppb	-370.1	33	1	
Nb	93	2	72	5.297	ppb	7.0	10254	2	>RL
Mo	95	2	115	0.039	ppb	131.3	113	0.5	
Pd	105	2	115	0.072	ppb	76.4	60	1	
Ag	107	2	115	0.005	ppb	346.1	43	1	
Cd	111	2	115	0.014	ppb	173.2	3	0.5	
Sn	120	2	115	0.139	ppb	76.5	213	1	
Sb	121	2	115	0.480	ppb	20.9	310	0.6	
Ba	137	2	115	-0.062	ppb	-166.2	13	0.5	
W	182	2	165	0.123	ppb	62.0	1047	1	
Pt	195	2	165	-0.003	ppb	-157.8	17	1	
Tl	205	2	165	0.020	ppb	23.4	183	0.1	
Pb	208	2	165	0.021	ppb	44.9	750	0.5	
Th	232	2	165	0.057	ppb	26.7	737	1	
U	238	2	165	0.075	ppb	6.2	797	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	821836	1.33	842608	97.53	60	120	
Sc (IS)	45	1	HMI H2	16078964	0.96	15887657	101.20	60	120	
Sc (IS)	45	2	HMI He	625932	1.05	621989	100.63	60	120	
Sc (IS)	45	3	No Gas	23764675	0.94	23999890	99.02	60	120	
Ge Internal Standard	72	1	HMI H2	5955562	1.70	5840960	101.96	60	120	
Ge Internal Standard	72	2	HMI He	680880	0.20	667191	102.05	60	120	
In Internal Standard	115	2	HMI He	2340217	0.57	2291045	102.15	60	120	
Ho-165	165	2	HMI He	11176243	0.75	10885907	102.67	60	120	

Blank Report

Sample Table

Sample Name	MB 280-435742/1-A
Data File Name	209_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:13:01-07:00
Sample Type	Blank
Dilution	1
Comment	435742 6020
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-30.320	ppb	-21.77921622	102608	0.5
Li	7	2	45	-11.466	ppb	-73.55158142	5965	0.5
Li	7	3	45	-21.097	ppb	-12.71686335	2361103	10
Be	9	1	6	0.049	ppb	86.60381445	13	0.5
B	11	1	6	3.829	ppb	27.8353734	2264	0.5
Na	23	1	45	-192.146	ppb	-1.917271771	443973	25
Na	23	2	45	-191.700	ppb	-4.464353797	31468	25
Mg	24	2	45	-0.112	ppb	-1274.52681	730	25
Al	27	2	45	7.166	ppb	6.969771631	217	15
K	39	1	45	-1428.446	ppb	-2.751568876	3957775	50
K	39	2	45	-9.930	ppb	-74.13748847	10978	50
Ca	40	1	45	9.245	ppb	14.42918022	86709	50
Ca	44	2	45	8.710	ppb	53.35235781	60	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	-1.524	ppb	-12.83285005	1250	1
Cr	52	2	72	0.118	ppb	33.27180818	297	1
Mn	55	2	72	0.013	ppb	592.5289706	83	0.5
Fe	57	2	72	9.067	ppb	41.22582122	203	25
Co	59	2	72	0.017	ppb	84.61942079	40	0.5
Ni	60	2	72	-0.023	ppb	-339.6425065	90	1
Cu	63	2	72	0.133	ppb	27.7944622	817	1
Zn	66	2	72	4.350	ppb	12.27616371	843	5
As	75	2	72	-0.037	ppb	-92.06300764	18	1
Se	78	1	72	0.040	ppb	224.3309125	13	1
Sr	88	2	72	0.071	ppb	225.584021	63	0.5
Zr	90	2	72	9.064	ppb	38.2531539	77	1
Nb	93	2	72	4.404	ppb	9.262008819	8370	2
Mo	95	2	115	0.027	ppb	48.97830666	103	0.5
Pd	105	2	115	0.012	ppb	99.08777202	10	1
Ag	107	2	115	-0.006	ppb	-253.9901973	23	1
Cd	111	2	115	0.029	ppb	173.2050808	7	0.5
Sn	120	2	115	0.143	ppb	8.902974725	210	1
Sb	121	2	115	0.474	ppb	19.0005558	297	0.6
Ba	137	2	115	0.079	ppb	86.52827964	43	0.5
W	182	2	165	0.168	ppb	22.46135908	1157	1
Pt	195	2	165	-0.003	ppb	-290.6157599	17	1
Tl	205	2	165	0.013	ppb	74.05299707	147	0.1
Pb	208	2	165	0.098	ppb	27.34243116	1283	0.5
Th	232	2	165	0.153	ppb	14.9568059	1554	1
U	238	2	165	0.044	ppb	4.585642684	497	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	800804	0.38	842608	95.04	60	120	
Sc (IS)	45	1	HMI H2	15495015	0.48	15887657	97.53	60	120	
Sc (IS)	45	2	HMI He	607445	1.44	621989	97.66	60	120	
Sc (IS)	45	3	No Gas	22428294	0.56	23999890	93.45	60	120	
Ge Internal Standard	72	1	HMI H2	5745558	0.29	5840960	98.37	60	120	
Ge Internal Standard	72	2	HMI He	659695	0.31	667191	98.88	60	120	
In Internal Standard	115	2	HMI He	2268334	1.39	2291045	99.01	60	120	
Ho-165	165	2	HMI He	11034808	0.79	10885907	101.37	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-435742/2-A
Data File Name	210_LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:16:50-07:00
Sample Type	LCS
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	435742 6020
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Li	7	1	45	50.107	50.107	ppb	16.523	127415	400	12.5	80	120	>+/-20%
Li	7	2	45	68.167	68.167	ppb	54.342	7489	400	17.0	80	120	>+/-20%
Li	7	3	45	53.080	53.080	ppb	6.884	2875122	400	13.3	80	120	>+/-20%
Be	9	1	6	36.963	36.963	ppb	4.947	10181	40	92.4	80	120	
Na	23	2	45	-206.364	-206.364	ppb	-2.170	29864	40	-515.9	80	120	>+/-20%
Mg	24	2	45	-2.387	-2.387	ppb	-44.240	583	40	-6.0	80	120	>+/-20%
Al	27	2	45	414.370	414.370	ppb	3.512	8463	40	1035.9	80	120	>+/-20%
K	39	2	45	-21.116	-21.116	ppb	-27.690	10808	40	-52.8	80	120	>+/-20%
Ca	44	2	45	173.209	173.209	ppb	15.285	400	40	433.0	80	120	>+/-20%
V	51	2	72	36.519	36.519	ppb	1.687	26358	40	91.3	80	120	
Cr	52	2	72	40.307	40.307	ppb	2.111	33490	40	100.8	80	120	
Mn	55	2	72	42.484	42.484	ppb	1.749	14765	40	106.2	80	120	
Fe	57	2	72	407.721	407.721	ppb	2.753	6502	40	1019.3	80	120	>+/-20%
Co	59	2	72	39.883	39.883	ppb	0.534	56307	40	99.7	80	120	
Ni	60	2	72	40.004	40.004	ppb	1.498	15619	40	100.0	80	120	
Cu	63	2	72	40.413	40.413	ppb	2.092	44215	40	101.0	80	120	
Zn	66	2	72	39.361	39.361	ppb	1.393	6088	40	98.4	80	120	
As	75	2	72	36.389	36.389	ppb	4.791	3688	40	91.0	80	120	
Se	78	1	72	38.653	38.653	ppb	6.160	5234	40	96.6	80	120	
Nb	93	2	72	3.058	3.058	ppb	2.514	6108	40	7.6	80	120	>+/-20%
Mo	95	2	115	37.491	37.491	ppb	1.019	20315	40	93.7	80	120	
Pd	105	2	115	0.021	0.021	ppb	91.546	17	40	0.1	80	120	>+/-20%
Ag	107	2	115	42.018	42.018	ppb	0.608	74652	40	105.0	80	120	
Cd	111	2	115	40.598	40.598	ppb	1.673	9734	40	101.5	80	120	
Sn	120	2	115	39.430	39.430	ppb	1.801	27378	40	98.6	80	120	
Sb	121	2	115	39.387	39.387	ppb	0.463	23638	40	98.5	80	120	
Ba	137	2	115	39.172	39.172	ppb	4.867	8593	40	97.9	80	120	
W	182	2	165	37.747	37.747	ppb	1.653	105295	40	94.4	80	120	
Pt	195	2	165	-0.005	-0.005	ppb	-109.196	13	40	0.0	80	120	>+/-20%
Tl	205	2	165	40.190	40.190	ppb	0.335	215266	40	100.5	80	120	
Pb	208	2	165	40.320	40.320	ppb	0.640	288815	40	100.8	80	120	
Th	232	2	165	39.008	39.008	ppb	0.495	340011	40	97.5	80	120	
U	238	2	165	39.452	39.452	ppb	0.518	368935	40	98.6	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	813770	0.43	842608	96.58	60	120	
Sc (IS)	45	1	HMI H2	15672935	0.63	15887657	98.65	60	120	
Sc (IS)	45	2	HMI He	620895	0.43	621989	99.82	60	120	
Sc (IS)	45	3	No Gas	22572650	0.82	23999890	94.05	60	120	
Ge Internal Standard	72	1	HMI H2	5744545	0.34	5840960	98.35	60	120	
Ge Internal Standard	72	2	HMI He	671036	0.31	667191	100.58	60	120	
In Internal Standard	115	2	HMI He	2300272	1.39	2291045	100.40	60	120	
Ho-165	165	2	HMI He	11169657	0.34	10885907	102.61	60	120	

Sample Report

Sample Table

Sample Name	280-116318-A-1-A
Data File Name	211SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:20:39-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-21.400	ppb	-21.400	-5.08	104515	500000	
Li	7	2	45	-18.548	ppb	-18.548	-97.79	5885	500000	
Li	7	3	45	-12.862	ppb	-12.862	-15.69	2390415	50000	
Be	9	1	6	0.129	ppb	0.129	69.32	33	2000	
B	11	1	6	41.347	ppb	41.347	1.35	11909	2000	
Na	23	1	45	175664.527	ppb	175664.527	1.32	382304381	2000	>LDR
Na	23	2	45	169697.236	ppb	169697.236	1.62	26343160	400000	
Mg	24	2	45	52429.526	ppb	52429.526	1.65	3719169	400000	
Al	27	2	45	23.136	ppb	23.136	17.60	537	400000	
K	39	1	45	10520.363	ppb	10520.363	1.16	28880893	400000	
K	39	2	45	11564.165	ppb	11564.165	2.47	430632	400000	
Ca	40	1	45	156373.886	ppb	156373.886	1.43	483096046	400000	
Ca	44	2	45	155638.415	ppb	155638.415	0.89	316039	400000	
Ti	47	2	45	0.811	ppb	0.811	173.21	13	4000	
V	51	2	72	-0.617	ppb	-0.617	-41.27	1824	2000	
Cr	52	2	72	0.150	ppb	0.150	57.93	320	5000	
Mn	55	2	72	19.780	ppb	19.780	6.03	6745	10000	
Fe	57	2	72	77.576	ppb	77.576	12.06	1257	400000	
Co	59	2	72	0.177	ppb	0.177	7.05	260	2000	
Ni	60	2	72	2.296	ppb	2.296	8.91	967	5000	
Cu	63	2	72	2.136	ppb	2.136	2.98	2914	5000	
Zn	66	2	72	2.705	ppb	2.705	48.61	597	5000	
As	75	2	72	0.517	ppb	0.517	26.37	72	2000	
Se	78	1	72	0.549	ppb	0.549	24.87	80	2000	
Sr	88	2	72	1314.073	ppb	1314.073	0.74	500901	4000	
Zr	90	2	72	381.400	ppb	381.400	13.34	1724	1000	
Nb	93	2	72	2.216	ppb	2.216	10.58	4491	200	
Mo	95	2	115	2.299	ppb	2.299	15.26	1310	2000	
Pd	105	2	115	0.063	ppb	0.063	72.83	50	100	
Ag	107	2	115	0.008	ppb	0.008	40.18	47	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.355	ppb	0.355	8.43	353	2000	
Sb	121	2	115	0.848	ppb	0.848	11.60	517	1000	
Ba	137	2	115	231.494	ppb	231.494	1.90	49855	5000	
W	182	2	165	0.229	ppb	0.229	22.70	1320	100	
Pt	195	2	165	-0.006	ppb	-0.006	-127.79	10	100	
Tl	205	2	165	0.042	ppb	0.042	42.44	300	2000	
Pb	208	2	165	0.053	ppb	0.053	39.73	963	5000	
Th	232	2	165	0.189	ppb	0.189	13.02	1860	2000	
U	238	2	165	26.308	ppb	26.308	0.81	242401	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	764150	0.04	842608	90.69	60	120	
Sc (IS)	45	1	HMI H2	15394811	0.76	15887657	96.90	60	120	
Sc (IS)	45	2	HMI He	611860	0.78	621989	98.37	60	120	
Sc (IS)	45	3	No Gas	22189286	0.17	23999890	92.46	60	120	
Ge Internal Standard	72	1	HMI H2	5595943	0.58	5840960	95.81	60	120	
Ge Internal Standard	72	2	HMI He	654380	0.06	667191	98.08	60	120	
In Internal Standard	115	2	HMI He	2263502	1.43	2291045	98.80	60	120	
Ho-165	165	2	HMI He	11004044	0.33	10885907	101.09	60	120	

Sample Report

Sample Table

Sample Name	280-116318-A-2-A
Data File Name	212SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:24:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	308.198	ppb	308.198	2.75	194714	500000	
Li	7	2	45	306.852	ppb	306.852	3.84	11358	500000	
Li	7	3	45	267.775	ppb	267.775	1.15	4146485	50000	
Be	9	1	6	0.112	ppb	0.112	77.55	27	2000	
B	11	1	6	81.241	ppb	81.241	3.67	20448	2000	
Na	23	1	45	459106.153	ppb	459106.153	1.42	973108892	2000	>LDR
Na	23	2	45	439169.154	ppb	439169.154	0.72	67257766	400000	
Mg	24	2	45	135407.872	ppb	135407.872	0.80	9488477	400000	
Al	27	2	45	0.964	ppb	0.964	82.74	93	400000	
K	39	1	45	12251.795	ppb	12251.795	1.53	31692213	400000	
K	39	2	45	13384.341	ppb	13384.341	0.33	490666	400000	
Ca	40	1	45	531713.421	ppb	531713.421	0.78	1601924989	400000	
Ca	44	2	45	531791.658	ppb	531791.658	0.69	1066691	400000	
Ti	47	2	45	0.411	ppb	0.411	173.21	7	4000	
V	51	2	72	-2.465	ppb	-2.465	-7.61	613	2000	
Cr	52	2	72	0.330	ppb	0.330	18.78	450	5000	
Mn	55	2	72	0.177	ppb	0.177	102.26	133	10000	
Fe	57	2	72	70.581	ppb	70.581	20.08	1110	400000	
Co	59	2	72	2.699	ppb	2.699	9.67	3604	2000	
Ni	60	2	72	9.793	ppb	9.793	3.54	3674	5000	
Cu	63	2	72	3.915	ppb	3.915	5.20	4621	5000	
Zn	66	2	72	8.178	ppb	8.178	11.55	1347	5000	
As	75	2	72	0.432	ppb	0.432	24.98	61	2000	
Se	78	1	72	47.059	ppb	47.059	2.26	5964	2000	
Sr	88	2	72	5310.783	ppb	5310.783	0.78	1955907	4000	
Zr	90	2	72	75.326	ppb	75.326	10.42	357	1000	
Nb	93	2	72	1.398	ppb	1.398	6.97	2964	200	
Mo	95	2	115	0.854	ppb	0.854	15.94	517	2000	
Pd	105	2	115	0.113	ppb	0.113	8.12	87	100	
Ag	107	2	115	-0.001	ppb	-0.001	-655.00	30	100	
Cd	111	2	115	0.045	ppb	0.045	173.21	10	2000	
Sn	120	2	115	0.107	ppb	0.107	12.68	177	2000	
Sb	121	2	115	0.203	ppb	0.203	63.70	130	1000	
Ba	137	2	115	178.774	ppb	178.774	0.31	36750	5000	
W	182	2	165	0.274	ppb	0.274	6.20	1397	100	
Pt	195	2	165	0.180	ppb	0.180	12.66	403	100	
Tl	205	2	165	0.020	ppb	0.020	50.72	180	2000	
Pb	208	2	165	0.110	ppb	0.110	29.68	1323	5000	
Th	232	2	165	0.086	ppb	0.086	11.32	943	2000	
U	238	2	165	69.031	ppb	69.031	0.27	616364	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	701584	0.57	842608	83.26	60	120	
Sc (IS)	45	1	HMI H2	15013896	0.54	15887657	94.50	60	120	
Sc (IS)	45	2	HMI He	604459	0.68	621989	97.18	60	120	
Sc (IS)	45	3	No Gas	21674984	0.05	23999890	90.31	60	120	
Ge Internal Standard	72	1	HMI H2	5378077	0.08	5840960	92.08	60	120	
Ge Internal Standard	72	2	HMI He	632281	0.42	667191	94.77	60	120	
In Internal Standard	115	2	HMI He	2159835	1.59	2291045	94.27	60	120	
Ho-165	165	2	HMI He	10665833	0.35	10885907	97.98	60	120	

Sample Report

Sample Table

Sample Name	280-116318-B-3-A
Data File Name	213SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:28:20-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	266.227	ppb	266.227	10.67	182977	500000	
Li	7	2	45	274.285	ppb	274.285	4.29	10588	500000	
Li	7	3	45	243.179	ppb	243.179	2.07	3918291	50000	
Be	9	1	6	0.015	ppb	0.015	173.21	3	2000	
B	11	1	6	77.449	ppb	77.449	5.86	19273	2000	
Na	23	1	45	449619.567	ppb	449619.567	6.15	953013826	2000	>LDR
Na	23	2	45	437575.010	ppb	437575.010	0.42	65675514	400000	
Mg	24	2	45	128006.058	ppb	128006.058	0.89	8790710	400000	
Al	27	2	45	5.716	ppb	5.716	52.65	183	400000	
K	39	1	45	11776.469	ppb	11776.469	7.99	30723101	400000	
K	39	2	45	13006.852	ppb	13006.852	0.52	467606	400000	
Ca	40	1	45	470293.995	ppb	470293.995	7.85	1416268619	400000	
Ca	44	2	45	473673.221	ppb	473673.221	0.54	931146	400000	
Ti	47	2	45	0.839	ppb	0.839	86.60	13	4000	
V	51	2	72	-2.519	ppb	-2.519	-3.07	573	2000	
Cr	52	2	72	0.385	ppb	0.385	29.91	487	5000	
Mn	55	2	72	4.529	ppb	4.529	11.52	1533	10000	
Fe	57	2	72	236.876	ppb	236.876	6.68	3544	400000	
Co	59	2	72	2.499	ppb	2.499	15.31	3301	2000	
Ni	60	2	72	27.152	ppb	27.152	4.11	9907	5000	
Cu	63	2	72	20.189	ppb	20.189	2.13	20899	5000	
Zn	66	2	72	11.569	ppb	11.569	9.56	1804	5000	
As	75	2	72	0.467	ppb	0.467	18.77	64	2000	
Se	78	1	72	14.626	ppb	14.626	7.15	1844	2000	
Sr	88	2	72	4932.112	ppb	4932.112	1.44	1796012	4000	
Zr	90	2	72	32.879	ppb	32.879	3.91	173	1000	
Nb	93	2	72	1.558	ppb	1.558	14.26	3197	200	
Mo	95	2	115	0.476	ppb	0.476	32.84	320	2000	
Pd	105	2	115	0.151	ppb	0.151	26.50	113	100	
Ag	107	2	115	0.001	ppb	0.001	1275.13	33	100	
Cd	111	2	115	0.030	ppb	0.030	86.61	7	2000	
Sn	120	2	115	0.097	ppb	0.097	63.08	167	2000	
Sb	121	2	115	0.250	ppb	0.250	47.83	153	1000	
Ba	137	2	115	150.108	ppb	150.108	2.68	30294	5000	
W	182	2	165	0.166	ppb	0.166	8.40	1093	100	
Pt	195	2	165	0.152	ppb	0.152	8.90	340	100	
Tl	205	2	165	0.013	ppb	0.013	78.70	140	2000	
Pb	208	2	165	0.216	ppb	0.216	16.91	2014	5000	
Th	232	2	165	0.040	ppb	0.040	10.55	550	2000	
U	238	2	165	26.762	ppb	26.762	0.77	235177	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	692543	3.02	842608	82.19	60	120	
Sc (IS)	45	1	HMI H2	15035328	3.61	15887657	94.64	60	120	
Sc (IS)	45	2	HMI He	592377	0.43	621989	95.24	60	120	
Sc (IS)	45	3	No Gas	21298007	0.44	23999890	88.74	60	120	
Ge Internal Standard	72	1	HMI H2	5339850	3.03	5840960	91.42	60	120	
Ge Internal Standard	72	2	HMI He	625142	0.44	667191	93.70	60	120	
In Internal Standard	115	2	HMI He	2120405	0.60	2291045	92.55	60	120	
Ho-165	165	2	HMI He	10495228	0.79	10885907	96.41	60	120	

Sample Report

Sample Table

Sample Name	280-116318-B-3-Asd@5
Data File Name	214SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:32:11-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	20.774	ppb	20.774	34.77	121117	500000	
Li	7	2	45	35.211	ppb	35.211	84.46	6882	500000	
Li	7	3	45	18.938	ppb	18.938	29.50	2705320	50000	
Be	9	1	6	0.039	ppb	0.039	99.77	10	2000	
B	11	1	6	17.357	ppb	17.357	9.37	5668	2000	
Na	23	1	45	92474.298	ppb	92474.298	0.86	209335044	2000	>LDR
Na	23	2	45	89928.651	ppb	89928.651	0.63	14134828	400000	
Mg	24	2	45	27674.364	ppb	27674.364	0.74	1983938	400000	
Al	27	2	45	1.354	ppb	1.354	85.53	103	400000	
K	39	1	45	2248.073	ppb	2248.073	3.05	12049945	400000	
K	39	2	45	2634.847	ppb	2634.847	0.71	108052	400000	
Ca	40	1	45	97271.532	ppb	97271.532	1.00	311961195	400000	
Ca	44	2	45	95900.040	ppb	95900.040	1.02	196768	400000	
Ti	47	2	45	0.201	ppb	0.201	173.21	3	4000	
V	51	2	72	-2.401	ppb	-2.401	-7.82	690	2000	
Cr	52	2	72	0.056	ppb	0.056	76.00	250	5000	
Mn	55	2	72	0.688	ppb	0.688	19.99	317	10000	
Fe	57	2	72	51.724	ppb	51.724	17.04	877	400000	
Co	59	2	72	0.555	ppb	0.555	14.39	797	2000	
Ni	60	2	72	5.447	ppb	5.447	8.48	2204	5000	
Cu	63	2	72	4.039	ppb	4.039	2.19	5014	5000	
Zn	66	2	72	1.299	ppb	1.299	21.13	400	5000	
As	75	2	72	0.052	ppb	0.052	205.86	27	2000	
Se	78	1	72	3.471	ppb	3.471	14.86	488	2000	
Sr	88	2	72	929.205	ppb	929.205	1.57	361561	4000	
Zr	90	2	72	2.202	ppb	2.202	323.48	47	1000	
Nb	93	2	72	0.345	ppb	0.345	17.54	1260	200	
Mo	95	2	115	0.602	ppb	0.602	28.58	407	2000	
Pd	105	2	115	0.038	ppb	0.038	88.60	30	100	
Ag	107	2	115	0.008	ppb	0.008	109.65	47	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.091	ppb	0.091	34.85	173	2000	
Sb	121	2	115	0.068	ppb	0.068	37.49	57	1000	
Ba	137	2	115	30.769	ppb	30.769	4.76	6625	5000	
W	182	2	165	0.053	ppb	0.053	123.40	840	100	
Pt	195	2	165	0.033	ppb	0.033	104.67	97	100	
Tl	205	2	165	0.002	ppb	0.002	455.86	90	2000	
Pb	208	2	165	0.057	ppb	0.057	14.86	990	5000	
Th	232	2	165	0.007	ppb	0.007	24.41	297	2000	
U	238	2	165	5.682	ppb	5.682	3.37	52464	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	763186	0.62	842608	90.57	60	120	
Sc (IS)	45	1	HMI H2	15980289	0.78	15887657	100.58	60	120	
Sc (IS)	45	2	HMI He	618192	0.33	621989	99.39	60	120	
Sc (IS)	45	3	No Gas	23083156	0.70	23999890	96.18	60	120	
Ge Internal Standard	72	1	HMI H2	5873365	0.28	5840960	100.55	60	120	
Ge Internal Standard	72	2	HMI He	667947	0.33	667191	100.11	60	120	
In Internal Standard	115	2	HMI He	2255039	0.45	2291045	98.43	60	120	
Ho-165	165	2	HMI He	11013104	0.22	10885907	101.17	60	120	

Sample Report

Sample Table

Sample Name	280-116318-B-3-B MS
Data File Name	215SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:35:59-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	320.682	ppb	320.682	9.16	199043	500000	
Li	7	2	45	333.238	ppb	333.238	5.27	11371	500000	
Li	7	3	45	307.186	ppb	307.186	1.95	4196432	50000	
Be	9	1	6	40.257	ppb	40.257	7.66	9247	2000	
B	11	1	6	101.980	ppb	101.980	7.77	24568	2000	
Na	23	1	45	431374.978	ppb	431374.978	8.56	916815346	2000	>LDR
Na	23	2	45	441464.640	ppb	441464.640	0.75	65108377	400000	
Mg	24	2	45	131334.997	ppb	131334.997	0.27	8862760	400000	
Al	27	2	45	483.712	ppb	483.712	4.81	9250	400000	
K	39	1	45	11264.917	ppb	11264.917	9.60	29772124	400000	
K	39	2	45	13103.131	ppb	13103.131	0.22	462808	400000	
Ca	40	1	45	453327.926	ppb	453327.926	9.95	1368705953	400000	
Ca	44	2	45	484997.565	ppb	484997.565	0.56	936853	400000	
Ti	47	2	45	1.492	ppb	1.492	173.21	23	4000	
V	51	2	72	37.608	ppb	37.608	3.74	24625	2000	
Cr	52	2	72	41.537	ppb	41.537	2.62	31378	5000	
Mn	55	2	72	44.254	ppb	44.254	5.52	13984	10000	
Fe	57	2	72	656.072	ppb	656.072	4.85	9480	400000	
Co	59	2	72	41.248	ppb	41.248	1.69	52958	2000	
Ni	60	2	72	73.738	ppb	73.738	2.48	26105	5000	
Cu	63	2	72	70.509	ppb	70.509	0.29	69688	5000	
Zn	66	2	72	55.644	ppb	55.644	3.25	7749	5000	
As	75	2	72	38.107	ppb	38.107	1.55	3512	2000	
Se	78	1	72	62.765	ppb	62.765	10.67	7984	2000	
Sr	88	2	72	5100.089	ppb	5100.089	1.06	1812796	4000	
Zr	90	2	72	1305.013	ppb	1305.013	8.45	5418	1000	
Nb	93	2	72	1.525	ppb	1.525	23.54	3067	200	
Mo	95	2	115	40.538	ppb	40.538	1.40	19855	2000	
Pd	105	2	115	0.163	ppb	0.163	7.24	120	100	
Ag	107	2	115	39.620	ppb	39.620	4.71	63608	100	
Cd	111	2	115	39.791	ppb	39.791	6.82	8620	2000	
Sn	120	2	115	22.066	ppb	22.066	2.86	13898	2000	
Sb	121	2	115	40.776	ppb	40.776	3.67	22115	1000	
Ba	137	2	115	196.154	ppb	196.154	2.67	38816	5000	
W	182	2	165	38.107	ppb	38.107	0.40	98330	100	
Pt	195	2	165	0.158	ppb	0.158	12.05	347	100	
Tl	205	2	165	37.768	ppb	37.768	2.09	187133	2000	
Pb	208	2	165	37.143	ppb	37.143	1.45	246166	5000	
Th	232	2	165	11.898	ppb	11.898	2.76	96082	2000	
U	238	2	165	88.941	ppb	88.941	0.28	769333	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	680234	5.13	842608	80.73	60	120	
Sc (IS)	45	1	HMI H2	15096189	5.06	15887657	95.02	60	120	
Sc (IS)	45	2	HMI He	582084	0.06	621989	93.58	60	120	
Sc (IS)	45	3	No Gas	20669063	0.86	23999890	86.12	60	120	
Ge Internal Standard	72	1	HMI H2	5422193	5.95	5840960	92.83	60	120	
Ge Internal Standard	72	2	HMI He	610237	0.26	667191	91.46	60	120	
In Internal Standard	115	2	HMI He	2079506	1.41	2291045	90.77	60	120	
Ho-165	165	2	HMI He	10333177	0.77	10885907	94.92	60	120	

Sample Report

Sample Table

Sample Name	280-116318-B-3-C MSD
Data File Name	216SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:39:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	304.860	ppb	304.860	0.81	185973	500000	
Li	7	2	45	290.602	ppb	290.602	4.44	10514	500000	
Li	7	3	45	269.147	ppb	269.147	2.91	3877010	50000	
Be	9	1	6	36.373	ppb	36.373	3.42	7956	2000	
B	11	1	6	105.946	ppb	105.946	2.25	24267	2000	
Na	23	1	45	426339.819	ppb	426339.819	0.78	867327960	2000	>LDR
Na	23	2	45	409849.089	ppb	409849.089	1.08	59557722	400000	
Mg	24	2	45	119377.968	ppb	119377.968	0.60	7937126	400000	
Al	27	2	45	342.220	ppb	342.220	1.80	6468	400000	
K	39	1	45	11271.469	ppb	11271.469	0.38	28500383	400000	
K	39	2	45	12429.436	ppb	12429.436	0.59	433090	400000	
Ca	40	1	45	442277.258	ppb	442277.258	0.51	1278815688	400000	
Ca	44	2	45	441297.607	ppb	441297.607	0.03	839885	400000	
Ti	47	2	45	0.433	ppb	0.433	86.60	7	4000	
V	51	2	72	33.561	ppb	33.561	0.86	22114	2000	
Cr	52	2	72	36.091	ppb	36.091	2.45	27187	5000	
Mn	55	2	72	40.863	ppb	40.863	3.35	12870	10000	
Fe	57	2	72	583.259	ppb	583.259	3.59	8403	400000	
Co	59	2	72	37.410	ppb	37.410	1.91	47853	2000	
Ni	60	2	72	62.170	ppb	62.170	1.63	21941	5000	
Cu	63	2	72	65.787	ppb	65.787	1.88	64823	5000	
Zn	66	2	72	44.453	ppb	44.453	8.63	6205	5000	
As	75	2	72	36.118	ppb	36.118	1.10	3317	2000	
Se	78	1	72	66.406	ppb	66.406	5.86	8142	2000	
Sr	88	2	72	4681.965	ppb	4681.965	1.18	1658002	4000	
Zr	90	2	72	711.167	ppb	711.167	10.71	2957	1000	
Nb	93	2	72	0.883	ppb	0.883	7.73	2017	200	
Mo	95	2	115	37.722	ppb	37.722	3.11	18503	2000	
Pd	105	2	115	0.113	ppb	0.113	38.56	83	100	
Ag	107	2	115	34.715	ppb	34.715	1.90	55835	100	
Cd	111	2	115	35.100	ppb	35.100	5.67	7619	2000	
Sn	120	2	115	21.046	ppb	21.046	3.34	13277	2000	
Sb	121	2	115	36.953	ppb	36.953	3.49	20079	1000	
Ba	137	2	115	179.828	ppb	179.828	0.56	35640	5000	
W	182	2	165	34.222	ppb	34.222	4.08	87961	100	
Pt	195	2	165	0.159	ppb	0.159	25.21	347	100	
Tl	205	2	165	34.919	ppb	34.919	2.11	172242	2000	
Pb	208	2	165	34.859	ppb	34.859	1.64	230021	5000	
Th	232	2	165	10.753	ppb	10.753	1.92	86473	2000	
U	238	2	165	89.649	ppb	89.649	0.83	771956	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	646283	1.18	842608	76.70	60	120	
Sc (IS)	45	1	HMI H2	14409026	0.55	15887657	90.69	60	120	
Sc (IS)	45	2	HMI He	573509	0.42	621989	92.21	60	120	
Sc (IS)	45	3	No Gas	20223979	0.71	23999890	84.27	60	120	
Ge Internal Standard	72	1	HMI H2	5204466	0.36	5840960	89.10	60	120	
Ge Internal Standard	72	2	HMI He	607967	0.19	667191	91.12	60	120	
In Internal Standard	115	2	HMI He	2082324	0.45	2291045	90.89	60	120	
Ho-165	165	2	HMI He	10286929	0.70	10885907	94.50	60	120	

Sample Report

Sample Table

Sample Name	280-116318-B-3-A pds
Data File Name	217SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:43:41-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	436.238	ppb	436.238	0.32	217631	500000	
Li	7	2	45	435.683	ppb	435.683	7.32	12729	500000	
Li	7	3	45	386.820	ppb	386.820	1.42	4454120	50000	
Be	9	1	6	217.342	ppb	217.342	3.17	45858	2000	
B	11	1	6	78.783	ppb	78.783	2.89	17651	2000	
Na	23	1	45	446444.082	ppb	446444.082	1.61	892315747	2000	>LDR
Na	23	2	45	430356.471	ppb	430356.471	0.56	61895417	400000	
Mg	24	2	45	129690.967	ppb	129690.967	0.87	8534432	400000	
Al	27	2	45	2051.383	ppb	2051.383	2.34	38027	400000	
K	39	1	45	11731.021	ppb	11731.021	1.09	28886675	400000	
K	39	2	45	13023.900	ppb	13023.900	0.95	448648	400000	
Ca	40	1	45	477210.541	ppb	477210.541	1.50	1355704993	400000	
Ca	44	2	45	482883.489	ppb	482883.489	0.93	909600	400000	
Ti	47	2	45	8.077	ppb	8.077	32.45	123	4000	
V	51	2	72	204.950	ppb	204.950	0.91	123149	2000	
Cr	52	2	72	208.491	ppb	208.491	0.64	154455	5000	
Mn	55	2	72	210.400	ppb	210.400	2.17	65241	10000	
Fe	57	2	72	2235.676	ppb	2235.676	1.90	31692	400000	
Co	59	2	72	202.244	ppb	202.244	0.62	255787	2000	
Ni	60	2	72	221.962	ppb	221.962	0.88	77243	5000	
Cu	63	2	72	219.105	ppb	219.105	1.49	212084	5000	
Zn	66	2	72	211.716	ppb	211.716	2.47	28526	5000	
As	75	2	72	201.539	ppb	201.539	1.48	18217	2000	
Se	78	1	72	208.842	ppb	208.842	2.18	24876	2000	
Sr	88	2	72	5223.021	ppb	5223.021	1.44	1829417	4000	
Zr	90	2	72	44412.843	ppb	44412.843	1.14	180588	1000	>LDR
Nb	93	2	72	8.729	ppb	8.729	7.51	14548	200	
Mo	95	2	115	207.243	ppb	207.243	1.67	100217	2000	
Pd	105	2	115	0.325	ppb	0.325	12.68	237	100	
Ag	107	2	115	37.540	ppb	37.540	1.82	59731	100	
Cd	111	2	115	195.871	ppb	195.871	1.58	42061	2000	
Sn	120	2	115	204.541	ppb	204.541	0.62	126769	2000	
Sb	121	2	115	202.364	ppb	202.364	1.57	108705	1000	
Ba	137	2	115	359.684	ppb	359.684	1.16	70501	5000	
W	182	2	165	202.163	ppb	202.163	0.36	509745	100	
Pt	195	2	165	0.285	ppb	0.285	20.73	597	100	
Tl	205	2	165	194.409	ppb	194.409	0.38	946112	2000	
Pb	208	2	165	188.911	ppb	188.911	0.05	1227873	5000	
Th	232	2	165	246.072	ppb	246.072	0.75	1948267	2000	
U	238	2	165	255.942	ppb	255.942	0.84	2174871	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	623503	0.90	842608	74.00	60	120	
Sc (IS)	45	1	HMI H2	14159298	1.65	15887657	89.12	60	120	
Sc (IS)	45	2	HMI He	567638	0.37	621989	91.26	60	120	
Sc (IS)	45	3	No Gas	19643110	0.21	23999890	81.85	60	120	
Ge Internal Standard	72	1	HMI H2	5059165	0.64	5840960	86.62	60	120	
Ge Internal Standard	72	2	HMI He	601301	0.62	667191	90.12	60	120	
In Internal Standard	115	2	HMI He	2060083	0.22	2291045	89.92	60	120	
Ho-165	165	2	HMI He	10151784	0.17	10885907	93.26	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	218_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:47:32-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	408.920	ppb	3.161	231120	500	81.8	90	110	>+\-10%
Li	7	2	45	400.400	ppb	10.044	12839	500	80.1	90	110	>+\-10%
Li	7	3	45	383.709	ppb	2.070	5010435	500	76.7	90	110	>+\-10%
Be	9	1	6	51.050	ppb	3.139	12839	50	102.1	90	110	
B	11	1	6	43.336	ppb	3.826	12085	50	86.7	90	110	>+\-10%
Na	23	1	45	4920.478	ppb	0.447	11664246	5000	98.4	90	110	
Na	23	2	45	4637.396	ppb	0.822	763484	5000	92.7	90	110	
Mg	24	2	45	4902.905	ppb	0.576	341273	5000	98.1	90	110	
Al	27	2	45	4962.901	ppb	2.032	97010	5000	99.3	90	110	
K	39	1	45	4922.355	ppb	0.466	17373230	5000	98.4	90	110	
K	39	2	45	5098.011	ppb	1.660	192173	5000	102.0	90	110	
Ca	40	1	45	5192.795	ppb	1.024	16266938	5000	103.9	90	110	
Ca	44	2	45	5414.255	ppb	6.777	10808	5000	108.3	90	110	
Ti	47	2	45	50.712	ppb	14.316	817	50	101.4	90	110	
V	51	2	72	46.008	ppb	1.674	31910	50	92.0	90	110	
Cr	52	2	72	50.787	ppb	1.404	41230	50	101.6	90	110	
Mn	55	2	72	50.221	ppb	1.080	17061	50	100.4	90	110	
Fe	57	2	72	4934.071	ppb	3.717	76291	5000	98.7	90	110	
Co	59	2	72	50.042	ppb	2.254	69116	50	100.1	90	110	
Ni	60	2	72	50.928	ppb	3.817	19427	50	101.9	90	110	
Cu	63	2	72	50.659	ppb	1.476	54055	50	101.3	90	110	
Zn	66	2	72	50.874	ppb	6.275	7639	50	101.7	90	110	
As	75	2	72	48.645	ppb	2.657	4817	50	97.3	90	110	
Se	78	1	72	48.733	ppb	5.505	6627	50	97.5	90	110	
Sr	88	2	72	53.040	ppb	2.649	20319	50	106.1	90	110	
Zr	90	2	72	80.487	ppb	1.707	393	50	161.0	90	110	>+\-10%
Nb	93	2	72	83.135	ppb	1.331	145818	100	83.1	90	110	>+\-10%
Mo	95	2	115	49.652	ppb	2.156	26356	50	99.3	90	110	
Pd	105	2	115	51.901	ppb	1.264	41442	50	103.8	90	110	
Ag	107	2	115	49.892	ppb	1.342	86911	50	99.8	90	110	
Cd	111	2	115	51.414	ppb	1.122	12089	50	102.8	90	110	
Sn	120	2	115	48.931	ppb	0.621	33291	50	97.9	90	110	
Sb	121	2	115	51.042	ppb	6.114	30027	50	102.1	90	110	
Ba	137	2	115	48.425	ppb	4.066	10418	50	96.8	90	110	
W	182	2	165	48.880	ppb	1.337	131052	50	97.8	90	110	
Pt	195	2	165	48.746	ppb	1.319	104179	50	97.5	90	110	
Tl	205	2	165	49.546	ppb	0.049	255445	50	99.1	90	110	
Pb	208	2	165	49.584	ppb	1.098	341763	50	99.2	90	110	
Th	232	2	165	48.733	ppb	0.891	408839	50	97.5	90	110	
U	238	2	165	49.464	ppb	0.911	445267	50	98.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	743231	0.48	842608	88.21	60	120	
Sc (IS)	45	1	HMI H2	15555853	0.47	15887657	97.91	60	120	
Sc (IS)	45	2	HMI He	599168	0.27	621989	96.33	60	120	
Sc (IS)	45	3	No Gas	22186616	0.54	23999890	92.44	60	120	
Ge Internal Standard	72	1	HMI H2	5770514	0.29	5840960	98.79	60	120	
Ge Internal Standard	72	2	HMI He	656510	0.08	667191	98.40	60	120	
In Internal Standard	115	2	HMI He	2255793	0.79	2291045	98.46	60	120	
Ho-165	165	2	HMI He	10752543	0.92	10885907	98.77	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	219_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:51:19-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-43.909	ppb	-16.6	2156641	10	
Be	9	1	6	0.105	ppb	94.4	27	0.5	
B	11	1	6	1.683	ppb	24.0	1513	0.5	>RL
Na	23	1	45	-100.022	ppb	-74.4	595278	25	
Na	23	2	45	-151.414	ppb	-1.2	37384	25	
Mg	24	2	45	12.584	ppb	32.3	1614	25	
Al	27	2	45	0.468	ppb	276.5	83	15	
K	39	1	45	133.711	ppb	246.8	6745871	50	>RL
K	39	2	45	-14.521	ppb	-99.0	10731	50	
Ca	40	1	45	51.057	ppb	73.6	196236	50	>RL
Ca	44	2	45	12.308	ppb	24.5	67	25	
Ti	47	2	45	0.825	ppb	114.6	13	0.5	>RL
V	51	2	72	-0.805	ppb	-32.0	1720	1	
Cr	52	2	72	-0.100	ppb	-61.7	120	1	
Mn	55	2	72	-0.086	ppb	-59.7	50	0.5	
Fe	57	2	72	5.825	ppb	13.3	153	25	
Co	59	2	72	0.019	ppb	21.9	43	0.5	
Ni	60	2	72	-0.059	ppb	-69.4	77	1	
Cu	63	2	72	-0.167	ppb	-83.4	500	1	
Zn	66	2	72	0.148	ppb	266.5	227	5	
As	75	2	72	0.088	ppb	90.9	30	1	
Se	78	1	72	0.048	ppb	148.4	13	1	
Sr	88	2	72	0.131	ppb	45.8	87	0.5	
Zr	90	2	72	1.573	ppb	359.0	43	1	>RL
Nb	93	2	72	5.921	ppb	8.0	11052	2	>RL
Mo	95	2	115	0.149	ppb	88.8	170	0.5	
Pd	105	2	115	0.037	ppb	32.9	30	1	
Ag	107	2	115	0.017	ppb	137.8	63	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.193	ppb	12.4	247	1	
Sb	121	2	115	0.608	ppb	5.6	380	0.6	>RL
Ba	137	2	115	-0.076	ppb	-0.5	10	0.5	
W	182	2	165	0.146	ppb	18.9	1083	1	
Pt	195	2	165	0.000	ppb	-19066.0	23	1	
Tl	205	2	165	0.016	ppb	52.7	160	0.1	
Pb	208	2	165	-0.003	ppb	-118.1	563	0.5	
Th	232	2	165	0.074	ppb	7.3	860	1	
U	238	2	165	0.096	ppb	11.8	970	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	722187	6.94	842608	85.71	60	120	
Sc (IS)	45	1	HMI H2	14522499	9.44	15887657	91.41	60	120	
Sc (IS)	45	2	HMI He	602916	0.43	621989	96.93	60	120	
Sc (IS)	45	3	No Gas	21902585	1.22	23999890	91.26	60	120	
Ge Internal Standard	72	1	HMI H2	5469150	8.18	5840960	93.63	60	120	
Ge Internal Standard	72	2	HMI He	661067	0.36	667191	99.08	60	120	
In Internal Standard	115	2	HMI He	2293057	0.83	2291045	100.09	60	120	
Ho-165	165	2	HMI He	10921300	0.05	10885907	100.33	60	120	

Sample Report

Sample Table

Sample Name	280-116318-A-4-A
Data File Name	220SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:55:07-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-27.076	ppb	-27.076	-27.13	96032	500000	
Li	7	2	45	-38.866	ppb	-38.866	-100.88	5188	500000	
Li	7	3	45	-34.732	ppb	-34.732	-12.11	1989922	50000	
Be	9	1	6	0.177	ppb	0.177	50.01	40	2000	
B	11	1	6	52.056	ppb	52.056	8.74	12829	2000	
Na	23	1	45	140407.061	ppb	140407.061	0.69	285430636	2000	>LDR
Na	23	2	45	134820.653	ppb	134820.653	0.82	19624017	400000	
Mg	24	2	45	45229.601	ppb	45229.601	0.99	3006619	400000	
Al	27	2	45	980.989	ppb	980.989	3.58	18406	400000	
K	39	1	45	7165.461	ppb	7165.461	0.63	20422421	400000	
K	39	2	45	8336.426	ppb	8336.426	1.96	293893	400000	
Ca	40	1	45	151534.640	ppb	151534.640	0.89	437038073	400000	
Ca	44	2	45	151013.735	ppb	151013.735	0.13	287345	400000	
Ti	47	2	45	16.003	ppb	16.003	12.22	247	4000	
V	51	2	72	0.692	ppb	0.692	40.51	2524	2000	
Cr	52	2	72	1.186	ppb	1.186	3.84	1093	5000	
Mn	55	2	72	2970.586	ppb	2970.586	1.05	948188	10000	
Fe	57	2	72	1635.167	ppb	1635.167	3.39	23904	400000	
Co	59	2	72	2.495	ppb	2.495	9.61	3267	2000	
Ni	60	2	72	4.766	ppb	4.766	7.44	1800	5000	
Cu	63	2	72	3.244	ppb	3.244	9.64	3861	5000	
Zn	66	2	72	9.192	ppb	9.192	3.20	1460	5000	
As	75	2	72	0.958	ppb	0.958	33.43	109	2000	
Se	78	1	72	0.596	ppb	0.596	21.83	81	2000	
Sr	88	2	72	1166.587	ppb	1166.587	0.32	421098	4000	
Zr	90	2	72	173.286	ppb	173.286	1.77	760	1000	
Nb	93	2	72	5.903	ppb	5.903	7.11	10331	200	
Mo	95	2	115	2.216	ppb	2.216	13.03	1197	2000	
Pd	105	2	115	0.053	ppb	0.053	90.70	40	100	
Ag	107	2	115	0.005	ppb	0.005	336.41	40	100	
Cd	111	2	115	0.149	ppb	0.149	91.89	33	2000	
Sn	120	2	115	0.131	ppb	0.131	67.03	190	2000	
Sb	121	2	115	0.444	ppb	0.444	30.50	263	1000	
Ba	137	2	115	232.755	ppb	232.755	0.87	47453	5000	
W	182	2	165	0.145	ppb	0.145	13.29	1037	100	
Pt	195	2	165	-0.008	ppb	-0.008	-72.91	7	100	
Tl	205	2	165	0.064	ppb	0.064	40.15	393	2000	
Pb	208	2	165	0.921	ppb	0.921	2.95	6724	5000	
Th	232	2	165	0.444	ppb	0.444	2.41	3847	2000	
U	238	2	165	7.961	ppb	7.961	0.90	69761	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	667308	0.17	842608	79.20	60	120	
Sc (IS)	45	1	HMI H2	14371462	0.64	15887657	90.46	60	120	
Sc (IS)	45	2	HMI He	573326	0.51	621989	92.18	60	120	
Sc (IS)	45	3	No Gas	19660249	0.61	23999890	81.92	60	120	
Ge Internal Standard	72	1	HMI H2	5282191	0.88	5840960	90.43	60	120	
Ge Internal Standard	72	2	HMI He	619672	0.40	667191	92.88	60	120	
In Internal Standard	115	2	HMI He	2142474	0.74	2291045	93.52	60	120	
Ho-165	165	2	HMI He	10456522	0.35	10885907	96.06	60	120	

Sample Report

Sample Table

Sample Name	280-116318-A-5-A
Data File Name	221SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T02:58:53-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-29.215	ppb	-29.215	-16.91	94097	500000	
Li	7	2	45	-32.997	ppb	-32.997	-21.41	5225	500000	
Li	7	3	45	-39.138	ppb	-39.138	-7.07	1967886	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	57.477	ppb	57.477	3.28	13800	2000	
Na	23	1	45	145407.478	ppb	145407.478	0.94	291350829	2000	>LDR
Na	23	2	45	137903.861	ppb	137903.861	0.43	19858839	400000	
Mg	24	2	45	46059.313	ppb	46059.313	0.80	3029444	400000	
Al	27	2	45	654.556	ppb	654.556	2.69	12172	400000	
K	39	1	45	7416.920	ppb	7416.920	1.06	20614176	400000	
K	39	2	45	8409.332	ppb	8409.332	0.52	293243	400000	
Ca	40	1	45	157668.942	ppb	157668.942	1.81	448226327	400000	
Ca	44	2	45	154566.411	ppb	154566.411	0.83	290992	400000	
Ti	47	2	45	9.410	ppb	9.410	34.89	143	4000	
V	51	2	72	0.295	ppb	0.295	144.84	2254	2000	
Cr	52	2	72	0.895	ppb	0.895	11.18	860	5000	
Mn	55	2	72	3012.988	ppb	3012.988	0.21	949097	10000	
Fe	57	2	72	1314.204	ppb	1314.204	0.86	18970	400000	
Co	59	2	72	2.248	ppb	2.248	5.40	2907	2000	
Ni	60	2	72	4.265	ppb	4.265	9.17	1600	5000	
Cu	63	2	72	3.014	ppb	3.014	6.50	3584	5000	
Zn	66	2	72	7.200	ppb	7.200	8.36	1170	5000	
As	75	2	72	0.824	ppb	0.824	21.68	95	2000	
Se	78	1	72	0.495	ppb	0.495	26.01	68	2000	
Sr	88	2	72	1200.538	ppb	1200.538	0.35	427665	4000	
Zr	90	2	72	133.815	ppb	133.815	9.21	587	1000	
Nb	93	2	72	3.182	ppb	3.182	8.41	5768	200	
Mo	95	2	115	1.915	ppb	1.915	23.43	1040	2000	
Pd	105	2	115	0.044	ppb	0.044	62.74	33	100	
Ag	107	2	115	-0.011	ppb	-0.011	-32.71	13	100	
Cd	111	2	115	0.030	ppb	0.030	173.21	7	2000	
Sn	120	2	115	0.101	ppb	0.101	55.43	170	2000	
Sb	121	2	115	0.404	ppb	0.404	25.20	240	1000	
Ba	137	2	115	238.716	ppb	238.716	2.90	48439	5000	
W	182	2	165	0.118	ppb	0.118	69.45	957	100	
Pt	195	2	165	-0.006	ppb	-0.006	-82.41	10	100	
Tl	205	2	165	0.047	ppb	0.047	17.28	307	2000	
Pb	208	2	165	0.676	ppb	0.676	3.93	5041	5000	
Th	232	2	165	0.294	ppb	0.294	9.87	2597	2000	
U	238	2	165	8.072	ppb	8.072	2.18	70090	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	654982	0.28	842608	77.73	60	120	
Sc (IS)	45	1	HMI H2	14166746	0.82	15887657	89.17	60	120	
Sc (IS)	45	2	HMI He	567248	0.50	621989	91.20	60	120	
Sc (IS)	45	3	No Gas	19698520	0.65	23999890	82.08	60	120	
Ge Internal Standard	72	1	HMI H2	5218017	0.35	5840960	89.33	60	120	
Ge Internal Standard	72	2	HMI He	611531	0.82	667191	91.66	60	120	
In Internal Standard	115	2	HMI He	2132685	0.86	2291045	93.09	60	120	
Ho-165	165	2	HMI He	10361353	0.76	10885907	95.18	60	120	

Sample Report

Sample Table

Sample Name	280-116313-B-1-A
Data File Name	222SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:02:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-46.165	ppb	-46.165	-15.74	90565	500000	
Li	7	2	45	-50.361	ppb	-50.361	-28.12	5014	500000	
Li	7	3	45	-52.461	ppb	-52.461	-1.46	1871891	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	68.887	ppb	68.887	1.78	16720	2000	
Na	23	1	45	94318.689	ppb	94318.689	0.20	191321370	2000	>LDR
Na	23	2	45	88852.615	ppb	88852.615	0.96	12989162	400000	
Mg	24	2	45	28065.972	ppb	28065.972	1.37	1871198	400000	
Al	27	2	45	12.058	ppb	12.058	9.70	297	400000	
K	39	1	45	-977.194	ppb	-977.194	-3.35	4534166	400000	
K	39	2	45	473.707	ppb	473.707	1.85	26865	400000	
Ca	40	1	45	67054.532	ppb	67054.532	0.51	192738190	400000	
Ca	44	2	45	66332.958	ppb	66332.958	1.06	126593	400000	
Ti	47	2	45	1.292	ppb	1.292	49.62	20	4000	
V	51	2	72	3.110	ppb	3.110	16.71	4021	2000	
Cr	52	2	72	0.352	ppb	0.352	12.99	460	5000	
Mn	55	2	72	5.957	ppb	5.957	10.91	1987	10000	
Fe	57	2	72	19.843	ppb	19.843	25.39	350	400000	
Co	59	2	72	0.100	ppb	0.100	22.79	147	2000	
Ni	60	2	72	0.360	ppb	0.360	3.58	223	5000	
Cu	63	2	72	1.338	ppb	1.338	13.62	1977	5000	
Zn	66	2	72	0.700	ppb	0.700	63.38	290	5000	
As	75	2	72	1.306	ppb	1.306	20.31	142	2000	
Se	78	1	72	3.000	ppb	3.000	4.82	381	2000	
Sr	88	2	72	487.582	ppb	487.582	0.70	177079	4000	
Zr	90	2	72	16.422	ppb	16.422	72.12	103	1000	
Nb	93	2	72	2.052	ppb	2.052	8.77	4007	200	
Mo	95	2	115	2.679	ppb	2.679	2.42	1440	2000	
Pd	105	2	115	0.022	ppb	0.022	69.13	17	100	
Ag	107	2	115	-0.007	ppb	-0.007	-153.19	20	100	
Cd	111	2	115	0.074	ppb	0.074	91.48	17	2000	
Sn	120	2	115	0.005	ppb	0.005	2597.42	110	2000	
Sb	121	2	115	0.316	ppb	0.316	12.19	193	1000	
Ba	137	2	115	115.539	ppb	115.539	2.96	23735	5000	
W	182	2	165	0.158	ppb	0.158	17.43	1077	100	
Pt	195	2	165	-0.004	ppb	-0.004	-250.03	13	100	
Tl	205	2	165	0.015	ppb	0.015	94.85	150	2000	
Pb	208	2	165	0.043	ppb	0.043	34.66	857	5000	
Th	232	2	165	0.062	ppb	0.062	16.42	737	2000	
U	238	2	165	26.396	ppb	26.396	0.66	232950	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	670199	0.12	842608	79.54	60	120	
Sc (IS)	45	1	HMI H2	14320084	0.49	15887657	90.13	60	120	
Sc (IS)	45	2	HMI He	574944	0.46	621989	92.44	60	120	
Sc (IS)	45	3	No Gas	19512152	0.87	23999890	81.30	60	120	
Ge Internal Standard	72	1	HMI H2	5297760	0.47	5840960	90.70	60	120	
Ge Internal Standard	72	2	HMI He	623411	0.55	667191	93.44	60	120	
In Internal Standard	115	2	HMI He	2157575	0.51	2291045	94.17	60	120	
Ho-165	165	2	HMI He	10539820	0.76	10885907	96.82	60	120	

Sample Report

Sample Table

Sample Name	280-116313-B-2-A
Data File Name	223SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:06:26-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-33.612	ppb	-33.612	-15.01	92360	500000	
Li	7	2	45	-33.133	ppb	-33.133	-25.23	5181	500000	
Li	7	3	45	-35.116	ppb	-35.116	-2.34	1961738	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	24.972	ppb	24.972	1.55	6618	2000	
Na	23	1	45	57192.196	ppb	57192.196	0.26	114372662	2000	>LDR
Na	23	2	45	55167.786	ppb	55167.786	0.57	7915755	400000	
Mg	24	2	45	51890.626	ppb	51890.626	0.22	3385979	400000	
Al	27	2	45	27.283	ppb	27.283	16.81	570	400000	
K	39	1	45	-916.581	ppb	-916.581	-2.11	4573908	400000	
K	39	2	45	545.902	ppb	545.902	3.64	28706	400000	
Ca	40	1	45	176100.130	ppb	176100.130	0.58	497582259	400000	
Ca	44	2	45	173539.537	ppb	173539.537	0.36	324128	400000	
Ti	47	2	45	0.442	ppb	0.442	173.21	7	4000	
V	51	2	72	-1.805	ppb	-1.805	-11.49	987	2000	
Cr	52	2	72	0.206	ppb	0.206	31.52	340	5000	
Mn	55	2	72	153.468	ppb	153.468	1.44	48221	10000	
Fe	57	2	72	424.779	ppb	424.779	6.03	6145	400000	
Co	59	2	72	0.098	ppb	0.098	37.21	140	2000	
Ni	60	2	72	0.441	ppb	0.441	18.54	247	5000	
Cu	63	2	72	0.003	ppb	0.003	2788.33	627	5000	
Zn	66	2	72	2.375	ppb	2.375	34.31	510	5000	
As	75	2	72	0.285	ppb	0.285	13.98	46	2000	
Se	78	1	72	0.050	ppb	0.050	151.10	13	2000	
Sr	88	2	72	1003.428	ppb	1003.428	1.17	356072	4000	
Zr	90	2	72	20.150	ppb	20.150	44.22	117	1000	
Nb	93	2	72	1.240	ppb	1.240	12.07	2600	200	
Mo	95	2	115	0.208	ppb	0.208	11.78	187	2000	
Pd	105	2	115	0.062	ppb	0.062	32.34	47	100	
Ag	107	2	115	0.001	ppb	0.001	1487.62	33	100	
Cd	111	2	115	0.031	ppb	0.031	173.21	7	2000	
Sn	120	2	115	0.092	ppb	0.092	40.54	163	2000	
Sb	121	2	115	0.069	ppb	0.069	82.11	53	1000	
Ba	137	2	115	94.504	ppb	94.504	3.57	19091	5000	
W	182	2	165	0.102	ppb	0.102	35.30	907	100	
Pt	195	2	165	-0.001	ppb	-0.001	-535.77	20	100	
Tl	205	2	165	0.018	ppb	0.018	33.63	160	2000	
Pb	208	2	165	0.074	ppb	0.074	24.05	1033	5000	
Th	232	2	165	0.047	ppb	0.047	10.29	600	2000	
U	238	2	165	12.412	ppb	12.412	0.78	106677	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	660764	0.21	842608	78.42	60	120	
Sc (IS)	45	1	HMI H2	14079586	0.27	15887657	88.62	60	120	
Sc (IS)	45	2	HMI He	562783	0.50	621989	90.48	60	120	
Sc (IS)	45	3	No Gas	19403746	0.26	23999890	80.85	60	120	
Ge Internal Standard	72	1	HMI H2	5233759	0.42	5840960	89.60	60	120	
Ge Internal Standard	72	2	HMI He	609131	1.03	667191	91.30	60	120	
In Internal Standard	115	2	HMI He	2120870	1.91	2291045	92.57	60	120	
Ho-165	165	2	HMI He	10259831	1.20	10885907	94.25	60	120	

Sample Report

Sample Table

Sample Name	280-116313-B-3-A
Data File Name	224SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:10:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-52.223	ppb	-52.223	-8.10	86210	500000	
Li	7	2	45	-51.918	ppb	-51.918	-10.79	4758	500000	
Li	7	3	45	-58.306	ppb	-58.306	-6.77	1815820	50000	
Be	9	1	6	0.000	ppb	0.000	#DIV/0!	0	2000	
B	11	1	6	4.871	ppb	4.871	11.53	2047	2000	
Na	23	1	45	97482.160	ppb	97482.160	0.07	191635424	2000	>LDR
Na	23	2	45	93582.822	ppb	93582.822	0.41	13044454	400000	
Mg	24	2	45	47388.958	ppb	47388.958	0.63	3012870	400000	
Al	27	2	45	7.794	ppb	7.794	30.44	207	400000	
K	39	1	45	-1272.709	ppb	-1272.709	-2.19	3838781	400000	
K	39	2	45	233.653	ppb	233.653	8.43	17822	400000	
Ca	40	1	45	120305.685	ppb	120305.685	0.37	335126702	400000	
Ca	44	2	45	120340.783	ppb	120340.783	1.00	219002	400000	
Ti	47	2	45	0.000	ppb	0.000	#DIV/0!	0	4000	
V	51	2	72	-2.195	ppb	-2.195	-8.14	740	2000	
Cr	52	2	72	1.563	ppb	1.563	14.00	1337	5000	
Mn	55	2	72	1.073	ppb	1.073	2.42	403	10000	
Fe	57	2	72	24.088	ppb	24.088	19.19	397	400000	
Co	59	2	72	0.015	ppb	0.015	113.94	33	2000	
Ni	60	2	72	0.501	ppb	0.501	27.63	263	5000	
Cu	63	2	72	0.083	ppb	0.083	104.91	693	5000	
Zn	66	2	72	4.579	ppb	4.579	17.25	797	5000	
As	75	2	72	0.068	ppb	0.068	118.76	25	2000	
Se	78	1	72	0.999	ppb	0.999	31.96	128	2000	
Sr	88	2	72	485.078	ppb	485.078	0.53	169418	4000	
Zr	90	2	72	12.428	ppb	12.428	49.67	83	1000	
Nb	93	2	72	0.897	ppb	0.897	10.51	2010	200	
Mo	95	2	115	-0.053	ppb	-0.053	-94.26	57	2000	
Pd	105	2	115	0.022	ppb	0.022	91.64	17	100	
Ag	107	2	115	-0.005	ppb	-0.005	-75.91	23	100	
Cd	111	2	115	0.091	ppb	0.091	50.43	20	2000	
Sn	120	2	115	0.050	ppb	0.050	102.90	137	2000	
Sb	121	2	115	0.068	ppb	0.068	54.62	53	1000	
Ba	137	2	115	22.082	ppb	22.082	3.34	4481	5000	
W	182	2	165	0.085	ppb	0.085	53.76	860	100	
Pt	195	2	165	-0.004	ppb	-0.004	-66.25	13	100	
Tl	205	2	165	0.005	ppb	0.005	165.52	97	2000	
Pb	208	2	165	0.044	ppb	0.044	22.49	833	5000	
Th	232	2	165	0.037	ppb	0.037	13.19	517	2000	
U	238	2	165	1.253	ppb	1.253	3.19	10795	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	643389	0.36	842608	76.36	60	120	
Sc (IS)	45	1	HMI H2	13880025	0.29	15887657	87.36	60	120	
Sc (IS)	45	2	HMI He	548321	0.45	621989	88.16	60	120	
Sc (IS)	45	3	No Gas	19276135	0.74	23999890	80.32	60	120	
Ge Internal Standard	72	1	HMI H2	5147313	0.64	5840960	88.12	60	120	
Ge Internal Standard	72	2	HMI He	599512	0.88	667191	89.86	60	120	
In Internal Standard	115	2	HMI He	2121877	0.49	2291045	92.62	60	120	
Ho-165	165	2	HMI He	10213837	0.54	10885907	93.83	60	120	

Sample Report

Sample Table

Sample Name	280-116313-B-4-A
Data File Name	225SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:13:58-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435742 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-47.068	ppb	-47.068	-9.86	87907	500000	
Li	7	2	45	-49.797	ppb	-49.797	-35.78	4814	500000	
Li	7	3	45	-55.592	ppb	-55.592	-3.70	1807553	50000	
Be	9	1	6	0.121	ppb	0.121	57.10	27	2000	
B	11	1	6	4.872	ppb	4.872	17.78	2067	2000	
Na	23	1	45	96382.831	ppb	96382.831	0.98	190254577	2000	>LDR
Na	23	2	45	93042.947	ppb	93042.947	0.21	13030572	400000	
Mg	24	2	45	25577.270	ppb	25577.270	0.27	1634073	400000	
Al	27	2	45	575.002	ppb	575.002	0.68	10394	400000	
K	39	1	45	-1048.122	ppb	-1048.122	-0.63	4278993	400000	
K	39	2	45	464.833	ppb	464.833	4.06	25450	400000	
Ca	40	1	45	62889.576	ppb	62889.576	1.42	175923404	400000	
Ca	44	2	45	62922.831	ppb	62922.831	2.41	115055	400000	
Ti	47	2	45	5.635	ppb	5.635	42.74	83	4000	
V	51	2	72	-0.805	ppb	-0.805	-34.64	1577	2000	
Cr	52	2	72	1.351	ppb	1.351	12.87	1193	5000	
Mn	55	2	72	86.694	ppb	86.694	1.78	27146	10000	
Fe	57	2	72	980.349	ppb	980.349	1.25	14044	400000	
Co	59	2	72	0.464	ppb	0.464	18.47	607	2000	
Ni	60	2	72	2.735	ppb	2.735	19.61	1050	5000	
Cu	63	2	72	0.500	ppb	0.500	34.29	1107	5000	
Zn	66	2	72	5.377	ppb	5.377	13.31	913	5000	
As	75	2	72	0.266	ppb	0.266	41.37	44	2000	
Se	78	1	72	0.106	ppb	0.106	31.22	20	2000	
Sr	88	2	72	448.189	ppb	448.189	0.51	158304	4000	
Zr	90	2	72	73.228	ppb	73.228	17.18	333	1000	
Nb	93	2	72	0.671	ppb	0.671	18.04	1670	200	
Mo	95	2	115	0.019	ppb	0.019	329.42	93	2000	
Pd	105	2	115	0.013	ppb	0.013	99.80	10	100	
Ag	107	2	115	-0.005	ppb	-0.005	-148.06	23	100	
Cd	111	2	115	0.015	ppb	0.015	173.21	3	2000	
Sn	120	2	115	0.027	ppb	0.027	248.13	123	2000	
Sb	121	2	115	0.031	ppb	0.031	174.39	33	1000	
Ba	137	2	115	16.570	ppb	16.570	10.61	3404	5000	
W	182	2	165	0.058	ppb	0.058	173.98	800	100	
Pt	195	2	165	-0.003	ppb	-0.003	-104.28	17	100	
Tl	205	2	165	0.022	ppb	0.022	50.00	180	2000	
Pb	208	2	165	0.547	ppb	0.547	5.32	4171	5000	
Th	232	2	165	0.165	ppb	0.165	19.62	1547	2000	
U	238	2	165	0.183	ppb	0.183	11.68	1670	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	649747	0.31	842608	77.11	60	120	
Sc (IS)	45	1	HMI H2	13937061	0.56	15887657	87.72	60	120	
Sc (IS)	45	2	HMI He	550902	0.74	621989	88.57	60	120	
Sc (IS)	45	3	No Gas	19026031	0.28	23999890	79.28	60	120	
Ge Internal Standard	72	1	HMI H2	5167447	0.22	5840960	88.47	60	120	
Ge Internal Standard	72	2	HMI He	606264	0.55	667191	90.87	60	120	
In Internal Standard	115	2	HMI He	2145200	1.12	2291045	93.63	60	120	
Ho-165	165	2	HMI He	10332003	0.40	10885907	94.91	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	226_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:17:44-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	407.763	ppb	0.054	224719	500	81.6	90	110	>+\-10%
Li	7	2	45	387.295	ppb	6.774	12409	500	77.5	90	110	>+\-10%
Li	7	3	45	387.309	ppb	1.704	4815180	500	77.5	90	110	>+\-10%
Be	9	1	6	48.202	ppb	1.517	11825	50	96.4	90	110	
B	11	1	6	39.971	ppb	3.817	10958	50	79.9	90	110	>+\-10%
Na	23	1	45	4753.058	ppb	1.130	10999103	5000	95.1	90	110	
Na	23	2	45	4508.994	ppb	1.006	731611	5000	90.2	90	110	
Mg	24	2	45	4806.432	ppb	0.700	328995	5000	96.1	90	110	
Al	27	2	45	5019.357	ppb	1.635	96473	5000	100.4	90	110	
K	39	1	45	5020.623	ppb	2.634	17116457	5000	100.4	90	110	
K	39	2	45	5100.158	ppb	1.282	189050	5000	102.0	90	110	
Ca	40	1	45	5125.602	ppb	1.275	15634121	5000	102.5	90	110	
Ca	44	2	45	5015.130	ppb	3.867	9847	5000	100.3	90	110	
Ti	47	2	45	49.666	ppb	11.404	787	50	99.3	90	110	
V	51	2	72	46.646	ppb	0.237	31846	50	93.3	90	110	
Cr	52	2	72	49.229	ppb	2.702	39381	50	98.5	90	110	
Mn	55	2	72	50.454	ppb	1.401	16887	50	100.9	90	110	
Fe	57	2	72	4926.463	ppb	1.348	75051	5000	98.5	90	110	
Co	59	2	72	49.149	ppb	1.367	66884	50	98.3	90	110	
Ni	60	2	72	50.423	ppb	2.917	18953	50	100.8	90	110	
Cu	63	2	72	48.194	ppb	0.597	50700	50	96.4	90	110	
Zn	66	2	72	50.817	ppb	3.045	7519	50	101.6	90	110	
As	75	2	72	48.574	ppb	3.733	4739	50	97.1	90	110	
Se	78	1	72	49.648	ppb	0.680	6567	50	99.3	90	110	
Sr	88	2	72	50.712	ppb	4.659	19141	50	101.4	90	110	
Zr	90	2	72	39.121	ppb	6.368	207	50	78.2	90	110	>+\-10%
Nb	93	2	72	84.290	ppb	0.234	145660	100	84.3	90	110	>+\-10%
Mo	95	2	115	47.958	ppb	1.947	25304	50	95.9	90	110	
Pd	105	2	115	50.862	ppb	3.834	40356	50	101.7	90	110	
Ag	107	2	115	48.663	ppb	1.189	84246	50	97.3	90	110	
Cd	111	2	115	50.479	ppb	1.390	11795	50	101.0	90	110	
Sn	120	2	115	48.014	ppb	0.705	32466	50	96.0	90	110	
Sb	121	2	115	50.399	ppb	0.907	29472	50	100.8	90	110	
Ba	137	2	115	48.989	ppb	2.855	10471	50	98.0	90	110	
W	182	2	165	47.691	ppb	1.065	128737	50	95.4	90	110	
Pt	195	2	165	48.036	ppb	0.323	103360	50	96.1	90	110	
Tl	205	2	165	50.070	ppb	0.207	259877	50	100.1	90	110	
Pb	208	2	165	49.684	ppb	1.610	344734	50	99.4	90	110	
Th	232	2	165	48.640	ppb	0.609	410811	50	97.3	90	110	
U	238	2	165	49.032	ppb	0.965	444314	50	98.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	724929	0.20	842608	86.03	60	120	
Sc (IS)	45	1	HMI H2	15146368	0.70	15887657	95.33	60	120	
Sc (IS)	45	2	HMI He	589188	0.30	621989	94.73	60	120	
Sc (IS)	45	3	No Gas	21222516	0.81	23999890	88.43	60	120	
Ge Internal Standard	72	1	HMI H2	5613263	0.06	5840960	96.10	60	120	
Ge Internal Standard	72	2	HMI He	646849	0.30	667191	96.95	60	120	
In Internal Standard	115	2	HMI He	2241684	0.30	2291045	97.85	60	120	
Ho-165	165	2	HMI He	10824862	1.17	10885907	99.44	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	227_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:21:30-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-45.740	ppb	-5.8	2098981	10	
Be	9	1	6	0.014	ppb	173.2	3	0.5	
B	11	1	6	0.411	ppb	102.2	1210	0.5	
Na	23	1	45	-167.542	ppb	-2.2	478949	25	
Na	23	2	45	-168.424	ppb	-1.6	33863	25	
Mg	24	2	45	14.791	ppb	11.9	1720	25	
Al	27	2	45	1.101	ppb	213.3	93	15	
K	39	1	45	-37.392	ppb	-73.7	6621519	50	
K	39	2	45	-9.071	ppb	-161.6	10634	50	
Ca	40	1	45	17.648	ppb	2.5	108583	50	
Ca	44	2	45	14.935	ppb	91.3	70	25	
Ti	47	2	45	0.423	ppb	173.2	7	0.5	
V	51	2	72	-0.499	ppb	-7.6	1870	1	
Cr	52	2	72	-0.029	ppb	-198.6	173	1	
Mn	55	2	72	0.109	ppb	178.4	113	0.5	
Fe	57	2	72	7.172	ppb	55.8	170	25	
Co	59	2	72	0.000	ppb	1012.6	17	0.5	
Ni	60	2	72	-0.134	ppb	-30.6	47	1	
Cu	63	2	72	-0.145	ppb	-52.7	510	1	
Zn	66	2	72	-0.485	ppb	-62.9	130	5	
As	75	2	72	-0.033	ppb	-164.5	18	1	
Se	78	1	72	0.002	ppb	2476.6	8	1	
Sr	88	2	72	0.074	ppb	74.4	63	0.5	
Zr	90	2	72	-0.480	ppb	-731.8	33	1	
Nb	93	2	72	6.474	ppb	8.5	11722	2	>RL
Mo	95	2	115	0.102	ppb	84.1	143	0.5	
Pd	105	2	115	0.087	ppb	89.2	70	1	
Ag	107	2	115	0.004	ppb	382.7	40	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.269	ppb	41.6	297	1	
Sb	121	2	115	0.517	ppb	15.1	323	0.6	
Ba	137	2	115	-0.045	ppb	-118.8	17	0.5	
W	182	2	165	0.177	ppb	14.2	1147	1	
Pt	195	2	165	-0.001	ppb	-584.2	20	1	
Tl	205	2	165	0.024	ppb	17.0	197	0.1	
Pb	208	2	165	0.023	ppb	41.6	733	0.5	
Th	232	2	165	0.055	ppb	20.7	693	1	
U	238	2	165	0.078	ppb	22.1	793	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	726786	0.36	842608	86.25	60	120	
Sc (IS)	45	1	HMI H2	14910183	0.78	15887657	93.85	60	120	
Sc (IS)	45	2	HMI He	586873	0.15	621989	94.35	60	120	
Sc (IS)	45	3	No Gas	21432093	0.42	23999890	89.30	60	120	
Ge Internal Standard	72	1	HMI H2	5605081	0.92	5840960	95.96	60	120	
Ge Internal Standard	72	2	HMI He	644476	0.21	667191	96.60	60	120	
In Internal Standard	115	2	HMI He	2277973	0.44	2291045	99.43	60	120	
Ho-165	165	2	HMI He	10729341	0.20	10885907	98.56	60	120	

Blank Report

Sample Table

Sample Name	MB 280-437101/1-A
Data File Name	228_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:25:19-07:00
Sample Type	Blank
Dilution	1
Comment	437101 hot Sb 6020
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-25.016	ppb	-26.17053002	102638	0.5
Li	7	2	45	-17.664	ppb	-56.75087146	5631	0.5
Li	7	3	45	-25.988	ppb	-11.95009866	2474932	10
Be	9	1	6	0.013	ppb	173.2050808	3	0.5
B	11	1	6	-0.064	ppb	-800.8062282	1167	0.5
Na	23	1	45	225.399	ppb	2.094857387	1337113	25
Na	23	2	45	183.519	ppb	3.525045595	85734	25
Mg	24	2	45	192.047	ppb	0.646022165	13714	25
Al	27	2	45	12.149	ppb	16.64955326	303	15
K	39	1	45	14839.902	ppb	0.943303272	37598713	50
K	39	2	45	60.109	ppb	16.8387982	12976	50
Ca	40	1	45	749.917	ppb	1.107281626	2355186	50
Ca	44	2	45	711.380	ppb	13.25836596	1420	25
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5
V	51	2	72	1.923	ppb	9.332631137	3571	1
Cr	52	2	72	0.297	ppb	19.73504937	453	1
Mn	55	2	72	3.857	ppb	11.64264212	1423	0.5
Fe	57	2	72	129.873	ppb	5.381573707	2130	25
Co	59	2	72	0.026	ppb	68.79476992	53	0.5
Ni	60	2	72	0.501	ppb	57.39102097	297	1
Cu	63	2	72	1.113	ppb	8.886319266	1900	1
Zn	66	2	72	8.266	ppb	6.715193857	1453	5
As	75	2	72	0.055	ppb	92.29732453	27	1
Se	78	1	72	0.155	ppb	115.3722107	29	1
Sr	88	2	72	2.058	ppb	19.50800486	847	0.5
Zr	90	2	72	7.164	ppb	104.5538747	70	1
Nb	93	2	72	5.845	ppb	10.2366279	11168	2
Mo	95	2	115	-0.006	ppb	-163.2761697	83	0.5
Pd	105	2	115	0.140	ppb	56.68504175	110	1
Ag	107	2	115	0.069	ppb	29.88384403	150	1
Cd	111	2	115	0.014	ppb	173.2050808	3	0.5
Sn	120	2	115	1.581	ppb	8.426035707	1160	1
Sb	121	2	115	0.585	ppb	18.65154199	353	0.6
Ba	137	2	115	3.444	ppb	13.4238687	750	0.5
W	182	2	165	0.080	ppb	43.13713798	887	1
Pt	195	2	165	0.006	ppb	111.0049418	37	1
Tl	205	2	165	0.031	ppb	19.13126394	237	0.1
Pb	208	2	165	0.202	ppb	12.7991955	1957	0.5
Th	232	2	165	0.105	ppb	18.40890161	1107	1
U	238	2	165	0.039	ppb	22.78530099	433	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	776112	0.30	842608	92.11	60	120	
Sc (IS)	45	1	HMI H2	15271774	0.48	15887657	96.12	60	120	
Sc (IS)	45	2	HMI He	584082	0.76	621989	93.91	60	120	
Sc (IS)	45	3	No Gas	23839478	0.57	23999890	99.33	60	120	
Ge Internal Standard	72	1	HMI H2	5858142	0.57	5840960	100.29	60	120	
Ge Internal Standard	72	2	HMI He	675903	0.60	667191	101.31	60	120	
In Internal Standard	115	2	HMI He	2210255	0.62	2291045	96.47	60	120	
Ho-165	165	2	HMI He	10684577	0.34	10885907	98.15	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-437101/2-A
Data File Name	229LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:29:07-07:00
Sample Type	LCS-s
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	437101 hot Sb 6020
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	195.592	195.592	ppb	2.584	52788	200	97.8	80	120	
Na	23	2	45	187.272	187.272	ppb	1.855	88133	200	93.6	80	120	
Mg	24	2	45	219.537	219.537	ppb	5.651	15906	200000	0.1	80	120	NewName Main CR1 Failed
Al	27	2	45	1993.732	1993.732	ppb	1.128	38845	200000	1.0	80	120	NewName Main CR1 Failed
K	39	2	45	89.520	89.520	ppb	5.389	14294	200000	0.0	80	120	NewName Main CR1 Failed
Ca	44	2	45	1792.813	1792.813	ppb	5.303	3591	200000	0.9	80	120	NewName Main CR1 Failed
V	51	2	72	186.117	186.117	ppb	2.021	129013	200	93.1	80	120	
Cr	52	2	72	192.582	192.582	ppb	1.253	164327	200	96.3	80	120	
(Cr)	53	2	72	205.830	205.830	ppb	1.579	21063	200	102.9	80	120	
Mn	55	2	72	193.169	193.169	ppb	1.377	68988	200	96.6	80	120	
Fe	57	2	72	1989.354	1989.354	ppb	1.581	32487	200000	1.0	80	120	NewName Main CR1 Failed
Co	59	2	72	191.778	191.778	ppb	0.600	279355	200	95.9	80	120	
Ni	60	2	72	196.228	196.228	ppb	1.676	78663	200	98.1	80	120	
Cu	63	2	72	197.790	197.790	ppb	0.742	220570	200	98.9	80	120	
Zn	66	2	72	244.431	244.431	ppb	1.163	37901	200	122.2	80	120	NewName Main CR1 Failed
As	75	2	72	182.978	182.978	ppb	1.224	19050	200	91.5	80	120	
Se	78	1	72	196.013	196.013	ppb	2.646	28116	200	98.0	80	120	
(Se)	82	1	72	176.780	176.780	ppb	2.982	12593	200	88.4	80	120	
Nb	93	2	72	5.207	5.207	ppb	4.724	10264	400	1.3	80	120	NewName Main CR1 Failed
Mo	95	2	115	201.686	201.686	ppb	1.879	104184	200	100.8	80	120	
Pd	105	2	115	0.107	0.107	ppb	34.760	83	200	0.1	80	120	NewName Main CR1 Failed
Ag	107	2	115	217.673	217.673	ppb	0.803	369824	200	108.8	80	120	
Cd	111	2	115	207.220	207.220	ppb	2.404	47535	200	103.6	80	120	
(Cd)	114	2	115	202.697	202.697	ppb	0.787	123162	200	101.3	80	120	
Sn	120	2	115	202.083	202.083	ppb	0.434	133790	200	101.0	80	120	
Sb	121	2	115	210.070	210.070	ppb	1.907	120541	200	105.0	80	110	
Ba	137	2	115	202.740	202.740	ppb	1.329	42460	200	101.4	80	120	
W	182	2	165	193.902	193.902	ppb	0.654	515694	200	97.0	80	120	
Pt	195	2	165	0.014	0.014	ppb	51.490	53	200	0.0	80	120	NewName Main CR1 Failed
Tl	205	2	165	200.575	200.575	ppb	1.413	1029481	200	100.3	80	120	
(Pb)	206	2	165	201.042	201.042	ppb	0.358	336518	200	100.5	80	120	
(Pb)	207	2	165	202.966	202.966	ppb	0.718	306810	200	101.5	80	120	
Pb	208	2	165	201.165	201.165	ppb	0.595	1379039	200	100.6	80	120	
Th	232	2	165	217.924	217.924	ppb	0.177	1819906	200	109.0	80	120	
U	238	2	165	220.085	220.085	ppb	2.079	1972419	200	110.0	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	797601	0.85	842608	94.66	60	120	
Sc (IS)	45	1	HMI H2	15936880	0.24	15887657	100.31	60	120	
Sc (IS)	45	2	HMI He	596547	0.57	621989	95.91	60	120	
Sc (IS)	45	3	No Gas	24754897	0.38	23999890	103.15	60	120	
Ge Internal Standard	72	1	HMI H2	6092448	0.79	5840960	104.31	60	120	
Ge Internal Standard	72	2	HMI He	692522	0.36	667191	103.80	60	120	
In Internal Standard	115	2	HMI He	2200613	0.16	2291045	96.05	60	120	
Ho-165	165	2	HMI He	10707665	0.91	10885907	98.36	60	120	

Sample Report

Sample Table

Sample Name	280-116639-A-7-A
Data File Name	230SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:32:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437101 hot Sb 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-21.121	ppb	-21.121	-10.83	105883	500000	
Li	7	2	45	-0.806	ppb	-0.806	-3265.51	5858	500000	
Li	7	3	45	-25.117	ppb	-25.117	-21.78	2551804	50000	
Be	9	1	6	0.260	ppb	0.260	28.58	70	2000	
B	11	1	6	75.102	ppb	75.102	2.78	21550	2000	
Na	23	1	45	3114.425	ppb	3114.425	0.51	7715499	2000	
Na	23	2	45	3110.910	ppb	3110.910	0.69	513949	400000	
Mg	24	2	45	11507.054	ppb	11507.054	0.51	772887	400000	
Al	27	2	45	31343.330	ppb	31343.330	0.20	591529	400000	
K	39	1	45	17704.540	ppb	17704.540	0.95	44422561	400000	
K	39	2	45	3412.132	ppb	3412.132	1.60	127842	400000	
Ca	40	1	45	79351.969	ppb	79351.969	0.68	248206323	400000	
Ca	44	2	45	82282.380	ppb	82282.380	0.43	158102	400000	
Ti	47	2	45	53.337	ppb	53.337	2.94	830	4000	
V	51	2	72	19.566	ppb	19.566	3.32	14792	2000	
Cr	52	2	72	40.012	ppb	40.012	1.50	32397	5000	
Mn	55	2	72	301.823	ppb	301.823	2.23	101734	10000	
Fe	57	2	72	111891.148	ppb	111891.148	1.63	1721994	400000	
Co	59	2	72	3.806	ppb	3.806	4.66	5251	2000	
Ni	60	2	72	29.473	ppb	29.473	4.21	11238	5000	
Cu	63	2	72	1921.839	ppb	1921.839	1.19	2017973	5000	
Zn	66	2	72	2121.312	ppb	2121.312	1.28	309035	5000	
As	75	2	72	16.546	ppb	16.546	3.60	1646	2000	
Se	78	1	72	19.482	ppb	19.482	3.76	2679	2000	
Sr	88	2	72	1125.879	ppb	1125.879	0.92	428885	4000	
Zr	90	2	72	24114.321	ppb	24114.321	1.49	106655	1000	>LDR
Nb	93	2	72	5.132	ppb	5.132	11.66	9564	200	
Mo	95	2	115	21.032	ppb	21.032	3.18	10528	2000	
Pd	105	2	115	0.204	ppb	0.204	42.23	153	100	
Ag	107	2	115	7.003	ppb	7.003	0.31	11479	100	
Cd	111	2	115	1.600	ppb	1.600	19.66	353	2000	
Sn	120	2	115	53.325	ppb	53.325	3.28	34046	2000	
Sb	121	2	115	4.863	ppb	4.863	7.22	2700	1000	
Ba	137	2	115	1274.877	ppb	1274.877	0.98	256770	5000	
W	182	2	165	3.239	ppb	3.239	3.46	9127	100	
Pt	195	2	165	0.083	ppb	0.083	17.92	197	100	
Tl	205	2	165	0.269	ppb	0.269	13.74	1430	2000	
Pb	208	2	165	15.438	ppb	15.438	1.47	104600	5000	
Th	232	2	165	0.495	ppb	0.495	12.09	4288	2000	
U	238	2	165	47.944	ppb	47.944	0.66	422671	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	796326	0.42	842608	94.51	60	120	
Sc (IS)	45	1	HMI H2	15584933	1.07	15887657	98.09	60	120	
Sc (IS)	45	2	HMI He	578885	0.32	621989	93.07	60	120	
Sc (IS)	45	3	No Gas	24517379	0.27	23999890	102.16	60	120	
Ge Internal Standard	72	1	HMI H2	5825262	0.20	5840960	99.73	60	120	
Ge Internal Standard	72	2	HMI He	653949	0.50	667191	98.02	60	120	
In Internal Standard	115	2	HMI He	2117404	0.23	2291045	92.42	60	120	
Ho-165	165	2	HMI He	10530574	0.35	10885907	96.74	60	120	

Sample Report

Sample Table

Sample Name	280-116639-A-7-Asd@5
Data File Name	231SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:36:41-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437101 hot Sb 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-34.068	ppb	-34.068	-14.40	104223	500000	
Li	7	2	45	-22.225	ppb	-22.225	-95.04	5611	500000	
Li	7	3	45	-37.196	ppb	-37.196	-7.76	2413463	50000	
Be	9	1	6	0.025	ppb	0.025	173.21	7	2000	
B	11	1	6	13.877	ppb	13.877	4.59	4981	2000	
Na	23	1	45	513.391	ppb	513.391	1.19	2039166	2000	
Na	23	2	45	490.866	ppb	490.866	1.13	132457	400000	
Mg	24	2	45	2332.134	ppb	2332.134	2.22	160151	400000	
Al	27	2	45	6237.097	ppb	6237.097	0.46	119981	400000	
K	39	1	45	3788.108	ppb	3788.108	1.76	15319822	400000	
K	39	2	45	665.490	ppb	665.490	3.70	34258	400000	
Ca	40	1	45	15974.381	ppb	15974.381	0.78	51054644	400000	
Ca	44	2	45	16509.014	ppb	16509.014	1.54	32350	400000	
Ti	47	2	45	10.304	ppb	10.304	39.35	163	4000	
V	51	2	72	3.211	ppb	3.211	10.39	4201	2000	
Cr	52	2	72	8.246	ppb	8.246	3.49	6705	5000	
Mn	55	2	72	61.480	ppb	61.480	2.13	20392	10000	
Fe	57	2	72	22349.370	ppb	22349.370	0.26	337458	400000	
Co	59	2	72	0.769	ppb	0.769	8.32	1053	2000	
Ni	60	2	72	6.897	ppb	6.897	10.78	2654	5000	
Cu	63	2	72	397.588	ppb	397.588	0.40	410052	5000	
Zn	66	2	72	450.625	ppb	450.625	0.36	64559	5000	
As	75	2	72	3.781	ppb	3.781	11.74	385	2000	
Se	78	1	72	3.645	ppb	3.645	10.41	512	2000	
Sr	88	2	72	237.653	ppb	237.653	2.02	88836	4000	
Zr	90	2	72	5109.753	ppb	5109.753	0.37	22199	1000	>LDR
Nb	93	2	72	0.822	ppb	0.822	16.79	2024	200	
Mo	95	2	115	4.857	ppb	4.857	4.52	2604	2000	
Pd	105	2	115	0.038	ppb	0.038	32.31	30	100	
Ag	107	2	115	1.379	ppb	1.379	6.71	2387	100	
Cd	111	2	115	0.392	ppb	0.392	41.07	90	2000	
Sn	120	2	115	10.840	ppb	10.840	2.97	7312	2000	
Sb	121	2	115	0.926	ppb	0.926	18.65	550	1000	
Ba	137	2	115	254.183	ppb	254.183	0.88	53465	5000	
W	182	2	165	0.921	ppb	0.921	9.92	3141	100	
Pt	195	2	165	0.011	ppb	0.011	64.50	47	100	
Tl	205	2	165	0.052	ppb	0.052	29.27	347	2000	
Pb	208	2	165	3.264	ppb	3.264	1.51	23079	5000	
Th	232	2	165	0.071	ppb	0.071	20.86	827	2000	
U	238	2	165	9.572	ppb	9.572	2.35	86388	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	797961	0.86	842608	94.70	60	120	
Sc (IS)	45	1	HMI H2	15909434	0.81	15887657	100.14	60	120	
Sc (IS)	45	2	HMI He	589771	0.51	621989	94.82	60	120	
Sc (IS)	45	3	No Gas	24018530	0.31	23999890	100.08	60	120	
Ge Internal Standard	72	1	HMI H2	5874321	0.72	5840960	100.57	60	120	
Ge Internal Standard	72	2	HMI He	641514	0.21	667191	96.15	60	120	
In Internal Standard	115	2	HMI He	2210508	1.12	2291045	96.48	60	120	
Ho-165	165	2	HMI He	10771722	0.52	10885907	98.95	60	120	

Sample Report

Sample Table

Sample Name	280-116639-A-7-B MS
Data File Name	232SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:40:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437101 hot Sb 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	341.086	ppb	341.086	2.56	211800	500000	
Li	7	2	45	366.081	ppb	366.081	1.45	11685	500000	
Li	7	3	45	348.831	ppb	348.831	3.96	5365454	50000	
Be	9	1	6	197.259	ppb	197.259	4.13	52031	2000	
B	11	1	6	235.472	ppb	235.472	2.10	63599	2000	
Na	23	1	45	3113.063	ppb	3113.063	1.23	7715112	2000	
Na	23	2	45	3102.726	ppb	3102.726	0.80	505852	400000	
Mg	24	2	45	11760.252	ppb	11760.252	0.22	779237	400000	
Al	27	2	45	33984.439	ppb	33984.439	1.21	632703	400000	
K	39	1	45	18048.745	ppb	18048.745	1.83	45164148	400000	
K	39	2	45	3343.936	ppb	3343.936	1.72	123806	400000	
Ca	40	1	45	79063.620	ppb	79063.620	1.58	247383610	400000	
Ca	44	2	45	82130.972	ppb	82130.972	0.54	155687	400000	
Ti	47	2	45	46.282	ppb	46.282	17.62	710	4000	
V	51	2	72	209.392	ppb	209.392	1.48	135507	2000	
Cr	52	2	72	232.470	ppb	232.470	1.47	185527	5000	
Mn	55	2	72	505.404	ppb	505.404	0.80	168713	10000	
Fe	57	2	72	118462.892	ppb	118462.892	0.34	1806024	400000	
Co	59	2	72	195.654	ppb	195.654	0.72	266610	2000	
Ni	60	2	72	226.658	ppb	226.658	2.50	84972	5000	
Cu	63	2	72	2157.332	ppb	2157.332	1.34	2243784	5000	
Zn	66	2	72	2376.823	ppb	2376.823	0.41	343000	5000	
As	75	2	72	205.045	ppb	205.045	1.41	19965	2000	
Se	78	1	72	228.941	ppb	228.941	0.55	31485	2000	
Sr	88	2	72	1324.558	ppb	1324.558	0.17	499842	4000	
Zr	90	2	72	31156.416	ppb	31156.416	2.78	136489	1000	>LDR
Nb	93	2	72	2.481	ppb	2.481	3.87	4904	200	
Mo	95	2	115	225.304	ppb	225.304	1.44	109920	2000	
Pd	105	2	115	0.140	ppb	0.140	19.59	103	100	
Ag	107	2	115	222.708	ppb	222.708	2.28	357371	100	
Cd	111	2	115	208.614	ppb	208.614	3.33	45207	2000	
Sn	120	2	115	256.003	ppb	256.003	1.13	160067	2000	
Sb	121	2	115	205.296	ppb	205.296	0.59	111285	1000	
Ba	137	2	115	1515.836	ppb	1515.836	1.24	299707	5000	
W	182	2	165	191.837	ppb	191.837	0.41	494525	100	
Pt	195	2	165	0.054	ppb	0.054	33.78	133	100	
Tl	205	2	165	197.215	ppb	197.215	0.32	981144	2000	
Pb	208	2	165	213.165	ppb	213.165	0.60	1416298	5000	
Th	232	2	165	85.766	ppb	85.766	0.95	694324	2000	
U	238	2	165	277.491	ppb	277.491	1.50	2410625	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	779554	0.69	842608	92.52	60	120	
Sc (IS)	45	1	HMI H2	15590671	1.11	15887657	98.13	60	120	
Sc (IS)	45	2	HMI He	571087	0.65	621989	91.82	60	120	
Sc (IS)	45	3	No Gas	24907397	0.92	23999890	103.78	60	120	
Ge Internal Standard	72	1	HMI H2	5841649	0.26	5840960	100.01	60	120	
Ge Internal Standard	72	2	HMI He	647825	0.65	667191	97.10	60	120	
In Internal Standard	115	2	HMI He	2078797	1.18	2291045	90.74	60	120	
Ho-165	165	2	HMI He	10377983	0.49	10885907	95.33	60	120	

Sample Report

Sample Table

Sample Name	280-116639-A-7-C MSD
Data File Name	233SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:44:16-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437101 hot Sb 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	343.276	ppb	343.276	1.12	215109	500000	
Li	7	2	45	392.380	ppb	392.380	2.88	12179	500000	
Li	7	3	45	334.108	ppb	334.108	1.46	5354217	50000	
Be	9	1	6	191.637	ppb	191.637	1.02	51339	2000	
B	11	1	6	232.998	ppb	232.998	0.82	63924	2000	
Na	23	1	45	3090.001	ppb	3090.001	1.22	7760115	2000	
Na	23	2	45	3094.391	ppb	3094.391	0.95	507597	400000	
Mg	24	2	45	11714.169	ppb	11714.169	1.44	780694	400000	
Al	27	2	45	33626.929	ppb	33626.929	1.20	629689	400000	
K	39	1	45	17934.691	ppb	17934.691	0.90	45487358	400000	
K	39	2	45	3402.876	ppb	3402.876	0.95	126536	400000	
Ca	40	1	45	78267.425	ppb	78267.425	1.02	247960390	400000	
Ca	44	2	45	81746.805	ppb	81746.805	0.84	155859	400000	
Ti	47	2	45	51.194	ppb	51.194	12.33	790	4000	
V	51	2	72	207.261	ppb	207.261	1.28	135271	2000	
Cr	52	2	72	230.744	ppb	230.744	1.91	185683	5000	
Mn	55	2	72	494.528	ppb	494.528	0.62	166487	10000	
Fe	57	2	72	116370.778	ppb	116370.778	0.73	1789220	400000	
Co	59	2	72	195.784	ppb	195.784	1.78	269016	2000	
Ni	60	2	72	229.524	ppb	229.524	1.58	86793	5000	
Cu	63	2	72	2165.134	ppb	2165.134	0.47	2271074	5000	
Zn	66	2	72	2358.301	ppb	2358.301	1.24	343190	5000	
As	75	2	72	206.339	ppb	206.339	1.45	20260	2000	
Se	78	1	72	227.907	ppb	227.907	2.62	31791	2000	
Sr	88	2	72	1318.286	ppb	1318.286	0.89	501654	4000	
Zr	90	2	72	31330.907	ppb	31330.907	0.95	138439	1000	>LDR
Nb	93	2	72	1.674	ppb	1.674	10.97	3544	200	
Mo	95	2	115	224.701	ppb	224.701	1.09	108735	2000	
Pd	105	2	115	0.151	ppb	0.151	18.24	110	100	
Ag	107	2	115	224.993	ppb	224.993	1.34	358131	100	
Cd	111	2	115	207.594	ppb	207.594	0.37	44615	2000	
Sn	120	2	115	256.976	ppb	256.976	2.02	159353	2000	
Sb	121	2	115	208.998	ppb	208.998	0.80	112360	1000	
Ba	137	2	115	1520.231	ppb	1520.231	0.76	298125	5000	
W	182	2	165	191.036	ppb	191.036	0.98	493875	100	
Pt	195	2	165	0.076	ppb	0.076	41.88	180	100	
Tl	205	2	165	196.202	ppb	196.202	1.23	978851	2000	
Pb	208	2	165	212.266	ppb	212.266	1.49	1414272	5000	
Th	232	2	165	91.799	ppb	91.799	2.85	745159	2000	
U	238	2	165	272.522	ppb	272.522	1.32	2373959	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	791590	0.94	842608	93.95	60	120	
Sc (IS)	45	1	HMI H2	15785176	0.70	15887657	99.35	60	120	
Sc (IS)	45	2	HMI He	574422	0.93	621989	92.35	60	120	
Sc (IS)	45	3	No Gas	25369416	0.76	23999890	105.71	60	120	
Ge Internal Standard	72	1	HMI H2	5925819	0.64	5840960	101.45	60	120	
Ge Internal Standard	72	2	HMI He	653306	1.18	667191	97.92	60	120	
In Internal Standard	115	2	HMI He	2061733	0.67	2291045	89.99	60	120	
Ho-165	165	2	HMI He	10407677	0.80	10885907	95.61	60	120	

Sample Report

Sample Table

Sample Name	280-116639-A-7-A pds
Data File Name	234SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:48:01-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	437101 hot Sb 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	160.099	ppb	160.099	6.09	162562	500000	
Li	7	2	45	196.317	ppb	196.317	8.76	9060	500000	
Li	7	3	45	174.049	ppb	174.049	2.69	4211960	50000	
Be	9	1	6	205.522	ppb	205.522	1.25	55852	2000	
B	11	1	6	75.252	ppb	75.252	1.92	21773	2000	
Na	23	1	45	3008.390	ppb	3008.390	1.62	7657735	2000	
Na	23	2	45	2980.173	ppb	2980.173	0.97	494048	400000	
Mg	24	2	45	11094.679	ppb	11094.679	1.55	744071	400000	
Al	27	2	45	32065.399	ppb	32065.399	1.40	604226	400000	
K	39	1	45	17070.828	ppb	17070.828	0.70	44096084	400000	
K	39	2	45	3328.307	ppb	3328.307	0.19	124783	400000	
Ca	40	1	45	76764.212	ppb	76764.212	0.85	245753043	400000	
Ca	44	2	45	78763.048	ppb	78763.048	1.10	151114	400000	
Ti	47	2	45	71.279	ppb	71.279	18.73	1107	4000	
V	51	2	72	219.433	ppb	219.433	0.67	142596	2000	
Cr	52	2	72	244.859	ppb	244.859	1.08	196366	5000	
Mn	55	2	72	494.295	ppb	494.295	1.63	165813	10000	
Fe	57	2	72	113945.994	ppb	113945.994	1.90	1745689	400000	
Co	59	2	72	208.421	ppb	208.421	0.88	285398	2000	
Ni	60	2	72	240.616	ppb	240.616	1.54	90650	5000	
Cu	63	2	72	2111.120	ppb	2111.120	0.47	2206675	5000	
Zn	66	2	72	2275.845	ppb	2275.845	0.59	330058	5000	
As	75	2	72	214.074	ppb	214.074	1.51	20949	2000	
Se	78	1	72	242.258	ppb	242.258	1.23	34216	2000	
Sr	88	2	72	1288.157	ppb	1288.157	0.77	488488	4000	
Zr	90	2	72	66273.063	ppb	66273.063	1.02	291740	1000	>LDR
Nb	93	2	72	6.440	ppb	6.440	9.21	11789	200	
Mo	95	2	115	230.874	ppb	230.874	0.46	113647	2000	
Pd	105	2	115	0.175	ppb	0.175	34.02	130	100	
Ag	107	2	115	57.085	ppb	57.085	2.20	92447	100	
Cd	111	2	115	217.616	ppb	217.616	0.88	47575	2000	
Sn	120	2	115	256.857	ppb	256.857	1.20	162031	2000	
Sb	121	2	115	221.854	ppb	221.854	0.63	121325	1000	
Ba	137	2	115	1449.756	ppb	1449.756	0.52	289208	5000	
W	182	2	165	208.101	ppb	208.101	0.84	543398	100	
Pt	195	2	165	0.174	ppb	0.174	34.00	387	100	
Tl	205	2	165	207.593	ppb	207.593	0.82	1046268	2000	
Pb	208	2	165	219.002	ppb	219.002	0.90	1474088	5000	
Th	232	2	165	249.270	ppb	249.270	1.44	2043829	2000	
U	238	2	165	282.791	ppb	282.791	1.60	2488588	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	803033	0.55	842608	95.30	60	120	
Sc (IS)	45	1	HMI H2	15951028	0.92	15887657	100.40	60	120	
Sc (IS)	45	2	HMI He	578025	0.59	621989	92.93	60	120	
Sc (IS)	45	3	No Gas	25778479	0.12	23999890	107.41	60	120	
Ge Internal Standard	72	1	HMI H2	5999576	0.50	5840960	102.72	60	120	
Ge Internal Standard	72	2	HMI He	651031	0.90	667191	97.58	60	120	
In Internal Standard	115	2	HMI He	2097248	0.56	2291045	91.54	60	120	
Ho-165	165	2	HMI He	10513915	0.69	10885907	96.58	60	120	

Sample Report

Sample Table

Sample Name	280-116306-B-13-C@50
Data File Name	235SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:51:48-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436761 6020 dod5 Ag
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-35.154	ppb	-35.154	-7.00	109671	500000	
Li	7	2	45	-3.932	ppb	-3.932	-670.04	6298	500000	
Li	7	3	45	-34.990	ppb	-34.990	-12.57	2591038	50000	
Be	9	1	6	0.684	ppb	0.684	31.54	190	2000	
B	11	1	6	9.757	ppb	9.757	6.58	3971	2000	
Na	23	1	45	172.057	ppb	172.057	8.56	1343734	2000	
Na	23	2	45	146.227	ppb	146.227	12.11	86253	400000	
Mg	24	2	45	4782.279	ppb	4782.279	2.64	348939	400000	
Al	27	2	45	6510.898	ppb	6510.898	2.74	133391	400000	
K	39	1	45	2510.726	ppb	2510.726	2.01	13261353	400000	
K	39	2	45	1777.387	ppb	1777.387	1.39	77873	400000	
Ca	40	1	45	5782.864	ppb	5782.864	1.07	19549096	400000	
Ca	44	2	45	5619.780	ppb	5619.780	2.48	11755	400000	
Ti	47	2	45	309.395	ppb	309.395	7.14	5221	4000	
V	51	2	72	28.386	ppb	28.386	2.60	21640	2000	
Cr	52	2	72	76.061	ppb	76.061	3.56	64945	5000	
Mn	55	2	72	252.593	ppb	252.593	3.17	90066	10000	
Fe	57	2	72	29202.093	ppb	29202.093	1.34	475390	400000	
Co	59	2	72	11.275	ppb	11.275	1.29	16420	2000	
Ni	60	2	72	74.421	ppb	74.421	1.00	29862	5000	
Cu	63	2	72	228.018	ppb	228.018	0.68	253864	5000	
Zn	66	2	72	127.215	ppb	127.215	1.34	19805	5000	
As	75	2	72	252.139	ppb	252.139	2.28	26208	2000	
Se	78	1	72	0.357	ppb	0.357	64.77	61	2000	
Sr	88	2	72	28.735	ppb	28.735	2.08	11615	4000	
Zr	90	2	72	172.272	ppb	172.272	13.72	843	1000	
Nb	93	2	72	0.059	ppb	0.059	95.77	780	200	
Mo	95	2	115	1.712	ppb	1.712	16.33	1030	2000	
Pd	105	2	115	0.004	ppb	0.004	173.21	3	100	
Ag	107	2	115	75.931	ppb	75.931	1.67	136982	100	
Cd	111	2	115	9.041	ppb	9.041	7.47	2204	2000	
Sn	120	2	115	4.573	ppb	4.573	9.36	3327	2000	
Sb	121	2	115	84.593	ppb	84.593	1.27	51546	1000	
Ba	137	2	115	91.340	ppb	91.340	1.61	20326	5000	
W	182	2	165	8.669	ppb	8.669	1.71	25058	100	
Pt	195	2	165	0.007	ppb	0.007	123.88	40	100	
Tl	205	2	165	0.350	ppb	0.350	2.46	1980	2000	
Pb	208	2	165	1035.210	ppb	1035.210	2.33	7499325	5000	
Th	232	2	165	1.868	ppb	1.868	1.50	16738	2000	
U	238	2	165	0.431	ppb	0.431	2.19	4181	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	820021	0.44	842608	97.32	60	120	
Sc (IS)	45	1	HMI H2	16792722	0.69	15887657	105.70	60	120	
Sc (IS)	45	2	HMI He	628178	1.69	621989	101.00	60	120	
Sc (IS)	45	3	No Gas	25618898	0.29	23999890	106.75	60	120	
Ge Internal Standard	72	1	HMI H2	6286243	0.50	5840960	107.62	60	120	
Ge Internal Standard	72	2	HMI He	691715	0.60	667191	103.68	60	120	
In Internal Standard	115	2	HMI He	2336659	1.50	2291045	101.99	60	120	
Ho-165	165	2	HMI He	11322200	1.98	10885907	104.01	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	236_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:55:34-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	409.663	ppb	0.999	251635	500	81.9	90	110	>+\-10%
Li	7	2	45	419.109	ppb	5.514	13940	500	83.8	90	110	>+\-10%
Li	7	3	45	403.077	ppb	1.229	5913665	500	80.6	90	110	>+\-10%
Be	9	1	6	49.532	ppb	3.969	13280	50	99.1	90	110	
B	11	1	6	42.887	ppb	3.997	12763	50	85.8	90	110	>+\-10%
Na	23	1	45	4680.603	ppb	0.407	12114617	5000	93.6	90	110	
Na	23	2	45	4605.815	ppb	1.565	803928	5000	92.1	90	110	
Mg	24	2	45	4867.679	ppb	1.852	359006	5000	97.4	90	110	
Al	27	2	45	4795.213	ppb	1.948	99315	5000	95.9	90	110	
K	39	1	45	5315.842	ppb	0.149	19799379	5000	106.3	90	110	
K	39	2	45	5124.169	ppb	1.342	204620	5000	102.5	90	110	
Ca	40	1	45	5038.176	ppb	0.328	17168876	5000	100.8	90	110	
Ca	44	2	45	5183.774	ppb	2.484	10965	5000	103.7	90	110	
Ti	47	2	45	53.292	ppb	11.206	910	50	106.6	90	110	
V	51	2	72	47.726	ppb	1.779	34923	50	95.5	90	110	
Cr	52	2	72	50.537	ppb	1.712	43395	50	101.1	90	110	
Mn	55	2	72	50.467	ppb	2.462	18132	50	100.9	90	110	
Fe	57	2	72	5030.693	ppb	1.286	82269	5000	100.6	90	110	
Co	59	2	72	50.030	ppb	0.239	73084	50	100.1	90	110	
Ni	60	2	72	51.390	ppb	1.467	20732	50	102.8	90	110	
Cu	63	2	72	50.036	ppb	0.908	56481	50	100.1	90	110	
Zn	66	2	72	50.488	ppb	5.517	8019	50	101.0	90	110	
As	75	2	72	49.486	ppb	1.305	5182	50	99.0	90	110	
Se	78	1	72	49.288	ppb	1.690	7353	50	98.6	90	110	
Sr	88	2	72	50.186	ppb	2.063	20335	50	100.4	90	110	
Zr	90	2	72	65.022	ppb	26.634	343	50	130.0	90	110	>+\-10%
Nb	93	2	72	83.748	ppb	1.449	155368	100	83.7	90	110	>+\-10%
Mo	95	2	115	49.657	ppb	2.138	27705	50	99.3	90	110	
Pd	105	2	115	53.413	ppb	2.084	44819	50	106.8	90	110	
Ag	107	2	115	50.708	ppb	1.054	92843	50	101.4	90	110	
Cd	111	2	115	49.771	ppb	2.094	12303	50	99.5	90	110	
Sn	120	2	115	49.431	ppb	3.191	35339	50	98.9	90	110	
Sb	121	2	115	49.584	ppb	1.094	30665	50	99.2	90	110	
Ba	137	2	115	48.879	ppb	3.028	11052	50	97.8	90	110	
W	182	2	165	48.553	ppb	0.961	137219	50	97.1	90	110	
Pt	195	2	165	48.495	ppb	0.978	109250	50	97.0	90	110	
Tl	205	2	165	49.329	ppb	1.619	268059	50	98.7	90	110	
Pb	208	2	165	49.144	ppb	1.210	357038	50	98.3	90	110	
Th	232	2	165	48.094	ppb	0.545	425296	50	96.2	90	110	
U	238	2	165	48.399	ppb	0.583	459211	50	96.8	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	792700	2.29	842608	94.08	60	120	
Sc (IS)	45	1	HMI H2	16919754	0.31	15887657	106.50	60	120	
Sc (IS)	45	2	HMI He	634938	1.01	621989	102.08	60	120	
Sc (IS)	45	3	No Gas	25534408	0.03	23999890	106.39	60	120	
Ge Internal Standard	72	1	HMI H2	6330421	0.53	5840960	108.38	60	120	
Ge Internal Standard	72	2	HMI He	694387	0.35	667191	104.08	60	120	
In Internal Standard	115	2	HMI He	2370975	1.45	2291045	103.49	60	120	
Ho-165	165	2	HMI He	11333249	0.29	10885907	104.11	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	237_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T03:59:20-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-45.196	ppb	-0.8	2561622	10	
Be	9	1	6	0.213	ppb	65.9	60	0.5	
B	11	1	6	1.165	ppb	18.4	1587	0.5	>RL
Na	23	1	45	-152.368	ppb	-2.4	584762	25	
Na	23	2	45	-140.384	ppb	-2.1	41369	25	
Mg	24	2	45	3.155	ppb	3.6	1010	25	
Al	27	2	45	1.349	ppb	195.7	107	15	
K	39	1	45	152.149	ppb	13.1	8018336	50	>RL
K	39	2	45	1.611	ppb	293.0	11972	50	
Ca	40	1	45	6.725	ppb	8.7	86878	50	
Ca	44	2	45	-0.564	ppb	-969.9	43	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	0.387	ppb	76.0	2660	1	
Cr	52	2	72	0.021	ppb	202.1	233	1	
Mn	55	2	72	-0.040	ppb	-386.5	70	0.5	
Fe	57	2	72	14.052	ppb	13.0	300	25	
Co	59	2	72	0.035	ppb	33.5	70	0.5	
Ni	60	2	72	0.027	ppb	516.6	117	1	
Cu	63	2	72	0.098	ppb	101.9	833	1	
Zn	66	2	72	0.054	ppb	659.1	227	5	
As	75	2	72	-0.036	ppb	-162.8	19	1	
Se	78	1	72	0.012	ppb	124.8	11	1	
Sr	88	2	72	0.003	ppb	2111.0	40	0.5	
Zr	90	2	72	-3.934	ppb	-53.5	20	1	
Nb	93	2	72	5.926	ppb	8.2	11799	2	>RL
Mo	95	2	115	0.113	ppb	27.4	160	0.5	
Pd	105	2	115	0.124	ppb	20.4	107	1	
Ag	107	2	115	0.027	ppb	59.5	87	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.232	ppb	52.9	290	1	
Sb	121	2	115	0.335	ppb	20.9	230	0.6	
Ba	137	2	115	-0.006	ppb	-1858.7	27	0.5	
W	182	2	165	0.423	ppb	5.3	1894	1	
Pt	195	2	165	-0.003	ppb	-154.0	17	1	
Tl	205	2	165	0.024	ppb	33.5	207	0.1	
Pb	208	2	165	0.032	ppb	29.1	837	0.5	
Th	232	2	165	0.069	ppb	12.2	847	1	
U	238	2	165	0.079	ppb	8.0	840	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	826192	1.24	842608	98.05	60	120	
Sc (IS)	45	1	HMI H2	17067105	0.72	15887657	107.42	60	120	
Sc (IS)	45	2	HMI He	638429	0.20	621989	102.64	60	120	
Sc (IS)	45	3	No Gas	26112604	0.76	23999890	108.80	60	120	
Ge Internal Standard	72	1	HMI H2	6402213	0.62	5840960	109.61	60	120	
Ge Internal Standard	72	2	HMI He	704925	0.57	667191	105.66	60	120	
In Internal Standard	115	2	HMI He	2434002	0.86	2291045	106.24	60	120	
Ho-165	165	2	HMI He	11265994	0.57	10885907	103.49	60	120	

Blank Report

Sample Table

Sample Name	MB 280-436750/1-A
Data File Name	238_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:03:08-07:00
Sample Type	Blank
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-48.082	ppb	-6.874879159	105877	0.5
Li	7	2	45	-45.287	ppb	-65.9889159	5671	0.5
Li	7	3	45	-53.805	ppb	-7.473358785	2422126	10
Be	9	1	6	0.108	ppb	0.677809561	30	0.5
B	11	1	6	7.522	ppb	13.25452022	3344	0.5
Na	23	1	45	-123.723	ppb	-1.696760222	644899	25
Na	23	2	45	-117.413	ppb	-1.857218852	45186	25
Mg	24	2	45	27.795	ppb	6.753300247	2840	25
Al	27	2	45	18.916	ppb	5.104610503	473	15
K	39	1	45	-1289.397	ppb	-1.645569698	4618371	50
K	39	2	45	5.801	ppb	343.1267269	12159	50
Ca	40	1	45	73.428	ppb	1.218189828	311062	50
Ca	44	2	45	51.192	ppb	37.23587223	153	25
Ti	47	2	45	0.968	ppb	69.00646955	17	0.5
V	51	2	72	-1.450	ppb	-6.336568039	1380	1
Cr	52	2	72	0.242	ppb	38.31329811	423	1
Mn	55	2	72	0.459	ppb	27.87747755	250	0.5
Fe	57	2	72	30.881	ppb	25.63059767	577	25
Co	59	2	72	0.017	ppb	118.0514168	43	0.5
Ni	60	2	72	0.069	ppb	142.76796	133	1
Cu	63	2	72	0.496	ppb	21.58135607	1277	1
Zn	66	2	72	1.125	ppb	67.60397308	393	5
As	75	2	72	0.065	ppb	303.3738342	29	1
Se	78	1	72	-0.022	ppb	-70.91936491	5	1
Sr	88	2	72	0.175	ppb	37.1313596	110	0.5
Zr	90	2	72	6.629	ppb	55.10482764	70	1
Nb	93	2	72	4.022	ppb	11.40590438	8186	2
Mo	95	2	115	0.105	ppb	136.9066912	153	0.5
Pd	105	2	115	0.024	ppb	132.5279541	20	1
Ag	107	2	115	0.014	ppb	175.2725308	60	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.180	ppb	58.14768374	250	1
Sb	121	2	115	0.184	ppb	34.57782527	133	0.6
Ba	137	2	115	0.316	ppb	63.89528854	100	0.5
W	182	2	165	0.168	ppb	5.871356807	1190	1
Pt	195	2	165	0.001	ppb	978.9138531	27	1
Tl	205	2	165	0.025	ppb	11.29129062	217	0.1
Pb	208	2	165	0.421	ppb	5.889548629	3667	0.5
Th	232	2	165	0.047	ppb	36.52532015	660	1
U	238	2	165	0.024	ppb	30.49536108	320	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	819279	0.68	842608	97.23	60	120	
Sc (IS)	45	1	HMI H2	16836364	0.80	15887657	105.97	60	120	
Sc (IS)	45	2	HMI He	639919	0.26	621989	102.88	60	120	
Sc (IS)	45	3	No Gas	25354822	0.99	23999890	105.65	60	120	
Ge Internal Standard	72	1	HMI H2	6306394	0.72	5840960	107.97	60	120	
Ge Internal Standard	72	2	HMI He	701474	0.43	667191	105.14	60	120	
In Internal Standard	115	2	HMI He	2407660	0.86	2291045	105.09	60	120	
Ho-165	165	2	HMI He	11350161	0.26	10885907	104.26	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	LCS 280-436750/2-A
Data File Name	239LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:06:56-07:00
Sample Type	LCS-s
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436750 soil 6020 dod5
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	185.929	185.929	ppb	3.119	48573	200	93.0	80	120	
Na	23	2	45	-103.011	-103.011	ppb	-3.670	45584	200	-51.5	80	120	NewName Main CR1 Failed
Mg	24	2	45	25.345	25.345	ppb	3.598	2550	200000	0.0	80	120	NewName Main CR1 Failed
Al	27	2	45	1928.457	1928.457	ppb	0.128	38665	200000	1.0	80	120	NewName Main CR1 Failed
K	39	2	45	15.029	15.029	ppb	69.592	11999	200000	0.0	80	120	NewName Main CR1 Failed
Ca	44	2	45	911.774	911.774	ppb	4.201	1900	200000	0.5	80	120	NewName Main CR1 Failed
V	51	2	72	187.851	187.851	ppb	0.778	126621	200	93.9	80	120	
Cr	52	2	72	196.640	196.640	ppb	0.354	163185	200	98.3	80	120	
(Cr)	53	2	72	200.868	200.868	ppb	1.148	20011	200	100.4	80	120	
Mn	55	2	72	197.872	197.872	ppb	2.176	68723	200	98.9	80	120	
Fe	57	2	72	1947.255	1947.255	ppb	1.197	30927	200000	1.0	80	120	NewName Main CR1 Failed
Co	59	2	72	195.609	195.609	ppb	0.739	277111	200	97.8	80	120	
Ni	60	2	72	199.452	199.452	ppb	0.206	77758	200	99.7	80	120	
Cu	63	2	72	196.498	196.498	ppb	0.294	213116	200	98.2	80	120	
Zn	66	2	72	188.714	188.714	ppb	0.973	28506	200	94.4	80	120	
As	75	2	72	183.008	183.008	ppb	0.953	18530	200	91.5	80	120	
Se	78	1	72	183.906	183.906	ppb	1.828	26124	200	92.0	80	120	
(Se)	82	1	72	160.163	160.163	ppb	6.507	11345	200	80.1	80	120	
Nb	93	2	72	5.767	5.767	ppb	3.872	10985	400	1.4	80	120	NewName Main CR1 Failed
Mo	95	2	115	185.167	185.167	ppb	0.579	101042	200	92.6	80	120	
Pd	105	2	115	0.024	0.024	ppb	49.902	20	200	0.0	80	120	NewName Main CR1 Failed
Ag	107	2	115	194.760	194.760	ppb	0.715	349523	200	97.4	80	120	
Cd	111	2	115	190.540	190.540	ppb	1.615	46171	200	95.3	80	120	
(Cd)	114	2	115	187.381	187.381	ppb	2.429	120260	200	93.7	80	120	
Sn	120	2	115	189.447	189.447	ppb	2.396	132480	200	94.7	80	120	
Sb	121	2	115	197.822	197.822	ppb	1.501	119913	200	98.9	80	110	
Ba	137	2	115	194.214	194.214	ppb	0.765	42965	200	97.1	80	120	
W	182	2	165	178.857	178.857	ppb	0.262	495403	200	89.4	80	120	
Pt	195	2	165	-0.002	-0.002	ppb	-4.908	20	200	0.0	80	120	NewName Main CR1 Failed
Tl	205	2	165	192.892	192.892	ppb	0.853	1030982	200	96.4	80	120	
(Pb)	206	2	165	191.955	191.955	ppb	0.322	334590	200	96.0	80	120	
(Pb)	207	2	165	194.023	194.023	ppb	0.718	305411	200	97.0	80	120	
Pb	208	2	165	192.385	192.385	ppb	0.597	1373368	200	96.2	80	120	
Th	232	2	165	209.906	209.906	ppb	1.068	1825245	200	105.0	80	120	
U	238	2	165	210.470	210.470	ppb	1.739	1964135	200	105.2	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	772087	0.95	842608	91.63	60	120	
Sc (IS)	45	1	HMI H2	16201523	0.45	15887657	101.98	60	120	
Sc (IS)	45	2	HMI He	613859	0.30	621989	98.69	60	120	
Sc (IS)	45	3	No Gas	23333141	0.29	23999890	97.22	60	120	
Ge Internal Standard	72	1	HMI H2	6033505	0.64	5840960	103.30	60	120	
Ge Internal Standard	72	2	HMI He	673520	0.30	667191	100.95	60	120	
In Internal Standard	115	2	HMI He	2324529	0.70	2291045	101.46	60	120	
Ho-165	165	2	HMI He	11150000	0.96	10885907	102.43	60	120	

Sample Report

Sample Table

Sample Name	LCSD 280-436750/3-A
Data File Name	240SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:10:44-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	312.765	ppb	312.765	2.36	210020	500000	
Li	7	2	45	322.918	ppb	322.918	2.13	11955	500000	
Li	7	3	45	299.366	ppb	299.366	4.43	4742962	50000	
Be	9	1	6	192.248	ppb	192.248	2.25	50460	2000	
B	11	1	6	162.911	ppb	162.911	0.67	44149	2000	
Na	23	1	45	-133.238	ppb	-133.238	-0.20	594641	2000	
Na	23	2	45	-127.198	ppb	-127.198	-1.62	42328	400000	
Mg	24	2	45	29.875	ppb	29.875	5.97	2907	400000	
Al	27	2	45	1919.422	ppb	1919.422	0.82	38946	400000	
K	39	1	45	-1336.988	ppb	-1336.988	-1.68	4308765	400000	
K	39	2	45	-7.934	ppb	-7.934	-244.68	11298	400000	
Ca	40	1	45	91.413	ppb	91.413	0.93	355278	400000	
Ca	44	2	45	992.970	ppb	992.970	6.18	2090	400000	
Ti	47	2	45	10.181	ppb	10.181	29.46	170	4000	
V	51	2	72	190.197	ppb	190.197	1.16	127899	2000	
Cr	52	2	72	198.729	ppb	198.729	0.30	164564	5000	
Mn	55	2	72	200.936	ppb	200.936	1.22	69637	10000	
Fe	57	2	72	2010.665	ppb	2010.665	3.43	31859	400000	
Co	59	2	72	201.386	ppb	201.386	0.53	284686	2000	
Ni	60	2	72	202.626	ppb	202.626	1.51	78821	5000	
Cu	63	2	72	201.675	ppb	201.675	0.76	218242	5000	
Zn	66	2	72	197.047	ppb	197.047	1.05	29691	5000	
As	75	2	72	187.949	ppb	187.949	1.82	18988	2000	
Se	78	1	72	188.343	ppb	188.343	1.78	26517	2000	
Sr	88	2	72	197.195	ppb	197.195	1.55	77227	4000	
Zr	90	2	72	41482.357	ppb	41482.357	0.96	188532	1000	>LDR
Nb	93	2	72	3.309	ppb	3.309	5.82	6569	200	
Mo	95	2	115	195.208	ppb	195.208	1.56	106119	2000	
Pd	105	2	115	0.032	ppb	0.032	86.60	27	100	
Ag	107	2	115	200.616	ppb	200.616	0.93	358681	100	
Cd	111	2	115	199.731	ppb	199.731	0.58	48214	2000	
Sn	120	2	115	197.062	ppb	197.062	1.52	137300	2000	
Sb	121	2	115	208.022	ppb	208.022	1.11	125609	1000	
Ba	137	2	115	196.523	ppb	196.523	0.64	43313	5000	
W	182	2	165	186.086	ppb	186.086	0.81	511603	100	
Pt	195	2	165	0.000	ppb	0.000	-3638.54	23	100	
Tl	205	2	165	198.306	ppb	198.306	1.10	1052069	2000	
Pb	208	2	165	199.082	ppb	199.082	0.89	1410634	5000	
Th	232	2	165	217.893	ppb	217.893	1.04	1880679	2000	
U	238	2	165	219.179	ppb	219.179	1.07	2030373	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	775692	1.07	842608	92.06	60	120	
Sc (IS)	45	1	HMI H2	16087354	0.54	15887657	101.26	60	120	
Sc (IS)	45	2	HMI He	621226	0.09	621989	99.88	60	120	
Sc (IS)	45	3	No Gas	23631666	0.30	23999890	98.47	60	120	
Ge Internal Standard	72	1	HMI H2	5980038	0.15	5840960	102.38	60	120	
Ge Internal Standard	72	2	HMI He	672093	0.85	667191	100.73	60	120	
In Internal Standard	115	2	HMI He	2315733	0.50	2291045	101.08	60	120	
Ho-165	165	2	HMI He	11067729	1.13	10885907	101.67	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-D@50
Data File Name	241SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:14:33-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-28.219	ppb	-28.219	-11.30	111685	500000	
Li	7	2	45	-9.137	ppb	-9.137	-216.86	6215	500000	
Li	7	3	45	-26.093	ppb	-26.093	-5.80	2635828	50000	
Be	9	1	6	0.894	ppb	0.894	16.56	247	2000	
B	11	1	6	8.425	ppb	8.425	3.75	3577	2000	
Na	23	1	45	-66.761	ppb	-66.761	-7.59	776943	2000	
Na	23	2	45	-50.225	ppb	-50.225	-9.28	55093	400000	
Mg	24	2	45	6825.584	ppb	6825.584	0.97	498264	400000	
Al	27	2	45	12069.243	ppb	12069.243	0.91	247450	400000	
K	39	1	45	3160.083	ppb	3160.083	1.98	14717767	400000	
K	39	2	45	3232.954	ppb	3232.954	0.59	132184	400000	
Ca	40	1	45	1827.422	ppb	1827.422	0.82	6211068	400000	
Ca	44	2	45	1819.744	ppb	1819.744	2.06	3841	400000	
Ti	47	2	45	518.588	ppb	518.588	5.28	8766	4000	
V	51	2	72	27.292	ppb	27.292	2.36	20792	2000	
Cr	52	2	72	83.420	ppb	83.420	3.17	70856	5000	
Mn	55	2	72	443.044	ppb	443.044	0.54	157129	10000	
Fe	57	2	72	23167.627	ppb	23167.627	0.61	375267	400000	
Co	59	2	72	15.684	ppb	15.684	3.00	22719	2000	
Ni	60	2	72	96.611	ppb	96.611	0.64	38539	5000	
Cu	63	2	72	32.150	ppb	32.150	5.63	36216	5000	
Zn	66	2	72	36.754	ppb	36.754	5.30	5845	5000	
As	75	2	72	13.074	ppb	13.074	4.75	1373	2000	
Se	78	1	72	0.278	ppb	0.278	67.12	49	2000	
Sr	88	2	72	23.847	ppb	23.847	2.59	9597	4000	
Zr	90	2	72	776.462	ppb	776.462	7.51	3651	1000	
Nb	93	2	72	0.759	ppb	0.759	5.83	2057	200	
Mo	95	2	115	1.490	ppb	1.490	12.59	903	2000	
Pd	105	2	115	0.012	ppb	0.012	1.07	10	100	
Ag	107	2	115	0.248	ppb	0.248	12.73	480	100	
Cd	111	2	115	0.193	ppb	0.193	66.47	47	2000	
Sn	120	2	115	1.798	ppb	1.798	19.08	1373	2000	
Sb	121	2	115	0.927	ppb	0.927	19.51	580	1000	
Ba	137	2	115	108.707	ppb	108.707	4.78	24069	5000	
W	182	2	165	0.959	ppb	0.959	8.26	3394	100	
Pt	195	2	165	0.000	ppb	0.000	-1755.66	23	100	
Tl	205	2	165	0.359	ppb	0.359	12.40	2020	2000	
Pb	208	2	165	10.859	ppb	10.859	1.13	78954	5000	
Th	232	2	165	5.047	ppb	5.047	1.62	44614	2000	
U	238	2	165	0.743	ppb	0.743	3.85	7106	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	814935	1.72	842608	96.72	60	120	
Sc (IS)	45	1	HMI H2	16767810	1.08	15887657	105.54	60	120	
Sc (IS)	45	2	HMI He	628780	0.63	621989	101.09	60	120	
Sc (IS)	45	3	No Gas	25395793	0.55	23999890	105.82	60	120	
Ge Internal Standard	72	1	HMI H2	6232655	0.30	5840960	106.71	60	120	
Ge Internal Standard	72	2	HMI He	688197	0.14	667191	103.15	60	120	
In Internal Standard	115	2	HMI He	2326039	1.07	2291045	101.53	60	120	
Ho-165	165	2	HMI He	11274129	0.33	10885907	103.57	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-Dsd@250
Data File Name	242SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:18:19-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.360	ppb	-31.360	-22.42	108555	500000	
Li	7	2	45	-3.291	ppb	-3.291	-196.33	6218	500000	
Li	7	3	45	-35.906	ppb	-35.906	-9.17	2518204	50000	
Be	9	1	6	0.251	ppb	0.251	14.99	70	2000	
B	11	1	6	1.328	ppb	1.328	28.68	1633	2000	
Na	23	1	45	-113.036	ppb	-113.036	-2.03	654625	2000	
Na	23	2	45	-94.877	ppb	-94.877	-6.07	47226	400000	
Mg	24	2	45	1360.934	ppb	1360.934	1.45	98378	400000	
Al	27	2	45	2442.995	ppb	2442.995	1.34	49356	400000	
K	39	1	45	603.161	ppb	603.161	3.38	8730947	400000	
K	39	2	45	634.463	ppb	634.463	2.67	34809	400000	
Ca	40	1	45	407.037	ppb	407.037	0.46	1404563	400000	
Ca	44	2	45	375.165	ppb	375.165	28.83	813	400000	
Ti	47	2	45	111.359	ppb	111.359	16.82	1854	4000	
V	51	2	72	5.154	ppb	5.154	16.30	5741	2000	
Cr	52	2	72	17.288	ppb	17.288	3.42	14648	5000	
Mn	55	2	72	90.475	ppb	90.475	3.38	31722	10000	
Fe	57	2	72	4669.935	ppb	4669.935	1.13	74675	400000	
Co	59	2	72	3.048	ppb	3.048	6.33	4371	2000	
Ni	60	2	72	20.428	ppb	20.428	3.63	8119	5000	
Cu	63	2	72	6.303	ppb	6.303	3.93	7562	5000	
Zn	66	2	72	9.596	ppb	9.596	15.25	1660	5000	
As	75	2	72	2.914	ppb	2.914	2.43	319	2000	
Se	78	1	72	0.132	ppb	0.132	102.74	28	2000	
Sr	88	2	72	5.001	ppb	5.001	12.44	2014	4000	
Zr	90	2	72	150.254	ppb	150.254	20.50	727	1000	
Nb	93	2	72	0.433	ppb	0.433	15.19	1440	200	
Mo	95	2	115	3.526	ppb	3.526	2.74	2040	2000	
Pd	105	2	115	0.008	ppb	0.008	173.21	7	100	
Ag	107	2	115	0.038	ppb	0.038	72.14	103	100	
Cd	111	2	115	0.000	ppb	0.000	#DIV/0!	0	2000	
Sn	120	2	115	0.447	ppb	0.447	6.36	433	2000	
Sb	121	2	115	0.238	ppb	0.238	24.69	163	1000	
Ba	137	2	115	20.040	ppb	20.040	1.31	4518	5000	
W	182	2	165	0.216	ppb	0.216	22.82	1307	100	
Pt	195	2	165	-0.003	ppb	-0.003	-289.48	17	100	
Tl	205	2	165	0.058	ppb	0.058	25.57	390	2000	
Pb	208	2	165	2.271	ppb	2.271	2.69	16895	5000	
Th	232	2	165	1.007	ppb	1.007	6.58	9044	2000	
U	238	2	165	0.155	ppb	0.155	8.08	1544	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	826152	0.92	842608	98.05	60	120	
Sc (IS)	45	1	HMI H2	16443088	0.76	15887657	103.50	60	120	
Sc (IS)	45	2	HMI He	618841	0.50	621989	99.49	60	120	
Sc (IS)	45	3	No Gas	24965816	0.04	23999890	104.02	60	120	
Ge Internal Standard	72	1	HMI H2	6226602	0.56	5840960	106.60	60	120	
Ge Internal Standard	72	2	HMI He	678887	0.71	667191	101.75	60	120	
In Internal Standard	115	2	HMI He	2355514	1.64	2291045	102.81	60	120	
Ho-165	165	2	HMI He	11211045	0.81	10885907	102.99	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-E MS@50
Data File Name	243SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:22:07-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-24.010	ppb	-24.010	-12.55	112331	500000	
Li	7	2	45	-7.814	ppb	-7.814	-169.34	6168	500000	
Li	7	3	45	-22.640	ppb	-22.640	-31.41	2631971	50000	
Be	9	1	6	5.194	ppb	5.194	13.04	1423	2000	
B	11	1	6	3.720	ppb	3.720	17.05	2260	2000	
Na	23	1	45	-55.079	ppb	-55.079	-4.70	799793	2000	
Na	23	2	45	-42.407	ppb	-42.407	-6.20	55712	400000	
Mg	24	2	45	6592.552	ppb	6592.552	1.02	475938	400000	
Al	27	2	45	11802.507	ppb	11802.507	0.15	239299	400000	
K	39	1	45	3015.480	ppb	3015.480	2.21	14302283	400000	
K	39	2	45	3218.860	ppb	3218.860	1.32	130198	400000	
Ca	40	1	45	1755.355	ppb	1755.355	1.70	5932432	400000	
Ca	44	2	45	1762.743	ppb	1762.743	4.66	3681	400000	
Ti	47	2	45	509.500	ppb	509.500	2.57	8516	4000	
V	51	2	72	30.326	ppb	30.326	1.36	22538	2000	
Cr	52	2	72	83.557	ppb	83.557	0.41	70022	5000	
Mn	55	2	72	432.337	ppb	432.337	1.32	151277	10000	
Fe	57	2	72	22224.841	ppb	22224.841	0.83	355181	400000	
Co	59	2	72	19.467	ppb	19.467	1.94	27818	2000	
Ni	60	2	72	96.510	ppb	96.510	1.79	37984	5000	
Cu	63	2	72	34.213	ppb	34.213	1.12	37981	5000	
Zn	66	2	72	38.047	ppb	38.047	7.18	5962	5000	
As	75	2	72	15.379	ppb	15.379	4.40	1590	2000	
Se	78	1	72	3.654	ppb	3.654	9.74	539	2000	
Sr	88	2	72	26.063	ppb	26.063	1.71	10344	4000	
Zr	90	2	72	1125.011	ppb	1125.011	7.83	5201	1000	
Nb	93	2	72	0.378	ppb	0.378	16.57	1340	200	
Mo	95	2	115	4.300	ppb	4.300	10.62	2397	2000	
Pd	105	2	115	0.016	ppb	0.016	86.60	13	100	
Ag	107	2	115	4.888	ppb	4.888	3.67	8666	100	
Cd	111	2	115	4.628	ppb	4.628	7.30	1103	2000	
Sn	120	2	115	2.094	ppb	2.094	6.08	1554	2000	
Sb	121	2	115	0.179	ppb	0.179	35.97	123	1000	
Ba	137	2	115	104.785	ppb	104.785	2.89	22823	5000	
W	182	2	165	0.964	ppb	0.964	17.96	3377	100	
Pt	195	2	165	0.004	ppb	0.004	304.63	33	100	
Tl	205	2	165	4.522	ppb	4.522	2.62	24310	2000	
Pb	208	2	165	14.357	ppb	14.357	0.99	103307	5000	
Th	232	2	165	8.709	ppb	8.709	1.69	76163	2000	
U	238	2	165	4.656	ppb	4.656	1.29	43651	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	810375	1.51	842608	96.17	60	120	
Sc (IS)	45	1	HMI H2	16666558	0.84	15887657	104.90	60	120	
Sc (IS)	45	2	HMI He	621784	0.32	621989	99.97	60	120	
Sc (IS)	45	3	No Gas	25114160	1.31	23999890	104.64	60	120	
Ge Internal Standard	72	1	HMI H2	6163645	0.31	5840960	105.52	60	120	
Ge Internal Standard	72	2	HMI He	678973	0.41	667191	101.77	60	120	
In Internal Standard	115	2	HMI He	2287598	0.55	2291045	99.85	60	120	
Ho-165	165	2	HMI He	11178859	0.77	10885907	102.69	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-F MSD@50
Data File Name	244SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:25:54-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-28.600	ppb	-28.600	-7.04	110983	500000	
Li	7	2	45	-12.306	ppb	-12.306	-132.52	6115	500000	
Li	7	3	45	-25.438	ppb	-25.438	-11.72	2660331	50000	
Be	9	1	6	4.358	ppb	4.358	14.56	1210	2000	
B	11	1	6	3.006	ppb	3.006	4.76	2090	2000	
Na	23	1	45	-68.643	ppb	-68.643	-6.20	768479	2000	
Na	23	2	45	-59.822	ppb	-59.822	-4.46	53176	400000	
Mg	24	2	45	5884.584	ppb	5884.584	0.86	426542	400000	
Al	27	2	45	10504.250	ppb	10504.250	0.87	213804	400000	
K	39	1	45	2760.026	ppb	2760.026	2.03	13735702	400000	
K	39	2	45	2886.706	ppb	2886.706	1.07	118411	400000	
Ca	40	1	45	1588.071	ppb	1588.071	0.57	5377527	400000	
Ca	44	2	45	1507.801	ppb	1507.801	8.23	3167	400000	
Ti	47	2	45	446.352	ppb	446.352	4.20	7489	4000	
V	51	2	72	25.789	ppb	25.789	2.76	19631	2000	
Cr	52	2	72	75.322	ppb	75.322	1.45	63525	5000	
Mn	55	2	72	384.135	ppb	384.135	1.46	135233	10000	
Fe	57	2	72	20580.068	ppb	20580.068	1.66	330872	400000	
Co	59	2	72	16.645	ppb	16.645	2.36	23934	2000	
Ni	60	2	72	86.977	ppb	86.977	1.83	34449	5000	
Cu	63	2	72	30.631	ppb	30.631	2.46	34289	5000	
Zn	66	2	72	37.271	ppb	37.271	5.48	5881	5000	
As	75	2	72	14.812	ppb	14.812	9.62	1541	2000	
Se	78	1	72	3.288	ppb	3.288	6.96	491	2000	
Sr	88	2	72	22.658	ppb	22.658	2.60	9053	4000	
Zr	90	2	72	1037.120	ppb	1037.120	2.76	4828	1000	
Nb	93	2	72	0.206	ppb	0.206	25.11	1037	200	
Mo	95	2	115	3.547	ppb	3.547	6.94	2030	2000	
Pd	105	2	115	0.016	ppb	0.016	114.98	13	100	
Ag	107	2	115	3.933	ppb	3.933	3.24	7112	100	
Cd	111	2	115	3.867	ppb	3.867	9.89	940	2000	
Sn	120	2	115	2.233	ppb	2.233	3.19	1680	2000	
Sb	121	2	115	0.219	ppb	0.219	47.86	150	1000	
Ba	137	2	115	95.115	ppb	95.115	1.29	21114	5000	
W	182	2	165	0.860	ppb	0.860	12.30	3114	100	
Pt	195	2	165	0.000	ppb	0.000	-2714.12	23	100	
Tl	205	2	165	3.774	ppb	3.774	4.10	20464	2000	
Pb	208	2	165	12.868	ppb	12.868	1.08	93416	5000	
Th	232	2	165	7.629	ppb	7.629	1.80	67289	2000	
U	238	2	165	4.099	ppb	4.099	1.54	38759	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	820639	0.46	842608	97.39	60	120	
Sc (IS)	45	1	HMI H2	16679096	0.18	15887657	104.98	60	120	
Sc (IS)	45	2	HMI He	624203	0.87	621989	100.36	60	120	
Sc (IS)	45	3	No Gas	25584724	0.73	23999890	106.60	60	120	
Ge Internal Standard	72	1	HMI H2	6228384	0.61	5840960	106.63	60	120	
Ge Internal Standard	72	2	HMI He	683107	0.77	667191	102.39	60	120	
In Internal Standard	115	2	HMI He	2331009	0.89	2291045	101.74	60	120	
Ho-165	165	2	HMI He	11269814	0.43	10885907	103.53	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-1-D pds@50
Data File Name	245SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:29:40-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-33.404	ppb	-33.404	-23.15	109147	500000	
Li	7	2	45	-3.087	ppb	-3.087	-143.90	6295	500000	
Li	7	3	45	-23.630	ppb	-23.630	-28.55	2656298	50000	
Be	9	1	6	195.768	ppb	195.768	2.57	54576	2000	
B	11	1	6	1.000	ppb	1.000	27.10	1537	2000	
Na	23	1	45	-33.008	ppb	-33.008	-6.56	849734	2000	
Na	23	2	45	-24.440	ppb	-24.440	-27.59	58947	400000	
Mg	24	2	45	6701.088	ppb	6701.088	1.98	487117	400000	
Al	27	2	45	13728.420	ppb	13728.420	1.03	280279	400000	
K	39	1	45	3092.060	ppb	3092.060	2.13	14442776	400000	
K	39	2	45	3174.142	ppb	3174.142	1.33	129442	400000	
Ca	40	1	45	1811.778	ppb	1811.778	0.67	6107537	400000	
Ca	44	2	45	1915.709	ppb	1915.709	1.64	4024	400000	
Ti	47	2	45	520.499	ppb	520.499	8.04	8760	4000	
V	51	2	72	226.893	ppb	226.893	0.53	154882	2000	
Cr	52	2	72	284.460	ppb	284.460	1.68	239716	5000	
Mn	55	2	72	645.389	ppb	645.389	0.29	227532	10000	
Fe	57	2	72	24822.077	ppb	24822.077	0.38	399737	400000	
Co	59	2	72	221.140	ppb	221.140	0.63	318262	2000	
Ni	60	2	72	305.881	ppb	305.881	0.46	121092	5000	
Cu	63	2	72	240.864	ppb	240.864	0.57	265227	5000	
Zn	66	2	72	252.960	ppb	252.960	2.15	38746	5000	
As	75	2	72	209.070	ppb	209.070	0.48	21502	2000	
Se	78	1	72	197.915	ppb	197.915	1.24	29051	2000	
Sr	88	2	72	23.711	ppb	23.711	3.38	9487	4000	
Zr	90	2	72	43707.286	ppb	43707.286	0.52	202237	1000	>LDR
Nb	93	2	72	7.097	ppb	7.097	1.94	13580	200	
Mo	95	2	115	196.065	ppb	196.065	0.45	108081	2000	
Pd	105	2	115	0.028	ppb	0.028	66.73	23	100	
Ag	107	2	115	42.769	ppb	42.769	1.65	77561	100	
Cd	111	2	115	205.869	ppb	205.869	0.73	50398	2000	
Sn	120	2	115	199.292	ppb	199.292	0.81	140797	2000	
Sb	121	2	115	204.050	ppb	204.050	2.12	124926	1000	
Ba	137	2	115	307.291	ppb	307.291	1.22	68661	5000	
W	182	2	165	195.880	ppb	195.880	0.43	545494	100	
Pt	195	2	165	0.057	ppb	0.057	35.32	150	100	
Tl	205	2	165	202.789	ppb	202.789	0.35	1089918	2000	
Pb	208	2	165	208.423	ppb	208.423	0.17	1496075	5000	
Th	232	2	165	21.456	ppb	21.456	1.28	187837	2000	
U	238	2	165	220.778	ppb	220.778	0.50	2071919	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	823811	0.52	842608	97.77	60	120	
Sc (IS)	45	1	HMI H2	16628287	0.12	15887657	104.66	60	120	
Sc (IS)	45	2	HMI He	626127	0.53	621989	100.67	60	120	
Sc (IS)	45	3	No Gas	25417085	1.02	23999890	105.91	60	120	
Ge Internal Standard	72	1	HMI H2	6234748	0.54	5840960	106.74	60	120	
Ge Internal Standard	72	2	HMI He	684221	0.23	667191	102.55	60	120	
In Internal Standard	115	2	HMI He	2348393	1.46	2291045	102.50	60	120	
Ho-165	165	2	HMI He	11211751	0.75	10885907	102.99	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	246_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:33:27-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	411.146	ppb	0.378	247483	500	82.2	90	110	>+\-10%
Li	7	2	45	457.104	ppb	4.017	14167	500	91.4	90	110	
Li	7	3	45	411.991	ppb	2.246	5844426	500	82.4	90	110	>+\-10%
Be	9	1	6	47.808	ppb	1.742	13120	50	95.6	90	110	
B	11	1	6	39.144	ppb	3.909	12029	50	78.3	90	110	>+\-10%
Na	23	1	45	4646.002	ppb	1.710	11810413	5000	92.9	90	110	
Na	23	2	45	4591.694	ppb	0.323	776929	5000	91.8	90	110	
Mg	24	2	45	4836.359	ppb	0.797	345729	5000	96.7	90	110	
Al	27	2	45	4922.455	ppb	0.217	98808	5000	98.4	90	110	
K	39	1	45	4970.516	ppb	0.676	18657998	5000	99.4	90	110	
K	39	2	45	5001.290	ppb	0.759	193824	5000	100.0	90	110	
Ca	40	1	45	5005.105	ppb	0.732	16743505	5000	100.1	90	110	
Ca	44	2	45	4903.152	ppb	2.504	10054	5000	98.1	90	110	
Ti	47	2	45	41.681	ppb	15.883	690	50	83.4	90	110	>+\-10%
V	51	2	72	47.490	ppb	3.586	33767	50	95.0	90	110	
Cr	52	2	72	50.091	ppb	0.846	41778	50	100.2	90	110	
Mn	55	2	72	50.502	ppb	3.449	17625	50	101.0	90	110	
Fe	57	2	72	5021.761	ppb	1.733	79763	5000	100.4	90	110	
Co	59	2	72	49.512	ppb	2.692	70250	50	99.0	90	110	
Ni	60	2	72	51.638	ppb	1.713	20235	50	103.3	90	110	
Cu	63	2	72	50.192	ppb	0.317	55026	50	100.4	90	110	
Zn	66	2	72	51.238	ppb	2.242	7903	50	102.5	90	110	
As	75	2	72	48.408	ppb	1.533	4924	50	96.8	90	110	
Se	78	1	72	49.955	ppb	1.578	7281	50	99.9	90	110	
Sr	88	2	72	51.707	ppb	1.773	20349	50	103.4	90	110	
Zr	90	2	72	139.504	ppb	8.717	673	50	279.0	90	110	>+\-10%
Nb	93	2	72	83.778	ppb	0.399	150955	100	83.8	90	110	>+\-10%
Mo	95	2	115	49.662	ppb	1.068	26813	50	99.3	90	110	
Pd	105	2	115	52.515	ppb	1.500	42649	50	105.0	90	110	
Ag	107	2	115	50.176	ppb	0.347	88897	50	100.4	90	110	
Cd	111	2	115	51.789	ppb	1.716	12386	50	103.6	90	110	
Sn	120	2	115	50.191	ppb	2.557	34731	50	100.4	90	110	
Sb	121	2	115	52.083	ppb	2.033	31166	50	104.2	90	110	
Ba	137	2	115	48.773	ppb	2.182	10668	50	97.5	90	110	
W	182	2	165	48.818	ppb	1.088	135505	50	97.6	90	110	
Pt	195	2	165	49.010	ppb	2.029	108437	50	98.0	90	110	
Tl	205	2	165	49.692	ppb	1.560	265213	50	99.4	90	110	
Pb	208	2	165	49.144	ppb	1.592	350676	50	98.3	90	110	
Th	232	2	165	47.706	ppb	0.595	414354	50	95.4	90	110	
U	238	2	165	48.551	ppb	0.814	452456	50	97.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	810945	0.57	842608	96.24	60	120	
Sc (IS)	45	1	HMI H2	16609570	0.83	15887657	104.54	60	120	
Sc (IS)	45	2	HMI He	615309	0.91	621989	98.93	60	120	
Sc (IS)	45	3	No Gas	24951166	1.41	23999890	103.96	60	120	
Ge Internal Standard	72	1	HMI H2	6185694	0.97	5840960	105.90	60	120	
Ge Internal Standard	72	2	HMI He	674434	0.49	667191	101.09	60	120	
In Internal Standard	115	2	HMI He	2294139	0.81	2291045	100.14	60	120	
Ho-165	165	2	HMI He	11131857	0.78	10885907	102.26	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	247_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:37:14-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-40.236	ppb	-4.7	2507122	10	
Be	9	1	6	0.240	ppb	23.4	67	0.5	
B	11	1	6	0.724	ppb	66.6	1453	0.5	>RL
Na	23	1	45	-199.334	ppb	-0.4	456316	25	
Na	23	2	45	-191.831	ppb	-1.6	31461	25	
Mg	24	2	45	9.907	ppb	9.5	1437	25	
Al	27	2	45	-0.579	ppb	-48.1	63	15	
K	39	1	45	-48.983	ppb	-101.8	7305364	50	
K	39	2	45	-9.334	ppb	-56.3	11001	50	
Ca	40	1	45	9.397	ppb	8.0	92913	50	
Ca	44	2	45	8.772	ppb	170.7	60	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.152	ppb	-217.2	2170	1	
Cr	52	2	72	0.007	ppb	1007.9	210	1	
Mn	55	2	72	-0.059	ppb	-83.4	60	0.5	
Fe	57	2	72	9.932	ppb	22.9	220	25	
Co	59	2	72	0.024	ppb	31.0	50	0.5	
Ni	60	2	72	0.068	ppb	156.5	127	1	
Cu	63	2	72	0.082	ppb	13.1	773	1	
Zn	66	2	72	-0.451	ppb	-55.4	140	5	
As	75	2	72	-0.014	ppb	-856.2	20	1	
Se	78	1	72	-0.031	ppb	-87.2	4	1	
Sr	88	2	72	0.000	ppb	-6814.4	37	0.5	
Zr	90	2	72	8.834	ppb	64.3	77	1	>RL
Nb	93	2	72	5.622	ppb	11.2	10654	2	>RL
Mo	95	2	115	0.227	ppb	47.6	213	0.5	
Pd	105	2	115	0.086	ppb	24.8	70	1	
Ag	107	2	115	-0.009	ppb	-123.0	17	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.310	ppb	12.3	330	1	
Sb	121	2	115	0.736	ppb	13.7	460	0.6	>RL
Ba	137	2	115	0.045	ppb	116.1	37	0.5	
W	182	2	165	0.328	ppb	4.1	1584	1	
Pt	195	2	165	0.011	ppb	99.9	47	1	
Tl	205	2	165	0.039	ppb	25.1	283	0.1	
Pb	208	2	165	0.025	ppb	62.0	763	0.5	
Th	232	2	165	0.086	ppb	5.1	970	1	
U	238	2	165	0.084	ppb	19.5	857	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	820816	0.54	842608	97.41	60	120	
Sc (IS)	45	1	HMI H2	16509603	1.09	15887657	103.91	60	120	
Sc (IS)	45	2	HMI He	607664	0.40	621989	97.70	60	120	
Sc (IS)	45	3	No Gas	25178671	1.22	23999890	104.91	60	120	
Ge Internal Standard	72	1	HMI H2	6215215	0.85	5840960	106.41	60	120	
Ge Internal Standard	72	2	HMI He	669392	0.74	667191	100.33	60	120	
In Internal Standard	115	2	HMI He	2310180	0.07	2291045	100.84	60	120	
Ho-165	165	2	HMI He	10965954	0.61	10885907	100.74	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-2-C@50
Data File Name	248SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:41:05-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-24.140	ppb	-24.140	-9.53	111457	500000	
Li	7	2	45	-18.547	ppb	-18.547	-20.67	5958	500000	
Li	7	3	45	-26.877	ppb	-26.877	-5.71	2595478	50000	
Be	9	1	6	0.436	ppb	0.436	31.39	120	2000	
B	11	1	6	1.428	ppb	1.428	45.24	1644	2000	
Na	23	1	45	-135.768	ppb	-135.768	-0.36	605580	2000	
Na	23	2	45	-131.677	ppb	-131.677	-2.63	41506	400000	
Mg	24	2	45	5897.185	ppb	5897.185	0.47	424242	400000	
Al	27	2	45	10451.775	ppb	10451.775	1.20	211133	400000	
K	39	1	45	3082.026	ppb	3082.026	0.65	14346031	400000	
K	39	2	45	3030.865	ppb	3030.865	0.62	122812	400000	
Ca	40	1	45	1982.671	ppb	1982.671	0.95	6643264	400000	
Ca	44	2	45	1907.387	ppb	1907.387	6.08	3964	400000	
Ti	47	2	45	475.077	ppb	475.077	8.63	7913	4000	
V	51	2	72	23.201	ppb	23.201	1.68	17568	2000	
Cr	52	2	72	66.534	ppb	66.534	1.10	55119	5000	
Mn	55	2	72	396.127	ppb	396.127	1.02	136926	10000	
Fe	57	2	72	18555.335	ppb	18555.335	0.43	292935	400000	
Co	59	2	72	12.638	ppb	12.638	2.49	17845	2000	
Ni	60	2	72	77.471	ppb	77.471	3.25	30139	5000	
Cu	63	2	72	25.623	ppb	25.623	1.36	28272	5000	
Zn	66	2	72	33.620	ppb	33.620	2.30	5228	5000	
As	75	2	72	9.605	ppb	9.605	2.98	989	2000	
Se	78	1	72	0.189	ppb	0.189	38.42	36	2000	
Sr	88	2	72	21.833	ppb	21.833	0.75	8566	4000	
Zr	90	2	72	418.983	ppb	418.983	6.87	1937	1000	
Nb	93	2	72	3.650	ppb	3.650	6.76	7162	200	
Mo	95	2	115	0.507	ppb	0.507	11.86	360	2000	
Pd	105	2	115	0.025	ppb	0.025	131.80	20	100	
Ag	107	2	115	0.222	ppb	0.222	20.58	423	100	
Cd	111	2	115	0.225	ppb	0.225	28.17	53	2000	
Sn	120	2	115	0.356	ppb	0.356	14.57	357	2000	
Sb	121	2	115	0.259	ppb	0.259	49.32	170	1000	
Ba	137	2	115	92.859	ppb	92.859	4.68	20139	5000	
W	182	2	165	0.327	ppb	0.327	6.94	1610	100	
Pt	195	2	165	0.006	ppb	0.006	366.18	37	100	
Tl	205	2	165	0.221	ppb	0.221	9.44	1260	2000	
Pb	208	2	165	10.040	ppb	10.040	0.52	72345	5000	
Th	232	2	165	3.916	ppb	3.916	2.44	34337	2000	
U	238	2	165	0.531	ppb	0.531	1.14	5058	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	816483	1.82	842608	96.90	60	120	
Sc (IS)	45	1	HMI H2	16542906	0.59	15887657	104.12	60	120	
Sc (IS)	45	2	HMI He	619478	0.24	621989	99.60	60	120	
Sc (IS)	45	3	No Gas	25064013	0.44	23999890	104.43	60	120	
Ge Internal Standard	72	1	HMI H2	6181983	0.06	5840960	105.84	60	120	
Ge Internal Standard	72	2	HMI He	670711	0.20	667191	100.53	60	120	
In Internal Standard	115	2	HMI He	2277025	0.78	2291045	99.39	60	120	
Ho-165	165	2	HMI He	11166372	1.06	10885907	102.58	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-3-C@50
Data File Name	249SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:44:52-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-33.047	ppb	-33.047	-16.64	109881	500000	
Li	7	2	45	-2.691	ppb	-2.691	-491.75	6205	500000	
Li	7	3	45	-29.778	ppb	-29.778	-10.04	2613550	50000	
Be	9	1	6	0.627	ppb	0.627	26.45	173	2000	
B	11	1	6	-0.149	ppb	-0.149	-51.19	1203	2000	
Na	23	1	45	-148.526	ppb	-148.526	-0.96	582048	2000	
Na	23	2	45	-141.277	ppb	-141.277	-2.16	39811	400000	
Mg	24	2	45	5653.437	ppb	5653.437	0.38	404815	400000	
Al	27	2	45	9878.488	ppb	9878.488	1.04	198616	400000	
K	39	1	45	2693.228	ppb	2693.228	1.12	13620117	400000	
K	39	2	45	2704.917	ppb	2704.917	3.87	110318	400000	
Ca	40	1	45	1491.715	ppb	1491.715	0.83	5068187	400000	
Ca	44	2	45	1548.354	ppb	1548.354	5.53	3211	400000	
Ti	47	2	45	442.793	ppb	442.793	3.88	7339	4000	
V	51	2	72	22.781	ppb	22.781	1.79	17324	2000	
Cr	52	2	72	67.962	ppb	67.962	0.15	56406	5000	
Mn	55	2	72	370.951	ppb	370.951	0.76	128480	10000	
Fe	57	2	72	19760.319	ppb	19760.319	0.92	312561	400000	
Co	59	2	72	12.804	ppb	12.804	4.85	18115	2000	
Ni	60	2	72	76.109	ppb	76.109	2.71	29668	5000	
Cu	63	2	72	25.699	ppb	25.699	2.76	28409	5000	
Zn	66	2	72	29.073	ppb	29.073	2.90	4558	5000	
As	75	2	72	10.435	ppb	10.435	3.15	1075	2000	
Se	78	1	72	0.153	ppb	0.153	118.02	31	2000	
Sr	88	2	72	18.664	ppb	18.664	2.48	7342	4000	
Zr	90	2	72	375.669	ppb	375.669	11.97	1744	1000	
Nb	93	2	72	2.284	ppb	2.284	18.02	4734	200	
Mo	95	2	115	0.457	ppb	0.457	10.00	337	2000	
Pd	105	2	115	0.037	ppb	0.037	173.21	30	100	
Ag	107	2	115	0.178	ppb	0.178	33.50	350	100	
Cd	111	2	115	0.166	ppb	0.166	74.73	40	2000	
Sn	120	2	115	0.235	ppb	0.235	59.94	277	2000	
Sb	121	2	115	0.216	ppb	0.216	22.20	147	1000	
Ba	137	2	115	88.246	ppb	88.246	1.99	19341	5000	
W	182	2	165	0.300	ppb	0.300	16.79	1530	100	
Pt	195	2	165	0.004	ppb	0.004	159.99	33	100	
Tl	205	2	165	0.243	ppb	0.243	1.59	1373	2000	
Pb	208	2	165	9.635	ppb	9.635	0.97	69244	5000	
Th	232	2	165	4.019	ppb	4.019	1.54	35125	2000	
U	238	2	165	0.510	ppb	0.510	2.47	4848	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	816147	0.40	842608	96.86	60	120	
Sc (IS)	45	1	HMI H2	16722456	0.47	15887657	105.25	60	120	
Sc (IS)	45	2	HMI He	616563	0.63	621989	99.13	60	120	
Sc (IS)	45	3	No Gas	25451949	0.90	23999890	106.05	60	120	
Ge Internal Standard	72	1	HMI H2	6209957	0.95	5840960	106.32	60	120	
Ge Internal Standard	72	2	HMI He	672006	0.27	667191	100.72	60	120	
In Internal Standard	115	2	HMI He	2301272	0.46	2291045	100.45	60	120	
Ho-165	165	2	HMI He	11132759	0.54	10885907	102.27	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-4-C@50
Data File Name	250SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:48:39-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-33.456	ppb	-33.456	-7.30	110211	500000	
Li	7	2	45	-17.596	ppb	-17.596	-74.45	6018	500000	
Li	7	3	45	-35.240	ppb	-35.240	-10.04	2616725	50000	
Be	9	1	6	0.647	ppb	0.647	67.43	180	2000	
B	11	1	6	-0.108	ppb	-0.108	-534.11	1223	2000	
Na	23	1	45	-148.085	ppb	-148.085	-0.89	585527	2000	
Na	23	2	45	-139.016	ppb	-139.016	-1.95	40653	400000	
Mg	24	2	45	6001.028	ppb	6001.028	0.38	434891	400000	
Al	27	2	45	10465.401	ppb	10465.401	0.57	212971	400000	
K	39	1	45	2886.418	ppb	2886.418	1.43	14116806	400000	
K	39	2	45	2891.829	ppb	2891.829	0.87	118578	400000	
Ca	40	1	45	1583.405	ppb	1583.405	0.70	5398280	400000	
Ca	44	2	45	1595.248	ppb	1595.248	2.41	3347	400000	
Ti	47	2	45	489.601	ppb	489.601	6.28	8213	4000	
V	51	2	72	24.476	ppb	24.476	1.41	18723	2000	
Cr	52	2	72	71.678	ppb	71.678	0.96	60376	5000	
Mn	55	2	72	384.794	ppb	384.794	1.51	135283	10000	
Fe	57	2	72	19895.274	ppb	19895.274	1.11	319442	400000	
Co	59	2	72	13.093	ppb	13.093	1.01	18803	2000	
Ni	60	2	72	84.405	ppb	84.405	0.78	33386	5000	
Cu	63	2	72	27.100	ppb	27.100	2.07	30370	5000	
Zn	66	2	72	30.815	ppb	30.815	3.59	4891	5000	
As	75	2	72	10.465	ppb	10.465	9.21	1094	2000	
Se	78	1	72	0.188	ppb	0.188	38.21	36	2000	
Sr	88	2	72	20.535	ppb	20.535	2.63	8196	4000	
Zr	90	2	72	367.797	ppb	367.797	9.79	1734	1000	
Nb	93	2	72	1.495	ppb	1.495	14.45	3374	200	
Mo	95	2	115	0.388	ppb	0.388	19.69	300	2000	
Pd	105	2	115	0.029	ppb	0.029	49.63	23	100	
Ag	107	2	115	0.176	ppb	0.176	9.45	347	100	
Cd	111	2	115	0.292	ppb	0.292	28.84	70	2000	
Sn	120	2	115	0.191	ppb	0.191	35.74	247	2000	
Sb	121	2	115	0.122	ppb	0.122	50.50	90	1000	
Ba	137	2	115	89.780	ppb	89.780	2.33	19715	5000	
W	182	2	165	0.262	ppb	0.262	11.27	1437	100	
Pt	195	2	165	0.000	ppb	0.000	-2730.10	23	100	
Tl	205	2	165	0.234	ppb	0.234	20.47	1337	2000	
Pb	208	2	165	9.260	ppb	9.260	1.04	67046	5000	
Th	232	2	165	4.095	ppb	4.095	2.96	36038	2000	
U	238	2	165	0.486	ppb	0.486	1.45	4654	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	821920	0.12	842608	97.54	60	120	
Sc (IS)	45	1	HMI H2	16792578	0.70	15887657	105.70	60	120	
Sc (IS)	45	2	HMI He	624060	0.62	621989	100.33	60	120	
Sc (IS)	45	3	No Gas	25892210	0.44	23999890	107.88	60	120	
Ge Internal Standard	72	1	HMI H2	6202659	0.38	5840960	106.19	60	120	
Ge Internal Standard	72	2	HMI He	682150	0.44	667191	102.24	60	120	
In Internal Standard	115	2	HMI He	2305869	1.32	2291045	100.65	60	120	
Ho-165	165	2	HMI He	11213026	1.48	10885907	103.00	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-15-C@50
Data File Name	251SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:52:27-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-40.193	ppb	-40.193	-10.49	105511	500000	
Li	7	2	45	-13.967	ppb	-13.967	-28.55	5785	500000	
Li	7	3	45	-33.843	ppb	-33.843	-10.92	2494474	50000	
Be	9	1	6	0.258	ppb	0.258	39.28	70	2000	
B	11	1	6	-0.774	ppb	-0.774	-10.43	1013	2000	
Na	23	1	45	-151.282	ppb	-151.282	-1.30	564182	2000	
Na	23	2	45	-138.513	ppb	-138.513	-7.18	38721	400000	
Mg	24	2	45	9750.050	ppb	9750.050	4.31	671138	400000	
Al	27	2	45	5705.931	ppb	5705.931	5.70	110379	400000	
K	39	1	45	1693.039	ppb	1693.039	1.51	11126895	400000	
K	39	2	45	1752.975	ppb	1752.975	3.04	72698	400000	
Ca	40	1	45	18492.514	ppb	18492.514	0.40	60887764	400000	
Ca	44	2	45	18764.347	ppb	18764.347	4.33	36978	400000	
Ti	47	2	45	295.959	ppb	295.959	2.20	4721	4000	
V	51	2	72	15.878	ppb	15.878	6.84	12319	2000	
Cr	52	2	72	23.463	ppb	23.463	2.93	18916	5000	
Mn	55	2	72	225.909	ppb	225.909	5.93	75474	10000	
Fe	57	2	72	12337.752	ppb	12337.752	3.92	188252	400000	
Co	59	2	72	5.736	ppb	5.736	7.52	7833	2000	
Ni	60	2	72	19.283	ppb	19.283	1.68	7329	5000	
Cu	63	2	72	247.021	ppb	247.021	4.98	257617	5000	
Zn	66	2	72	146.958	ppb	146.958	4.68	21410	5000	
As	75	2	72	37.189	ppb	37.189	4.41	3640	2000	
Se	78	1	72	0.127	ppb	0.127	66.10	27	2000	
Sr	88	2	72	32.655	ppb	32.655	4.79	12363	4000	
Zr	90	2	72	239.138	ppb	239.138	7.64	1083	1000	
Nb	93	2	72	1.375	ppb	1.375	16.32	2997	200	
Mo	95	2	115	0.603	ppb	0.603	4.42	400	2000	
Pd	105	2	115	0.026	ppb	0.026	52.55	20	100	
Ag	107	2	115	16.878	ppb	16.878	1.86	28894	100	
Cd	111	2	115	4.281	ppb	4.281	20.06	990	2000	
Sn	120	2	115	1.329	ppb	1.329	28.14	990	2000	
Sb	121	2	115	0.792	ppb	0.792	28.84	473	1000	
Ba	137	2	115	98.674	ppb	98.674	6.89	20793	5000	
W	182	2	165	15.462	ppb	15.462	4.77	41984	100	
Pt	195	2	165	-0.003	ppb	-0.003	-226.23	17	100	
Tl	205	2	165	0.107	ppb	0.107	10.90	627	2000	
Pb	208	2	165	361.156	ppb	361.156	5.90	2489278	5000	
Th	232	2	165	1.937	ppb	1.937	3.32	16505	2000	
U	238	2	165	0.245	ppb	0.245	7.09	2300	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	803177	1.35	842608	95.32	60	120	
Sc (IS)	45	1	HMI H2	16392179	1.08	15887657	103.18	60	120	
Sc (IS)	45	2	HMI He	593518	2.13	621989	95.42	60	120	
Sc (IS)	45	3	No Gas	24583047	1.24	23999890	102.43	60	120	
Ge Internal Standard	72	1	HMI H2	6112351	0.88	5840960	104.65	60	120	
Ge Internal Standard	72	2	HMI He	648580	2.43	667191	97.21	60	120	
In Internal Standard	115	2	HMI He	2215699	2.85	2291045	96.71	60	120	
Ho-165	165	2	HMI He	10776104	2.10	10885907	98.99	60	120	

Sample Report

Sample Table

Sample Name	280-116297-B-16-C@50
Data File Name	252SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T04:56:15-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-37.658	ppb	-37.658	-9.22	104562	500000	
Li	7	2	45	-0.042	ppb	-0.042	-29842.96	5981	500000	
Li	7	3	45	-33.956	ppb	-33.956	-6.04	2474009	50000	
Be	9	1	6	0.260	ppb	0.260	56.92	70	2000	
B	11	1	6	-1.246	ppb	-1.246	-33.43	873	2000	
Na	23	1	45	-169.647	ppb	-169.647	-0.95	513244	2000	
Na	23	2	45	-163.093	ppb	-163.093	-4.02	34828	400000	
Mg	24	2	45	8524.789	ppb	8524.789	1.05	583581	400000	
Al	27	2	45	4820.969	ppb	4820.969	2.01	92760	400000	
K	39	1	45	1377.037	ppb	1377.037	0.78	10255374	400000	
K	39	2	45	1410.087	ppb	1410.087	2.36	60295	400000	
Ca	40	1	45	16119.601	ppb	16119.601	0.26	52221394	400000	
Ca	44	2	45	15567.849	ppb	15567.849	1.78	30509	400000	
Ti	47	2	45	260.489	ppb	260.489	2.09	4131	4000	
V	51	2	72	12.832	ppb	12.832	5.46	10324	2000	
Cr	52	2	72	23.550	ppb	23.550	2.49	18890	5000	
Mn	55	2	72	196.742	ppb	196.742	2.60	65445	10000	
Fe	57	2	72	11157.524	ppb	11157.524	1.43	169438	400000	
Co	59	2	72	4.910	ppb	4.910	3.60	6679	2000	
Ni	60	2	72	17.043	ppb	17.043	3.41	6452	5000	
Cu	63	2	72	216.867	ppb	216.867	0.67	225217	5000	
Zn	66	2	72	125.055	ppb	125.055	5.47	18162	5000	
As	75	2	72	30.980	ppb	30.980	1.65	3022	2000	
Se	78	1	72	0.148	ppb	0.148	28.55	29	2000	
Sr	88	2	72	25.456	ppb	25.456	1.68	9600	4000	
Zr	90	2	72	161.655	ppb	161.655	15.68	740	1000	
Nb	93	2	72	0.783	ppb	0.783	21.28	1967	200	
Mo	95	2	115	1.024	ppb	1.024	17.36	617	2000	
Pd	105	2	115	0.009	ppb	0.009	173.21	7	100	
Ag	107	2	115	17.412	ppb	17.412	2.18	29666	100	
Cd	111	2	115	3.614	ppb	3.614	9.36	830	2000	
Sn	120	2	115	1.708	ppb	1.708	8.37	1240	2000	
Sb	121	2	115	0.863	ppb	0.863	19.91	513	1000	
Ba	137	2	115	76.385	ppb	76.385	3.27	16040	5000	
W	182	2	165	13.823	ppb	13.823	2.87	38062	100	
Pt	195	2	165	0.002	ppb	0.002	892.99	27	100	
Tl	205	2	165	0.089	ppb	0.089	14.96	543	2000	
Pb	208	2	165	436.613	ppb	436.613	0.18	3046548	5000	
Th	232	2	165	1.618	ppb	1.618	5.86	13985	2000	
U	238	2	165	0.206	ppb	0.206	8.80	1974	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	793159	0.40	842608	94.13	60	120	
Sc (IS)	45	1	HMI H2	16125918	0.26	15887657	101.50	60	120	
Sc (IS)	45	2	HMI He	589838	0.92	621989	94.83	60	120	
Sc (IS)	45	3	No Gas	24387552	0.35	23999890	101.62	60	120	
Ge Internal Standard	72	1	HMI H2	6036870	1.21	5840960	103.35	60	120	
Ge Internal Standard	72	2	HMI He	645119	0.74	667191	96.69	60	120	
In Internal Standard	115	2	HMI He	2204926	1.46	2291045	96.24	60	120	
Ho-165	165	2	HMI He	10901105	0.75	10885907	100.14	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-17-C@50
Data File Name	253SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:00:02-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-35.067	ppb	-35.067	-6.10	104592	500000	
Li	7	2	45	4.261	ppb	4.261	153.37	6008	500000	
Li	7	3	45	-33.230	ppb	-33.230	-12.16	2459782	50000	
Be	9	1	6	0.325	ppb	0.325	23.59	87	2000	
B	11	1	6	-0.985	ppb	-0.985	-58.98	937	2000	
Na	23	1	45	-169.628	ppb	-169.628	-0.96	509618	2000	
Na	23	2	45	-172.325	ppb	-172.325	-1.60	33205	400000	
Mg	24	2	45	8309.053	ppb	8309.053	1.12	564630	400000	
Al	27	2	45	4253.962	ppb	4253.962	0.46	81263	400000	
K	39	1	45	1225.844	ppb	1225.844	4.65	9853173	400000	
K	39	2	45	1266.770	ppb	1266.770	2.03	54867	400000	
Ca	40	1	45	15731.860	ppb	15731.860	0.71	50601036	400000	
Ca	44	2	45	15287.394	ppb	15287.394	4.52	29741	400000	
Ti	47	2	45	231.881	ppb	231.881	4.78	3651	4000	
V	51	2	72	11.358	ppb	11.358	3.59	9347	2000	
Cr	52	2	72	17.938	ppb	17.938	3.78	14371	5000	
Mn	55	2	72	187.800	ppb	187.800	2.79	62197	10000	
Fe	57	2	72	8883.954	ppb	8883.954	0.60	134324	400000	
Co	59	2	72	4.426	ppb	4.426	3.81	5995	2000	
Ni	60	2	72	15.135	ppb	15.135	6.47	5715	5000	
Cu	63	2	72	222.350	ppb	222.350	1.33	229854	5000	
Zn	66	2	72	124.986	ppb	124.986	3.47	18069	5000	
As	75	2	72	34.278	ppb	34.278	5.56	3326	2000	
Se	78	1	72	0.065	ppb	0.065	141.90	17	2000	
Sr	88	2	72	23.351	ppb	23.351	1.80	8770	4000	
Zr	90	2	72	170.797	ppb	170.797	20.24	777	1000	
Nb	93	2	72	0.682	ppb	0.682	19.02	1787	200	
Mo	95	2	115	0.529	ppb	0.529	22.27	360	2000	
Pd	105	2	115	0.009	ppb	0.009	86.61	7	100	
Ag	107	2	115	17.708	ppb	17.708	1.87	30180	100	
Cd	111	2	115	4.309	ppb	4.309	8.77	990	2000	
Sn	120	2	115	0.676	ppb	0.676	29.37	557	2000	
Sb	121	2	115	0.808	ppb	0.808	28.22	480	1000	
Ba	137	2	115	78.275	ppb	78.275	4.68	16447	5000	
W	182	2	165	16.502	ppb	16.502	2.42	44669	100	
Pt	195	2	165	0.006	ppb	0.006	152.54	37	100	
Tl	205	2	165	0.084	ppb	0.084	8.07	510	2000	
Pb	208	2	165	405.459	ppb	405.459	0.41	2789064	5000	
Th	232	2	165	1.764	ppb	1.764	3.71	15009	2000	
U	238	2	165	0.280	ppb	0.280	2.84	2604	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	786329	0.84	842608	93.32	60	120	
Sc (IS)	45	1	HMI H2	16010854	0.86	15887657	100.78	60	120	
Sc (IS)	45	2	HMI He	585487	0.85	621989	94.13	60	120	
Sc (IS)	45	3	No Gas	24196921	0.80	23999890	100.82	60	120	
Ge Internal Standard	72	1	HMI H2	5976980	1.00	5840960	102.33	60	120	
Ge Internal Standard	72	2	HMI He	642208	0.22	667191	96.26	60	120	
In Internal Standard	115	2	HMI He	2205328	0.84	2291045	96.26	60	120	
Ho-165	165	2	HMI He	10746357	0.09	10885907	98.72	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-18-C@50
Data File Name	254SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:03:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-37.174	ppb	-37.174	-9.08	102994	500000	
Li	7	2	45	11.154	ppb	11.154	178.92	6172	500000	
Li	7	3	45	-33.423	ppb	-33.423	-1.95	2477816	50000	
Be	9	1	6	0.378	ppb	0.378	52.73	100	2000	
B	11	1	6	-0.348	ppb	-0.348	-260.47	1100	2000	
Na	23	1	45	-144.831	ppb	-144.831	-1.05	560363	2000	
Na	23	2	45	-148.755	ppb	-148.755	-5.47	36997	400000	
Mg	24	2	45	11446.139	ppb	11446.139	0.58	783925	400000	
Al	27	2	45	6204.977	ppb	6204.977	1.55	119461	400000	
K	39	1	45	1840.394	ppb	1840.394	0.30	11084341	400000	
K	39	2	45	1868.272	ppb	1868.272	3.11	76352	400000	
Ca	40	1	45	22487.920	ppb	22487.920	0.49	71637334	400000	
Ca	44	2	45	21495.698	ppb	21495.698	1.38	42148	400000	
Ti	47	2	45	301.238	ppb	301.238	5.53	4781	4000	
V	51	2	72	16.395	ppb	16.395	2.43	12609	2000	
Cr	52	2	72	27.887	ppb	27.887	4.38	22382	5000	
Mn	55	2	72	269.551	ppb	269.551	0.87	89833	10000	
Fe	57	2	72	14562.423	ppb	14562.423	0.75	221604	400000	
Co	59	2	72	6.141	ppb	6.141	3.55	8366	2000	
Ni	60	2	72	25.420	ppb	25.420	1.64	9597	5000	
Cu	63	2	72	359.296	ppb	359.296	1.02	373487	5000	
Zn	66	2	72	193.114	ppb	193.114	1.72	27995	5000	
As	75	2	72	45.580	ppb	45.580	2.88	4445	2000	
Se	78	1	72	0.066	ppb	0.066	101.62	17	2000	
Sr	88	2	72	34.922	ppb	34.922	3.65	13187	4000	
Zr	90	2	72	226.845	ppb	226.845	20.04	1027	1000	
Nb	93	2	72	0.528	ppb	0.528	18.49	1534	200	
Mo	95	2	115	0.913	ppb	0.913	32.08	557	2000	
Pd	105	2	115	0.000	ppb	0.000	#DIV/0!	0	100	
Ag	107	2	115	21.525	ppb	21.525	2.44	36606	100	
Cd	111	2	115	5.343	ppb	5.343	13.65	1227	2000	
Sn	120	2	115	1.271	ppb	1.271	14.66	950	2000	
Sb	121	2	115	1.123	ppb	1.123	17.23	660	1000	
Ba	137	2	115	115.733	ppb	115.733	3.11	24252	5000	
W	182	2	165	20.348	ppb	20.348	1.82	55436	100	
Pt	195	2	165	-0.005	ppb	-0.005	-58.84	13	100	
Tl	205	2	165	0.148	ppb	0.148	12.52	847	2000	
Pb	208	2	165	637.456	ppb	637.456	0.76	4425863	5000	
Th	232	2	165	1.958	ppb	1.958	5.82	16798	2000	
U	238	2	165	0.355	ppb	0.355	5.70	3311	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	781670	0.32	842608	92.77	60	120	
Sc (IS)	45	1	HMI H2	15861793	0.79	15887657	99.84	60	120	
Sc (IS)	45	2	HMI He	590282	0.65	621989	94.90	60	120	
Sc (IS)	45	3	No Gas	24386675	0.11	23999890	101.61	60	120	
Ge Internal Standard	72	1	HMI H2	5937393	1.19	5840960	101.65	60	120	
Ge Internal Standard	72	2	HMI He	646485	0.33	667191	96.90	60	120	
In Internal Standard	115	2	HMI He	2201206	0.78	2291045	96.08	60	120	
Ho-165	165	2	HMI He	10847855	0.66	10885907	99.65	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-19-B@50
Data File Name	255SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:07:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-40.847	ppb	-40.847	-6.29	103340	500000	
Li	7	2	45	-12.412	ppb	-12.412	-40.96	5808	500000	
Li	7	3	45	-36.084	ppb	-36.084	-10.51	2469841	50000	
Be	9	1	6	0.100	ppb	0.100	115.18	27	2000	
B	11	1	6	-1.763	ppb	-1.763	-10.97	730	2000	
Na	23	1	45	-177.916	ppb	-177.916	-0.28	493209	2000	
Na	23	2	45	-172.715	ppb	-172.715	-0.55	33586	400000	
Mg	24	2	45	13212.478	ppb	13212.478	0.52	909332	400000	
Al	27	2	45	1717.670	ppb	1717.670	2.18	33292	400000	
K	39	1	45	444.249	ppb	444.249	1.61	8194775	400000	
K	39	2	45	503.122	ppb	503.122	2.88	28756	400000	
Ca	40	1	45	24562.751	ppb	24562.751	1.24	79339352	400000	
Ca	44	2	45	23619.810	ppb	23619.810	1.25	46538	400000	
Ti	47	2	45	95.541	ppb	95.541	14.18	1523	4000	
V	51	2	72	3.435	ppb	3.435	14.48	4408	2000	
Cr	52	2	72	6.890	ppb	6.890	6.33	5718	5000	
Mn	55	2	72	95.651	ppb	95.651	1.28	32157	10000	
Fe	57	2	72	3344.129	ppb	3344.129	0.65	51301	400000	
Co	59	2	72	1.118	ppb	1.118	8.85	1547	2000	
Ni	60	2	72	3.699	ppb	3.699	6.24	1490	5000	
Cu	63	2	72	452.924	ppb	452.924	0.71	474022	5000	
Zn	66	2	72	152.508	ppb	152.508	2.58	22308	5000	
As	75	2	72	63.716	ppb	63.716	2.11	6250	2000	
Se	78	1	72	0.036	ppb	0.036	122.07	13	2000	
Sr	88	2	72	24.147	ppb	24.147	4.60	9194	4000	
Zr	90	2	72	38.048	ppb	38.048	20.73	203	1000	
Nb	93	2	72	0.400	ppb	0.400	7.69	1323	200	
Mo	95	2	115	0.527	ppb	0.527	22.84	363	2000	
Pd	105	2	115	0.008	ppb	0.008	86.62	7	100	
Ag	107	2	115	38.730	ppb	38.730	2.23	66776	100	
Cd	111	2	115	8.493	ppb	8.493	12.01	1977	2000	
Sn	120	2	115	0.138	ppb	0.138	40.30	203	2000	
Sb	121	2	115	1.898	ppb	1.898	9.99	1120	1000	
Ba	137	2	115	62.785	ppb	62.785	7.21	13350	5000	
W	182	2	165	12.109	ppb	12.109	2.21	33430	100	
Pt	195	2	165	-0.006	ppb	-0.006	-75.56	10	100	
Tl	205	2	165	0.052	ppb	0.052	33.77	347	2000	
Pb	208	2	165	363.315	ppb	363.315	3.07	2534856	5000	
Th	232	2	165	0.775	ppb	0.775	2.34	6825	2000	
U	238	2	165	0.235	ppb	0.235	1.04	2230	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	788899	0.84	842608	93.63	60	120	
Sc (IS)	45	1	HMI H2	16085765	0.77	15887657	101.25	60	120	
Sc (IS)	45	2	HMI He	593241	0.50	621989	95.38	60	120	
Sc (IS)	45	3	No Gas	24499355	0.26	23999890	102.08	60	120	
Ge Internal Standard	72	1	HMI H2	6026999	1.04	5840960	103.19	60	120	
Ge Internal Standard	72	2	HMI He	651109	0.28	667191	97.59	60	120	
In Internal Standard	115	2	HMI He	2232689	1.35	2291045	97.45	60	120	
Ho-165	165	2	HMI He	10901191	0.80	10885907	100.14	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-20-B@50
Data File Name	256SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:11:25-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-41.888	ppb	-41.888	-8.99	103024	500000	
Li	7	2	45	-27.044	ppb	-27.044	-65.30	5568	500000	
Li	7	3	45	-36.866	ppb	-36.866	-1.78	2457874	50000	
Be	9	1	6	0.250	ppb	0.250	48.29	67	2000	
B	11	1	6	-1.713	ppb	-1.713	-8.79	743	2000	
Na	23	1	45	-154.822	ppb	-154.822	-0.83	545603	2000	
Na	23	2	45	-154.837	ppb	-154.837	-3.06	36295	400000	
Mg	24	2	45	12495.160	ppb	12495.160	0.74	860506	400000	
Al	27	2	45	1747.953	ppb	1747.953	0.75	33896	400000	
K	39	1	45	445.791	ppb	445.791	10.62	8197878	400000	
K	39	2	45	486.226	ppb	486.226	3.26	28175	400000	
Ca	40	1	45	23217.791	ppb	23217.791	0.17	75003894	400000	
Ca	44	2	45	22755.252	ppb	22755.252	2.61	44867	400000	
Ti	47	2	45	101.736	ppb	101.736	6.65	1623	4000	
V	51	2	72	3.743	ppb	3.743	15.04	4601	2000	
Cr	52	2	72	6.143	ppb	6.143	3.47	5118	5000	
Mn	55	2	72	94.433	ppb	94.433	0.93	31729	10000	
Fe	57	2	72	3268.300	ppb	3268.300	1.00	50111	400000	
Co	59	2	72	1.018	ppb	1.018	9.68	1410	2000	
Ni	60	2	72	3.392	ppb	3.392	4.76	1373	5000	
Cu	63	2	72	468.266	ppb	468.266	0.63	489766	5000	
Zn	66	2	72	152.592	ppb	152.592	1.46	22308	5000	
As	75	2	72	61.540	ppb	61.540	3.91	6034	2000	
Se	78	1	72	0.054	ppb	0.054	138.38	16	2000	
Sr	88	2	72	22.146	ppb	22.146	6.62	8430	4000	
Zr	90	2	72	47.934	ppb	47.934	17.90	247	1000	
Nb	93	2	72	0.252	ppb	0.252	24.63	1067	200	
Mo	95	2	115	0.855	ppb	0.855	18.94	533	2000	
Pd	105	2	115	0.021	ppb	0.021	91.48	17	100	
Ag	107	2	115	34.129	ppb	34.129	0.15	58640	100	
Cd	111	2	115	7.690	ppb	7.690	7.80	1784	2000	
Sn	120	2	115	0.184	ppb	0.184	11.85	233	2000	
Sb	121	2	115	2.053	ppb	2.053	11.66	1207	1000	
Ba	137	2	115	61.210	ppb	61.210	3.90	12977	5000	
W	182	2	165	10.721	ppb	10.721	1.30	29631	100	
Pt	195	2	165	-0.002	ppb	-0.002	-306.13	20	100	
Tl	205	2	165	0.041	ppb	0.041	40.79	290	2000	
Pb	208	2	165	340.889	ppb	340.889	0.72	2374731	5000	
Th	232	2	165	0.773	ppb	0.773	3.11	6792	2000	
U	238	2	165	0.187	ppb	0.187	7.63	1794	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	788692	0.52	842608	93.60	60	120	
Sc (IS)	45	1	HMI H2	16085853	0.44	15887657	101.25	60	120	
Sc (IS)	45	2	HMI He	593601	0.70	621989	95.44	60	120	
Sc (IS)	45	3	No Gas	24436727	0.94	23999890	101.82	60	120	
Ge Internal Standard	72	1	HMI H2	6069004	0.90	5840960	103.90	60	120	
Ge Internal Standard	72	2	HMI He	650730	0.05	667191	97.53	60	120	
In Internal Standard	115	2	HMI He	2224439	0.44	2291045	97.09	60	120	
Ho-165	165	2	HMI He	10883129	1.06	10885907	99.97	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	257_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:15:13-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	405.430	ppb	1.501	238336	500	81.1	90	110	>+\-10%
Li	7	2	45	410.697	ppb	5.046	12916	500	82.1	90	110	>+\-10%
Li	7	3	45	404.035	ppb	1.192	5721062	500	80.8	90	110	>+\-10%
Be	9	1	6	47.133	ppb	3.540	12406	50	94.3	90	110	
B	11	1	6	38.623	ppb	2.181	11402	50	77.2	90	110	>+\-10%
Na	23	1	45	4578.765	ppb	1.550	11304075	5000	91.6	90	110	
Na	23	2	45	4517.410	ppb	1.024	739734	5000	90.3	90	110	
Mg	24	2	45	4859.292	ppb	0.738	335715	5000	97.2	90	110	
Al	27	2	45	4868.413	ppb	2.150	94450	5000	97.4	90	110	
K	39	1	45	4936.305	ppb	1.529	18024171	5000	98.7	90	110	
K	39	2	45	5033.784	ppb	1.055	188478	5000	100.7	90	110	
Ca	40	1	45	5017.199	ppb	0.777	16281009	5000	100.3	90	110	
Ca	44	2	45	4975.683	ppb	1.525	9860	5000	99.5	90	110	
Ti	47	2	45	51.496	ppb	5.050	823	50	103.0	90	110	
V	51	2	72	45.876	ppb	3.923	31542	50	91.8	90	110	
Cr	52	2	72	50.418	ppb	0.872	40567	50	100.8	90	110	
Mn	55	2	72	49.930	ppb	2.298	16810	50	99.9	90	110	
Fe	57	2	72	4937.051	ppb	0.487	75654	5000	98.7	90	110	
Co	59	2	72	49.391	ppb	1.269	67608	50	98.8	90	110	
Ni	60	2	72	50.295	ppb	2.101	19013	50	100.6	90	110	
Cu	63	2	72	50.618	ppb	1.452	53527	50	101.2	90	110	
Zn	66	2	72	48.075	ppb	6.215	7165	50	96.1	90	110	
As	75	2	72	49.002	ppb	2.355	4808	50	98.0	90	110	
Se	78	1	72	48.984	ppb	4.201	6992	50	98.0	90	110	
Sr	88	2	72	50.601	ppb	3.087	19214	50	101.2	90	110	
Zr	90	2	72	129.779	ppb	7.776	607	50	259.6	90	110	>+\-10%
Nb	93	2	72	85.808	ppb	1.077	149140	100	85.8	90	110	>+\-10%
Mo	95	2	115	48.536	ppb	1.538	25574	50	97.1	90	110	
Pd	105	2	115	53.230	ppb	2.780	42164	50	106.5	90	110	
Ag	107	2	115	49.652	ppb	2.303	85818	50	99.3	90	110	
Cd	111	2	115	51.913	ppb	4.017	12116	50	103.8	90	110	
Sn	120	2	115	48.569	ppb	3.963	32780	50	97.1	90	110	
Sb	121	2	115	50.577	ppb	2.054	29529	50	101.2	90	110	
Ba	137	2	115	48.461	ppb	5.511	10338	50	96.9	90	110	
W	182	2	165	48.828	ppb	2.052	132253	50	97.7	90	110	
Pt	195	2	165	48.960	ppb	1.848	105716	50	97.9	90	110	
Tl	205	2	165	49.407	ppb	1.276	257330	50	98.8	90	110	
Pb	208	2	165	49.513	ppb	1.206	344785	50	99.0	90	110	
Th	232	2	165	48.626	ppb	0.810	412132	50	97.3	90	110	
U	238	2	165	48.946	ppb	0.759	445115	50	97.9	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	777830	0.55	842608	92.31	60	120	
Sc (IS)	45	1	HMI H2	16112183	0.81	15887657	101.41	60	120	
Sc (IS)	45	2	HMI He	594712	0.69	621989	95.61	60	120	
Sc (IS)	45	3	No Gas	24672695	0.30	23999890	102.80	60	120	
Ge Internal Standard	72	1	HMI H2	6057710	0.15	5840960	103.71	60	120	
Ge Internal Standard	72	2	HMI He	650640	0.52	667191	97.52	60	120	
In Internal Standard	115	2	HMI He	2238450	1.55	2291045	97.70	60	120	
Ho-165	165	2	HMI He	10862442	0.16	10885907	99.78	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	258_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:19:00-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-39.914	ppb	-9.5	2487439	10	
Be	9	1	6	0.173	ppb	54.3	47	0.5	
B	11	1	6	-0.477	ppb	-103.2	1090	0.5	
Na	23	1	45	-249.224	ppb	-1.2	333218	25	
Na	23	2	45	-242.621	ppb	-2.3	23269	25	
Mg	24	2	45	9.095	ppb	34.1	1357	25	
Al	27	2	45	-0.013	ppb	-12047.1	73	15	
K	39	1	45	-36.123	ppb	-70.7	7186517	50	
K	39	2	45	-13.012	ppb	-70.7	10694	50	
Ca	40	1	45	8.852	ppb	11.6	89228	50	
Ca	44	2	45	-4.246	ppb	-178.4	33	25	
Ti	47	2	45	1.029	ppb	91.5	17	0.5	>RL
V	51	2	72	-0.407	ppb	-38.8	1977	1	
Cr	52	2	72	-0.002	ppb	-2199.5	200	1	
Mn	55	2	72	-0.125	ppb	-72.6	37	0.5	
Fe	57	2	72	5.594	ppb	97.2	150	25	
Co	59	2	72	0.005	ppb	339.0	23	0.5	
Ni	60	2	72	-0.067	ppb	-20.8	73	1	
Cu	63	2	72	0.007	ppb	2602.3	683	1	
Zn	66	2	72	0.037	ppb	318.6	210	5	
As	75	2	72	-0.043	ppb	-277.4	17	1	
Se	78	1	72	0.026	ppb	397.0	12	1	
Sr	88	2	72	-0.017	ppb	-409.9	30	0.5	
Zr	90	2	72	5.288	ppb	111.4	60	1	>RL
Nb	93	2	72	6.606	ppb	7.0	12249	2	>RL
Mo	95	2	115	0.088	ppb	136.1	137	0.5	
Pd	105	2	115	0.115	ppb	61.0	93	1	
Ag	107	2	115	-0.009	ppb	-68.7	17	1	
Cd	111	2	115	0.014	ppb	173.2	3	0.5	
Sn	120	2	115	0.355	ppb	19.4	357	1	
Sb	121	2	115	0.499	ppb	30.6	313	0.6	
Ba	137	2	115	-0.045	ppb	-60.6	17	0.5	
W	182	2	165	0.223	ppb	38.7	1290	1	
Pt	195	2	165	0.000	ppb	-512503.5	23	1	
Tl	205	2	165	0.015	ppb	69.4	157	0.1	
Pb	208	2	165	0.051	ppb	4.2	940	0.5	
Th	232	2	165	0.081	ppb	10.9	920	1	
U	238	2	165	0.043	ppb	20.7	487	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	799514	0.86	842608	94.89	60	120	
Sc (IS)	45	1	HMI H2	16176542	1.30	15887657	101.82	60	120	
Sc (IS)	45	2	HMI He	598050	1.18	621989	96.15	60	120	
Sc (IS)	45	3	No Gas	24956630	0.56	23999890	103.99	60	120	
Ge Internal Standard	72	1	HMI H2	6132582	1.31	5840960	104.99	60	120	
Ge Internal Standard	72	2	HMI He	660514	0.63	667191	99.00	60	120	
In Internal Standard	115	2	HMI He	2280621	0.79	2291045	99.55	60	120	
Ho-165	165	2	HMI He	10892470	0.54	10885907	100.06	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-21-B@50
Data File Name	259SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:22:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-44.829	ppb	-44.829	-13.93	103860	500000	
Li	7	2	45	-12.272	ppb	-12.272	-143.57	5851	500000	
Li	7	3	45	-37.301	ppb	-37.301	-5.75	2494623	50000	
Be	9	1	6	0.320	ppb	0.320	26.48	87	2000	
B	11	1	6	-1.594	ppb	-1.594	-15.77	787	2000	
Na	23	1	45	-218.049	ppb	-218.049	-0.89	408945	2000	
Na	23	2	45	-210.449	ppb	-210.449	-5.27	28114	400000	
Mg	24	2	45	12717.426	ppb	12717.426	0.65	881427	400000	
Al	27	2	45	1643.696	ppb	1643.696	0.59	32082	400000	
K	39	1	45	405.645	ppb	405.645	14.03	8246992	400000	
K	39	2	45	452.098	ppb	452.098	4.08	27149	400000	
Ca	40	1	45	23588.478	ppb	23588.478	0.29	77491864	400000	
Ca	44	2	45	22959.092	ppb	22959.092	1.10	45555	400000	
Ti	47	2	45	94.239	ppb	94.239	8.87	1513	4000	
V	51	2	72	4.100	ppb	4.100	6.35	4881	2000	
Cr	52	2	72	5.833	ppb	5.833	5.55	4921	5000	
Mn	55	2	72	93.928	ppb	93.928	2.05	31899	10000	
Fe	57	2	72	3173.737	ppb	3173.737	2.30	49184	400000	
Co	59	2	72	0.967	ppb	0.967	17.97	1353	2000	
Ni	60	2	72	3.704	ppb	3.704	11.01	1507	5000	
Cu	63	2	72	459.244	ppb	459.244	1.37	485507	5000	
Zn	66	2	72	149.460	ppb	149.460	3.83	22088	5000	
As	75	2	72	62.714	ppb	62.714	0.45	6215	2000	
Se	78	1	72	-0.003	ppb	-0.003	-2207.00	8	2000	
Sr	88	2	72	22.201	ppb	22.201	4.69	8543	4000	
Zr	90	2	72	39.101	ppb	39.101	25.21	210	1000	
Nb	93	2	72	3.585	ppb	3.585	12.33	6912	200	
Mo	95	2	115	0.387	ppb	0.387	49.90	293	2000	
Pd	105	2	115	0.063	ppb	0.063	53.30	50	100	
Ag	107	2	115	37.262	ppb	37.262	1.65	64948	100	
Cd	111	2	115	8.133	ppb	8.133	7.32	1914	2000	
Sn	120	2	115	0.253	ppb	0.253	26.18	283	2000	
Sb	121	2	115	2.488	ppb	2.488	4.85	1480	1000	
Ba	137	2	115	63.898	ppb	63.898	3.46	13741	5000	
W	182	2	165	11.357	ppb	11.357	1.92	31522	100	
Pt	195	2	165	0.001	ppb	0.001	649.65	27	100	
Tl	205	2	165	0.047	ppb	0.047	36.94	323	2000	
Pb	208	2	165	349.359	ppb	349.359	0.73	2447423	5000	
Th	232	2	165	0.741	ppb	0.741	8.60	6552	2000	
U	238	2	165	0.206	ppb	0.206	9.30	1977	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	800212	0.22	842608	94.97	60	120	
Sc (IS)	45	1	HMI H2	16358638	1.30	15887657	102.96	60	120	
Sc (IS)	45	2	HMI He	597394	0.05	621989	96.05	60	120	
Sc (IS)	45	3	No Gas	24834658	0.44	23999890	103.48	60	120	
Ge Internal Standard	72	1	HMI H2	6090351	1.02	5840960	104.27	60	120	
Ge Internal Standard	72	2	HMI He	657753	0.49	667191	98.59	60	120	
In Internal Standard	115	2	HMI He	2256628	0.50	2291045	98.50	60	120	
Ho-165	165	2	HMI He	10944336	0.93	10885907	100.54	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-22-C@50
Data File Name	260SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:26:37-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-43.819	ppb	-43.819	-5.74	102756	500000	
Li	7	2	45	-10.268	ppb	-10.268	-239.10	5855	500000	
Li	7	3	45	-38.782	ppb	-38.782	-13.37	2478896	50000	
Be	9	1	6	0.249	ppb	0.249	31.63	67	2000	
B	11	1	6	-1.453	ppb	-1.453	-2.79	817	2000	
Na	23	1	45	-233.563	ppb	-233.563	-1.26	368069	2000	
Na	23	2	45	-225.093	ppb	-225.093	-3.46	25770	400000	
Mg	24	2	45	13827.115	ppb	13827.115	0.44	953467	400000	
Al	27	2	45	1758.290	ppb	1758.290	3.43	34140	400000	
K	39	1	45	454.342	ppb	454.342	4.20	8241772	400000	
K	39	2	45	486.971	ppb	486.971	5.03	28241	400000	
Ca	40	1	45	26031.853	ppb	26031.853	0.62	84342365	400000	
Ca	44	2	45	25641.626	ppb	25641.626	0.92	50619	400000	
Ti	47	2	45	105.357	ppb	105.357	9.22	1684	4000	
V	51	2	72	4.200	ppb	4.200	5.50	4891	2000	
Cr	52	2	72	6.250	ppb	6.250	3.17	5201	5000	
Mn	55	2	72	103.298	ppb	103.298	1.52	34686	10000	
Fe	57	2	72	3628.805	ppb	3628.805	2.00	55607	400000	
Co	59	2	72	1.097	ppb	1.097	19.43	1517	2000	
Ni	60	2	72	3.721	ppb	3.721	1.72	1497	5000	
Cu	63	2	72	559.643	ppb	559.643	1.18	584957	5000	
Zn	66	2	72	168.084	ppb	168.084	3.86	24542	5000	
As	75	2	72	72.847	ppb	72.847	1.09	7136	2000	
Se	78	1	72	0.073	ppb	0.073	59.07	19	2000	
Sr	88	2	72	25.068	ppb	25.068	4.45	9534	4000	
Zr	90	2	72	25.206	ppb	25.206	36.11	147	1000	
Nb	93	2	72	2.314	ppb	2.314	11.02	4634	200	
Mo	95	2	115	0.223	ppb	0.223	34.97	203	2000	
Pd	105	2	115	0.000	ppb	0.000	#DIV/0!	0	100	
Ag	107	2	115	49.959	ppb	49.959	2.15	85637	100	
Cd	111	2	115	10.241	ppb	10.241	7.91	2370	2000	
Sn	120	2	115	0.255	ppb	0.255	16.89	280	2000	
Sb	121	2	115	3.249	ppb	3.249	8.26	1897	1000	
Ba	137	2	115	69.993	ppb	69.993	2.68	14805	5000	
W	182	2	165	12.678	ppb	12.678	3.58	34924	100	
Pt	195	2	165	-0.005	ppb	-0.005	-232.35	13	100	
Tl	205	2	165	0.058	ppb	0.058	25.12	380	2000	
Pb	208	2	165	417.246	ppb	417.246	0.77	2907911	5000	
Th	232	2	165	0.678	ppb	0.678	1.68	5992	2000	
U	238	2	165	0.212	ppb	0.212	5.92	2020	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	792239	0.64	842608	94.02	60	120	
Sc (IS)	45	1	HMI H2	16134891	0.38	15887657	101.56	60	120	
Sc (IS)	45	2	HMI He	594393	0.30	621989	95.56	60	120	
Sc (IS)	45	3	No Gas	24787241	0.29	23999890	103.28	60	120	
Ge Internal Standard	72	1	HMI H2	6044106	0.56	5840960	103.48	60	120	
Ge Internal Standard	72	2	HMI He	650458	0.24	667191	97.49	60	120	
In Internal Standard	115	2	HMI He	2219899	1.14	2291045	96.89	60	120	
Ho-165	165	2	HMI He	10888261	0.83	10885907	100.02	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-23-E@50
Data File Name	261SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:30:26-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-34.238	ppb	-34.238	-16.62	104371	500000	
Li	7	2	45	-1.225	ppb	-1.225	-1813.26	5911	500000	
Li	7	3	45	-36.136	ppb	-36.136	-8.45	2451926	50000	
Be	9	1	6	0.301	ppb	0.301	24.72	80	2000	
B	11	1	6	-0.470	ppb	-0.470	-185.65	1070	2000	
Na	23	1	45	-166.551	ppb	-166.551	-0.73	514185	2000	
Na	23	2	45	-167.017	ppb	-167.017	-2.23	33966	400000	
Mg	24	2	45	10871.707	ppb	10871.707	1.12	737959	400000	
Al	27	2	45	6831.047	ppb	6831.047	1.45	130334	400000	
K	39	1	45	2023.116	ppb	2023.116	2.02	11531459	400000	
K	39	2	45	2041.229	ppb	2041.229	1.51	81671	400000	
Ca	40	1	45	23243.834	ppb	23243.834	0.77	74390824	400000	
Ca	44	2	45	22401.118	ppb	22401.118	2.01	43526	400000	
Ti	47	2	45	366.580	ppb	366.580	1.74	5765	4000	
V	51	2	72	16.987	ppb	16.987	1.52	12836	2000	
Cr	52	2	72	21.586	ppb	21.586	5.16	17171	5000	
Mn	55	2	72	250.450	ppb	250.450	0.83	82513	10000	
Fe	57	2	72	12595.077	ppb	12595.077	1.06	189471	400000	
Co	59	2	72	6.399	ppb	6.399	5.41	8616	2000	
Ni	60	2	72	19.860	ppb	19.860	3.02	7432	5000	
Cu	63	2	72	82.526	ppb	82.526	1.54	85305	5000	
Zn	66	2	72	89.768	ppb	89.768	1.38	12970	5000	
As	75	2	72	22.244	ppb	22.244	0.41	2155	2000	
Se	78	1	72	0.018	ppb	0.018	375.16	11	2000	
Sr	88	2	72	38.461	ppb	38.461	2.34	14351	4000	
Zr	90	2	72	187.856	ppb	187.856	20.02	847	1000	
Nb	93	2	72	1.848	ppb	1.848	13.13	3761	200	
Mo	95	2	115	0.291	ppb	0.291	50.72	237	2000	
Pd	105	2	115	0.004	ppb	0.004	173.21	3	100	
Ag	107	2	115	6.878	ppb	6.878	2.28	11729	100	
Cd	111	2	115	1.725	ppb	1.725	41.59	397	2000	
Sn	120	2	115	0.158	ppb	0.158	62.18	213	2000	
Sb	121	2	115	0.320	ppb	0.320	19.13	200	1000	
Ba	137	2	115	57.196	ppb	57.196	3.92	12009	5000	
W	182	2	165	8.423	ppb	8.423	3.59	23191	100	
Pt	195	2	165	-0.008	ppb	-0.008	-35.27	7	100	
Tl	205	2	165	0.118	ppb	0.118	6.30	683	2000	
Pb	208	2	165	519.341	ppb	519.341	0.70	3580936	5000	
Th	232	2	165	2.310	ppb	2.310	4.07	19639	2000	
U	238	2	165	0.282	ppb	0.282	11.86	2630	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	784561	0.63	842608	93.11	60	120	
Sc (IS)	45	1	HMI H2	15937161	0.89	15887657	100.31	60	120	
Sc (IS)	45	2	HMI He	585016	0.62	621989	94.06	60	120	
Sc (IS)	45	3	No Gas	24325354	0.29	23999890	101.36	60	120	
Ge Internal Standard	72	1	HMI H2	5970086	0.86	5840960	102.21	60	120	
Ge Internal Standard	72	2	HMI He	639045	0.15	667191	95.78	60	120	
In Internal Standard	115	2	HMI He	2202945	0.55	2291045	96.15	60	120	
Ho-165	165	2	HMI He	10772729	0.68	10885907	98.96	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-24-E@50
Data File Name	262SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:34:14-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-38.548	ppb	-38.548	-12.24	103168	500000	
Li	7	2	45	0.648	ppb	0.648	887.41	5922	500000	
Li	7	3	45	-29.032	ppb	-29.032	-9.44	2459824	50000	
Be	9	1	6	0.304	ppb	0.304	12.80	80	2000	
B	11	1	6	-0.947	ppb	-0.947	-33.69	937	2000	
Na	23	1	45	-155.257	ppb	-155.257	-1.02	540071	2000	
Na	23	2	45	-147.975	ppb	-147.975	-2.82	36650	400000	
Mg	24	2	45	11895.530	ppb	11895.530	0.56	804473	400000	
Al	27	2	45	7335.049	ppb	7335.049	0.58	139439	400000	
K	39	1	45	2119.378	ppb	2119.378	1.22	11750630	400000	
K	39	2	45	2189.982	ppb	2189.982	1.86	86511	400000	
Ca	40	1	45	25513.667	ppb	25513.667	1.29	81723249	400000	
Ca	44	2	45	24821.775	ppb	24821.775	0.80	48050	400000	
Ti	47	2	45	438.574	ppb	438.574	1.15	6872	4000	
V	51	2	72	17.541	ppb	17.541	1.78	13167	2000	
Cr	52	2	72	22.432	ppb	22.432	1.80	17812	5000	
Mn	55	2	72	277.272	ppb	277.272	0.59	91222	10000	
Fe	57	2	72	13954.077	ppb	13954.077	1.42	209634	400000	
Co	59	2	72	6.792	ppb	6.792	0.84	9133	2000	
Ni	60	2	72	22.392	ppb	22.392	5.00	8356	5000	
Cu	63	2	72	90.228	ppb	90.228	2.23	93079	5000	
Zn	66	2	72	100.785	ppb	100.785	2.78	14518	5000	
As	75	2	72	22.436	ppb	22.436	4.22	2171	2000	
Se	78	1	72	0.018	ppb	0.018	91.77	11	2000	
Sr	88	2	72	42.373	ppb	42.373	2.24	15786	4000	
Zr	90	2	72	240.608	ppb	240.608	5.33	1073	1000	
Nb	93	2	72	1.362	ppb	1.362	11.48	2930	200	
Mo	95	2	115	0.261	ppb	0.261	27.13	220	2000	
Pd	105	2	115	0.026	ppb	0.026	86.05	20	100	
Ag	107	2	115	8.013	ppb	8.013	2.62	13611	100	
Cd	111	2	115	2.009	ppb	2.009	20.86	460	2000	
Sn	120	2	115	0.124	ppb	0.124	81.92	190	2000	
Sb	121	2	115	0.234	ppb	0.234	20.35	150	1000	
Ba	137	2	115	64.513	ppb	64.513	4.20	13491	5000	
W	182	2	165	10.435	ppb	10.435	2.04	28692	100	
Pt	195	2	165	0.002	ppb	0.002	168.72	27	100	
Tl	205	2	165	0.138	ppb	0.138	26.09	790	2000	
Pb	208	2	165	490.820	ppb	490.820	0.41	3399493	5000	
Th	232	2	165	2.505	ppb	2.505	1.73	21372	2000	
U	238	2	165	0.311	ppb	0.311	3.25	2904	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	778241	1.03	842608	92.36	60	120	
Sc (IS)	45	1	HMI H2	15951691	0.76	15887657	100.40	60	120	
Sc (IS)	45	2	HMI He	582872	0.25	621989	93.71	60	120	
Sc (IS)	45	3	No Gas	23902387	0.56	23999890	99.59	60	120	
Ge Internal Standard	72	1	HMI H2	5929348	0.40	5840960	101.51	60	120	
Ge Internal Standard	72	2	HMI He	638205	0.30	667191	95.66	60	120	
In Internal Standard	115	2	HMI He	2194833	0.63	2291045	95.80	60	120	
Ho-165	165	2	HMI He	10820876	0.66	10885907	99.40	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-25-E@50
Data File Name	263SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:38:02-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-38.173	ppb	-38.173	-11.44	102551	500000	
Li	7	2	45	-18.378	ppb	-18.378	-54.35	5581	500000	
Li	7	3	45	-36.491	ppb	-36.491	-11.48	2440594	50000	
Be	9	1	6	0.371	ppb	0.371	33.96	97	2000	
B	11	1	6	-0.857	ppb	-0.857	-52.25	953	2000	
Na	23	1	45	-175.008	ppb	-175.008	-1.62	492149	2000	
Na	23	2	45	-172.530	ppb	-172.530	-1.54	32867	400000	
Mg	24	2	45	11453.561	ppb	11453.561	0.25	770852	400000	
Al	27	2	45	5741.135	ppb	5741.135	0.80	108628	400000	
K	39	1	45	1691.890	ppb	1691.890	1.64	10750135	400000	
K	39	2	45	1775.338	ppb	1775.338	2.78	71846	400000	
Ca	40	1	45	22155.579	ppb	22155.579	0.99	70479514	400000	
Ca	44	2	45	21560.274	ppb	21560.274	0.82	41540	400000	
Ti	47	2	45	303.204	ppb	303.204	2.81	4728	4000	
V	51	2	72	13.680	ppb	13.680	4.67	10768	2000	
Cr	52	2	72	18.397	ppb	18.397	5.26	14675	5000	
Mn	55	2	72	226.092	ppb	226.092	1.47	74545	10000	
Fe	57	2	72	11162.234	ppb	11162.234	0.77	168039	400000	
Co	59	2	72	5.056	ppb	5.056	5.79	6815	2000	
Ni	60	2	72	16.171	ppb	16.171	6.10	6075	5000	
Cu	63	2	72	208.869	ppb	208.869	1.30	215038	5000	
Zn	66	2	72	141.869	ppb	141.869	1.71	20395	5000	
As	75	2	72	34.569	ppb	34.569	4.25	3340	2000	
Se	78	1	72	0.047	ppb	0.047	93.80	15	2000	
Sr	88	2	72	32.318	ppb	32.318	2.01	12072	4000	
Zr	90	2	72	161.404	ppb	161.404	16.56	733	1000	
Nb	93	2	72	1.178	ppb	1.178	11.78	2624	200	
Mo	95	2	115	0.313	ppb	0.313	26.13	247	2000	
Pd	105	2	115	0.030	ppb	0.030	138.18	23	100	
Ag	107	2	115	19.910	ppb	19.910	2.14	33775	100	
Cd	111	2	115	4.162	ppb	4.162	17.32	953	2000	
Sn	120	2	115	0.153	ppb	0.153	97.69	210	2000	
Sb	121	2	115	0.654	ppb	0.654	22.28	390	1000	
Ba	137	2	115	68.945	ppb	68.945	2.05	14422	5000	
W	182	2	165	19.300	ppb	19.300	2.15	52461	100	
Pt	195	2	165	-0.008	ppb	-0.008	-34.85	7	100	
Tl	205	2	165	0.115	ppb	0.115	21.21	673	2000	
Pb	208	2	165	608.793	ppb	608.793	0.56	4214367	5000	
Th	232	2	165	1.913	ppb	1.913	1.58	16368	2000	
U	238	2	165	0.260	ppb	0.260	5.06	2444	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	772214	1.10	842608	91.65	60	120	
Sc (IS)	45	1	HMI H2	15840855	1.14	15887657	99.71	60	120	
Sc (IS)	45	2	HMI He	580053	0.38	621989	93.26	60	120	
Sc (IS)	45	3	No Gas	24237897	0.60	23999890	100.99	60	120	
Ge Internal Standard	72	1	HMI H2	5915552	0.41	5840960	101.28	60	120	
Ge Internal Standard	72	2	HMI He	639491	0.55	667191	95.85	60	120	
In Internal Standard	115	2	HMI He	2195441	0.75	2291045	95.83	60	120	
Ho-165	165	2	HMI He	10815392	0.39	10885907	99.35	60	120	

Sample Report

Sample Table

Sample Name	280-116297-A-26-E@50
Data File Name	264SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:41:49-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436750 soil 6020 dod5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-33.882	ppb	-33.882	-7.88	104511	500000	
Li	7	2	45	-4.523	ppb	-4.523	-326.91	5855	500000	
Li	7	3	45	-34.519	ppb	-34.519	-10.48	2467951	50000	
Be	9	1	6	0.305	ppb	0.305	74.99	80	2000	
B	11	1	6	-1.297	ppb	-1.297	-27.93	840	2000	
Na	23	1	45	-175.237	ppb	-175.237	-0.52	494879	2000	
Na	23	2	45	-173.287	ppb	-173.287	-2.78	33018	400000	
Mg	24	2	45	11321.455	ppb	11321.455	0.11	768063	400000	
Al	27	2	45	5772.840	ppb	5772.840	1.30	110100	400000	
K	39	1	45	1735.556	ppb	1735.556	1.73	10914829	400000	
K	39	2	45	1747.599	ppb	1747.599	2.57	71454	400000	
Ca	40	1	45	22590.956	ppb	22590.956	0.58	72335309	400000	
Ca	44	2	45	21725.421	ppb	21725.421	1.18	42192	400000	
Ti	47	2	45	317.750	ppb	317.750	0.74	4994	4000	
V	51	2	72	14.018	ppb	14.018	4.82	10978	2000	
Cr	52	2	72	18.515	ppb	18.515	1.57	14765	5000	
Mn	55	2	72	222.426	ppb	222.426	1.41	73338	10000	
Fe	57	2	72	10702.151	ppb	10702.151	1.32	161108	400000	
Co	59	2	72	5.117	ppb	5.117	4.20	6899	2000	
Ni	60	2	72	16.652	ppb	16.652	5.16	6252	5000	
Cu	63	2	72	187.988	ppb	187.988	0.99	193610	5000	
Zn	66	2	72	123.627	ppb	123.627	0.73	17798	5000	
As	75	2	72	31.618	ppb	31.618	1.94	3057	2000	
Se	78	1	72	0.112	ppb	0.112	75.66	24	2000	
Sr	88	2	72	33.311	ppb	33.311	3.43	12443	4000	
Zr	90	2	72	164.535	ppb	164.535	21.63	747	1000	
Nb	93	2	72	1.131	ppb	1.131	21.86	2544	200	
Mo	95	2	115	0.255	ppb	0.255	46.68	217	2000	
Pd	105	2	115	0.021	ppb	0.021	173.21	17	100	
Ag	107	2	115	15.812	ppb	15.812	2.46	26783	100	
Cd	111	2	115	3.599	ppb	3.599	15.21	823	2000	
Sn	120	2	115	0.099	ppb	0.099	60.66	173	2000	
Sb	121	2	115	0.841	ppb	0.841	23.75	497	1000	
Ba	137	2	115	65.699	ppb	65.699	3.37	13721	5000	
W	182	2	165	17.682	ppb	17.682	2.39	48087	100	
Pt	195	2	165	0.002	ppb	0.002	441.05	27	100	
Tl	205	2	165	0.093	ppb	0.093	5.07	557	2000	
Pb	208	2	165	625.204	ppb	625.204	1.06	4325087	5000	
Th	232	2	165	2.044	ppb	2.044	3.04	17463	2000	
U	238	2	165	0.249	ppb	0.249	7.01	2344	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	774892	0.39	842608	91.96	60	120	
Sc (IS)	45	1	HMI H2	15943978	0.44	15887657	100.35	60	120	
Sc (IS)	45	2	HMI He	584687	0.30	621989	94.00	60	120	
Sc (IS)	45	3	No Gas	24367301	0.42	23999890	101.53	60	120	
Ge Internal Standard	72	1	HMI H2	5968055	0.47	5840960	102.18	60	120	
Ge Internal Standard	72	2	HMI He	639467	0.20	667191	95.84	60	120	
In Internal Standard	115	2	HMI He	2191961	1.36	2291045	95.68	60	120	
Ho-165	165	2	HMI He	10808800	0.85	10885907	99.29	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	265_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:45:37-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	404.835	ppb	2.374	236655	500	81.0	90	110	>+\-10%
Li	7	2	45	422.411	ppb	1.573	13043	500	84.5	90	110	>+\-10%
Li	7	3	45	409.593	ppb	2.002	5683266	500	81.9	90	110	>+\-10%
Be	9	1	6	48.101	ppb	1.157	12526	50	96.2	90	110	
B	11	1	6	38.173	ppb	5.146	11161	50	76.3	90	110	>+\-10%
Na	23	1	45	4525.257	ppb	1.062	11113325	5000	90.5	90	110	
Na	23	2	45	4486.709	ppb	0.706	731187	5000	89.7	90	110	>+\-10%
Mg	24	2	45	4837.481	ppb	0.774	332426	5000	96.7	90	110	
Al	27	2	45	4789.952	ppb	0.343	92434	5000	95.8	90	110	
K	39	1	45	4891.695	ppb	1.941	17813616	5000	97.8	90	110	
K	39	2	45	5020.806	ppb	0.265	187020	5000	100.4	90	110	
Ca	40	1	45	4979.803	ppb	0.529	16059030	5000	99.6	90	110	
Ca	44	2	45	4859.726	ppb	1.608	9580	5000	97.2	90	110	
Ti	47	2	45	45.290	ppb	23.041	720	50	90.6	90	110	
V	51	2	72	47.181	ppb	3.010	32307	50	94.4	90	110	
Cr	52	2	72	49.773	ppb	1.847	39966	50	99.5	90	110	
Mn	55	2	72	50.537	ppb	6.501	16981	50	101.1	90	110	
Fe	57	2	72	4975.919	ppb	2.428	76089	5000	99.5	90	110	
Co	59	2	72	49.876	ppb	1.773	68127	50	99.8	90	110	
Ni	60	2	72	50.891	ppb	1.642	19200	50	101.8	90	110	
Cu	63	2	72	49.868	ppb	2.896	52647	50	99.7	90	110	
Zn	66	2	72	50.536	ppb	8.430	7506	50	101.1	90	110	
As	75	2	72	49.958	ppb	0.804	4892	50	99.9	90	110	
Se	78	1	72	50.381	ppb	2.328	7115	50	100.8	90	110	
Sr	88	2	72	49.952	ppb	5.361	18923	50	99.9	90	110	
Zr	90	2	72	101.262	ppb	18.914	480	50	202.5	90	110	>+\-10%
Nb	93	2	72	85.904	ppb	1.788	148997	100	85.9	90	110	>+\-10%
Mo	95	2	115	50.026	ppb	2.308	26135	50	100.1	90	110	
Pd	105	2	115	52.166	ppb	1.896	40988	50	104.3	90	110	
Ag	107	2	115	49.577	ppb	1.105	84993	50	99.2	90	110	
Cd	111	2	115	50.780	ppb	2.810	11749	50	101.6	90	110	
Sn	120	2	115	47.756	ppb	1.818	31978	50	95.5	90	110	
Sb	121	2	115	49.703	ppb	1.463	28784	50	99.4	90	110	
Ba	137	2	115	49.474	ppb	1.386	10471	50	98.9	90	110	
W	182	2	165	49.094	ppb	0.292	133088	50	98.2	90	110	
Pt	195	2	165	48.971	ppb	1.260	105833	50	97.9	90	110	
Tl	205	2	165	49.359	ppb	1.176	257305	50	98.7	90	110	
Pb	208	2	165	49.177	ppb	0.682	342745	50	98.4	90	110	
Th	232	2	165	48.208	ppb	1.068	408943	50	96.4	90	110	
U	238	2	165	48.727	ppb	1.143	443500	50	97.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	769518	1.11	842608	91.33	60	120	
Sc (IS)	45	1	HMI H2	16011340	1.23	15887657	100.78	60	120	
Sc (IS)	45	2	HMI He	591523	0.20	621989	95.10	60	120	
Sc (IS)	45	3	No Gas	24336524	0.61	23999890	101.40	60	120	
Ge Internal Standard	72	1	HMI H2	5992789	0.73	5840960	102.60	60	120	
Ge Internal Standard	72	2	HMI He	649345	0.86	667191	97.33	60	120	
In Internal Standard	115	2	HMI He	2220077	1.29	2291045	96.90	60	120	
Ho-165	165	2	HMI He	10871941	0.23	10885907	99.87	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	266_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:49:25-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-35.855	ppb	-5.2	2453497	10	
Be	9	1	6	0.075	ppb	1.3	20	0.5	
B	11	1	6	-0.928	ppb	-35.7	950	0.5	
Na	23	1	45	-259.874	ppb	-0.4	305487	25	
Na	23	2	45	-254.308	ppb	-0.7	21133	25	
Mg	24	2	45	11.001	ppb	36.8	1463	25	
Al	27	2	45	2.316	ppb	13.2	117	15	
K	39	1	45	-99.029	ppb	-22.2	6969414	50	
K	39	2	45	-9.047	ppb	-84.1	10648	50	
Ca	40	1	45	8.745	ppb	1.9	87907	50	
Ca	44	2	45	-2.200	ppb	-142.2	37	25	
Ti	47	2	45	0.211	ppb	173.2	3	0.5	
V	51	2	72	-0.709	ppb	-43.7	1750	1	
Cr	52	2	72	-0.018	ppb	-144.6	183	1	
Mn	55	2	72	0.037	ppb	84.8	90	0.5	
Fe	57	2	72	6.226	ppb	53.1	157	25	
Co	59	2	72	-0.002	ppb	-802.6	13	0.5	
Ni	60	2	72	-0.073	ppb	-98.0	70	1	
Cu	63	2	72	-0.049	ppb	-83.4	613	1	
Zn	66	2	72	-0.146	ppb	-289.2	180	5	
As	75	2	72	-0.027	ppb	-87.1	18	1	
Se	78	1	72	0.026	ppb	216.2	12	1	
Sr	88	2	72	0.003	ppb	2506.7	37	0.5	
Zr	90	2	72	4.001	ppb	198.8	53	1	>RL
Nb	93	2	72	6.566	ppb	9.3	11966	2	>RL
Mo	95	2	115	0.051	ppb	169.3	117	0.5	
Pd	105	2	115	0.087	ppb	13.9	70	1	
Ag	107	2	115	0.002	ppb	863.4	37	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.146	ppb	103.1	213	1	
Sb	121	2	115	0.358	ppb	27.7	230	0.6	
Ba	137	2	115	0.001	ppb	6478.9	27	0.5	
W	182	2	165	0.262	ppb	14.5	1383	1	
Pt	195	2	165	0.002	ppb	432.1	27	1	
Tl	205	2	165	0.011	ppb	55.9	133	0.1	
Pb	208	2	165	0.067	ppb	40.3	1043	0.5	
Th	232	2	165	0.064	ppb	22.8	770	1	
U	238	2	165	0.054	ppb	29.4	573	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	785211	1.27	842608	93.19	60	120	
Sc (IS)	45	1	HMI H2	15994373	0.57	15887657	100.67	60	120	
Sc (IS)	45	2	HMI He	587689	1.08	621989	94.49	60	120	
Sc (IS)	45	3	No Gas	24320993	0.58	23999890	101.34	60	120	
Ge Internal Standard	72	1	HMI H2	6032047	1.00	5840960	103.27	60	120	
Ge Internal Standard	72	2	HMI He	649118	0.40	667191	97.29	60	120	
In Internal Standard	115	2	HMI He	2282270	1.23	2291045	99.62	60	120	
Ho-165	165	2	HMI He	10791707	0.17	10885907	99.13	60	120	

Blank Report

Sample Table

Sample Name	mb 280-436760/1-a
Data File Name	267_BLK.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:53:14-07:00
Sample Type	Blank
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit
Li	7	1	45	-50.623	ppb	-8.542797066	97632	0.5
Li	7	2	45	-44.670	ppb	-12.84873868	5218	0.5
Li	7	3	45	-46.568	ppb	-10.90663986	2279520	10
Be	9	1	6	0.052	ppb	44.00274946	13	0.5
B	11	1	6	3.979	ppb	12.59063353	2170	0.5
Na	23	1	45	-240.615	ppb	-0.288714619	341329	25
Na	23	2	45	-236.184	ppb	-3.736122213	23813	25
Mg	24	2	45	22.748	ppb	2.037202929	2264	25
Al	27	2	45	1.975	ppb	48.40812873	110	15
K	39	1	45	-1486.886	ppb	-0.893693176	3872106	50
K	39	2	45	-14.216	ppb	-82.07356654	10464	50
Ca	40	1	45	53.612	ppb	2.398329566	226820	50
Ca	44	2	45	42.116	ppb	72.15286735	123	25
Ti	47	2	45	1.060	ppb	124.683288	17	0.5
V	51	2	72	-1.739	ppb	-2.032348834	1077	1
Cr	52	2	72	0.087	ppb	114.9575461	263	1
Mn	55	2	72	0.041	ppb	200.8779449	90	0.5
Fe	57	2	72	10.800	ppb	12.00950319	223	25
Co	59	2	72	0.010	ppb	121.9871169	30	0.5
Ni	60	2	72	0.029	ppb	458.3237791	107	1
Cu	63	2	72	0.210	ppb	104.2259117	870	1
Zn	66	2	72	0.694	ppb	118.0781924	297	5
As	75	2	72	0.010	ppb	2172.77122	22	1
Se	78	1	72	-0.039	ppb	-42.22390588	3	1
Sr	88	2	72	0.138	ppb	129.4811377	87	0.5
Zr	90	2	72	7.317	ppb	80.91512146	67	1
Nb	93	2	72	4.797	ppb	9.637217944	8783	2
Mo	95	2	115	0.017	ppb	436.9431989	97	0.5
Pd	105	2	115	0.029	ppb	23.30820062	23	1
Ag	107	2	115	-0.005	ppb	-130.8148223	23	1
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5
Sn	120	2	115	0.243	ppb	23.64191771	273	1
Sb	121	2	115	0.190	ppb	64.12931672	127	0.6
Ba	137	2	115	0.161	ppb	58.43710201	60	0.5
W	182	2	165	0.037	ppb	20.48048757	777	1
Pt	195	2	165	-0.001	ppb	-330.4659238	20	1
Tl	205	2	165	0.016	ppb	27.56302	157	0.1
Pb	208	2	165	0.158	ppb	13.95739053	1660	0.5
Th	232	2	165	0.078	ppb	4.345754678	880	1
U	238	2	165	0.017	ppb	16.19850866	240	0.5

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	754091	0.63	842608	89.49	60	120	
Sc (IS)	45	1	HMI H2	15644956	1.20	15887657	98.47	60	120	
Sc (IS)	45	2	HMI He	587432	1.12	621989	94.44	60	120	
Sc (IS)	45	3	No Gas	23336860	1.19	23999890	97.24	60	120	
Ge Internal Standard	72	1	HMI H2	5857969	1.84	5840960	100.29	60	120	
Ge Internal Standard	72	2	HMI He	639558	0.80	667191	95.86	60	120	
In Internal Standard	115	2	HMI He	2230404	1.36	2291045	97.35	60	120	
Ho-165	165	2	HMI He	10748934	0.89	10885907	98.74	60	120	

Laboratory Control Sample (LCS) Report

Sample Table

Sample Name	lcs 280-436760/2-a
Data File Name	268LCS.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T05:57:02-07:00
Sample Type	LCS-s
Dilution	1
Analyst	Trudell, Lynn-Anne
Comment	436760 soil 6020 DOD5
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	FinalConc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High	QC Flag
Be	9	1	6	187.670	187.670	ppb	2.207	45778	200	93.8	80	120	
Na	23	2	45	-220.071	-220.071	ppb	-2.129	25730	200	-110.0	80	120	NewName Main CR1 Failed
Mg	24	2	45	28.421	28.421	ppb	5.718	2600	200000	0.0	80	120	NewName Main CR1 Failed
Al	27	2	45	1910.854	1910.854	ppb	1.560	35985	200000	1.0	80	120	NewName Main CR1 Failed
K	39	2	45	-21.104	-21.104	ppb	-72.053	10034	200000	0.0	80	120	NewName Main CR1 Failed
Ca	44	2	45	1003.315	1003.315	ppb	10.075	1960	200000	0.5	80	120	NewName Main CR1 Failed
V	51	2	72	190.651	190.651	ppb	0.641	119570	200	95.3	80	120	
Cr	52	2	72	201.817	201.817	ppb	0.948	155866	200	100.9	80	120	
(Cr)	53	2	72	201.159	201.159	ppb	3.836	18653	200	100.6	80	120	
Mn	55	2	72	199.590	199.590	ppb	1.493	64518	200	99.8	80	120	
Fe	57	2	72	1983.365	1983.365	ppb	1.023	29317	200000	1.0	80	120	NewName Main CR1 Failed
Co	59	2	72	202.429	202.429	ppb	1.417	266894	200	101.2	80	120	
Ni	60	2	72	206.084	206.084	ppb	0.906	74773	200	103.0	80	120	
Cu	63	2	72	200.519	200.519	ppb	1.588	202387	200	100.3	80	120	
Zn	66	2	72	192.533	192.533	ppb	3.397	27066	200	96.3	80	120	
As	75	2	72	187.196	187.196	ppb	0.759	17640	200	93.6	80	120	
Se	78	1	72	186.329	186.329	ppb	0.875	24806	200	93.2	80	120	
(Se)	82	1	72	152.480	152.480	ppb	2.320	10147	200	76.2	80	120	NewName Main CR1 Failed
Nb	93	2	72	7.361	7.361	ppb	8.228	12883	400	1.8	80	120	NewName Main CR1 Failed
Mo	95	2	115	194.024	194.024	ppb	1.299	100649	200	97.0	80	120	
Pd	105	2	115	0.038	0.038	ppb	145.337	30	200	0.0	80	120	NewName Main CR1 Failed
Ag	107	2	115	204.492	204.492	ppb	0.534	348882	200	102.2	80	120	
Cd	111	2	115	201.455	201.455	ppb	0.545	46405	200	100.7	80	120	
(Cd)	114	2	115	188.040	188.040	ppb	0.747	114731	200	94.0	80	120	
Sn	120	2	115	193.601	193.601	ppb	0.091	128716	200	96.8	80	120	
Sb	121	2	115	202.682	202.682	ppb	0.632	116793	200	101.3	80	110	
Ba	137	2	115	200.700	200.700	ppb	0.295	42209	200	100.3	80	120	
W	182	2	165	187.822	187.822	ppb	0.409	499221	200	93.9	80	120	
Pt	195	2	165	-0.009	-0.009	ppb	-29.719	3	200	0.0	80	120	NewName Main CR1 Failed
Tl	205	2	165	200.567	200.567	ppb	1.344	1028755	200	100.3	80	120	
(Pb)	206	2	165	197.436	197.436	ppb	0.751	330250	200	98.7	80	120	
(Pb)	207	2	165	200.808	200.808	ppb	0.914	303338	200	100.4	80	120	
Pb	208	2	165	198.946	198.946	ppb	0.921	1362867	200	99.5	80	120	
Th	232	2	165	220.964	220.964	ppb	1.453	1843939	200	110.5	80	120	
U	238	2	165	223.409	223.409	ppb	0.816	2000921	200	111.7	80	120	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	720648	1.27	842608	85.53	60	120	
Sc (IS)	45	1	HMI H2	15213228	0.59	15887657	95.76	60	120	
Sc (IS)	45	2	HMI He	576527	0.57	621989	92.69	60	120	
Sc (IS)	45	3	No Gas	23020127	0.29	23999890	95.92	60	120	
Ge Internal Standard	72	1	HMI H2	5654455	0.25	5840960	96.81	60	120	
Ge Internal Standard	72	2	HMI He	626852	0.49	667191	93.95	60	120	
In Internal Standard	115	2	HMI He	2209824	0.51	2291045	96.45	60	120	
Ho-165	165	2	HMI He	10700199	0.69	10885907	98.29	60	120	

Sample Report

Sample Table

Sample Name	lcsd 280-436760/3-a
Data File Name	269SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:00:50-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	317.600	ppb	317.600	2.40	200027	500000	
Li	7	2	45	330.070	ppb	330.070	6.91	11095	500000	
Li	7	3	45	300.320	ppb	300.320	2.29	4658995	50000	
Be	9	1	6	188.950	ppb	188.950	1.23	46409	2000	
B	11	1	6	177.785	ppb	177.785	2.44	44982	2000	
Na	23	1	45	-208.944	ppb	-208.944	-0.96	399942	2000	
Na	23	2	45	-204.211	ppb	-204.211	-0.84	27754	400000	
Mg	24	2	45	28.221	ppb	28.221	5.55	2560	400000	
Al	27	2	45	2011.761	ppb	2011.761	2.84	37485	400000	
K	39	1	45	-1484.328	ppb	-1484.328	-0.58	3771594	400000	
K	39	2	45	-10.627	ppb	-10.627	-171.14	10284	400000	
Ca	40	1	45	87.531	ppb	87.531	1.25	324213	400000	
Ca	44	2	45	1113.149	ppb	1113.149	7.30	2147	400000	
Ti	47	2	45	5.658	ppb	5.658	35.85	87	4000	
V	51	2	72	186.557	ppb	186.557	0.36	117930	2000	
Cr	52	2	72	198.027	ppb	198.027	0.79	154094	5000	
Mn	55	2	72	197.998	ppb	197.998	0.43	64484	10000	
Fe	57	2	72	2061.563	ppb	2061.563	1.11	30700	400000	
Co	59	2	72	199.936	ppb	199.936	0.69	265603	2000	
Ni	60	2	72	205.650	ppb	205.650	1.03	75175	5000	
Cu	63	2	72	197.744	ppb	197.744	0.80	201109	5000	
Zn	66	2	72	185.098	ppb	185.098	1.40	26222	5000	
As	75	2	72	186.050	ppb	186.050	1.81	17664	2000	
Se	78	1	72	185.109	ppb	185.109	2.25	24836	2000	
Sr	88	2	72	205.775	ppb	205.775	0.63	75731	4000	
Zr	90	2	72	42304.177	ppb	42304.177	0.96	180687	1000	>LDR
Nb	93	2	72	4.423	ppb	4.423	4.07	8043	200	
Mo	95	2	115	197.243	ppb	197.243	2.04	101808	2000	
Pd	105	2	115	0.004	ppb	0.004	173.21	3	100	
Ag	107	2	115	205.479	ppb	205.479	1.64	348838	100	
Cd	111	2	115	198.434	ppb	198.434	0.31	45489	2000	
Sn	120	2	115	196.416	ppb	196.416	1.48	129961	2000	
Sb	121	2	115	207.482	ppb	207.482	2.02	118964	1000	
Ba	137	2	115	196.216	ppb	196.216	0.88	41066	5000	
W	182	2	165	190.237	ppb	190.237	0.33	508568	100	
Pt	195	2	165	-0.008	ppb	-0.008	-35.15	7	100	
Tl	205	2	165	197.766	ppb	197.766	0.27	1020337	2000	
Pb	208	2	165	198.599	ppb	198.599	0.62	1368465	5000	
Th	232	2	165	219.078	ppb	219.078	0.79	1838879	2000	
U	238	2	165	220.264	ppb	220.264	0.98	1984259	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	725777	0.61	842608	86.13	60	120	
Sc (IS)	45	1	HMI H2	15216781	0.84	15887657	95.78	60	120	
Sc (IS)	45	2	HMI He	570596	0.61	621989	91.74	60	120	
Sc (IS)	45	3	No Gas	23178916	0.53	23999890	96.58	60	120	
Ge Internal Standard	72	1	HMI H2	5698527	0.49	5840960	97.56	60	120	
Ge Internal Standard	72	2	HMI He	631562	0.49	667191	94.66	60	120	
In Internal Standard	115	2	HMI He	2199129	1.05	2291045	95.99	60	120	
Ho-165	165	2	HMI He	10762395	0.20	10885907	98.87	60	120	

Sample Table

Sample Name	280-116306-b-1-c@50
Data File Name	270SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:04:38-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-44.922	ppb	-44.922	-5.68	101534	500000	
Li	7	2	45	-21.265	ppb	-21.265	-118.64	5621	500000	
Li	7	3	45	-41.785	ppb	-41.785	-6.70	2413058	50000	
Be	9	1	6	0.485	ppb	0.485	67.97	130	2000	
B	11	1	6	6.815	ppb	6.815	19.91	3027	2000	
Na	23	1	45	-251.507	ppb	-251.507	-0.54	324376	2000	
Na	23	2	45	-244.713	ppb	-244.713	-1.78	22621	400000	
Mg	24	2	45	9493.333	ppb	9493.333	0.54	649173	400000	
Al	27	2	45	1593.116	ppb	1593.116	0.27	30673	400000	
K	39	1	45	584.868	ppb	584.868	5.67	8453373	400000	
K	39	2	45	665.740	ppb	665.740	2.17	34238	400000	
Ca	40	1	45	21036.112	ppb	21036.112	0.47	67579872	400000	
Ca	44	2	45	20591.041	ppb	20591.041	0.70	40303	400000	
Ti	47	2	45	5.888	ppb	5.888	75.80	93	4000	
V	51	2	72	3.155	ppb	3.155	3.55	4171	2000	
Cr	52	2	72	8.071	ppb	8.071	0.61	6575	5000	
Mn	55	2	72	387.671	ppb	387.671	1.13	128331	10000	
Fe	57	2	72	14831.531	ppb	14831.531	1.80	224241	400000	
Co	59	2	72	8.859	ppb	8.859	5.36	11986	2000	
Ni	60	2	72	15.745	ppb	15.745	8.59	5941	5000	
Cu	63	2	72	76.159	ppb	76.159	1.21	79180	5000	
Zn	66	2	72	119.336	ppb	119.336	1.59	17264	5000	
As	75	2	72	8.127	ppb	8.127	3.93	805	2000	
Se	78	1	72	0.225	ppb	0.225	12.63	40	2000	
Sr	88	2	72	69.635	ppb	69.635	0.18	26088	4000	
Zr	90	2	72	153.850	ppb	153.850	5.64	703	1000	
Nb	93	2	72	1.019	ppb	1.019	14.89	2364	200	
Mo	95	2	115	0.962	ppb	0.962	9.55	580	2000	
Pd	105	2	115	0.026	ppb	0.026	86.61	20	100	
Ag	107	2	115	7.745	ppb	7.745	2.49	13127	100	
Cd	111	2	115	2.805	ppb	2.805	14.26	640	2000	
Sn	120	2	115	1.257	ppb	1.257	19.31	937	2000	
Sb	121	2	115	1.081	ppb	1.081	16.78	633	1000	
Ba	137	2	115	143.668	ppb	143.668	0.30	29957	5000	
W	182	2	165	21.337	ppb	21.337	0.71	57836	100	
Pt	195	2	165	-0.011	ppb	-0.011	0.00	0	100	
Tl	205	2	165	0.131	ppb	0.131	7.58	753	2000	
Pb	208	2	165	111.492	ppb	111.492	0.17	771061	5000	
Th	232	2	165	1.286	ppb	1.286	6.02	11059	2000	
U	238	2	165	0.584	ppb	0.584	6.99	5368	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	787512	1.11	842608	93.46	60	120	
Sc (IS)	45	1	HMI H2	15995401	0.83	15887657	100.68	60	120	
Sc (IS)	45	2	HMI He	589243	0.29	621989	94.74	60	120	
Sc (IS)	45	3	No Gas	24346485	0.44	23999890	101.44	60	120	
Ge Internal Standard	72	1	HMI H2	5994758	0.31	5840960	102.63	60	120	
Ge Internal Standard	72	2	HMI He	642327	0.40	667191	96.27	60	120	
In Internal Standard	115	2	HMI He	2190449	0.84	2291045	95.61	60	120	
Ho-165	165	2	HMI He	10798276	0.54	10885907	99.20	60	120	

Sample Report

Sample Table

Sample Name	280-116306-a-2-b@50
Data File Name	271SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:08:26-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-41.855	ppb	-41.855	-1.81	100360	500000	
Li	7	2	45	-3.909	ppb	-3.909	-319.23	5788	500000	
Li	7	3	45	-42.061	ppb	-42.061	-1.89	2378145	50000	
Be	9	1	6	0.420	ppb	0.420	23.27	110	2000	
B	11	1	6	0.736	ppb	0.736	103.11	1370	2000	
Na	23	1	45	-250.234	ppb	-250.234	-0.52	320565	2000	
Na	23	2	45	-240.709	ppb	-240.709	-2.74	22738	400000	
Mg	24	2	45	9029.557	ppb	9029.557	0.66	604792	400000	
Al	27	2	45	1475.624	ppb	1475.624	1.63	27831	400000	
K	39	1	45	486.818	ppb	486.818	4.95	8072220	400000	
K	39	2	45	581.127	ppb	581.127	1.36	30643	400000	
Ca	40	1	45	19569.855	ppb	19569.855	0.61	61585442	400000	
Ca	44	2	45	19129.372	ppb	19129.372	2.91	36670	400000	
Ti	47	2	45	5.566	ppb	5.566	63.00	87	4000	
V	51	2	72	2.310	ppb	2.310	17.78	3591	2000	
Cr	52	2	72	8.203	ppb	8.203	3.95	6592	5000	
Mn	55	2	72	329.939	ppb	329.939	1.26	107801	10000	
Fe	57	2	72	12620.460	ppb	12620.460	1.04	188336	400000	
Co	59	2	72	7.793	ppb	7.793	4.05	10404	2000	
Ni	60	2	72	13.443	ppb	13.443	1.50	5021	5000	
Cu	63	2	72	69.915	ppb	69.915	1.45	71782	5000	
Zn	66	2	72	115.155	ppb	115.155	1.74	16447	5000	
As	75	2	72	7.565	ppb	7.565	1.08	741	2000	
Se	78	1	72	0.048	ppb	0.048	94.07	15	2000	
Sr	88	2	72	61.132	ppb	61.132	2.11	22606	4000	
Zr	90	2	72	78.367	ppb	78.367	43.19	370	1000	
Nb	93	2	72	0.610	ppb	0.610	32.50	1644	200	
Mo	95	2	115	0.577	ppb	0.577	30.19	380	2000	
Pd	105	2	115	0.043	ppb	0.043	124.55	33	100	
Ag	107	2	115	7.591	ppb	7.591	4.77	12793	100	
Cd	111	2	115	2.908	ppb	2.908	9.76	660	2000	
Sn	120	2	115	0.278	ppb	0.278	28.34	290	2000	
Sb	121	2	115	0.799	ppb	0.799	19.04	470	1000	
Ba	137	2	115	135.441	ppb	135.441	1.66	28083	5000	
W	182	2	165	20.793	ppb	20.793	1.25	56229	100	
Pt	195	2	165	-0.001	ppb	-0.001	-328.51	20	100	
Tl	205	2	165	0.066	ppb	0.066	14.24	417	2000	
Pb	208	2	165	109.582	ppb	109.582	1.23	755832	5000	
Th	232	2	165	0.882	ppb	0.882	2.63	7643	2000	
U	238	2	165	0.410	ppb	0.410	2.30	3787	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	772610	1.07	842608	91.69	60	120	
Sc (IS)	45	1	HMI H2	15667945	0.37	15887657	98.62	60	120	
Sc (IS)	45	2	HMI He	577144	0.90	621989	92.79	60	120	
Sc (IS)	45	3	No Gas	24013772	0.55	23999890	100.06	60	120	
Ge Internal Standard	72	1	HMI H2	5883583	0.91	5840960	100.73	60	120	
Ge Internal Standard	72	2	HMI He	633907	0.75	667191	95.01	60	120	
In Internal Standard	115	2	HMI He	2177910	0.53	2291045	95.06	60	120	
Ho-165	165	2	HMI He	10769774	0.55	10885907	98.93	60	120	

Sample Report

Sample Table

Sample Name	280-116306-b-3-b@50
Data File Name	272SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:12:14-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-48.205	ppb	-48.205	-11.81	98210	500000	
Li	7	2	45	-24.277	ppb	-24.277	-43.74	5428	500000	
Li	7	3	45	-36.899	ppb	-36.899	-1.37	2393617	50000	
Be	9	1	6	0.269	ppb	0.269	25.34	70	2000	
B	11	1	6	0.096	ppb	0.096	460.18	1197	2000	
Na	23	1	45	-249.079	ppb	-249.079	-0.58	322186	2000	
Na	23	2	45	-241.546	ppb	-241.546	-4.67	22495	400000	
Mg	24	2	45	8944.567	ppb	8944.567	0.43	595903	400000	
Al	27	2	45	1693.009	ppb	1693.009	2.49	31752	400000	
K	39	1	45	570.038	ppb	570.038	6.13	8225259	400000	
K	39	2	45	650.783	ppb	650.783	3.73	32844	400000	
Ca	40	1	45	19877.604	ppb	19877.604	0.82	62372556	400000	
Ca	44	2	45	19397.020	ppb	19397.020	1.29	36988	400000	
Ti	47	2	45	5.186	ppb	5.186	25.19	80	4000	
V	51	2	72	2.314	ppb	2.314	11.48	3577	2000	
Cr	52	2	72	7.965	ppb	7.965	8.85	6382	5000	
Mn	55	2	72	406.126	ppb	406.126	1.15	132112	10000	
Fe	57	2	72	15390.407	ppb	15390.407	0.28	228669	400000	
Co	59	2	72	8.991	ppb	8.991	0.86	11952	2000	
Ni	60	2	72	14.426	ppb	14.426	5.19	5358	5000	
Cu	63	2	72	70.473	ppb	70.473	1.65	72047	5000	
Zn	66	2	72	102.364	ppb	102.364	1.22	14581	5000	
As	75	2	72	6.778	ppb	6.778	6.80	663	2000	
Se	78	1	72	0.077	ppb	0.077	58.67	19	2000	
Sr	88	2	72	75.416	ppb	75.416	2.46	27765	4000	
Zr	90	2	72	38.761	ppb	38.761	28.12	200	1000	
Nb	93	2	72	0.418	ppb	0.418	3.94	1313	200	
Mo	95	2	115	0.596	ppb	0.596	14.02	390	2000	
Pd	105	2	115	0.022	ppb	0.022	125.23	17	100	
Ag	107	2	115	6.774	ppb	6.774	3.62	11419	100	
Cd	111	2	115	2.304	ppb	2.304	12.30	523	2000	
Sn	120	2	115	0.273	ppb	0.273	22.09	287	2000	
Sb	121	2	115	0.583	ppb	0.583	6.60	347	1000	
Ba	137	2	115	140.783	ppb	140.783	1.10	29185	5000	
W	182	2	165	18.020	ppb	18.020	2.14	48706	100	
Pt	195	2	165	-0.006	ppb	-0.006	-76.45	10	100	
Tl	205	2	165	0.056	ppb	0.056	22.48	363	2000	
Pb	208	2	165	93.486	ppb	93.486	1.60	643413	5000	
Th	232	2	165	0.947	ppb	0.947	3.95	8170	2000	
U	238	2	165	0.486	ppb	0.486	2.39	4461	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	768749	0.84	842608	91.23	60	120	
Sc (IS)	45	1	HMI H2	15622793	0.38	15887657	98.33	60	120	
Sc (IS)	45	2	HMI He	574037	0.39	621989	92.29	60	120	
Sc (IS)	45	3	No Gas	23800392	0.34	23999890	99.17	60	120	
Ge Internal Standard	72	1	HMI H2	5850658	1.03	5840960	100.17	60	120	
Ge Internal Standard	72	2	HMI He	631214	0.56	667191	94.61	60	120	
In Internal Standard	115	2	HMI He	2177803	0.85	2291045	95.06	60	120	
Ho-165	165	2	HMI He	10745373	0.59	10885907	98.71	60	120	

Sample Report

Sample Table

Sample Name	280-116306-a-4-b@50
Data File Name	273SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:16:02-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-46.256	ppb	-46.256	-4.70	98824	500000	
Li	7	2	45	-8.259	ppb	-8.259	-114.80	5711	500000	
Li	7	3	45	-42.028	ppb	-42.028	-5.55	2400393	50000	
Be	9	1	6	0.269	ppb	0.269	37.53	70	2000	
B	11	1	6	-0.974	ppb	-0.974	-6.32	917	2000	
Na	23	1	45	-256.724	ppb	-256.724	-0.25	305467	2000	
Na	23	2	45	-254.881	ppb	-254.881	-0.87	20648	400000	
Mg	24	2	45	9206.077	ppb	9206.077	0.75	615911	400000	
Al	27	2	45	1396.031	ppb	1396.031	1.05	26304	400000	
K	39	1	45	461.578	ppb	461.578	3.33	7999011	400000	
K	39	2	45	555.108	ppb	555.108	3.74	29714	400000	
Ca	40	1	45	19936.226	ppb	19936.226	0.73	62584602	400000	
Ca	44	2	45	19322.826	ppb	19322.826	2.06	37001	400000	
Ti	47	2	45	5.585	ppb	5.585	39.95	87	4000	
V	51	2	72	1.523	ppb	1.523	4.39	3097	2000	
Cr	52	2	72	8.187	ppb	8.187	6.68	6575	5000	
Mn	55	2	72	330.889	ppb	330.889	0.54	108032	10000	
Fe	57	2	72	12299.110	ppb	12299.110	1.13	183397	400000	
Co	59	2	72	7.537	ppb	7.537	4.29	10057	2000	
Ni	60	2	72	14.098	ppb	14.098	6.07	5258	5000	
Cu	63	2	72	75.899	ppb	75.899	1.37	77816	5000	
Zn	66	2	72	125.102	ppb	125.102	2.98	17838	5000	
As	75	2	72	7.564	ppb	7.564	3.51	740	2000	
Se	78	1	72	0.019	ppb	0.019	237.84	11	2000	
Sr	88	2	72	61.727	ppb	61.727	1.44	22809	4000	
Zr	90	2	72	47.110	ppb	47.110	31.58	237	1000	
Nb	93	2	72	0.324	ppb	0.324	11.24	1160	200	
Mo	95	2	115	0.617	ppb	0.617	30.39	403	2000	
Pd	105	2	115	0.009	ppb	0.009	86.61	7	100	
Ag	107	2	115	8.800	ppb	8.800	3.44	14962	100	
Cd	111	2	115	3.072	ppb	3.072	8.05	703	2000	
Sn	120	2	115	0.204	ppb	0.204	70.44	243	2000	
Sb	121	2	115	0.781	ppb	0.781	32.84	463	1000	
Ba	137	2	115	156.357	ppb	156.357	1.33	32707	5000	
W	182	2	165	21.998	ppb	21.998	3.50	59380	100	
Pt	195	2	165	-0.008	ppb	-0.008	-35.27	7	100	
Tl	205	2	165	0.060	ppb	0.060	21.86	383	2000	
Pb	208	2	165	118.725	ppb	118.725	0.78	817970	5000	
Th	232	2	165	0.814	ppb	0.814	2.14	7062	2000	
U	238	2	165	0.394	ppb	0.394	4.49	3637	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	767836	0.26	842608	91.13	60	120	
Sc (IS)	45	1	HMI H2	15629490	0.34	15887657	98.38	60	120	
Sc (IS)	45	2	HMI He	576486	0.91	621989	92.68	60	120	
Sc (IS)	45	3	No Gas	24235826	0.76	23999890	100.98	60	120	
Ge Internal Standard	72	1	HMI H2	5884814	0.73	5840960	100.75	60	120	
Ge Internal Standard	72	2	HMI He	633434	0.23	667191	94.94	60	120	
In Internal Standard	115	2	HMI He	2197512	1.18	2291045	95.92	60	120	
Ho-165	165	2	HMI He	10758128	0.72	10885907	98.83	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	274_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:19:49-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	409.714	ppb	0.268	232752	500	81.9	90	110	>+\-10%
Li	7	2	45	423.793	ppb	2.437	12799	500	84.8	90	110	>+\-10%
Li	7	3	45	406.099	ppb	1.317	5640089	500	81.2	90	110	>+\-10%
Be	9	1	6	48.640	ppb	1.879	12539	50	97.3	90	110	
B	11	1	6	38.038	ppb	1.542	11014	50	76.1	90	110	>+\-10%
Na	23	1	45	4550.278	ppb	0.898	10916990	5000	91.0	90	110	
Na	23	2	45	4488.536	ppb	0.881	716533	5000	89.8	90	110	>+\-10%
Mg	24	2	45	4875.830	ppb	0.213	328233	5000	97.5	90	110	
Al	27	2	45	4910.777	ppb	0.926	92837	5000	98.2	90	110	
K	39	1	45	4900.270	ppb	1.389	17429615	5000	98.0	90	110	
K	39	2	45	5003.644	ppb	0.743	182624	5000	100.1	90	110	
Ca	40	1	45	5032.426	ppb	0.408	15861081	5000	100.6	90	110	
Ca	44	2	45	5073.195	ppb	3.933	9797	5000	101.5	90	110	
Ti	47	2	45	48.144	ppb	24.057	750	50	96.3	90	110	
V	51	2	72	46.898	ppb	3.056	31575	50	93.8	90	110	
Cr	52	2	72	51.018	ppb	1.388	40257	50	102.0	90	110	
Mn	55	2	72	50.874	ppb	0.549	16797	50	101.7	90	110	
Fe	57	2	72	4956.934	ppb	1.042	74494	5000	99.1	90	110	
Co	59	2	72	49.249	ppb	1.221	66115	50	98.5	90	110	
Ni	60	2	72	50.899	ppb	4.568	18873	50	101.8	90	110	
Cu	63	2	72	50.319	ppb	0.869	52192	50	100.6	90	110	
Zn	66	2	72	49.695	ppb	9.393	7259	50	99.4	90	110	
As	75	2	72	49.846	ppb	3.921	4796	50	99.7	90	110	
Se	78	1	72	48.816	ppb	0.861	6800	50	97.6	90	110	
Sr	88	2	72	50.292	ppb	2.633	18726	50	100.6	90	110	
Zr	90	2	72	837.193	ppb	3.959	3647	50	1674.4	90	110	>+\-10%
Nb	93	2	72	84.972	ppb	0.811	144846	100	85.0	90	110	>+\-10%
Mo	95	2	115	49.217	ppb	2.713	25634	50	98.4	90	110	
Pd	105	2	115	51.704	ppb	2.741	40506	50	103.4	90	110	
Ag	107	2	115	49.843	ppb	1.360	85198	50	99.7	90	110	
Cd	111	2	115	48.931	ppb	2.553	11288	50	97.9	90	110	
Sn	120	2	115	47.470	ppb	3.478	31691	50	94.9	90	110	
Sb	121	2	115	49.845	ppb	2.545	28777	50	99.7	90	110	
Ba	137	2	115	49.228	ppb	4.279	10388	50	98.5	90	110	
W	182	2	165	48.042	ppb	1.183	129453	50	96.1	90	110	
Pt	195	2	165	48.799	ppb	2.111	104804	50	97.6	90	110	
Tl	205	2	165	49.355	ppb	1.705	255702	50	98.7	90	110	
Pb	208	2	165	49.137	ppb	1.143	340358	50	98.3	90	110	
Th	232	2	165	48.541	ppb	1.560	409223	50	97.1	90	110	
U	238	2	165	48.618	ppb	0.762	439799	50	97.2	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	761834	1.29	842608	90.41	60	120	
Sc (IS)	45	1	HMI H2	15649168	0.86	15887657	98.50	60	120	
Sc (IS)	45	2	HMI He	579478	0.87	621989	93.17	60	120	
Sc (IS)	45	3	No Gas	24258691	0.47	23999890	101.08	60	120	
Ge Internal Standard	72	1	HMI H2	5911668	1.06	5840960	101.21	60	120	
Ge Internal Standard	72	2	HMI He	638107	0.30	667191	95.64	60	120	
In Internal Standard	115	2	HMI He	2213472	0.87	2291045	96.61	60	120	
Ho-165	165	2	HMI He	10805865	0.97	10885907	99.26	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	275_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:23:37-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-41.006	ppb	-0.6	2477191	10	
Be	9	1	6	0.025	ppb	173.2	7	0.5	
B	11	1	6	-0.545	ppb	-108.5	1047	0.5	
Na	23	1	45	-274.524	ppb	-0.8	269907	25	
Na	23	2	45	-271.677	ppb	-0.8	18415	25	
Mg	24	2	45	9.526	ppb	15.8	1353	25	
Al	27	2	45	0.241	ppb	800.1	77	15	
K	39	1	45	-90.647	ppb	-67.8	6922417	50	
K	39	2	45	-8.116	ppb	-73.0	10604	50	
Ca	40	1	45	7.999	ppb	5.2	84728	50	
Ca	44	2	45	8.131	ppb	177.9	57	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.758	ppb	-5.8	1700	1	
Cr	52	2	72	-0.003	ppb	-1540.2	193	1	
Mn	55	2	72	-0.061	ppb	-28.6	57	0.5	
Fe	57	2	72	6.792	ppb	60.7	163	25	
Co	59	2	72	0.023	ppb	104.9	47	0.5	
Ni	60	2	72	-0.071	ppb	-98.9	70	1	
Cu	63	2	72	-0.007	ppb	-1079.7	650	1	
Zn	66	2	72	0.171	ppb	68.5	223	5	
As	75	2	72	-0.059	ppb	-122.1	15	1	
Se	78	1	72	-0.002	ppb	-4880.8	8	1	
Sr	88	2	72	0.030	ppb	135.7	47	0.5	
Zr	90	2	72	1.801	ppb	652.0	43	1	>RL
Nb	93	2	72	6.848	ppb	11.0	12326	2	>RL
Mo	95	2	115	0.122	ppb	59.9	153	0.5	
Pd	105	2	115	0.067	ppb	21.6	53	1	
Ag	107	2	115	0.004	ppb	361.8	40	1	
Cd	111	2	115	0.000	ppb	#DIV/0!	0	0.5	
Sn	120	2	115	0.223	ppb	60.6	263	1	
Sb	121	2	115	0.527	ppb	23.8	327	0.6	
Ba	137	2	115	-0.044	ppb	-163.8	17	0.5	
W	182	2	165	0.296	ppb	12.1	1463	1	
Pt	195	2	165	0.008	ppb	59.8	40	1	
Tl	205	2	165	0.028	ppb	54.6	220	0.1	
Pb	208	2	165	0.053	ppb	57.7	940	0.5	
Th	232	2	165	0.106	ppb	0.5	1117	1	
U	238	2	165	0.049	ppb	15.4	527	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	781868	1.39	842608	92.79	60	120	
Sc (IS)	45	1	HMI H2	15848527	1.91	15887657	99.75	60	120	
Sc (IS)	45	2	HMI He	583510	1.31	621989	93.81	60	120	
Sc (IS)	45	3	No Gas	24934600	0.46	23999890	103.89	60	120	
Ge Internal Standard	72	1	HMI H2	5975202	1.38	5840960	102.30	60	120	
Ge Internal Standard	72	2	HMI He	642210	0.66	667191	96.26	60	120	
In Internal Standard	115	2	HMI He	2255090	1.11	2291045	98.43	60	120	
Ho-165	165	2	HMI He	10724806	0.60	10885907	98.52	60	120	

Sample Report

Sample Table

Sample Name	280-116306-a-5-c@50
Data File Name	276SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:27:24-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-35.952	ppb	-35.952	-15.19	104175	500000	
Li	7	2	45	-16.622	ppb	-16.622	-63.97	5551	500000	
Li	7	3	45	-35.733	ppb	-35.733	-11.86	2433380	50000	
Be	9	1	6	0.441	ppb	0.441	17.24	117	2000	
B	11	1	6	0.559	ppb	0.559	34.70	1340	2000	
Na	23	1	45	-191.643	ppb	-191.643	-0.97	459205	2000	
Na	23	2	45	-188.813	ppb	-188.813	-3.96	30155	400000	
Mg	24	2	45	11889.669	ppb	11889.669	5.26	791406	400000	
Al	27	2	45	8817.567	ppb	8817.567	4.79	164985	400000	
K	39	1	45	2114.357	ppb	2114.357	1.84	11764904	400000	
K	39	2	45	2184.539	ppb	2184.539	4.07	84992	400000	
Ca	40	1	45	14285.214	ppb	14285.214	0.91	45883741	400000	
Ca	44	2	45	14114.155	ppb	14114.155	5.32	26909	400000	
Ti	47	2	45	384.909	ppb	384.909	12.69	5928	4000	
V	51	2	72	26.649	ppb	26.649	2.02	18649	2000	
Cr	52	2	72	81.416	ppb	81.416	3.26	63322	5000	
Mn	55	2	72	449.663	ppb	449.663	3.19	146019	10000	
Fe	57	2	72	18969.778	ppb	18969.778	3.11	281353	400000	
Co	59	2	72	14.090	ppb	14.090	3.20	18689	2000	
Ni	60	2	72	94.728	ppb	94.728	4.05	34596	5000	
Cu	63	2	72	75.898	ppb	75.898	5.05	77387	5000	
Zn	66	2	72	69.993	ppb	69.993	6.14	10011	5000	
As	75	2	72	17.734	ppb	17.734	1.06	1699	2000	
Se	78	1	72	0.225	ppb	0.225	69.88	40	2000	
Sr	88	2	72	25.945	ppb	25.945	2.76	9560	4000	
Zr	90	2	72	405.067	ppb	405.067	17.43	1757	1000	
Nb	93	2	72	4.479	ppb	4.479	13.45	8106	200	
Mo	95	2	115	0.617	ppb	0.617	41.52	397	2000	
Pd	105	2	115	0.013	ppb	0.013	100.09	10	100	
Ag	107	2	115	9.635	ppb	9.635	5.43	15980	100	
Cd	111	2	115	1.688	ppb	1.688	29.98	377	2000	
Sn	120	2	115	0.616	ppb	0.616	13.10	503	2000	
Sb	121	2	115	0.655	ppb	0.655	38.80	380	1000	
Ba	137	2	115	205.207	ppb	205.207	4.94	41875	5000	
W	182	2	165	4.926	ppb	4.926	4.97	13694	100	
Pt	195	2	165	-0.005	ppb	-0.005	-58.87	13	100	
Tl	205	2	165	0.263	ppb	0.263	9.17	1423	2000	
Pb	208	2	165	84.924	ppb	84.924	3.02	579856	5000	
Th	232	2	165	2.775	ppb	2.775	3.95	23292	2000	
U	238	2	165	0.323	ppb	0.323	4.35	2974	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	781188	0.81	842608	92.71	60	120	
Sc (IS)	45	1	HMI H2	15986224	0.76	15887657	100.62	60	120	
Sc (IS)	45	2	HMI He	574252	2.82	621989	92.33	60	120	
Sc (IS)	45	3	No Gas	24113095	0.38	23999890	100.47	60	120	
Ge Internal Standard	72	1	HMI H2	5985224	0.49	5840960	102.47	60	120	
Ge Internal Standard	72	2	HMI He	630414	2.27	667191	94.49	60	120	
In Internal Standard	115	2	HMI He	2145969	2.49	2291045	93.67	60	120	
Ho-165	165	2	HMI He	10663155	2.16	10885907	97.95	60	120	

Sample Report

Sample Table

Sample Name	280-116306-a-6-c@50
Data File Name	277SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:31:12-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-35.440	ppb	-35.440	-10.70	102347	500000	
Li	7	2	45	-18.913	ppb	-18.913	-148.30	5558	500000	
Li	7	3	45	-32.235	ppb	-32.235	-21.19	2454949	50000	
Be	9	1	6	0.374	ppb	0.374	40.85	97	2000	
B	11	1	6	0.352	ppb	0.352	151.83	1253	2000	
Na	23	1	45	-202.727	ppb	-202.727	-0.84	425977	2000	
Na	23	2	45	-202.672	ppb	-202.672	-3.63	28351	400000	
Mg	24	2	45	11827.797	ppb	11827.797	0.53	793693	400000	
Al	27	2	45	8129.674	ppb	8129.674	1.80	153333	400000	
K	39	1	45	2011.565	ppb	2011.565	2.82	11323399	400000	
K	39	2	45	2055.366	ppb	2055.366	1.88	81224	400000	
Ca	40	1	45	15464.950	ppb	15464.950	1.15	48725833	400000	
Ca	44	2	45	14927.386	ppb	14927.386	3.67	28686	400000	
Ti	47	2	45	344.073	ppb	344.073	6.81	5351	4000	
V	51	2	72	23.580	ppb	23.580	2.38	16744	2000	
Cr	52	2	72	71.836	ppb	71.836	0.89	55908	5000	
Mn	55	2	72	420.586	ppb	420.586	1.83	136615	10000	
Fe	57	2	72	17838.155	ppb	17838.155	1.11	264639	400000	
Co	59	2	72	13.709	ppb	13.709	3.00	18189	2000	
Ni	60	2	72	82.039	ppb	82.039	1.06	29985	5000	
Cu	63	2	72	82.346	ppb	82.346	0.70	83950	5000	
Zn	66	2	72	82.242	ppb	82.242	5.72	11735	5000	
As	75	2	72	19.193	ppb	19.193	0.25	1837	2000	
Se	78	1	72	0.028	ppb	0.028	100.97	12	2000	
Sr	88	2	72	26.601	ppb	26.601	3.77	9801	4000	
Zr	90	2	72	355.573	ppb	355.573	13.54	1550	1000	
Nb	93	2	72	2.895	ppb	2.895	11.93	5465	200	
Mo	95	2	115	0.543	ppb	0.543	29.95	360	2000	
Pd	105	2	115	0.017	ppb	0.017	43.53	13	100	
Ag	107	2	115	9.861	ppb	9.861	3.84	16490	100	
Cd	111	2	115	1.997	ppb	1.997	18.24	450	2000	
Sn	120	2	115	0.527	ppb	0.527	55.34	450	2000	
Sb	121	2	115	0.457	ppb	0.457	19.27	273	1000	
Ba	137	2	115	209.758	ppb	209.758	2.10	43162	5000	
W	182	2	165	6.039	ppb	6.039	1.88	16811	100	
Pt	195	2	165	-0.008	ppb	-0.008	-35.26	7	100	
Tl	205	2	165	0.248	ppb	0.248	7.22	1357	2000	
Pb	208	2	165	101.049	ppb	101.049	0.90	696908	5000	
Th	232	2	165	2.743	ppb	2.743	2.34	23262	2000	
U	238	2	165	0.345	ppb	0.345	5.27	3197	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	761896	1.02	842608	90.42	60	120	
Sc (IS)	45	1	HMI H2	15683716	0.98	15887657	98.72	60	120	
Sc (IS)	45	2	HMI He	578377	1.00	621989	92.99	60	120	
Sc (IS)	45	3	No Gas	24079135	0.67	23999890	100.33	60	120	
Ge Internal Standard	72	1	HMI H2	5890716	1.05	5840960	100.85	60	120	
Ge Internal Standard	72	2	HMI He	630274	0.27	667191	94.47	60	120	
In Internal Standard	115	2	HMI He	2162139	0.28	2291045	94.37	60	120	
Ho-165	165	2	HMI He	10767736	0.33	10885907	98.91	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-7-C@50
Data File Name	278SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:34:59-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-38.023	ppb	-38.023	-7.03	102048	500000	
Li	7	2	45	-2.868	ppb	-2.868	-327.04	5748	500000	
Li	7	3	45	-31.990	ppb	-31.990	-10.12	2461213	50000	
Be	9	1	6	0.530	ppb	0.530	22.08	137	2000	
B	11	1	6	-0.228	ppb	-0.228	-60.42	1103	2000	
Na	23	1	45	-204.266	ppb	-204.266	-0.75	424490	2000	
Na	23	2	45	-202.987	ppb	-202.987	-2.54	27967	400000	
Mg	24	2	45	11848.185	ppb	11848.185	1.04	785412	400000	
Al	27	2	45	8487.246	ppb	8487.246	0.13	158147	400000	
K	39	1	45	1937.867	ppb	1937.867	1.85	11217629	400000	
K	39	2	45	2049.347	ppb	2049.347	2.38	80048	400000	
Ca	40	1	45	15328.954	ppb	15328.954	0.60	48519308	400000	
Ca	44	2	45	15237.763	ppb	15237.763	1.02	28930	400000	
Ti	47	2	45	374.488	ppb	374.488	3.53	5751	4000	
V	51	2	72	24.656	ppb	24.656	3.71	17208	2000	
Cr	52	2	72	77.633	ppb	77.633	0.83	59706	5000	
Mn	55	2	72	430.267	ppb	430.267	1.14	138147	10000	
Fe	57	2	72	18586.400	ppb	18586.400	0.29	272556	400000	
Co	59	2	72	13.884	ppb	13.884	1.02	18209	2000	
Ni	60	2	72	86.397	ppb	86.397	1.81	31208	5000	
Cu	63	2	72	112.593	ppb	112.593	0.22	113230	5000	
Zn	66	2	72	96.577	ppb	96.577	5.80	13590	5000	
As	75	2	72	20.608	ppb	20.608	2.14	1948	2000	
Se	78	1	72	0.097	ppb	0.097	138.86	21	2000	
Sr	88	2	72	27.299	ppb	27.299	1.79	9941	4000	
Zr	90	2	72	371.766	ppb	371.766	9.10	1600	1000	
Nb	93	2	72	2.157	ppb	2.157	16.10	4178	200	
Mo	95	2	115	0.659	ppb	0.659	19.28	423	2000	
Pd	105	2	115	0.021	ppb	0.021	123.22	17	100	
Ag	107	2	115	14.956	ppb	14.956	2.40	25197	100	
Cd	111	2	115	2.619	ppb	2.619	18.52	597	2000	
Sn	120	2	115	0.333	ppb	0.333	15.87	327	2000	
Sb	121	2	115	0.698	ppb	0.698	19.20	413	1000	
Ba	137	2	115	228.550	ppb	228.550	2.82	47396	5000	
W	182	2	165	6.709	ppb	6.709	0.40	18537	100	
Pt	195	2	165	0.005	ppb	0.005	147.62	33	100	
Tl	205	2	165	0.262	ppb	0.262	11.86	1423	2000	
Pb	208	2	165	133.253	ppb	133.253	0.26	915723	5000	
Th	232	2	165	2.553	ppb	2.553	1.24	21596	2000	
U	238	2	165	0.315	ppb	0.315	8.11	2917	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	762167	0.62	842608	90.45	60	120	
Sc (IS)	45	1	HMI H2	15754980	0.69	15887657	99.16	60	120	
Sc (IS)	45	2	HMI He	571362	0.60	621989	91.86	60	120	
Sc (IS)	45	3	No Gas	24121621	0.23	23999890	100.51	60	120	
Ge Internal Standard	72	1	HMI H2	5868991	0.85	5840960	100.48	60	120	
Ge Internal Standard	72	2	HMI He	623004	0.45	667191	93.38	60	120	
In Internal Standard	115	2	HMI He	2180125	2.42	2291045	95.16	60	120	
Ho-165	165	2	HMI He	10731336	0.28	10885907	98.58	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-8-C@50
Data File Name	279SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:38:47-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-37.872	ppb	-37.872	-17.78	101078	500000	
Li	7	2	45	-18.551	ppb	-18.551	-49.68	5455	500000	
Li	7	3	45	-33.805	ppb	-33.805	-1.03	2439891	50000	
Be	9	1	6	0.426	ppb	0.426	70.89	110	2000	
B	11	1	6	-0.188	ppb	-0.188	-106.40	1113	2000	
Na	23	1	45	-213.437	ppb	-213.437	-0.42	400078	2000	
Na	23	2	45	-210.150	ppb	-210.150	-2.09	26735	400000	
Mg	24	2	45	11486.004	ppb	11486.004	0.90	755785	400000	
Al	27	2	45	7413.755	ppb	7413.755	1.23	137122	400000	
K	39	1	45	1774.254	ppb	1774.254	0.79	10759893	400000	
K	39	2	45	1854.177	ppb	1854.177	2.81	72891	400000	
Ca	40	1	45	16225.683	ppb	16225.683	0.75	50844321	400000	
Ca	44	2	45	15422.658	ppb	15422.658	3.14	29066	400000	
Ti	47	2	45	319.715	ppb	319.715	1.71	4874	4000	
V	51	2	72	19.834	ppb	19.834	5.21	14381	2000	
Cr	52	2	72	61.908	ppb	61.908	1.25	48068	5000	
Mn	55	2	72	399.878	ppb	399.878	0.93	129511	10000	
Fe	57	2	72	15707.741	ppb	15707.741	1.68	232356	400000	
Co	59	2	72	11.204	ppb	11.204	1.65	14825	2000	
Ni	60	2	72	71.837	ppb	71.837	2.64	26191	5000	
Cu	63	2	72	92.036	ppb	92.036	1.09	93481	5000	
Zn	66	2	72	92.286	ppb	92.286	0.30	13107	5000	
As	75	2	72	23.011	ppb	23.011	1.83	2192	2000	
Se	78	1	72	0.086	ppb	0.086	57.55	20	2000	
Sr	88	2	72	25.878	ppb	25.878	1.76	9507	4000	
Zr	90	2	72	334.787	ppb	334.787	17.44	1457	1000	
Nb	93	2	72	1.640	ppb	1.640	16.09	3351	200	
Mo	95	2	115	0.574	ppb	0.574	18.33	373	2000	
Pd	105	2	115	0.017	ppb	0.017	113.26	13	100	
Ag	107	2	115	12.958	ppb	12.958	2.91	21544	100	
Cd	111	2	115	2.375	ppb	2.375	15.32	533	2000	
Sn	120	2	115	3.863	ppb	3.863	7.80	2604	2000	
Sb	121	2	115	5.141	ppb	5.141	6.99	2900	1000	
Ba	137	2	115	224.733	ppb	224.733	2.93	45988	5000	
W	182	2	165	6.795	ppb	6.795	1.69	18644	100	
Pt	195	2	165	-0.006	ppb	-0.006	-78.58	10	100	
Tl	205	2	165	0.268	ppb	0.268	12.28	1443	2000	
Pb	208	2	165	361.733	ppb	361.733	0.44	2468710	5000	
Th	232	2	165	2.390	ppb	2.390	0.71	20103	2000	
U	238	2	165	0.283	ppb	0.283	9.89	2617	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	761984	0.46	842608	90.43	60	120	
Sc (IS)	45	1	HMI H2	15597587	0.83	15887657	98.17	60	120	
Sc (IS)	45	2	HMI He	567120	0.60	621989	91.18	60	120	
Sc (IS)	45	3	No Gas	24040160	0.68	23999890	100.17	60	120	
Ge Internal Standard	72	1	HMI H2	5873925	1.45	5840960	100.56	60	120	
Ge Internal Standard	72	2	HMI He	628432	0.19	667191	94.19	60	120	
In Internal Standard	115	2	HMI He	2150679	1.79	2291045	93.87	60	120	
Ho-165	165	2	HMI He	10661704	0.62	10885907	97.94	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-12-C@50
Data File Name	280SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:42:35-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-36.444	ppb	-36.444	-7.60	101541	500000	
Li	7	2	45	8.367	ppb	8.367	222.73	5951	500000	
Li	7	3	45	-37.482	ppb	-37.482	-12.48	2454809	50000	
Be	9	1	6	0.271	ppb	0.271	79.31	70	2000	
B	11	1	6	8.462	ppb	8.462	16.75	3354	2000	
Na	23	1	45	52.372	ppb	52.372	3.03	985340	2000	
Na	23	2	45	49.111	ppb	49.111	17.12	64701	400000	
Mg	24	2	45	6631.485	ppb	6631.485	1.34	441798	400000	
Al	27	2	45	8681.349	ppb	8681.349	1.90	162442	400000	
K	39	1	45	2033.367	ppb	2033.367	2.06	11312511	400000	
K	39	2	45	2077.834	ppb	2077.834	2.17	81348	400000	
Ca	40	1	45	8758.223	ppb	8758.223	0.34	27482651	400000	
Ca	44	2	45	8612.832	ppb	8612.832	3.70	16437	400000	
Ti	47	2	45	380.930	ppb	380.930	7.67	5871	4000	
V	51	2	72	28.416	ppb	28.416	2.93	19844	2000	
Cr	52	2	72	92.154	ppb	92.154	1.86	72048	5000	
Mn	55	2	72	299.673	ppb	299.673	2.26	97871	10000	
Fe	57	2	72	22988.989	ppb	22988.989	0.59	342807	400000	
Co	59	2	72	12.017	ppb	12.017	0.76	16029	2000	
Ni	60	2	72	91.191	ppb	91.191	1.31	33496	5000	
Cu	63	2	72	217.287	ppb	217.287	0.07	221618	5000	
Zn	66	2	72	150.450	ppb	150.450	2.18	21420	5000	
As	75	2	72	199.586	ppb	199.586	0.48	19008	2000	
Se	78	1	72	0.171	ppb	0.171	83.15	32	2000	
Sr	88	2	72	32.710	ppb	32.710	5.34	12102	4000	
Zr	90	2	72	325.905	ppb	325.905	13.31	1430	1000	
Nb	93	2	72	1.037	ppb	1.037	18.80	2364	200	
Mo	95	2	115	1.681	ppb	1.681	11.34	943	2000	
Pd	105	2	115	0.026	ppb	0.026	85.29	20	100	
Ag	107	2	115	14.060	ppb	14.060	5.84	23624	100	
Cd	111	2	115	7.154	ppb	7.154	11.24	1624	2000	
Sn	120	2	115	1.486	ppb	1.486	24.45	1080	2000	
Sb	121	2	115	1.623	ppb	1.623	14.77	937	1000	
Ba	137	2	115	157.250	ppb	157.250	1.82	32550	5000	
W	182	2	165	3.232	ppb	3.232	7.54	9274	100	
Pt	195	2	165	-0.003	ppb	-0.003	-329.98	17	100	
Tl	205	2	165	0.249	ppb	0.249	9.29	1357	2000	
Pb	208	2	165	826.671	ppb	826.671	1.17	5673844	5000	
Th	232	2	165	2.267	ppb	2.267	2.52	19188	2000	
U	238	2	165	0.323	ppb	0.323	3.63	2984	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	761992	0.45	842608	90.43	60	120	
Sc (IS)	45	1	HMI H2	15604542	0.75	15887657	98.22	60	120	
Sc (IS)	45	2	HMI He	573883	1.87	621989	92.27	60	120	
Sc (IS)	45	3	No Gas	24452438	0.66	23999890	101.89	60	120	
Ge Internal Standard	72	1	HMI H2	5903548	1.22	5840960	101.07	60	120	
Ge Internal Standard	72	2	HMI He	633570	0.80	667191	94.96	60	120	
In Internal Standard	115	2	HMI He	2174672	1.41	2291045	94.92	60	120	
Ho-165	165	2	HMI He	10723542	0.34	10885907	98.51	60	120	

Sample Report

Sample Table

Sample Name	280-116306-B-13-B@50
Data File Name	281SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:46:23-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-32.337	ppb	-32.337	-20.34	104284	500000	
Li	7	2	45	-22.071	ppb	-22.071	-121.49	5601	500000	
Li	7	3	45	-34.501	ppb	-34.501	-11.01	2554337	50000	
Be	9	1	6	0.317	ppb	0.317	14.36	83	2000	
B	11	1	6	10.314	ppb	10.314	7.15	3914	2000	
Na	23	1	45	106.546	ppb	106.546	3.67	1121242	2000	
Na	23	2	45	74.798	ppb	74.798	15.22	70180	400000	
Mg	24	2	45	6951.432	ppb	6951.432	0.94	474880	400000	
Al	27	2	45	9602.799	ppb	9602.799	0.56	184279	400000	
K	39	1	45	2270.242	ppb	2270.242	1.25	11991760	400000	
K	39	2	45	2329.477	ppb	2329.477	2.05	92211	400000	
Ca	40	1	45	7152.286	ppb	7152.286	0.70	22791656	400000	
Ca	44	2	45	7181.380	ppb	7181.380	4.69	14067	400000	
Ti	47	2	45	426.679	ppb	426.679	6.99	6752	4000	
V	51	2	72	33.209	ppb	33.209	3.10	23279	2000	
Cr	52	2	72	105.775	ppb	105.775	0.57	84297	5000	
Mn	55	2	72	293.235	ppb	293.235	1.40	97667	10000	
Fe	57	2	72	30405.640	ppb	30405.640	0.21	462371	400000	
Co	59	2	72	12.655	ppb	12.655	2.16	17214	2000	
Ni	60	2	72	90.888	ppb	90.888	0.64	34044	5000	
Cu	63	2	72	238.547	ppb	238.547	0.73	248050	5000	
Zn	66	2	72	164.764	ppb	164.764	2.23	23901	5000	
As	75	2	72	256.677	ppb	256.677	1.13	24922	2000	
Se	78	1	72	0.150	ppb	0.150	76.04	29	2000	
Sr	88	2	72	34.292	ppb	34.292	4.84	12940	4000	
Zr	90	2	72	375.710	ppb	375.710	3.32	1677	1000	
Nb	93	2	72	1.030	ppb	1.030	6.21	2397	200	
Mo	95	2	115	1.030	ppb	1.030	16.49	623	2000	
Pd	105	2	115	0.017	ppb	0.017	86.61	13	100	
Ag	107	2	115	7.845	ppb	7.845	5.74	13480	100	
Cd	111	2	115	7.098	ppb	7.098	1.63	1644	2000	
Sn	120	2	115	1.734	ppb	1.734	14.75	1267	2000	
Sb	121	2	115	1.651	ppb	1.651	21.20	973	1000	
Ba	137	2	115	167.367	ppb	167.367	0.72	35380	5000	
W	182	2	165	5.131	ppb	5.131	2.53	14485	100	
Pt	195	2	165	-0.002	ppb	-0.002	-302.71	20	100	
Tl	205	2	165	0.300	ppb	0.300	12.31	1637	2000	
Pb	208	2	165	1148.668	ppb	1148.668	1.16	7971380	5000	
Th	232	2	165	2.516	ppb	2.516	5.46	21505	2000	
U	238	2	165	0.327	ppb	0.327	0.32	3061	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	777774	0.56	842608	92.31	60	120	
Sc (IS)	45	1	HMI H2	15839217	0.50	15887657	99.70	60	120	
Sc (IS)	45	2	HMI He	588452	0.97	621989	94.61	60	120	
Sc (IS)	45	3	No Gas	25221755	1.25	23999890	105.09	60	120	
Ge Internal Standard	72	1	HMI H2	5977051	0.74	5840960	102.33	60	120	
Ge Internal Standard	72	2	HMI He	646112	0.32	667191	96.84	60	120	
In Internal Standard	115	2	HMI He	2221015	1.12	2291045	96.94	60	120	
Ho-165	165	2	HMI He	10843473	0.68	10885907	99.61	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	282_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:50:08-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	400.563	ppb	0.588	238299	500	80.1	90	110	>+\-10%
Li	7	2	45	406.954	ppb	9.885	12796	500	81.4	90	110	>+\-10%
Li	7	3	45	392.122	ppb	0.415	5744149	500	78.4	90	110	>+\-10%
Be	9	1	6	49.559	ppb	0.960	13060	50	99.1	90	110	
B	11	1	6	37.910	ppb	7.884	11221	50	75.8	90	110	>+\-10%
Na	23	1	45	4476.397	ppb	0.341	11138984	5000	89.5	90	110	>+\-10%
Na	23	2	45	4496.419	ppb	0.600	733207	5000	89.9	90	110	>+\-10%
Mg	24	2	45	4838.448	ppb	0.693	332739	5000	96.8	90	110	
Al	27	2	45	4849.446	ppb	1.037	93648	5000	97.0	90	110	
K	39	1	45	4897.952	ppb	0.694	18048653	5000	98.0	90	110	
K	39	2	45	5144.129	ppb	1.083	191484	5000	102.9	90	110	
Ca	40	1	45	4966.924	ppb	0.225	16216366	5000	99.3	90	110	
Ca	44	2	45	5031.023	ppb	3.347	9924	5000	100.6	90	110	
Ti	47	2	45	48.404	ppb	17.879	770	50	96.8	90	110	
V	51	2	72	48.358	ppb	1.385	33209	50	96.7	90	110	
Cr	52	2	72	50.410	ppb	1.739	40658	50	100.8	90	110	
Mn	55	2	72	50.100	ppb	4.171	16907	50	100.2	90	110	
Fe	57	2	72	4956.432	ppb	0.938	76143	5000	99.1	90	110	
Co	59	2	72	50.455	ppb	0.940	69232	50	100.9	90	110	
Ni	60	2	72	51.002	ppb	2.944	19330	50	102.0	90	110	
Cu	63	2	72	50.779	ppb	3.373	53824	50	101.6	90	110	
Zn	66	2	72	52.035	ppb	9.768	7756	50	104.1	90	110	
As	75	2	72	50.167	ppb	1.461	4934	50	100.3	90	110	
Se	78	1	72	49.946	ppb	4.261	7151	50	99.9	90	110	
Sr	88	2	72	48.970	ppb	1.384	18640	50	97.9	90	110	
Zr	90	2	72	305.636	ppb	10.260	1383	50	611.3	90	110	>+\-10%
Nb	93	2	72	87.417	ppb	1.920	152294	100	87.4	90	110	>+\-10%
Mo	95	2	115	48.919	ppb	0.818	25761	50	97.8	90	110	
Pd	105	2	115	53.641	ppb	0.540	42485	50	107.3	90	110	
Ag	107	2	115	49.769	ppb	0.548	86003	50	99.5	90	110	
Cd	111	2	115	52.247	ppb	1.213	12186	50	104.5	90	110	
Sn	120	2	115	48.857	ppb	0.404	32973	50	97.7	90	110	
Sb	121	2	115	50.447	ppb	1.959	29445	50	100.9	90	110	
Ba	137	2	115	49.725	ppb	2.424	10608	50	99.5	90	110	
W	182	2	165	48.500	ppb	1.336	131509	50	97.0	90	110	
Pt	195	2	165	48.827	ppb	0.882	105543	50	97.7	90	110	
Tl	205	2	165	49.358	ppb	0.917	257349	50	98.7	90	110	
Pb	208	2	165	49.242	ppb	0.865	343257	50	98.5	90	110	
Th	232	2	165	48.098	ppb	0.621	408085	50	96.2	90	110	
U	238	2	165	48.034	ppb	0.457	437275	50	96.1	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	778720	1.11	842608	92.42	60	120	
Sc (IS)	45	1	HMI H2	16209279	1.12	15887657	102.02	60	120	
Sc (IS)	45	2	HMI He	591974	0.71	621989	95.17	60	120	
Sc (IS)	45	3	No Gas	25157054	0.55	23999890	104.82	60	120	
Ge Internal Standard	72	1	HMI H2	6078586	1.50	5840960	104.07	60	120	
Ge Internal Standard	72	2	HMI He	652261	0.57	667191	97.76	60	120	
In Internal Standard	115	2	HMI He	2237552	0.29	2291045	97.67	60	120	
Ho-165	165	2	HMI He	10874117	0.46	10885907	99.89	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	283_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:53:55-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-44.778	ppb	-6.7	2456657	10	
Be	9	1	6	0.049	ppb	173.2	13	0.5	
B	11	1	6	-0.866	ppb	-33.2	970	0.5	
Na	23	1	45	-282.332	ppb	-0.4	256770	25	
Na	23	2	45	-277.565	ppb	-0.1	17775	25	
Mg	24	2	45	6.344	ppb	20.2	1153	25	
Al	27	2	45	-0.314	ppb	-101.4	67	15	
K	39	1	45	-96.219	ppb	-54.7	7027730	50	
K	39	2	45	-17.473	ppb	-92.3	10418	50	
Ca	40	1	45	8.841	ppb	11.0	88919	50	
Ca	44	2	45	16.397	ppb	72.8	73	25	
Ti	47	2	45	0.000	ppb	#DIV/0!	0	0.5	
V	51	2	72	-0.470	ppb	-19.4	1904	1	
Cr	52	2	72	-0.081	ppb	-96.5	133	1	
Mn	55	2	72	-0.014	ppb	-1063.4	73	0.5	
Fe	57	2	72	5.557	ppb	28.8	147	25	
Co	59	2	72	0.010	ppb	71.8	30	0.5	
Ni	60	2	72	-0.020	ppb	-395.3	90	1	
Cu	63	2	72	-0.078	ppb	-139.2	583	1	
Zn	66	2	72	0.132	ppb	237.3	220	5	
As	75	2	72	-0.068	ppb	-110.9	14	1	
Se	78	1	72	0.073	ppb	144.9	19	1	
Sr	88	2	72	-0.024	ppb	-227.2	27	0.5	
Zr	90	2	72	1.796	ppb	738.6	43	1	>RL
Nb	93	2	72	6.820	ppb	13.9	12413	2	>RL
Mo	95	2	115	0.099	ppb	57.3	140	0.5	
Pd	105	2	115	0.067	ppb	39.6	53	1	
Ag	107	2	115	0.006	ppb	144.7	43	1	
Cd	111	2	115	0.071	ppb	92.0	17	0.5	
Sn	120	2	115	0.127	ppb	79.2	197	1	
Sb	121	2	115	0.365	ppb	12.4	230	0.6	
Ba	137	2	115	-0.028	ppb	-170.7	20	0.5	
W	182	2	165	0.214	ppb	16.6	1250	1	
Pt	195	2	165	0.008	ppb	59.5	40	1	
Tl	205	2	165	0.019	ppb	51.7	173	0.1	
Pb	208	2	165	0.108	ppb	5.0	1323	0.5	
Th	232	2	165	0.078	ppb	14.4	887	1	
U	238	2	165	0.046	ppb	22.0	507	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	787876	1.73	842608	93.50	60	120	
Sc (IS)	45	1	HMI H2	16116105	1.47	15887657	101.44	60	120	
Sc (IS)	45	2	HMI He	591061	0.57	621989	95.03	60	120	
Sc (IS)	45	3	No Gas	25010656	0.21	23999890	104.21	60	120	
Ge Internal Standard	72	1	HMI H2	6014785	1.42	5840960	102.98	60	120	
Ge Internal Standard	72	2	HMI He	649442	0.66	667191	97.34	60	120	
In Internal Standard	115	2	HMI He	2245066	0.71	2291045	97.99	60	120	
Ho-165	165	2	HMI He	10767875	0.21	10885907	98.92	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-14-B@50
Data File Name	284SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T06:57:44-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-41.599	ppb	-41.599	-12.37	103448	500000	
Li	7	2	45	-13.210	ppb	-13.210	-18.84	5755	500000	
Li	7	3	45	-33.126	ppb	-33.126	-3.47	2512222	50000	
Be	9	1	6	0.378	ppb	0.378	10.20	100	2000	
B	11	1	6	6.955	ppb	6.955	13.73	3044	2000	
Na	23	1	45	37.460	ppb	37.460	7.36	985036	2000	
Na	23	2	45	47.135	ppb	47.135	13.49	66138	400000	
Mg	24	2	45	7282.352	ppb	7282.352	1.15	498036	400000	
Al	27	2	45	9827.370	ppb	9827.370	1.80	188793	400000	
K	39	1	45	2281.456	ppb	2281.456	0.82	12241830	400000	
K	39	2	45	2299.297	ppb	2299.297	0.78	91256	400000	
Ca	40	1	45	7145.014	ppb	7145.014	0.36	23196866	400000	
Ca	44	2	45	6903.469	ppb	6903.469	0.32	13537	400000	
Ti	47	2	45	406.936	ppb	406.936	6.21	6445	4000	
V	51	2	72	33.581	ppb	33.581	5.50	23600	2000	
Cr	52	2	72	95.800	ppb	95.800	0.38	76648	5000	
Mn	55	2	72	336.144	ppb	336.144	0.86	112357	10000	
Fe	57	2	72	23323.345	ppb	23323.345	0.83	355997	400000	
Co	59	2	72	13.537	ppb	13.537	3.41	18479	2000	
Ni	60	2	72	92.514	ppb	92.514	0.37	34779	5000	
Cu	63	2	72	198.403	ppb	198.403	0.76	207184	5000	
Zn	66	2	72	128.334	ppb	128.334	1.14	18730	5000	
As	75	2	72	164.694	ppb	164.694	1.10	16058	2000	
Se	78	1	72	0.138	ppb	0.138	0.71	28	2000	
Sr	88	2	72	28.112	ppb	28.112	3.11	10654	4000	
Zr	90	2	72	368.206	ppb	368.206	5.38	1650	1000	
Nb	93	2	72	4.493	ppb	4.493	8.60	8380	200	
Mo	95	2	115	1.337	ppb	1.337	27.08	783	2000	
Pd	105	2	115	0.047	ppb	0.047	42.39	37	100	
Ag	107	2	115	12.017	ppb	12.017	5.21	20663	100	
Cd	111	2	115	5.498	ppb	5.498	15.71	1273	2000	
Sn	120	2	115	1.369	ppb	1.369	22.10	1027	2000	
Sb	121	2	115	1.175	ppb	1.175	24.61	697	1000	
Ba	137	2	115	171.129	ppb	171.129	2.95	36226	5000	
W	182	2	165	2.884	ppb	2.884	3.60	8486	100	
Pt	195	2	165	-0.009	ppb	-0.009	-28.56	3	100	
Tl	205	2	165	0.301	ppb	0.301	12.58	1647	2000	
Pb	208	2	165	698.333	ppb	698.333	1.89	4870712	5000	
Th	232	2	165	2.517	ppb	2.517	2.73	21622	2000	
U	238	2	165	0.329	ppb	0.329	9.41	3094	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	782602	0.29	842608	92.88	60	120	
Sc (IS)	45	1	HMI H2	16137027	0.66	15887657	101.57	60	120	
Sc (IS)	45	2	HMI He	589116	0.17	621989	94.71	60	120	
Sc (IS)	45	3	No Gas	24703394	0.60	23999890	102.93	60	120	
Ge Internal Standard	72	1	HMI H2	6069252	0.49	5840960	103.91	60	120	
Ge Internal Standard	72	2	HMI He	648497	0.14	667191	97.20	60	120	
In Internal Standard	115	2	HMI He	2224531	1.07	2291045	97.10	60	120	
Ho-165	165	2	HMI He	10898517	1.01	10885907	100.12	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-C@50
Data File Name	285SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:01:32-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-37.608	ppb	-37.608	-8.69	104471	500000	
Li	7	2	45	-4.358	ppb	-4.358	-403.04	5948	500000	
Li	7	3	45	-35.247	ppb	-35.247	-5.05	2564476	50000	
Be	9	1	6	0.609	ppb	0.609	32.59	160	2000	
B	11	1	6	5.307	ppb	5.307	16.84	2584	2000	
Na	23	1	45	-24.053	ppb	-24.053	-19.73	843653	2000	
Na	23	2	45	-17.946	ppb	-17.946	-60.91	56839	400000	
Mg	24	2	45	6612.280	ppb	6612.280	1.41	455594	400000	
Al	27	2	45	8734.977	ppb	8734.977	3.10	169025	400000	
K	39	1	45	2141.494	ppb	2141.494	1.72	11915440	400000	
K	39	2	45	2245.259	ppb	2245.259	1.19	90028	400000	
Ca	40	1	45	5111.039	ppb	5111.039	0.18	16582992	400000	
Ca	44	2	45	5176.604	ppb	5176.604	4.99	10241	400000	
Ti	47	2	45	438.951	ppb	438.951	7.48	6999	4000	
V	51	2	72	30.273	ppb	30.273	1.81	21610	2000	
Cr	52	2	72	94.675	ppb	94.675	1.73	76153	5000	
Mn	55	2	72	269.851	ppb	269.851	0.87	90699	10000	
Fe	57	2	72	27479.031	ppb	27479.031	1.52	421651	400000	
Co	59	2	72	11.716	ppb	11.716	5.44	16083	2000	
Ni	60	2	72	87.428	ppb	87.428	1.53	33052	5000	
Cu	63	2	72	195.581	ppb	195.581	1.13	205342	5000	
Zn	66	2	72	114.557	ppb	114.557	1.32	16831	5000	
As	75	2	72	215.554	ppb	215.554	2.21	21121	2000	
Se	78	1	72	0.121	ppb	0.121	99.83	25	2000	
Sr	88	2	72	23.062	ppb	23.062	3.87	8796	4000	
Zr	90	2	72	380.092	ppb	380.092	10.89	1710	1000	
Nb	93	2	72	3.058	ppb	3.058	11.82	5938	200	
Mo	95	2	115	0.662	ppb	0.662	22.99	433	2000	
Pd	105	2	115	0.004	ppb	0.004	173.21	3	100	
Ag	107	2	115	19.939	ppb	19.939	2.32	34296	100	
Cd	111	2	115	6.246	ppb	6.246	5.30	1450	2000	
Sn	120	2	115	1.987	ppb	1.987	8.24	1440	2000	
Sb	121	2	115	2.517	ppb	2.517	17.98	1477	1000	
Ba	137	2	115	157.167	ppb	157.167	3.19	33298	5000	
W	182	2	165	8.566	ppb	8.566	3.66	23849	100	
Pt	195	2	165	-0.006	ppb	-0.006	-77.10	10	100	
Tl	205	2	165	0.252	ppb	0.252	21.92	1390	2000	
Pb	208	2	165	1175.811	ppb	1175.811	2.83	8202409	5000	
Th	232	2	165	2.461	ppb	2.461	2.77	21148	2000	
U	238	2	165	0.332	ppb	0.332	13.45	3121	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	775707	1.05	842608	92.06	60	120	
Sc (IS)	45	1	HMI H2	16110219	0.69	15887657	101.40	60	120	
Sc (IS)	45	2	HMI He	593518	1.56	621989	95.42	60	120	
Sc (IS)	45	3	No Gas	25375233	0.33	23999890	105.73	60	120	
Ge Internal Standard	72	1	HMI H2	6045572	1.58	5840960	103.50	60	120	
Ge Internal Standard	72	2	HMI He	652023	1.07	667191	97.73	60	120	
In Internal Standard	115	2	HMI He	2226344	1.26	2291045	97.18	60	120	
Ho-165	165	2	HMI He	10903621	2.03	10885907	100.16	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-Csd@250
Data File Name	286SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:05:19-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-43.722	ppb	-43.722	-12.69	103981	500000	
Li	7	2	45	-20.307	ppb	-20.307	-60.71	5761	500000	
Li	7	3	45	-46.319	ppb	-46.319	-3.18	2525697	50000	
Be	9	1	6	0.050	ppb	0.050	43.75	13	2000	
B	11	1	6	-1.047	ppb	-1.047	-15.23	927	2000	
Na	23	1	45	-239.189	ppb	-239.189	-0.64	359404	2000	
Na	23	2	45	-236.144	ppb	-236.144	-0.70	24428	400000	
Mg	24	2	45	1321.306	ppb	1321.306	0.41	92976	400000	
Al	27	2	45	1778.488	ppb	1778.488	2.10	34996	400000	
K	39	1	45	496.817	ppb	496.817	11.41	8431676	400000	
K	39	2	45	425.045	ppb	425.045	1.08	26405	400000	
Ca	40	1	45	1044.442	ppb	1044.442	0.39	3482382	400000	
Ca	44	2	45	1069.892	ppb	1069.892	18.43	2177	400000	
Ti	47	2	45	85.142	ppb	85.142	14.33	1377	4000	
V	51	2	72	6.163	ppb	6.163	10.50	6282	2000	
Cr	52	2	72	18.860	ppb	18.860	1.23	15629	5000	
Mn	55	2	72	53.634	ppb	53.634	2.05	18443	10000	
Fe	57	2	72	5479.304	ppb	5479.304	1.15	85770	400000	
Co	59	2	72	2.273	ppb	2.273	5.51	3194	2000	
Ni	60	2	72	17.032	ppb	17.032	8.18	6645	5000	
Cu	63	2	72	39.346	ppb	39.346	1.92	42661	5000	
Zn	66	2	72	26.812	ppb	26.812	6.91	4174	5000	
As	75	2	72	42.125	ppb	42.125	3.59	4225	2000	
Se	78	1	72	0.051	ppb	0.051	91.41	16	2000	
Sr	88	2	72	4.297	ppb	4.297	11.94	1700	4000	
Zr	90	2	72	89.013	ppb	89.013	14.97	437	1000	
Nb	93	2	72	1.866	ppb	1.866	19.10	3944	200	
Mo	95	2	115	0.235	ppb	0.235	19.83	217	2000	
Pd	105	2	115	0.045	ppb	0.045	149.90	37	100	
Ag	107	2	115	4.051	ppb	4.051	3.49	7212	100	
Cd	111	2	115	1.501	ppb	1.501	46.81	360	2000	
Sn	120	2	115	0.419	ppb	0.419	24.87	403	2000	
Sb	121	2	115	0.457	ppb	0.457	17.55	290	1000	
Ba	137	2	115	32.105	ppb	32.105	4.32	7035	5000	
W	182	2	165	1.603	ppb	1.603	8.59	5035	100	
Pt	195	2	165	-0.009	ppb	-0.009	-28.60	3	100	
Tl	205	2	165	0.039	ppb	0.039	44.55	283	2000	
Pb	208	2	165	219.606	ppb	219.606	0.68	1535746	5000	
Th	232	2	165	0.500	ppb	0.500	6.38	4494	2000	
U	238	2	165	0.074	ppb	0.074	16.65	770	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	792693	0.52	842608	94.08	60	120	
Sc (IS)	45	1	HMI H2	16324066	1.09	15887657	102.75	60	120	
Sc (IS)	45	2	HMI He	602256	1.26	621989	96.83	60	120	
Sc (IS)	45	3	No Gas	25834333	0.06	23999890	107.64	60	120	
Ge Internal Standard	72	1	HMI H2	6178930	0.85	5840960	105.79	60	120	
Ge Internal Standard	72	2	HMI He	664692	0.36	667191	99.63	60	120	
In Internal Standard	115	2	HMI He	2295788	0.86	2291045	100.21	60	120	
Ho-165	165	2	HMI He	10923291	0.43	10885907	100.34	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-D MS@50
Data File Name	287SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:09:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-33.186	ppb	-33.186	-17.45	109567	500000	
Li	7	2	45	3.683	ppb	3.683	275.10	6288	500000	
Li	7	3	45	-29.855	ppb	-29.855	-5.37	2636184	50000	
Be	9	1	6	4.933	ppb	4.933	7.42	1333	2000	
B	11	1	6	8.284	ppb	8.284	7.87	3471	2000	
Na	23	1	45	494.742	ppb	494.742	1.95	2094365	2000	
Na	23	2	45	454.467	ppb	454.467	1.64	132217	400000	
Mg	24	2	45	6331.072	ppb	6331.072	1.02	451304	400000	
Al	27	2	45	8621.946	ppb	8621.946	0.44	172610	400000	
K	39	1	45	2325.982	ppb	2325.982	1.60	12756633	400000	
K	39	2	45	2339.897	ppb	2339.897	0.92	96566	400000	
Ca	40	1	45	4935.644	ppb	4935.644	1.27	16584846	400000	
Ca	44	2	45	4671.220	ppb	4671.220	5.63	9560	400000	
Ti	47	2	45	418.542	ppb	418.542	6.35	6909	4000	
V	51	2	72	34.605	ppb	34.605	1.17	25326	2000	
Cr	52	2	72	92.446	ppb	92.446	0.86	77245	5000	
Mn	55	2	72	258.266	ppb	258.266	2.37	90159	10000	
Fe	57	2	72	25838.254	ppb	25838.254	0.36	411817	400000	
Co	59	2	72	14.976	ppb	14.976	2.63	21346	2000	
Ni	60	2	72	82.704	ppb	82.704	4.58	32477	5000	
Cu	63	2	72	194.032	ppb	194.032	1.37	211597	5000	
Zn	66	2	72	163.338	ppb	163.338	0.69	24836	5000	
As	75	2	72	208.253	ppb	208.253	1.53	21198	2000	
Se	78	1	72	3.140	ppb	3.140	11.76	473	2000	
Sr	88	2	72	27.578	ppb	27.578	3.43	10915	4000	
Zr	90	2	72	1031.569	ppb	1031.569	6.50	4761	1000	
Nb	93	2	72	1.806	ppb	1.806	8.56	3911	200	
Mo	95	2	115	4.628	ppb	4.628	10.57	2570	2000	
Pd	105	2	115	0.029	ppb	0.029	65.52	23	100	
Ag	107	2	115	15.714	ppb	15.714	1.52	27758	100	
Cd	111	2	115	11.752	ppb	11.752	11.29	2800	2000	
Sn	120	2	115	3.995	ppb	3.995	14.30	2857	2000	
Sb	121	2	115	2.965	ppb	2.965	4.19	1784	1000	
Ba	137	2	115	175.954	ppb	175.954	2.54	38274	5000	
W	182	2	165	9.930	ppb	9.930	0.76	27927	100	
Pt	195	2	165	-0.005	ppb	-0.005	-57.33	13	100	
Tl	205	2	165	4.184	ppb	4.184	3.07	22250	2000	
Pb	208	2	165	924.530	ppb	924.530	1.02	6540778	5000	
Th	232	2	165	6.156	ppb	6.156	1.57	53300	2000	
U	238	2	165	4.236	ppb	4.236	2.08	39288	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	799060	0.95	842608	94.83	60	120	
Sc (IS)	45	1	HMI H2	16683440	1.14	15887657	105.01	60	120	
Sc (IS)	45	2	HMI He	613886	0.65	621989	98.70	60	120	
Sc (IS)	45	3	No Gas	25676459	0.35	23999890	106.99	60	120	
Ge Internal Standard	72	1	HMI H2	6283118	1.06	5840960	107.57	60	120	
Ge Internal Standard	72	2	HMI He	677179	0.37	667191	101.50	60	120	
In Internal Standard	115	2	HMI He	2285512	0.26	2291045	99.76	60	120	
Ho-165	165	2	HMI He	11054335	0.90	10885907	101.55	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-E MSD@50
Data File Name	288SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:12:56-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Pass
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-40.139	ppb	-40.139	-11.81	108576	500000	
Li	7	2	45	-2.731	ppb	-2.731	-676.05	6238	500000	
Li	7	3	45	-29.720	ppb	-29.720	-8.50	2662393	50000	
Be	9	1	6	4.234	ppb	4.234	10.27	1150	2000	
B	11	1	6	8.070	ppb	8.070	1.93	3427	2000	
Na	23	1	45	216.184	ppb	216.184	1.20	1454643	2000	
Na	23	2	45	197.942	ppb	197.942	6.88	93259	400000	
Mg	24	2	45	6540.666	ppb	6540.666	0.39	470779	400000	
Al	27	2	45	8859.317	ppb	8859.317	1.17	179104	400000	
K	39	1	45	2254.396	ppb	2254.396	0.40	12732329	400000	
K	39	2	45	2303.722	ppb	2303.722	0.37	96190	400000	
Ca	40	1	45	5010.510	ppb	5010.510	0.38	17019852	400000	
Ca	44	2	45	5064.493	ppb	5064.493	4.79	10461	400000	
Ti	47	2	45	441.791	ppb	441.791	2.08	7362	4000	
V	51	2	72	36.624	ppb	36.624	1.66	26785	2000	
Cr	52	2	72	96.841	ppb	96.841	0.48	81256	5000	
Mn	55	2	72	278.008	ppb	278.008	0.80	97469	10000	
Fe	57	2	72	28267.937	ppb	28267.937	0.81	452504	400000	
Co	59	2	72	15.924	ppb	15.924	1.86	22796	2000	
Ni	60	2	72	91.909	ppb	91.909	2.36	36239	5000	
Cu	63	2	72	210.630	ppb	210.630	0.79	230631	5000	
Zn	66	2	72	132.519	ppb	132.519	4.91	20279	5000	
As	75	2	72	217.183	ppb	217.183	1.49	22202	2000	
Se	78	1	72	3.746	ppb	3.746	5.33	568	2000	
Sr	88	2	72	27.448	ppb	27.448	3.14	10911	4000	
Zr	90	2	72	1078.599	ppb	1078.599	4.70	4998	1000	
Nb	93	2	72	1.355	ppb	1.355	7.26	3111	200	
Mo	95	2	115	4.405	ppb	4.405	9.91	2510	2000	
Pd	105	2	115	0.012	ppb	0.012	100.61	10	100	
Ag	107	2	115	15.446	ppb	15.446	1.98	27965	100	
Cd	111	2	115	10.733	ppb	10.733	2.54	2620	2000	
Sn	120	2	115	4.729	ppb	4.729	5.48	3447	2000	
Sb	121	2	115	2.990	ppb	2.990	8.00	1844	1000	
Ba	137	2	115	183.141	ppb	183.141	1.18	40832	5000	
W	182	2	165	11.288	ppb	11.288	4.46	31953	100	
Pt	195	2	165	-0.005	ppb	-0.005	-144.00	13	100	
Tl	205	2	165	4.451	ppb	4.451	1.57	23886	2000	
Pb	208	2	165	961.220	ppb	961.220	3.02	6864366	5000	
Th	232	2	165	6.672	ppb	6.672	1.94	58295	2000	
U	238	2	165	4.340	ppb	4.340	1.23	40632	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	802847	1.00	842608	95.28	60	120	
Sc (IS)	45	1	HMI H2	16865035	0.53	15887657	106.15	60	120	
Sc (IS)	45	2	HMI He	619919	0.26	621989	99.67	60	120	
Sc (IS)	45	3	No Gas	25921438	0.93	23999890	108.01	60	120	
Ge Internal Standard	72	1	HMI H2	6344030	1.41	5840960	108.61	60	120	
Ge Internal Standard	72	2	HMI He	680121	0.34	667191	101.94	60	120	
In Internal Standard	115	2	HMI He	2342547	1.14	2291045	102.25	60	120	
Ho-165	165	2	HMI He	11159685	0.98	10885907	102.51	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-15-C pds@50
Data File Name	289SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:16:44-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-44.006	ppb	-44.006	-10.06	107606	500000	
Li	7	2	45	-21.926	ppb	-21.926	-156.76	5838	500000	
Li	7	3	45	-38.946	ppb	-38.946	-2.85	2615678	50000	
Be	9	1	6	198.001	ppb	198.001	1.69	54239	2000	
B	11	1	6	4.610	ppb	4.610	7.74	2504	2000	
Na	23	1	45	-12.600	ppb	-12.600	-33.25	912570	2000	
Na	23	2	45	-8.390	ppb	-8.390	-260.79	60249	400000	
Mg	24	2	45	6492.583	ppb	6492.583	7.12	462283	400000	
Al	27	2	45	10742.427	ppb	10742.427	5.52	214906	400000	
K	39	1	45	2080.985	ppb	2080.985	0.85	12365331	400000	
K	39	2	45	2171.650	ppb	2171.650	5.49	90410	400000	
Ca	40	1	45	4937.674	ppb	4937.674	0.46	16813756	400000	
Ca	44	2	45	4993.044	ppb	4993.044	5.66	10207	400000	
Ti	47	2	45	424.631	ppb	424.631	17.86	6982	4000	
V	51	2	72	239.231	ppb	239.231	6.80	161577	2000	
Cr	52	2	72	308.974	ppb	308.974	6.73	257804	5000	
Mn	55	2	72	470.512	ppb	470.512	5.85	164305	10000	
Fe	57	2	72	28861.532	ppb	28861.532	6.37	460256	400000	
Co	59	2	72	224.540	ppb	224.540	6.49	319998	2000	
Ni	60	2	72	302.188	ppb	302.188	5.81	118489	5000	
Cu	63	2	72	410.212	ppb	410.212	5.97	446858	5000	
Zn	66	2	72	336.648	ppb	336.648	7.40	50981	5000	
As	75	2	72	418.178	ppb	418.178	5.28	42578	2000	
Se	78	1	72	205.011	ppb	205.011	1.49	30424	2000	
Sr	88	2	72	23.626	ppb	23.626	6.98	9360	4000	
Zr	90	2	72	44953.270	ppb	44953.270	6.12	205987	1000	>LDR
Nb	93	2	72	15.890	ppb	15.890	4.91	29315	200	
Mo	95	2	115	210.649	ppb	210.649	8.06	112582	2000	
Pd	105	2	115	0.033	ppb	0.033	19.20	27	100	
Ag	107	2	115	65.280	ppb	65.280	5.49	114854	100	
Cd	111	2	115	220.654	ppb	220.654	6.50	52393	2000	
Sn	120	2	115	210.420	ppb	210.420	5.85	144229	2000	
Sb	121	2	115	214.787	ppb	214.787	6.20	127584	1000	
Ba	137	2	115	365.963	ppb	365.963	6.20	79319	5000	
W	182	2	165	212.651	ppb	212.651	5.78	577740	100	
Pt	195	2	165	0.040	ppb	0.040	42.16	110	100	
Tl	205	2	165	209.887	ppb	209.887	4.78	1100866	2000	
Pb	208	2	165	1358.028	ppb	1358.028	6.00	9507273	5000	
Th	232	2	165	19.417	ppb	19.417	5.59	165899	2000	
U	238	2	165	233.768	ppb	233.768	6.25	2140305	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	809473	0.65	842608	96.07	60	120	
Sc (IS)	45	1	HMI H2	16905585	0.64	15887657	106.41	60	120	
Sc (IS)	45	2	HMI He	614351	3.87	621989	98.77	60	120	
Sc (IS)	45	3	No Gas	26167097	0.60	23999890	109.03	60	120	
Ge Internal Standard	72	1	HMI H2	6304057	1.05	5840960	107.93	60	120	
Ge Internal Standard	72	2	HMI He	678496	3.27	667191	101.69	60	120	
In Internal Standard	115	2	HMI He	2281819	4.12	2291045	99.60	60	120	
Ho-165	165	2	HMI He	10951840	3.04	10885907	100.61	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	290_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:20:32-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	395.365	ppb	1.790	241945	500	79.1	90	110	>+\-10%
Li	7	2	45	418.949	ppb	3.734	13467	500	83.8	90	110	>+\-10%
Li	7	3	45	391.942	ppb	2.517	5898122	500	78.4	90	110	>+\-10%
Be	9	1	6	49.155	ppb	0.626	12996	50	98.3	90	110	
B	11	1	6	40.441	ppb	5.117	11929	50	80.9	90	110	>+\-10%
Na	23	1	45	4486.426	ppb	0.089	11407754	5000	89.7	90	110	>+\-10%
Na	23	2	45	4466.351	ppb	0.171	755158	5000	89.3	90	110	>+\-10%
Mg	24	2	45	4837.703	ppb	0.517	344774	5000	96.8	90	110	
Al	27	2	45	4798.706	ppb	0.400	96040	5000	96.0	90	110	
K	39	1	45	4966.941	ppb	1.449	18600852	5000	99.3	90	110	
K	39	2	45	5088.365	ppb	0.103	196414	5000	101.8	90	110	
Ca	40	1	45	5025.771	ppb	0.358	16769061	5000	100.5	90	110	
Ca	44	2	45	4933.224	ppb	5.895	10087	5000	98.7	90	110	
Ti	47	2	45	49.759	ppb	21.299	820	50	99.5	90	110	
V	51	2	72	48.472	ppb	2.873	34375	50	96.9	90	110	
Cr	52	2	72	50.722	ppb	1.307	42252	50	101.4	90	110	
Mn	55	2	72	51.378	ppb	3.302	17908	50	102.8	90	110	
Fe	57	2	72	5033.678	ppb	0.845	79862	5000	100.7	90	110	
Co	59	2	72	50.807	ppb	0.393	72003	50	101.6	90	110	
Ni	60	2	72	52.164	ppb	2.984	20415	50	104.3	90	110	
Cu	63	2	72	50.744	ppb	0.398	55558	50	101.5	90	110	
Zn	66	2	72	50.388	ppb	5.944	7766	50	100.8	90	110	
As	75	2	72	49.877	ppb	1.448	5067	50	99.8	90	110	
Se	78	1	72	50.097	ppb	2.960	7338	50	100.2	90	110	
Sr	88	2	72	49.260	ppb	5.086	19364	50	98.5	90	110	
Zr	90	2	72	107.529	ppb	17.288	527	50	215.1	90	110	>+\-10%
Nb	93	2	72	83.836	ppb	2.149	150881	100	83.8	90	110	>+\-10%
Mo	95	2	115	49.463	ppb	3.949	26650	50	98.9	90	110	
Pd	105	2	115	52.375	ppb	2.233	42445	50	104.7	90	110	
Ag	107	2	115	49.797	ppb	1.148	88042	50	99.6	90	110	
Cd	111	2	115	49.994	ppb	3.498	11929	50	100.0	90	110	
Sn	120	2	115	48.968	ppb	1.973	33812	50	97.9	90	110	
Sb	121	2	115	49.969	ppb	1.132	29843	50	99.9	90	110	
Ba	137	2	115	49.399	ppb	4.570	10781	50	98.8	90	110	
W	182	2	165	48.109	ppb	0.702	133007	50	96.2	90	110	
Pt	195	2	165	48.596	ppb	0.464	107092	50	97.2	90	110	
Tl	205	2	165	49.085	ppb	1.313	260915	50	98.2	90	110	
Pb	208	2	165	48.756	ppb	0.709	346524	50	97.5	90	110	
Th	232	2	165	47.560	ppb	0.741	411418	50	95.1	90	110	
U	238	2	165	47.750	ppb	0.309	443187	50	95.5	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	781259	1.58	842608	92.72	60	120	
Sc (IS)	45	1	HMI H2	16566273	0.83	15887657	104.27	60	120	
Sc (IS)	45	2	HMI He	613470	0.46	621989	98.63	60	120	
Sc (IS)	45	3	No Gas	25839011	0.84	23999890	107.66	60	120	
Ge Internal Standard	72	1	HMI H2	6215975	0.14	5840960	106.42	60	120	
Ge Internal Standard	72	2	HMI He	673647	0.21	667191	100.97	60	120	
In Internal Standard	115	2	HMI He	2289500	0.91	2291045	99.93	60	120	
Ho-165	165	2	HMI He	11086454	0.52	10885907	101.84	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	291_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:24:20-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-42.551	ppb	-3.2	2565621	10	
Be	9	1	6	0.146	ppb	65.8	40	0.5	
B	11	1	6	-1.625	ppb	-40.1	783	0.5	
Na	23	1	45	-302.035	ppb	-0.8	218469	25	
Na	23	2	45	-299.229	ppb	-1.4	14871	25	
Mg	24	2	45	6.342	ppb	8.9	1180	25	
Al	27	2	45	1.292	ppb	178.6	100	15	
K	39	1	45	-81.474	ppb	-67.1	7277883	50	
K	39	2	45	13.292	ppb	31.2	11759	50	
Ca	40	1	45	7.126	ppb	11.9	85899	50	
Ca	44	2	45	8.886	ppb	168.0	60	25	
Ti	47	2	45	0.206	ppb	173.2	3	0.5	
V	51	2	72	-0.908	ppb	-30.8	1664	1	
Cr	52	2	72	0.013	ppb	465.6	213	1	
Mn	55	2	72	-0.029	ppb	-174.8	70	0.5	
Fe	57	2	72	11.520	ppb	29.0	243	25	
Co	59	2	72	0.007	ppb	151.8	27	0.5	
Ni	60	2	72	-0.051	ppb	-280.5	80	1	
Cu	63	2	72	0.061	ppb	15.1	747	1	
Zn	66	2	72	-0.154	ppb	-238.7	183	5	
As	75	2	72	-0.058	ppb	-68.5	16	1	
Se	78	1	72	-0.022	ppb	-138.4	5	1	
Sr	88	2	72	-0.008	ppb	-766.8	33	0.5	
Zr	90	2	72	4.471	ppb	29.4	57	1	>RL
Nb	93	2	72	6.160	ppb	8.8	11545	2	>RL
Mo	95	2	115	0.161	ppb	17.7	177	0.5	
Pd	105	2	115	0.099	ppb	13.4	80	1	
Ag	107	2	115	0.013	ppb	64.1	57	1	
Cd	111	2	115	0.014	ppb	173.2	3	0.5	
Sn	120	2	115	0.207	ppb	63.9	257	1	
Sb	121	2	115	0.479	ppb	10.7	303	0.6	
Ba	137	2	115	-0.076	ppb	-60.8	10	0.5	
W	182	2	165	0.293	ppb	9.9	1480	1	
Pt	195	2	165	-0.002	ppb	-291.2	20	1	
Tl	205	2	165	0.031	ppb	31.8	237	0.1	
Pb	208	2	165	0.185	ppb	12.3	1873	0.5	
Th	232	2	165	0.061	ppb	39.4	750	1	
U	238	2	165	0.079	ppb	19.2	813	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	804256	1.05	842608	95.45	60	120	
Sc (IS)	45	1	HMI H2	16614235	1.69	15887657	104.57	60	120	
Sc (IS)	45	2	HMI He	604726	0.55	621989	97.22	60	120	
Sc (IS)	45	3	No Gas	25945037	0.30	23999890	108.10	60	120	
Ge Internal Standard	72	1	HMI H2	6249953	1.81	5840960	107.00	60	120	
Ge Internal Standard	72	2	HMI He	665171	0.36	667191	99.70	60	120	
In Internal Standard	115	2	HMI He	2294179	0.96	2291045	100.14	60	120	
Ho-165	165	2	HMI He	10899716	0.81	10885907	100.13	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-2-B
Data File Name	292SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:28:09-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-25.749	ppb	-25.749	-9.90	92621	500000	
Li	7	2	45	10.087	ppb	10.087	106.50	5275	500000	
Li	7	3	45	-29.943	ppb	-29.943	-13.21	2137393	50000	
Be	9	1	6	12.180	ppb	12.180	11.52	2460	2000	
B	11	1	6	67.679	ppb	67.679	4.33	14648	2000	
Na	23	1	45	332.074	ppb	332.074	0.61	1416740	2000	
Na	23	2	45	292.240	ppb	292.240	1.85	88198	400000	
Mg	24	2	45	413551.612	ppb	413551.612	0.41	24257086	400000	
Al	27	2	45	70659.081	ppb	70659.081	0.20	1165501	400000	
K	39	1	45	26886.098	ppb	26886.098	0.51	56557254	400000	
K	39	2	45	28239.319	ppb	28239.319	0.34	856115	400000	
Ca	40	1	45	913450.710	ppb	913450.710	0.17	2531075002	400000	
Ca	44	2	45	936688.741	ppb	936688.741	0.93	1572739	400000	
Ti	47	2	45	308.263	ppb	308.263	9.66	4194	4000	
V	51	2	72	215.212	ppb	215.212	0.94	109929	2000	
Cr	52	2	72	405.556	ppb	405.556	0.46	255472	5000	
Mn	55	2	72	16864.361	ppb	16864.361	0.11	4443842	10000	
Fe	57	2	72	653604.689	ppb	653604.689	0.16	7868728	400000	
Co	59	2	72	361.928	ppb	361.928	0.94	389435	2000	
Ni	60	2	72	670.845	ppb	670.845	2.16	198460	5000	
Cu	63	2	72	3327.412	ppb	3327.412	1.00	2732887	5000	
Zn	66	2	72	5293.433	ppb	5293.433	0.19	603061	5000	
As	75	2	72	372.421	ppb	372.421	0.33	28624	2000	
Se	78	1	72	2.943	ppb	2.943	12.76	335	2000	
Sr	88	2	72	3131.089	ppb	3131.089	0.25	933024	4000	
Zr	90	2	72	682.997	ppb	682.997	3.86	2390	1000	
Nb	93	2	72	6.795	ppb	6.795	8.98	9741	200	
Mo	95	2	115	39.371	ppb	39.371	1.31	16430	2000	
Pd	105	2	115	0.300	ppb	0.300	62.59	190	100	
Ag	107	2	115	350.227	ppb	350.227	1.99	479004	100	
Cd	111	2	115	132.108	ppb	132.108	1.05	24399	2000	
Sn	120	2	115	1.774	ppb	1.774	12.23	1033	2000	
Sb	121	2	115	30.741	ppb	30.741	2.53	14211	1000	
Ba	137	2	115	6796.686	ppb	6796.686	2.17	1145205	5000	
W	182	2	165	1125.486	ppb	1125.486	0.47	2549386	100	>LDR
Pt	195	2	165	-0.005	ppb	-0.005	-103.87	10	100	
Tl	205	2	165	2.222	ppb	2.222	4.80	9791	2000	
Pb	208	2	165	5410.243	ppb	5410.243	0.59	31609549	5000	
Th	232	2	165	39.595	ppb	39.595	0.70	282078	2000	
U	238	2	165	19.468	ppb	19.468	0.75	148835	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	596974	0.55	842608	70.85	60	120	
Sc (IS)	45	1	HMI H2	13808444	0.36	15887657	86.91	60	120	
Sc (IS)	45	2	HMI He	505982	0.41	621989	81.35	60	120	
Sc (IS)	45	3	No Gas	20824208	0.59	23999890	86.77	60	120	
Ge Internal Standard	72	1	HMI H2	4732929	1.20	5840960	81.03	60	120	
Ge Internal Standard	72	2	HMI He	511582	0.47	667191	76.68	60	120	
In Internal Standard	115	2	HMI He	1771995	1.97	2291045	77.34	60	120	
Ho-165	165	2	HMI He	9129330	0.38	10885907	83.86	60	120	

Sample Report

Sample Table

Sample Name	280-116306-B-3-B
Data File Name	293SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:31:59-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-31.396	ppb	-31.396	-24.71	87229	500000	
Li	7	2	45	5.745	ppb	5.745	326.91	4861	500000	
Li	7	3	45	-45.062	ppb	-45.062	-12.60	2033045	50000	
Be	9	1	6	14.364	ppb	14.364	10.51	2650	2000	
B	11	1	6	78.971	ppb	78.971	4.42	15472	2000	
Na	23	1	45	414.018	ppb	414.018	1.83	1508392	2000	
Na	23	2	45	386.230	ppb	386.230	1.63	93470	400000	
Mg	24	2	45	409210.643	ppb	409210.643	0.49	22381958	400000	
Al	27	2	45	81467.551	ppb	81467.551	0.05	1253043	400000	
K	39	1	45	30203.604	ppb	30203.604	0.61	60061964	400000	
K	39	2	45	32223.073	ppb	32223.073	0.41	909682	400000	
Ca	40	1	45	931484.869	ppb	931484.869	1.02	2469673297	400000	
Ca	44	2	45	957487.758	ppb	957487.758	1.74	1499138	400000	
Ti	47	2	45	280.729	ppb	280.729	4.35	3561	4000	
V	51	2	72	243.891	ppb	243.891	1.96	116630	2000	
Cr	52	2	72	425.764	ppb	425.764	1.35	251553	5000	
Mn	55	2	72	20820.191	ppb	20820.191	0.51	5146005	10000	
Fe	57	2	72	802261.993	ppb	802261.993	0.86	9059287	400000	
Co	59	2	72	438.603	ppb	438.603	1.66	442654	2000	
Ni	60	2	72	729.826	ppb	729.826	1.69	202515	5000	
Cu	63	2	72	3508.474	ppb	3508.474	0.70	2702769	5000	
Zn	66	2	72	4583.021	ppb	4583.021	0.96	489755	5000	
As	75	2	72	363.422	ppb	363.422	1.57	26200	2000	
Se	78	1	72	3.658	ppb	3.658	4.76	397	2000	
Sr	88	2	72	3830.826	ppb	3830.826	0.60	1070741	4000	
Zr	90	2	72	668.381	ppb	668.381	12.65	2194	1000	
Nb	93	2	72	4.289	ppb	4.289	7.69	5941	200	
Mo	95	2	115	39.644	ppb	39.644	2.58	15516	2000	
Pd	105	2	115	0.295	ppb	0.295	4.64	173	100	
Ag	107	2	115	329.150	ppb	329.150	1.77	422232	100	
Cd	111	2	115	115.548	ppb	115.548	2.77	20012	2000	
Sn	120	2	115	1.871	ppb	1.871	2.20	1017	2000	
Sb	121	2	115	29.654	ppb	29.654	4.64	12857	1000	
Ba	137	2	115	7275.058	ppb	7275.058	1.05	1149825	5000	
W	182	2	165	993.899	ppb	993.899	0.67	2157884	100	>LDR
Pt	195	2	165	0.003	ppb	0.003	692.71	23	100	
Tl	205	2	165	2.278	ppb	2.278	2.19	9614	2000	
Pb	208	2	165	4716.595	ppb	4716.595	0.53	26412285	5000	
Th	232	2	165	48.056	ppb	48.056	0.69	328090	2000	
U	238	2	165	24.518	ppb	24.518	0.59	179643	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	545219	0.04	842608	64.71	60	120	
Sc (IS)	45	1	HMI H2	13212839	0.51	15887657	83.16	60	120	
Sc (IS)	45	2	HMI He	471816	0.02	621989	75.86	60	120	
Sc (IS)	45	3	No Gas	20716524	0.32	23999890	86.32	60	120	
Ge Internal Standard	72	1	HMI H2	4543237	0.32	5840960	77.78	60	120	
Ge Internal Standard	72	2	HMI He	479868	0.74	667191	71.92	60	120	
In Internal Standard	115	2	HMI He	1661837	1.36	2291045	72.54	60	120	
Ho-165	165	2	HMI He	8750149	0.48	10885907	80.38	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-4-B
Data File Name	294SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:35:49-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	-41.496	ppb	-41.496	-7.68	80414	500000	
Li	7	2	45	-29.176	ppb	-29.176	-66.27	4187	500000	
Li	7	3	45	-49.198	ppb	-49.198	-16.57	1901253	50000	
Be	9	1	6	12.202	ppb	12.202	2.71	2164	2000	
B	11	1	6	60.335	ppb	60.335	5.77	11548	2000	
Na	23	1	45	258.327	ppb	258.327	2.99	1156157	2000	
Na	23	2	45	236.016	ppb	236.016	1.66	71931	400000	
Mg	24	2	45	399424.204	ppb	399424.204	0.71	20804772	400000	
Al	27	2	45	61255.539	ppb	61255.539	0.57	897251	400000	
K	39	1	45	23803.371	ppb	23803.371	0.62	46119468	400000	
K	39	2	45	25123.140	ppb	25123.140	1.18	677250	400000	
Ca	40	1	45	888733.008	ppb	888733.008	0.79	2236382100	400000	
Ca	44	2	45	907810.635	ppb	907810.635	1.15	1353710	400000	
Ti	47	2	45	289.287	ppb	289.287	5.63	3494	4000	
V	51	2	72	196.532	ppb	196.532	1.18	90876	2000	
Cr	52	2	72	396.196	ppb	396.196	2.48	225574	5000	
Mn	55	2	72	16159.229	ppb	16159.229	0.28	3848695	10000	
Fe	57	2	72	604491.637	ppb	604491.637	0.62	6577764	400000	
Co	59	2	72	337.946	ppb	337.946	0.47	328680	2000	
Ni	60	2	72	652.055	ppb	652.055	0.43	174369	5000	
Cu	63	2	72	3529.333	ppb	3529.333	0.94	2619905	5000	
Zn	66	2	72	5394.307	ppb	5394.307	0.76	555460	5000	
As	75	2	72	373.641	ppb	373.641	1.00	25957	2000	
Se	78	1	72	2.750	ppb	2.750	5.08	291	2000	
Sr	88	2	72	2975.788	ppb	2975.788	0.24	801504	4000	
Zr	90	2	72	706.572	ppb	706.572	17.50	2234	1000	
Nb	93	2	72	2.733	ppb	2.733	10.68	3811	200	
Mo	95	2	115	39.758	ppb	39.758	3.21	14989	2000	
Pd	105	2	115	0.165	ppb	0.165	22.01	93	100	
Ag	107	2	115	368.646	ppb	368.646	0.99	455565	100	
Cd	111	2	115	146.301	ppb	146.301	3.31	24409	2000	
Sn	120	2	115	1.754	ppb	1.754	7.26	923	2000	
Sb	121	2	115	32.271	ppb	32.271	7.72	13487	1000	
Ba	137	2	115	7687.317	ppb	7687.317	1.20	1170352	5000	
W	182	2	165	1122.569	ppb	1122.569	1.06	2386294	100	>LDR
Pt	195	2	165	-0.001	ppb	-0.001	-714.81	17	100	
Tl	205	2	165	2.120	ppb	2.120	5.66	8763	2000	
Pb	208	2	165	5651.984	ppb	5651.984	0.83	30988108	5000	
Th	232	2	165	36.951	ppb	36.951	0.69	247048	2000	
U	238	2	165	18.922	ppb	18.922	2.01	135745	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	524022	0.65	842608	62.19	60	120	
Sc (IS)	45	1	HMI H2	12540667	1.05	15887657	78.93	60	120	
Sc (IS)	45	2	HMI He	449332	0.86	621989	72.24	60	120	
Sc (IS)	45	3	No Gas	19620434	0.40	23999890	81.75	60	120	
Ge Internal Standard	72	1	HMI H2	4395977	0.63	5840960	75.26	60	120	
Ge Internal Standard	72	2	HMI He	462401	0.33	667191	69.31	60	120	
In Internal Standard	115	2	HMI He	1600784	1.06	2291045	69.87	60	120	
Ho-165	165	2	HMI He	8567300	0.81	10885907	78.70	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-5-C
Data File Name	295SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:39:38-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	373.211	ppb	373.211	1.20	169307	500000	
Li	7	2	45	389.024	ppb	389.024	8.52	8996	500000	
Li	7	3	45	325.310	ppb	325.310	2.86	3833926	50000	
Be	9	1	6	20.222	ppb	20.222	5.25	3227	2000	
B	11	1	6	125.420	ppb	125.420	4.85	20819	2000	
Na	23	1	45	3369.069	ppb	3369.069	1.48	6336100	2000	
Na	23	2	45	3446.705	ppb	3446.705	1.33	414510	400000	
Mg	24	2	45	531620.764	ppb	531620.764	0.84	26259485	400000	
Al	27	2	45	409956.021	ppb	409956.021	1.13	5694172	400000	
K	39	1	45	100533.576	ppb	100533.576	0.27	168072101	400000	
K	39	2	45	105761.997	ppb	105761.997	1.10	2678467	400000	
Ca	40	1	45	675146.609	ppb	675146.609	0.58	1616659549	400000	
Ca	44	2	45	663185.048	ppb	663185.048	0.54	937758	400000	
Ti	47	2	45	18678.831	ppb	18678.831	1.25	213949	4000	
V	51	2	72	1442.556	ppb	1442.556	0.90	627953	2000	
Cr	52	2	72	4305.095	ppb	4305.095	0.83	2341243	5000	
Mn	55	2	72	22919.946	ppb	22919.946	0.48	5216998	10000	
Fe	57	2	72	950632.749	ppb	950632.749	0.49	9886105	400000	
Co	59	2	72	692.164	ppb	692.164	0.52	643343	2000	
Ni	60	2	72	4498.080	ppb	4498.080	0.47	1149169	5000	
Cu	63	2	72	3608.834	ppb	3608.834	0.96	2560202	5000	
Zn	66	2	72	3288.618	ppb	3288.618	0.15	323688	5000	
As	75	2	72	901.187	ppb	901.187	0.52	59812	2000	
Se	78	1	72	6.257	ppb	6.257	9.90	624	2000	
Sr	88	2	72	1323.792	ppb	1323.792	0.58	340767	4000	
Zr	90	2	72	20629.775	ppb	20629.775	1.80	61664	1000	>LDR
Nb	93	2	72	19.343	ppb	19.343	0.75	23167	200	
Mo	95	2	115	31.352	ppb	31.352	6.92	11502	2000	
Pd	105	2	115	0.339	ppb	0.339	26.24	187	100	
Ag	107	2	115	450.623	ppb	450.623	2.28	541562	100	
Cd	111	2	115	77.402	ppb	77.402	4.03	12560	2000	
Sn	120	2	115	15.306	ppb	15.306	0.31	7242	2000	
Sb	121	2	115	16.775	ppb	16.775	3.88	6822	1000	
Ba	137	2	115	10556.828	ppb	10556.828	1.55	1563239	5000	
W	182	2	165	257.231	ppb	257.231	1.30	527842	100	
Pt	195	2	165	0.046	ppb	0.046	32.18	93	100	
Tl	205	2	165	12.305	ppb	12.305	1.59	48805	2000	
Pb	208	2	165	4170.405	ppb	4170.405	0.61	22057625	5000	
Th	232	2	165	133.580	ppb	133.580	0.50	861060	2000	
U	238	2	165	15.813	ppb	15.813	1.48	109444	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	471413	0.96	842608	55.95	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11932934	0.75	15887657	75.11	60	120	
Sc (IS)	45	2	HMI He	426110	0.86	621989	68.51	60	120	
Sc (IS)	45	3	No Gas	18394337	0.54	23999890	76.64	60	120	
Ge Internal Standard	72	1	HMI H2	4197441	0.49	5840960	71.86	60	120	
Ge Internal Standard	72	2	HMI He	441914	0.42	667191	66.23	60	120	
In Internal Standard	115	2	HMI He	1557233	2.29	2291045	67.97	60	120	
Ho-165	165	2	HMI He	8264735	1.09	10885907	75.92	60	120	

Sample Report

Sample Table

Sample Name	280-116306-A-6-C
Data File Name	296SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:43:28-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	436760 soil 6020 DOD5
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	321.146	ppb	321.146	3.87	147397	500000	
Li	7	2	45	379.887	ppb	379.887	12.08	8266	500000	
Li	7	3	45	287.607	ppb	287.607	2.28	3389432	50000	
Be	9	1	6	20.027	ppb	20.027	4.40	2860	2000	
B	11	1	6	131.110	ppb	131.110	5.28	19453	2000	
Na	23	1	45	3292.720	ppb	3292.720	1.01	5803294	2000	
Na	23	2	45	3350.027	ppb	3350.027	0.58	376086	400000	
Mg	24	2	45	535942.304	ppb	535942.304	1.11	24637361	400000	
Al	27	2	45	390165.777	ppb	390165.777	0.80	5043924	400000	
K	39	1	45	95445.929	ppb	95445.929	1.02	149424634	400000	
K	39	2	45	101047.032	ppb	101047.032	0.80	2381798	400000	
Ca	40	1	45	723890.376	ppb	723890.376	0.61	1620457683	400000	
Ca	44	2	45	713368.087	ppb	713368.087	1.14	938830	400000	
Ti	47	2	45	18511.424	ppb	18511.424	0.98	197338	4000	
V	51	2	72	1331.424	ppb	1331.424	0.76	541230	2000	
Cr	52	2	72	3872.759	ppb	3872.759	0.59	1966367	5000	
Mn	55	2	72	22245.133	ppb	22245.133	0.56	4727319	10000	
Fe	57	2	72	927796.926	ppb	927796.926	1.10	9007942	400000	
Co	59	2	72	657.153	ppb	657.153	0.88	570261	2000	
Ni	60	2	72	4092.453	ppb	4092.453	0.94	976145	5000	
Cu	63	2	72	4022.559	ppb	4022.559	1.09	2664250	5000	
Zn	66	2	72	3848.551	ppb	3848.551	0.91	353630	5000	
As	75	2	72	963.436	ppb	963.436	0.33	59701	2000	
Se	78	1	72	6.318	ppb	6.318	10.58	596	2000	
Sr	88	2	72	1427.693	ppb	1427.693	0.26	343130	4000	
Zr	90	2	72	20566.604	ppb	20566.604	0.61	57397	1000	>LDR
Nb	93	2	72	20.743	ppb	20.743	1.00	23167	200	
Mo	95	2	115	34.288	ppb	34.288	4.70	11845	2000	
Pd	105	2	115	0.430	ppb	0.430	28.13	223	100	
Ag	107	2	115	467.265	ppb	467.265	1.10	528880	100	
Cd	111	2	115	92.714	ppb	92.714	4.16	14168	2000	
Sn	120	2	115	20.700	ppb	20.700	5.22	9194	2000	
Sb	121	2	115	18.867	ppb	18.867	1.59	7222	1000	
Ba	137	2	115	11603.756	ppb	11603.756	0.74	1618135	5000	
W	182	2	165	310.652	ppb	310.652	0.57	606646	100	
Pt	195	2	165	0.051	ppb	0.051	59.24	97	100	
Tl	205	2	165	11.758	ppb	11.758	1.24	44389	2000	
Pb	208	2	165	5121.455	ppb	5121.455	1.08	25780898	5000	
Th	232	2	165	141.365	ppb	141.365	0.78	867278	2000	
U	238	2	165	17.222	ppb	17.222	1.24	113450	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	422219	2.04	842608	50.11	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11155724	0.69	15887657	70.22	60	120	
Sc (IS)	45	2	HMI He	396574	0.95	621989	63.76	60	120	
Sc (IS)	45	3	No Gas	17187256	0.20	23999890	71.61	60	120	
Ge Internal Standard	72	1	HMI H2	3973024	1.29	5840960	68.02	60	120	
Ge Internal Standard	72	2	HMI He	412590	0.62	667191	61.84	60	120	
In Internal Standard	115	2	HMI He	1466216	1.06	2291045	64.00	60	120	
Ho-165	165	2	HMI He	7865932	0.50	10885907	72.26	60	120	

Sample Report

Sample Table

Sample Name	5401850
Data File Name	297SMPL.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:47:17-07:00
Analyst	Trudell, Lynn-Anne
Sample Type	Sample
Dilution	1
Comment	435643 SOIL 6020
ISTD Ref FileName	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Fail

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	units	FinalConc	Conc %RSD	CPS	LDR	QC Flag
Li	7	1	45	85.249	ppb	85.249	7.32	101870	500000	
Li	7	2	45	122.934	ppb	122.934	29.98	5701	500000	
Li	7	3	45	81.090	ppb	81.090	3.26	2469977	50000	
Be	9	1	6	12.795	ppb	12.795	20.23	1984	2000	
B	11	1	6	32.661	ppb	32.661	7.21	5775	2000	
Na	23	1	45	1543.199	ppb	1543.199	0.91	3169482	2000	
Na	23	2	45	1523.891	ppb	1523.891	0.15	203668	400000	
Mg	24	2	45	115971.866	ppb	115971.866	0.29	5633253	400000	
Al	27	2	45	197749.352	ppb	197749.352	0.87	2700824	400000	
K	39	1	45	57825.909	ppb	57825.909	0.14	96118599	400000	
K	39	2	45	61820.633	ppb	61820.633	1.72	1542612	400000	
Ca	40	1	45	29872.875	ppb	29872.875	0.30	69526469	400000	
Ca	44	2	45	30654.064	ppb	30654.064	3.19	42643	400000	
Ti	47	2	45	9481.531	ppb	9481.531	1.67	106787	4000	
V	51	2	72	591.110	ppb	591.110	0.45	266110	2000	
Cr	52	2	72	1584.003	ppb	1584.003	1.24	887866	5000	
Mn	55	2	72	8407.796	ppb	8407.796	0.41	1972447	10000	
Fe	57	2	72	562346.410	ppb	562346.410	0.19	6027170	400000	
Co	59	2	72	282.278	ppb	282.278	1.30	270399	2000	
Ni	60	2	72	1834.818	ppb	1834.818	1.28	483129	5000	
Cu	63	2	72	624.031	ppb	624.031	1.41	456647	5000	
Zn	66	2	72	603.567	ppb	603.567	2.22	61344	5000	
As	75	2	72	258.409	ppb	258.409	1.76	17685	2000	
Se	78	1	72	4.091	ppb	4.091	9.49	419	2000	
Sr	88	2	72	449.885	ppb	449.885	1.57	119364	4000	
Zr	90	2	72	8423.524	ppb	8423.524	4.19	25968	1000	>LDR
Nb	93	2	72	5.087	ppb	5.087	6.60	6605	200	
Mo	95	2	115	23.090	ppb	23.090	2.43	8810	2000	
Pd	105	2	115	0.146	ppb	0.146	6.92	83	100	
Ag	107	2	115	2.773	ppb	2.773	3.88	3481	100	
Cd	111	2	115	4.198	ppb	4.198	9.34	707	2000	
Sn	120	2	115	2.466	ppb	2.466	11.47	1277	2000	
Sb	121	2	115	1.437	ppb	1.437	15.59	617	1000	
Ba	137	2	115	2093.726	ppb	2093.726	0.09	321629	5000	
W	182	2	165	6.919	ppb	6.919	4.28	15263	100	
Pt	195	2	165	0.024	ppb	0.024	105.07	60	100	
Tl	205	2	165	4.781	ppb	4.781	3.47	19712	2000	
Pb	208	2	165	228.276	ppb	228.276	0.95	1253368	5000	
Th	232	2	165	109.020	ppb	109.020	1.43	729284	2000	
U	238	2	165	12.716	ppb	12.716	1.64	91348	2000	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	457316	1.37	842608	54.27	60	120	IS Failed
Sc (IS)	45	1	HMI H2	11591309	0.44	15887657	72.96	60	120	
Sc (IS)	45	2	HMI He	418990	0.78	621989	67.36	60	120	
Sc (IS)	45	3	No Gas	18200671	0.54	23999890	75.84	60	120	
Ge Internal Standard	72	1	HMI H2	4283064	1.43	5840960	73.33	60	120	
Ge Internal Standard	72	2	HMI He	455447	0.64	667191	68.26	60	120	
In Internal Standard	115	2	HMI He	1615005	0.26	2291045	70.49	60	120	
Ho-165	165	2	HMI He	8576575	0.60	10885907	78.79	60	120	

Continuing Calibration Verification (CCV) Report

Sample Table

Sample Name	CCV-5427683
Data File Name	298_CCV.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:51:03-07:00
Sample Type	CCV
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Exp Value	%Rec	%Low	%High2	QC Flag
Li	7	1	45	301.694	ppb	1.571	162766	500	60.3	90	110	>+\-10%
Li	7	2	45	339.158	ppb	5.080	8923	500	67.8	90	110	>+\-10%
Li	7	3	45	306.601	ppb	2.874	4061382	500	61.3	90	110	>+\-10%
Be	9	1	6	49.495	ppb	4.588	9016	50	99.0	90	110	
B	11	1	6	38.785	ppb	3.454	7919	50	77.6	90	110	>+\-10%
Na	23	1	45	4211.157	ppb	0.816	8232056	5000	84.2	90	110	>+\-10%
Na	23	2	45	4217.272	ppb	1.076	528801	5000	84.3	90	110	>+\-10%
Mg	24	2	45	4667.817	ppb	1.527	245551	5000	93.4	90	110	
Al	27	2	45	4799.476	ppb	1.468	70900	5000	96.0	90	110	
K	39	1	45	4879.409	ppb	2.007	14074603	5000	97.6	90	110	
K	39	2	45	5074.802	ppb	1.221	144600	5000	101.5	90	110	
Ca	40	1	45	5004.646	ppb	1.064	12769825	5000	100.1	90	110	
Ca	44	2	45	4941.545	ppb	5.925	7456	5000	98.8	90	110	
Ti	47	2	45	55.335	ppb	9.311	673	50	110.7	90	110	>+\-10%
V	51	2	72	46.924	ppb	4.649	25463	50	93.8	90	110	
Cr	52	2	72	48.403	ppb	2.542	30797	50	96.8	90	110	
Mn	55	2	72	52.083	ppb	2.294	13861	50	104.2	90	110	
Fe	57	2	72	5158.569	ppb	1.038	62495	5000	103.2	90	110	
Co	59	2	72	49.795	ppb	0.986	53888	50	99.6	90	110	
Ni	60	2	72	51.068	ppb	1.383	15262	50	102.1	90	110	
Cu	63	2	72	49.756	ppb	0.344	41608	50	99.5	90	110	
Zn	66	2	72	51.078	ppb	6.629	6008	50	102.2	90	110	
As	75	2	72	50.427	ppb	3.586	3911	50	100.9	90	110	
Se	78	1	72	46.948	ppb	0.857	5438	50	93.9	90	110	
Sr	88	2	72	51.039	ppb	4.571	15322	50	102.1	90	110	
Zr	90	2	72	225.676	ppb	11.101	813	50	451.4	90	110	>+\-10%
Nb	93	2	72	86.279	ppb	2.246	118546	100	86.3	90	110	>+\-10%
Mo	95	2	115	47.841	ppb	2.450	20809	50	95.7	90	110	
Pd	105	2	115	51.493	ppb	2.116	33688	50	103.0	90	110	
Ag	107	2	115	49.156	ppb	1.938	70163	50	98.3	90	110	
Cd	111	2	115	50.263	ppb	1.511	9684	50	100.5	90	110	
Sn	120	2	115	47.555	ppb	1.974	26513	50	95.1	90	110	
Sb	121	2	115	50.191	ppb	3.441	24195	50	100.4	90	110	
Ba	137	2	115	50.321	ppb	2.074	8870	50	100.6	90	110	
W	182	2	165	47.980	ppb	0.660	110596	50	96.0	90	110	
Pt	195	2	165	47.997	ppb	1.693	88185	50	96.0	90	110	
Tl	205	2	165	49.875	ppb	0.864	221045	50	99.7	90	110	
Pb	208	2	165	50.069	ppb	0.786	296671	50	100.1	90	110	
Th	232	2	165	48.322	ppb	1.066	348504	50	96.6	90	110	
U	238	2	165	48.638	ppb	0.494	376378	50	97.3	90	110	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	538238	0.54	842608	63.88	60	120	
Sc (IS)	45	1	HMI H2	12669718	1.26	15887657	79.75	60	120	
Sc (IS)	45	2	HMI He	452810	1.08	621989	72.80	60	120	
Sc (IS)	45	3	No Gas	20021551	0.97	23999890	83.42	60	120	
Ge Internal Standard	72	1	HMI H2	4915661	0.74	5840960	84.16	60	120	
Ge Internal Standard	72	2	HMI He	514389	0.51	667191	77.10	60	120	
In Internal Standard	115	2	HMI He	1848540	1.47	2291045	80.69	60	120	
Ho-165	165	2	HMI He	9243300	0.34	10885907	84.91	60	120	

Continuing Calibration Blank (CCB) Report

Sample Table

Sample Name	CCB-5427681
Data File Name	299_CCB.d
Data Path Name	D:\MassHunter Data\li11
Acq Date Time	2018-11-15T07:54:50-07:00
Sample Type	CCB
Dilution	1
Comment	
ISTD Ref File Name	194CALB.d
Sample QC Pass/Fail	Fail
ISTD Pass/Fail	Pass

QC Analyte Table

Name	Mass	Tune Step	IS	Conc	Units	Conc %RSD	CPS	Upper Limit	QC Flag
Li	7	3	45	-77.091	ppb	-2.8	1852464	10	
Be	9	1	6	0.125	ppb	89.9	23	0.5	
B	11	1	6	-0.513	ppb	-81.3	750	0.5	
Na	23	1	45	-308.620	ppb	-0.3	155460	25	
Na	23	2	45	-304.248	ppb	-1.1	10828	25	
Mg	24	2	45	24.203	ppb	19.6	1867	25	
Al	27	2	45	12.071	ppb	8.1	240	15	
K	39	1	45	-63.205	ppb	-78.5	5602692	50	
K	39	2	45	59.979	ppb	47.7	10318	50	>RL
Ca	40	1	45	52.619	ppb	2.1	181836	50	>RL
Ca	44	2	45	39.617	ppb	26.8	93	25	>RL
Ti	47	2	45	0.537	ppb	86.6	7	0.5	>RL
V	51	2	72	-1.660	ppb	-14.0	930	1	
Cr	52	2	72	0.060	ppb	116.1	200	1	
Mn	55	2	72	2.173	ppb	11.1	653	0.5	>RL
Fe	57	2	72	84.084	ppb	14.0	1093	25	>RL
Co	59	2	72	0.150	ppb	32.6	180	0.5	
Ni	60	2	72	0.505	ppb	21.5	233	1	
Cu	63	2	72	0.290	ppb	48.1	787	1	
Zn	66	2	72	1.362	ppb	35.0	323	5	
As	75	2	72	0.000	ppb	-22034.4	17	1	
Se	78	1	72	0.067	ppb	191.6	15	1	
Sr	88	2	72	0.057	ppb	163.5	47	0.5	
Zr	90	2	72	-5.343	ppb	-52.0	10	1	
Nb	93	2	72	6.812	ppb	7.7	10077	2	>RL
Mo	95	2	115	0.114	ppb	96.3	127	0.5	
Pd	105	2	115	0.108	ppb	70.1	73	1	
Ag	107	2	115	0.028	ppb	82.4	70	1	
Cd	111	2	115	0.033	ppb	86.6	7	0.5	
Sn	120	2	115	0.146	ppb	31.4	180	1	
Sb	121	2	115	0.351	ppb	10.1	190	0.6	
Ba	137	2	115	0.352	ppb	33.2	87	0.5	
W	182	2	165	0.305	ppb	22.2	1287	1	
Pt	195	2	165	-0.004	ppb	-176.1	13	1	
Tl	205	2	165	0.030	ppb	27.1	200	0.1	
Pb	208	2	165	0.545	ppb	1.2	3734	0.5	>RL
Th	232	2	165	0.083	ppb	14.5	800	1	
U	238	2	165	0.073	ppb	19.2	643	0.5	

QC ISTD Table

Name	Mass	Tune Step	Tune Mode	CPS	%RSD	Ref CPS	%Rec	%QC Low	%QC High	QC Flag
Li-6 Internal Standard	6	1	HMI H2	555000	2.20	842608	65.87	60	120	
Sc (IS)	45	1	HMI H2	12717431	1.33	15887657	80.05	60	120	
Sc (IS)	45	2	HMI He	464461	1.15	621989	74.67	60	120	
Sc (IS)	45	3	No Gas	20907458	0.43	23999890	87.11	60	120	
Ge Internal Standard	72	1	HMI H2	4927723	0.99	5840960	84.36	60	120	
Ge Internal Standard	72	2	HMI He	527669	0.84	667191	79.09	60	120	
In Internal Standard	115	2	HMI He	1925425	0.96	2291045	84.04	60	120	
Ho-165	165	2	HMI He	9274789	0.23	10885907	85.20	60	120	

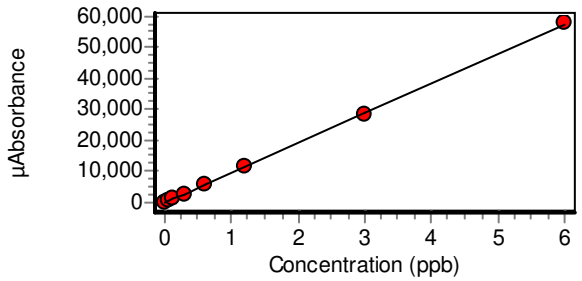
Report Generated By CETAC QuickTrace
Analyst: denmet
Worksheet file: C:\Program Files\QuickTrace\Worksheets\2018\November\181116bc.wsz
Date Started: 11/16/2018 6:46:23 PM
Comment:

Results

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
IC 280-437882/1-A	STD	11/16/18 06:50:32 pm	0.000	176	3.18		1.00	1.00	1.00
IC 280-437882/2-A	STD	11/16/18 06:52:44 pm	0.060	742	0.39		1.00	1.00	1.00
IC 280-437882/3-A	STD	11/16/18 06:54:58 pm	0.120	1332	0.48		1.00	1.00	1.00
IC 280-437882/4-A	STD	11/16/18 06:57:11 pm	0.300	2887	0.65		1.00	1.00	1.00
IC 280-437882/5-A	STD	11/16/18 06:59:26 pm	0.600	5681	0.56		1.00	1.00	1.00
IC 280-437882/6-A	STD	11/16/18 07:01:40 pm	1.200	11296	0.57		1.00	1.00	1.00
IC 280-437882/7-A	STD	11/16/18 07:03:56 pm	3.000	28260	0.54		1.00	1.00	1.00
IC 280-437882/8-A	STD	11/16/18 07:06:12 pm	6.000	57951	0.53		1.00	1.00	1.00

Calibration

Equation: A = -2.244 + 9604.840C
R2: 0.99980
SEE: 305.7747
Flags:



ICV 280-437882/9-A	ICV	11/16/18 07:09:05 pm	2.413	23178	0.47		1.00	1.00	1.00
% Recovery 100.56									
ICB 280-437882/10-A	ICB	11/16/18 07:11:17 pm	0.020	188	1.31		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
CRA 280-437882/11-A	CRDL	11/16/18 07:13:31 pm	0.138	1320	0.67		1.00	1.00	1.00
% Recovery 114.74									
CCV 280-437882/12-A	CCV	11/16/18 07:15:46 pm	3.063	29417	0.84		1.00	1.00	1.00
% Recovery 102.10									
CCB 280-437882/13-A	CCB	11/16/18 07:17:58 pm	0.017	161	2.53		1.00	1.00	1.00
MB 280-437883/1-A	UNK	11/16/18 07:20:10 pm	0.017	160	7.11	s	1.00	1.00	1.00
LCS 280-437883/2-A	UNK	11/16/18 07:22:23 pm	2.889	27744	0.44		1.00	1.00	1.00
280-116892-F-1-B	UNK	11/16/18 07:24:35 pm	0.045	427	0.73		1.00	1.00	1.00
280-116892-F-2-B	UNK	11/16/18 07:26:48 pm	0.025	242	2.32		1.00	1.00	1.00
280-116892-F-2-C MS	UNK	11/16/18 07:29:02 pm	3.122	29979	0.84		1.00	1.00	1.00
280-116892-F-2-D MSD	UNK	11/16/18 07:31:15 pm	2.833	27209	0.63		1.00	1.00	1.00
280-116892-F-3-B	UNK	11/16/18 07:33:29 pm	0.058	554	2.01		1.00	1.00	1.00
280-116892-F-4-B	UNK	11/16/18 07:35:43 pm	0.034	325	0.77		1.00	1.00	1.00
280-116892-F-5-B	UNK	11/16/18 07:37:57 pm	0.040	383	2.17		1.00	1.00	1.00
280-116294-M-1-C	UNK	11/16/18 07:40:12 pm	0.105	1007	1.23		1.00	1.00	1.00
CCV 280-437882/12-A	CCV	11/16/18 07:42:27 pm	3.192	30652	1.13		1.00	1.00	1.00
% Recovery 106.38									
CCB 280-437882/13-A	CCB	11/16/18 07:44:40 pm	0.018	175	3.35		1.00	1.00	1.00
280-116295-M-1-C	UNK	11/16/18 07:46:55 pm	0.012	113	5.49	s	1.00	1.00	1.00
280-116295-M-2-E	UNK	11/16/18 07:49:10 pm	0.053	507	1.61		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116295-M-3-C	UNK	11/16/18 07:51:22 pm	0.059	568	1.32		1.00	1.00	1.00
280-116295-M-4-C	UNK	11/16/18 07:59:55 pm	0.021	196	3.50		1.00	1.00	1.00
MB 280-437884/1-A	UNK	11/16/18 08:02:07 pm	0.021	204	2.05		1.00	1.00	1.00
LCS 280-437884/2-A	UNK	11/16/18 08:04:20 pm	3.273	31437	0.47		1.00	1.00	1.00
280-116726-H-1-C	UNK	11/16/18 08:06:33 pm	0.021	204	1.60		1.00	1.00	1.00
280-116797-A-1-D	UNK	11/16/18 08:08:46 pm	0.023	218	1.25		1.00	1.00	1.00
280-116797-A-1-E MS	UNK	11/16/18 08:10:59 pm	3.253	31246	0.47		1.00	1.00	1.00
280-116797-A-1-F MSD	UNK	11/16/18 08:13:13 pm	3.295	31650	0.73		1.00	1.00	1.00
CCV 280-437882/12-A % Recovery 108.29	CCV	11/16/18 08:15:28 pm	3.249	31201	0.55		1.00	1.00	1.00
CCB 280-437882/13-A	CCB	11/16/18 08:17:40 pm	0.021	195	2.88		1.00	1.00	1.00
280-116797-A-2-B	UNK	11/16/18 08:19:54 pm	0.042	406	0.71		1.00	1.00	1.00
280-116797-A-3-B	UNK	11/16/18 08:22:09 pm	0.039	374	1.73		1.00	1.00	1.00
280-116639-A-1-C	UNK	11/16/18 08:24:23 pm	0.039	368	0.57		1.00	1.00	1.00
280-116639-Q-5-E	UNK	11/16/18 08:26:38 pm	0.040	382	0.97		1.00	1.00	1.00
280-116639-K-6-C	UNK	11/16/18 08:28:50 pm	0.063	601	2.13		1.00	1.00	1.00
280-116647-O-1-C	UNK	11/16/18 08:31:02 pm	0.046	443	1.08		1.00	1.00	1.00
MB 280-437885/1-A	UNK	11/16/18 08:33:14 pm	0.019	177	5.74	s	1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
LCS 280-437885/2-A	UNK	11/16/18 08:35:27 pm	3.293	31631	0.69		1.00	1.00	1.00
LCSD 280-437885/3-A	UNK	11/16/18 08:37:40 pm	3.293	31629	0.59		1.00	1.00	1.00
280-116572-E-1-B	UNK	11/16/18 08:39:53 pm	0.041	394	0.87		1.00	1.00	1.00
CCV 280-437882/12-A	CCV	11/16/18 08:42:09 pm	3.297	31662	0.44		1.00	1.00	1.00
% Recovery 109.89									
CCB 280-437882/13-A	CCB	11/16/18 08:44:21 pm	0.019	182	4.92		1.00	1.00	1.00
280-116470-F-1-C	UNK	11/16/18 08:46:34 pm	0.035	336	1.30		1.00	1.00	1.00
280-116470-F-2-C	UNK	11/16/18 08:48:48 pm	0.038	367	2.28		1.00	1.00	1.00
280-116470-A-11-G	UNK	11/16/18 08:51:02 pm	0.020	187	5.61	s	1.00	1.00	1.00
280-116470-A-11-G SD@5	UNK	11/16/18 08:53:16 pm	0.020	188	3.43		1.00	1.00	1.00
280-116470-A-11-H MS	UNK	11/16/18 08:55:31 pm	3.182	30563	0.61		1.00	1.00	1.00
280-116470-A-11-I MSD	UNK	11/16/18 08:57:45 pm	3.232	31038	0.50		1.00	1.00	1.00
280-116470-A-11-G PDS	UNK	11/16/18 08:59:58 pm	3.131	30067	0.58		1.00	1.00	1.00
280-116538-J-1-C	UNK	11/16/18 09:02:10 pm	0.038	365	2.39		1.00	1.00	1.00
280-116538-J-2-C	UNK	11/16/18 09:04:22 pm	0.040	383	3.64		1.00	1.00	1.00
280-116469-F-2-C	UNK	11/16/18 09:06:35 pm	0.041	391	1.86		1.00	1.00	1.00
CCV 280-437882/12-A	CCV	11/16/18 09:08:50 pm	3.236	31078	0.42		1.00	1.00	1.00
% Recovery 107.86									
CCB 280-437882/13-A	CCB	11/16/18 09:11:02 pm	0.019	182	1.52		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116469-F-3-G	UNK	11/16/18 09:13:15 pm	0.020	188	4.06		1.00	1.00	1.00
280-116469-F-3-H MS	UNK	11/16/18 09:15:29 pm	3.403	32687	0.73		1.00	1.00	1.00
280-116469-F-3-I MSD	UNK	11/16/18 09:17:42 pm	3.438	33023	0.87		1.00	1.00	1.00
280-116595-D-1-E	UNK	11/16/18 09:19:56 pm	0.029	277	0.84		1.00	1.00	1.00
280-116595-D-2-C	UNK	11/16/18 09:22:10 pm	0.040	378	1.39		1.00	1.00	1.00
280-116595-D-3-C	UNK	11/16/18 09:24:24 pm	0.037	355	2.00		1.00	1.00	1.00
280-116595-D-4-C	UNK	11/16/18 09:26:38 pm	0.042	402	1.69		1.00	1.00	1.00
280-116595-D-5-C	UNK	11/16/18 09:28:53 pm	0.039	372	1.28		1.00	1.00	1.00
280-116595-D-6-C	UNK	11/16/18 09:31:06 pm	0.038	365	1.27		1.00	1.00	1.00
280-116595-D-7-C	UNK	11/16/18 09:33:18 pm	0.039	369	0.34		1.00	1.00	1.00
CCV 280-437882/12-A % Recovery 108.11	CCV	11/16/18 09:35:34 pm	3.243	31150	0.70		1.00	1.00	1.00
CCB 280-437882/13-A	CCB	11/16/18 09:37:46 pm	0.023	216	1.89		1.00	1.00	1.00
280-116595-D-8-C	UNK	11/16/18 09:39:59 pm	0.039	377	1.46		1.00	1.00	1.00
280-116595-D-9-C	UNK	11/16/18 09:42:11 pm	0.035	338	1.90		1.00	1.00	1.00
280-116595-D-10-C	UNK	11/16/18 09:44:24 pm	0.037	355	1.59		1.00	1.00	1.00
280-116596-T-1-A	UNK	11/16/18 09:46:37 pm	0.042	400	0.67		1.00	1.00	1.00
490-163035-A-2-B	UNK	11/16/18 09:48:51 pm	0.037	354	1.16		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
MB 280-437886/1-A	UNK	11/16/18 09:51:04 pm	0.019	183	1.85		1.00	1.00	1.00
LCS 280-437886/2-A	UNK	11/16/18 09:53:18 pm	3.322	31907	0.89		1.00	1.00	1.00
LCSD 280-437886/3-A	UNK	11/16/18 09:55:33 pm	3.367	32337	0.78		1.00	1.00	1.00
280-116633-F-1-A	UNK	11/16/18 09:57:47 pm	0.019	182	2.62		1.00	1.00	1.00
280-116633-F-1-B MS	UNK	11/16/18 10:00:02 pm	3.366	32328	0.89		1.00	1.00	1.00
CCV 280-437882/12-A % Recovery 109.18	CCV	11/16/18 10:02:17 pm	3.275	31456	0.77		1.00	1.00	1.00
CCB 280-437882/13-A	CCB	11/16/18 10:04:29 pm	0.020	193	1.23		1.00	1.00	1.00
280-116633-F-1-C MSD	UNK	11/16/18 10:06:43 pm	3.354	32212	0.94		1.00	1.00	1.00
280-116633-F-2-A	UNK	11/16/18 10:08:56 pm	0.038	359	1.18		1.00	1.00	1.00
280-116633-F-3-A	UNK	11/16/18 10:11:09 pm	0.040	379	2.26		1.00	1.00	1.00
280-116633-F-4-A	UNK	11/16/18 10:13:22 pm	0.042	397	2.16		1.00	1.00	1.00
280-116633-F-5-A	UNK	11/16/18 10:15:35 pm	0.038	359	1.60		1.00	1.00	1.00
280-116633-F-6-A	UNK	11/16/18 10:17:48 pm	0.036	345	4.23		1.00	1.00	1.00
280-116705-L-3-H	UNK	11/16/18 10:20:01 pm	0.044	423	0.83		1.00	1.00	1.00
280-116705-L-4-C	UNK	11/16/18 10:22:15 pm	0.062	597	0.49		1.00	1.00	1.00
280-116705-N-5-B	UNK	11/16/18 10:24:29 pm	0.034	324	1.76		1.00	1.00	1.00
280-116705-J-6-B	UNK	11/16/18 10:26:43 pm	0.002	15	35.21		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
CCV 280-437882/12-A	CCV	11/16/18 10:28:59 pm	3.274	31440	0.78		1.00	1.00	1.00
% Recovery 109.12									
CCB 280-437882/13-A	CCB	11/16/18 10:31:11 pm	0.020	189	1.30		1.00	1.00	1.00
280-116752-L-3-G	UNK	11/16/18 10:33:25 pm	0.029	276	3.04		1.00	1.00	1.00
280-116752-J-4-B	UNK	11/16/18 10:35:40 pm	0.013	118	3.07		1.00	1.00	1.00
280-116715-E-1-F	UNK	11/16/18 10:37:54 pm	0.038	366	1.57		1.00	1.00	1.00
280-116736-A-1-B	UNK	11/16/18 10:40:07 pm	0.062	597	0.84		1.00	1.00	1.00
280-116741-A-1-C	UNK	11/16/18 10:42:20 pm	0.036	347	1.77		1.00	1.00	1.00
280-116746-A-1-G	UNK	11/16/18 10:44:33 pm	0.039	368	1.54		1.00	1.00	1.00
280-116746-A-2-C	UNK	11/16/18 10:46:47 pm	0.038	363	0.72		1.00	1.00	1.00
280-116746-A-3-C	UNK	11/16/18 10:49:00 pm	0.037	349	0.63		1.00	1.00	1.00
280-116746-A-4-C	UNK	11/16/18 10:51:13 pm	0.039	375	1.63		1.00	1.00	1.00
280-116851-I-1-B	UNK	11/16/18 10:53:27 pm	0.035	338	0.95		1.00	1.00	1.00
CCV 280-437882/12-A	CCV	11/16/18 10:55:43 pm	3.269	31394	0.87		1.00	1.00	1.00
% Recovery 108.96									
CCB 280-437882/13-A	CCB	11/16/18 10:57:55 pm	0.021	203	3.63		1.00	1.00	1.00
LB3 280-437112/1-F	UNK	11/16/18 11:00:09 pm	0.020	186	1.94		1.00	1.00	1.00
LCS 280-437112/2-F	UNK	11/16/18 11:02:23 pm	3.338	32061	0.78		1.00	1.00	1.00
280-116707-D-2-J	UNK	11/16/18 11:04:38 pm	0.015	140	8.31	s	1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol. ODF
280-116636-A-1-J	UNK	11/16/18 11:06:52 pm	0.253	2432	0.88		1.00	1.00 1.00
280-116636-A-1-K MS	UNK	11/16/18 11:09:06 pm	3.572	34312	0.99		1.00	1.00 1.00
280-116636-A-1-L MSD	UNK	11/16/18 11:11:20 pm	3.562	34212	0.75		1.00	1.00 1.00
LB3 280-437267/1-F	UNK	11/16/18 11:13:33 pm	0.019	183	2.36		1.00	1.00 1.00
LCS 280-437267/2-F	UNK	11/16/18 11:15:47 pm	3.242	31135	1.02		1.00	1.00 1.00
280-116707-D-1-H	UNK	11/16/18 11:18:00 pm	0.004	39	18.23		1.00	1.00 1.00
280-116707-D-1-I MS	UNK	11/16/18 11:20:14 pm	0.489	4696	0.74		1.00	1.00 1.00
CCV 280-437882/12-A % Recovery 108.28	CCV	11/16/18 11:22:29 pm	3.248	31198	1.01		1.00	1.00 1.00
CCB 280-437882/13-A	CCB	11/16/18 11:24:41 pm	0.020	193	5.23	s	1.00	1.00 1.00
280-116707-D-1-J MSD	UNK	11/16/18 11:26:55 pm	0.607	5828	1.80		1.00	1.00 1.00
280-116803-D-1-K	UNK	11/16/18 11:29:09 pm	-0.004	-44	17.31		1.00	1.00 1.00
280-116803-D-2-K	UNK	11/16/18 11:31:23 pm	0.021	203	4.55		1.00	1.00 1.00
LB 280-436731/1-F	UNK	11/16/18 11:33:37 pm	0.021	197	2.53		1.00	1.00 1.00
LCS 280-436731/2-H	UNK	11/16/18 11:35:52 pm	3.371	32377	1.03		1.00	1.00 1.00
280-116610-A-2-M	UNK	11/16/18 11:38:07 pm	0.025	234	6.53	s	1.00	1.00 1.00
280-116610-A-2-N MS	UNK	11/16/18 11:40:21 pm	3.246	31179	0.97		1.00	1.00 1.00
280-116610-A-2-O MSD	UNK	11/16/18 11:42:34 pm	3.182	30562	0.67		1.00	1.00 1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
MB 280-437892/1-A	UNK	11/16/18 11:44:48 pm	0.017	159	4.41		1.00	1.00	1.00
LCS 280-437892/2-A	UNK	11/16/18 11:47:02 pm	3.309	31778	0.71		1.00	1.00	1.00
CCV 280-437882/12-A	CCV	11/16/18 11:49:18 pm	3.270	31407	0.70		1.00	1.00	1.00
% Recovery 109.00									
CCB 280-437882/13-A	CCB	11/16/18 11:51:30 pm	0.022	208	2.35		1.00	1.00	1.00
LCSD 280-437892/3-A	UNK	11/16/18 11:53:44 pm	3.370	32370	0.75		1.00	1.00	1.00
280-116400-A-1-B	UNK	11/16/18 11:55:57 pm	0.473	4543	0.68		1.00	1.00	1.00
280-116400-A-2-B	UNK	11/16/18 11:58:11 pm	3.932	37765	0.60		1.00	1.00	1.00
280-116400-A-3-B	UNK	11/17/18 12:00:25 am	1.051	10093	0.58		1.00	1.00	1.00
280-116400-A-4-B	UNK	11/17/18 12:02:39 am	0.504	4843	0.85		1.00	1.00	1.00
280-116400-A-5-B	UNK	11/17/18 12:04:53 am	0.330	3171	1.39		1.00	1.00	1.00
280-116400-A-6-B	UNK	11/17/18 12:07:08 am	0.568	5456	0.77		1.00	1.00	1.00
280-116400-A-7-B	UNK	11/17/18 12:09:23 am	0.150	1438	1.17		1.00	1.00	1.00
280-116400-A-8-B	UNK	11/17/18 12:11:37 am	0.398	3825	1.28		1.00	1.00	1.00
280-116400-A-9-B	UNK	11/17/18 12:13:51 am	0.244	2344	1.37		1.00	1.00	1.00
CCV 280-437882/12-A	CCV	11/17/18 12:16:06 am	3.266	31368	0.97		1.00	1.00	1.00
% Recovery 108.87									
CCB 280-437882/13-A	CCB	11/17/18 12:18:19 am	0.021	203	4.52		1.00	1.00	1.00
280-116400-A-10-B	UNK	11/17/18 12:20:33 am	0.094	902	1.30		1.00	1.00	1.00

Sample Name	Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags	Wt.	Vol.	ODF
280-116400-A-11-B	UNK	11/17/18 12:22:47 am	0.339	3251	1.08		1.00	1.00	1.00
CCV 280-437882/12-A	CCV	11/17/18 12:25:02 am	3.276	31460	0.89		1.00	1.00	1.00
% Recovery 109.19									
CCB 280-437882/13-A	CCB	11/17/18 12:27:14 am	0.022	211	3.30		1.00	1.00	1.00

Analysis Parameters

Instrument M-7500 Mercury Analyzer

Conditions

Gas flow (mL/min)	Sample Uptake (s)	Rinse (s)	Read delay (s)	Replicates (#)	Replicate time (s)	Pump speed (%)	Wavelength (nm)
100	35.00	90.00	55.00	4	1.50	50	253.65

ASX Pump Rate (%)
100

Instrumental Zero

Zero before first sample: No

Zero periodically: Yes

Before each calibration.

Baseline Correction

#1 Start time (s)	#1 End time (s)	#2 Start time (s)	#2 End time (s)
20.00	24.00		

Standby Mode

Enabled: Yes

Standby Options: pump off, gas off, lamp off

Autodilution

Enabled: No

Condition:

Tube # range:

If no autodilution tubes remaining

Calibration

Settings

Algorithm	Through blank	Weighted fit	Cal. Type	Racalibration rate	Reslope rate	Reslope standard
Linear	No	No	Normal	0	0	N/A

Limits

Calibration slope		Reslope		Coeff. of Determination
Lower (%)	Upper (%)	Lower (%)	Upper (%)	
20	150	75	125	0.99500

Error action: Flag and continue

QC

GLP Override: Yes

QC Tests

CCB

Concentration (ppb)
0.0600

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICB

Concentration (ppb)
0.0600

Failure flag: Z

Error action for manually inserted QC: Stop analysis

CCV

Concentration (ppb)	Low Limit %	High Limit %
3.0000	80.0000	120.0000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

ICV

Concentration (ppb)	Low Limit %	High Limit %
2.4000	94.6000	105.4000

Failure flag: Q

Error action for manually inserted QC: Stop analysis

CRDL

Concentration (ppb)	Low Limit %	High Limit %
0.1200	50.0000	150.0000

Failure flag: Y

Error action for manually inserted QC: Stop analysis

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG No.:

Project: Leidos RFP# 001088 - Ravenna AAP-66

Client Sample ID	Lab Sample ID
SCLmw-001-181001-GW	280-116538-1
SCLmw-003-181001-GW	280-116538-2

Comments:

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job Number: 280-116538-1

SDG No.:

Project: Leidos RFP# 001088 - Ravenna AAP-66

Client Sample ID	Lab Sample ID
SCLmw-001-181001-GW	280-116538-1
SCLmw-003-181001-GW	280-116538-2

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: SCLmw-001-181001-GW
Lab Sample ID: 280-116538-1
Lab Name: TestAmerica Denver
Job No.: 280-116538-1
SDG ID.:
Matrix: Water
Date Sampled: 11/02/2018 10:45
Reporting Basis: WET
Date Received: 11/03/2018 09:00

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	0.0093	0.010	0.0050	0.0020	mg/L	J		1	9012B
Sulfide	1.9	4.0	1.9	0.79	mg/L	U		1	9034
Nitrate as N	0.13	0.50	0.10	0.042	mg/L	J		1	9056
Nitrite as N	0.10	0.50	0.10	0.049	mg/L	U		1	9056
Sulfate	230	25	2.5	1.2	mg/L		D	5	9056A
Alkalinity	370	5.0	5.0	1.1	mg/L		B	1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: SCLmw-003-181001-GW
Lab Sample ID: 280-116538-2
Lab Name: TestAmerica Denver
Job No.: 280-116538-1
SDG ID.:
Matrix: Water
Date Sampled: 11/02/2018 11:10
Reporting Basis: WET
Date Received: 11/03/2018 09:00

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Cyanide, Total	0.0060	0.010	0.0050	0.0020	mg/L	J		1	9012B
Sulfide	1.9	4.0	1.9	0.79	mg/L	U	J1	1	9034
Nitrate as N	0.10	0.50	0.10	0.042	mg/L	U		1	9056
Nitrite as N	0.10	0.50	0.10	0.049	mg/L	U		1	9056
Sulfate	190	5.0	0.50	0.23	mg/L			1	9056A
Alkalinity	340	5.0	5.0	1.1	mg/L		B	1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: SCLmw-001-181001-GW
Lab Sample ID: 280-116538-1
Lab Name: TestAmerica Sacramento
Job No.: 280-116538-1
SDG ID.:
Matrix: Water
Date Sampled: 11/02/2018 10:45
Reporting Basis: WET
Date Received: 11/03/2018 09:00

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Nitrocellulose	1000	2000	1000	480	ug/L	U		1	353.2

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: SCLmw-003-181001-GW
Lab Sample ID: 280-116538-2
Lab Name: TestAmerica Sacramento
Job No.: 280-116538-1
SDG ID.:
Matrix: Water
Date Sampled: 11/02/2018 11:10
Reporting Basis: WET
Date Received: 11/03/2018 09:00

Analyte	Result	LOQ	LOD	DL	Units	C	Q	DIL	Method
Nitrocellulose	1000	2000	1000	480	ug/L	U		1	353.2

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Analyst: RK Batch Start Date: 11/15/2018

Reporting Units: mg/L Analytical Batch No.: 437833

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
14	ICV	17:50	Cyanide, Total	0.104	0.100	104	90-110		CN ICV Daily_01225
15	ICB	17:51	Cyanide, Total	0.0050				U	
29	CCV	18:12	Cyanide, Total	0.201	0.200	101	90-110		CN CAL 1 ppm_01458
30	CCB	18:14	Cyanide, Total	0.0050				U	
44	CCV	18:35	Cyanide, Total	0.201	0.200	101	90-110		CN CAL 1 ppm_01458
45	CCB	18:36	Cyanide, Total	0.0050				U	
59	CCV	19:01	Cyanide, Total	0.204	0.200	102	90-110		CN CAL 1 ppm_01458
60	CCB	19:03	Cyanide, Total	0.0050				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Analyst: A1D Batch Start Date: 10/30/2018

Reporting Units: mg/L Analytical Batch No.: 435512

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
8	ICV	12:12	Nitrate as N	4.09	4.00	102	90-110		IC ICV 5_00214
			Nitrite as N	3.70	4.00	92	90-110		IC ICV 5_00214
9	ICB	12:29	Nitrate as N	0.10				U	
			Nitrite as N	0.10				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Analyst: A1D Batch Start Date: 11/03/2018

Reporting Units: mg/L Analytical Batch No.: 436181

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	10:40	Nitrate as N	4.96	5.00	99	90-110		IC LCS_01391
			Nitrite as N	5.03	5.00	101	90-110		IC LCS_01391
2	CCB	10:57	Nitrate as N	0.10				U	
			Nitrite as N	0.10				U	
16	CCV	15:26	Nitrate as N	5.00	5.00	100	90-110		IC LCS_01391
			Nitrite as N	5.14	5.00	103	90-110		IC LCS_01391
17	CCB	15:43	Nitrate as N	0.10				U	
			Nitrite as N	0.10				U	
25	CCV	18:03	Nitrate as N	5.01	5.00	100	90-110		IC LCS_01391
			Nitrite as N	5.14	5.00	103	90-110		IC LCS_01391
26	CCB	18:21	Nitrate as N	0.10				U	
			Nitrite as N	0.10				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Analyst: A1D Batch Start Date: 10/30/2018

Reporting Units: mg/L Analytical Batch No.: 435513

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
8	ICV	12:12	Sulfate	80.8	80.0	101	90-110		IC SO4 ICV_00017
9	ICB	12:29	Sulfate	0.484				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Analyst: A1D Batch Start Date: 11/03/2018

Reporting Units: mg/L Analytical Batch No.: 436182

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	10:40	Sulfate	102	100	102	90-110		IC LCS_01391
2	CCB	10:57	Sulfate	0.50				U	
16	CCV	15:26	Sulfate	103	100	103	90-110		IC LCS_01391
17	CCB	15:43	Sulfate	0.50				U	
25	CCV	18:03	Sulfate	103	100	103	90-110		IC LCS_01391
26	CCB	18:21	Sulfate	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Analyst: SGB Batch Start Date: 11/13/2018

Reporting Units: mg/L Analytical Batch No.: 437553

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
10	CCV	19:33	Alkalinity	199	200	99	90-110		Alk daily lcs 00785
11	CCB	19:38	Alkalinity	3.89				J	
22	CCV	20:56	Alkalinity	205	200	103	90-110		Alk daily lcs 00785
23	CCB	21:01	Alkalinity	3.62				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Analyst: TCS Batch Start Date: 11/15/2018

Reporting Units: mg/L Analytical Batch No.: 259445

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
9	ICV	13:23	Nitrocellulose	7.71	7.94	97	90-110		WC-353.2-ICV_00097
10	ICB	13:25	Nitrocellulose	1.0				U	
24	CCV	13:53	Nitrocellulose	7.64	7.94	96	90-110		WC-353.2-L4_00089
25	CCB	13:55	Nitrocellulose	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 437833	Date: 11/15/2018 18:00	Prep Batch: 437763	Date: 11/15/2018 11:37				
9012B	MB 280-437763/5-A	Cyanide, Total	0.0050	U	mg/L	0.010	1
Batch ID: 436735	Date: 11/07/2018 20:06	Prep Batch: 436723	Date: 11/07/2018 17:19				
9034	MB 280-436723/1-A	Sulfide	1.9	U	mg/L	4.0	1
Batch ID: 436181	Date: 11/03/2018 12:07						
9056	MB 280-436181/6	Nitrate as N	0.10	U	mg/L	0.50	1
9056	MB 280-436181/6	Nitrite as N	0.0961	J	mg/L	0.50	1
Batch ID: 436182	Date: 11/03/2018 12:07						
9056A	MB 280-436182/6	Sulfate	0.50	U	mg/L	5.0	1
Batch ID: 437553	Date: 11/13/2018 19:03						
SM 2320B	MB 280-437553/5	Alkalinity	3.21	J	mg/L	5.0	1

FORM III-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	LOQ	Dil
Batch ID: 259445	Date: 11/15/2018 13:37	Prep Batch: 261014	Date: 11/15/2018 09:00				
353.2	MB 320-261007/1-B	Nitrocellulose	1000	U	ug/L	2000	1

FORM III-IN

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436735	Date: 11/07/2018 20:06		Prep Batch: 436723		Date: 11/07/2018 17:19						
9034	280-116538-2	Sulfide	1.9	U	mg/L						J1
9034	280-116538-2 MS	Sulfide	19.8		mg/L	22.3	89	50-106			
Batch ID: 436181	Date: 11/03/2018 13:24										
9056	280-116538-1	Nitrate as N	0.13	J	mg/L						
9056	280-116538-1 MS	Nitrate as N	5.03		mg/L	5.00	98	88-111			
9056	280-116538-1	Nitrite as N	0.10	U	mg/L						
9056	280-116538-1 MS	Nitrite as N	4.55		mg/L	5.00	91	87-111			
Batch ID: 436182	Date: 11/03/2018 17:28										
9056A	280-116538-1	Sulfate	230		mg/L						D
9056A	280-116538-1 MS	Sulfate	358		mg/L	125	103	87-112			D

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436735 Date: 11/07/2018 20:06 Prep Batch: 436723 Date: 11/07/2018 17:19											
9034	280-116538-2 MSD	Sulfide	13.6		mg/L	22.3	61	50-106	37	20	J1
Batch ID: 436181 Date: 11/03/2018 13:41											
9056	280-116538-1 MSD	Nitrate as N	5.12		mg/L	5.00	100	88-111	2	10	
9056	280-116538-1 MSD	Nitrite as N	4.60		mg/L	5.00	92	87-111	1	10	
Batch ID: 436182 Date: 11/03/2018 17:46											
9056A	280-116538-1 MSD	Sulfate	358		mg/L	125	103	87-112	0	10	D

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 436181 Date: 11/03/2018 13:06								
9056	SCLmw-001-181001-GW	280-116538-1	Nitrate as N	0.13	mg/L			J
9056	SCLmw-001-181001-GW	280-116538-1 DU	Nitrate as N	0.132	mg/L	0.05	10	J
9056	SCLmw-001-181001-GW	280-116538-1	Nitrite as N	0.10	mg/L			U
9056	SCLmw-001-181001-GW	280-116538-1 DU	Nitrite as N	0.10	mg/L	NC	10	U
Batch ID: 436182 Date: 11/03/2018 17:11								
9056A	SCLmw-001-181001-GW	280-116538-1	Sulfate	230	mg/L			
9056A	SCLmw-001-181001-GW	280-116538-1 DU	Sulfate	224	mg/L	2	10	D

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 437833	Date: 11/15/2018 17:57		Prep Batch: 437763			Date: 11/15/2018 11:37					
						LCS Source: CN ICV Int_00511					
9012B	LCS 280-437763/3-A	Cyanide, Total	0.102		mg/L	0.100	102	83-116	4	20	
Batch ID: 436735	Date: 11/07/2018 20:06		Prep Batch: 436723			Date: 11/07/2018 17:19					
						LCS Source: SFD ICV INT_01516					
9034	LCS 280-436723/3-A	Sulfide	16.0		mg/L	22.3	72	50-106			
Batch ID: 436181	Date: 11/03/2018 11:32										
						LCS Source: IC LCS_01391					
9056	LCS 280-436181/4	Nitrate as N	4.96		mg/L	5.00	99	88-111	0	10	
9056	LCS 280-436181/4	Nitrite as N	5.06		mg/L	5.00	101	87-111	1	10	
Batch ID: 436182	Date: 11/03/2018 11:32										
						LCS Source: IC LCS_01391					
9056A	LCS 280-436182/4	Sulfate	102		mg/L	100	102	87-112	0	10	
Batch ID: 437553	Date: 11/13/2018 18:45										
						LCS Source: Alk daily lcs_00785					
SM 2320B	LCS 280-437553/4	Alkalinity	198		mg/L	200	99	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 437833	Date: 11/15/2018 17:59		Prep Batch: 437763			Date: 11/15/2018 11:37					
						LCSD Source: CN ICV Int_00511					
9012B	LCSD 280-437763/4-A	Cyanide, Total	0.0973		mg/L	0.100	97	83-116	4	20	
Batch ID: 436181	Date: 11/03/2018 11:49										
						LCSD Source: IC LCS_01391					
9056	LCSD 280-436181/5	Nitrate as N	4.97		mg/L	5.00	99	88-111	0	10	
9056	LCSD 280-436181/5	Nitrite as N	5.13		mg/L	5.00	103	87-111	1	10	
Batch ID: 436182	Date: 11/03/2018 11:49										
						LCSD Source: IC LCS_01391					
9056A	LCSD 280-436182/5	Sulfate	102		mg/L	100	102	87-112	0	10	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LOW LEVEL CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 437833	Date: 11/15/2018 17:56		Prep Batch: 437763			Date: 11/15/2018 11:37					
						LCS Source: CN 10ppm_00321					
9012B	LLCS 280-437763/2-A	Cyanide, Total	0.0970		mg/L	0.100	97	44-167			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
HIGH LEVEL CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 437833	Date: 11/15/2018 17:54		Prep Batch: 437763			Date: 11/15/2018 11:37					
						LCS Source: CN 10ppm_00321					
9012B	HLCS 280-437763/1-A	Cyanide, Total	0.342		mg/L	0.350	98	90-110			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
METHOD REPORTING LIMIT CHECK
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 436181	Date: 11/03/2018 11:14										
						LCS Source: IC Cal low_00412					
9056	MRL 280-436181/3	Nitrate as N	0.241	J	mg/L	0.200	120	50-150			
9056	MRL 280-436181/3	Nitrite as N	0.234	J	mg/L	0.200	117	50-150			
Batch ID: 436182	Date: 11/03/2018 11:14										
						LCS Source: IC CAL cl/so4_00228					
9056A	MRL 280-436182/3	Sulfate	1.98	J	mg/L	2.50	79	50-150			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 259445	Date: 11/15/2018 13:39		Prep Batch: 261014		Date: 11/15/2018 09:00						
					LCS Source: HPNCSP_00020						
353.2	LCS 320-261007/2-B	Nitrocellulose	3570		ug/L	5060	70	26-144			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: WC_Alp 1

Method: 9012B DL Date: 08/01/2018 00:00

Prep Method: 9012B

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Cyanide, Total		0.01	0.002

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: WC_Alp 1

Method: 9012B XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Cyanide, Total		0.01	0.002

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 9034 DL Date: 03/28/2011 13:37

Prep Method: 9030B

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Sulfide		4	0.793

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 9034 XMDL Date: 03/28/2011 13:37

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfide		4	0.793

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056 DL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Nitrate as N		0.5	0.042
Nitrite as N		0.5	0.049

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056 XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrate as N		0.5	0.042
Nitrite as N		0.5	0.049

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056A DL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Sulfate		5	0.232

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: WC_IonChrom10

Method: 9056A XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Sulfate		5	0.232

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: WC-AT3

Method: SM 2320B DL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Alkalinity		5	1.07

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: WC-AT3

Method: SM 2320B XMDL Date: 08/01/2018 00:00

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	1.07

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: FS4

Method: 353.2 DL Date: 03/15/2011 14:37

Prep Method: 353 (NCell-Hyd)

Analyte	Wavelength/ Mass	LOQ (mg/L)	DL (mg/L)
Nitrocellulose		2	0.475

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job Number: 280-116538-1

SDG Number:

Matrix: Water Instrument ID: FS4

Method: 353.2 XMDL Date: 03/15/2011 14:36

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Nitrocellulose		2	0.475

11-IN
LINEAR RANGES
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job No: 280-116538-1

SDG No.:

Instrument ID: FS4 Date: 07/31/2011 19:29

Analyte	Integ. Time (Sec.)	Concentration (mg/L)	Method
Nitrocellulose		16.8	353.2

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Prep Method: 9012B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
HLCS 280-437763/1-A	11/15/2018 11:37	437763		50	50
LLCS 280-437763/2-A	11/15/2018 11:37	437763		50	50
LCS 280-437763/3-A	11/15/2018 11:37	437763		50	50
LCSD 280-437763/4-A	11/15/2018 11:37	437763		50	50
MB 280-437763/5-A	11/15/2018 11:37	437763		50	50
280-116538-1	11/15/2018 11:37	437763		50	50
280-116538-2	11/15/2018 11:37	437763		50	50

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Prep Method: 9030B

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 280-436723/1-A	11/07/2018 17:19	436723		50	50
LCS 280-436723/3-A	11/07/2018 17:19	436723		50	50
280-116538-1	11/07/2018 17:19	436723		50	50
280-116538-2	11/07/2018 17:19	436723		50	50
280-116538-2 MS	11/07/2018 17:19	436723		50	50
280-116538-2 MSD	11/07/2018 17:19	436723		50	50

12-IN
PREPARATION LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Prep Method: 353 (NCell-Hyd)

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 320-261007/1-B	11/15/2018 09:00	261014		50	40
LCS 320-261007/2-B	11/15/2018 09:00	261014		50	40
280-116538-1	11/15/2018 09:00	261014		50	40
280-116538-2	11/15/2018 09:00	261014		50	40

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/15/2018 17:30 End Date: 11/15/2018 19:52

Lab Sample Id	D/F	Type	Time	Analytes
				CN
ZZZZZZ			17:30	
ZZZZZZ			17:32	
ZZZZZZ			17:33	
ZZZZZZ			17:35	
IC 280-437833/5			17:36	X
IC 280-437833/6			17:38	X
IC 280-437833/7			17:39	X
IC 280-437833/8			17:41	X
IC 280-437833/9			17:42	X
IC 280-437833/10			17:44	X
IC 280-437833/11			17:45	X
ZZZZZZ			17:47	
ZZZZZZ			17:48	
ICV 280-437833/14	1		17:50	X
ICB 280-437833/15	1		17:51	X
ZZZZZZ			17:53	
HLCS 280-437763/1-A	1	T	17:54	X
LLCS 280-437763/2-A	1	T	17:56	X
LCS 280-437763/3-A	1	T	17:57	X
LCSD 280-437763/4-A	1	T	17:59	X
MB 280-437763/5-A	1	T	18:00	X
ZZZZZZ			18:02	
ZZZZZZ			18:03	
ZZZZZZ			18:05	
ZZZZZZ			18:06	
ZZZZZZ			18:08	
ZZZZZZ			18:09	
ZZZZZZ			18:11	
CCV 280-437833/29	1		18:12	X
CCB 280-437833/30	1		18:14	X
ZZZZZZ			18:15	
ZZZZZZ			18:17	
ZZZZZZ			18:18	
ZZZZZZ			18:20	
ZZZZZZ			18:21	
ZZZZZZ			18:23	
ZZZZZZ			18:24	
ZZZZZZ			18:26	
ZZZZZZ			18:27	
ZZZZZZ			18:29	
ZZZZZZ			18:30	
ZZZZZZ			18:32	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/15/2018 17:30 End Date: 11/15/2018 19:52

Lab Sample Id	D/F	Type	Time	Analytes
				CN
ZZZZZZ			18:33	
CCV 280-437833/44	1		18:35	X
CCB 280-437833/45	1		18:36	X
ZZZZZZ			18:38	
ZZZZZZ			18:39	
ZZZZZZ			18:41	
280-116538-1	1	T	18:42	X
280-116538-2	1	T	18:44	X
ZZZZZZ			18:45	
ZZZZZZ			18:47	
ZZZZZZ			18:48	
ZZZZZZ			18:50	
ZZZZZZ			18:55	
ZZZZZZ			18:57	
ZZZZZZ			18:58	
ZZZZZZ			19:00	
CCV 280-437833/59	1		19:01	X
CCB 280-437833/60	1		19:03	X
ZZZZZZ			19:04	
ZZZZZZ			19:06	
ZZZZZZ			19:07	
ZZZZZZ			19:09	
ZZZZZZ			19:10	
ZZZZZZ			19:12	
ZZZZZZ			19:13	
ZZZZZZ			19:15	
ZZZZZZ			19:16	
ZZZZZZ			19:18	
ZZZZZZ			19:19	
ZZZZZZ			19:21	
ZZZZZZ			19:22	
CCV 280-437833/74			19:24	
CCB 280-437833/75			19:25	
ZZZZZZ			19:27	
ZZZZZZ			19:28	
ZZZZZZ			19:30	
ZZZZZZ			19:31	
CCV 280-437833/80			19:33	
CCB 280-437833/81			19:34	
ZZZZZZ			19:36	
ZZZZZZ			19:41	
ZZZZZZ			19:43	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC_Alp 1 Analysis Method: 9012B

Start Date: 11/15/2018 17:30 End Date: 11/15/2018 19:52

Lab Sample Id	D/F	Type	Time	Analytes																								
				CN																								
ZZZZZZ			19:44																									
ZZZZZZ			19:46																									
ZZZZZZ			19:47																									
CCV 280-437833/88			19:49																									
CCB 280-437833/89			19:50																									
ZZZZZZ			19:52																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: 9034

Start Date: 11/07/2018 20:06 End Date: 11/07/2018 20:06

Lab Sample Id	D/F	Type	Time	Analytes																								
				S2																								
MB 280-436723/1-A	1	T	20:06	X																								
ZZZZZZ			20:06																									
LCS 280-436723/3-A	1	T	20:06	X																								
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
280-116538-1	1	T	20:06	X																								
280-116538-2	1	T	20:06	X																								
280-116538-2 MS	1	T	20:06	X																								
280-116538-2 MSD	1	T	20:06	X																								
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									
ZZZZZZ			20:06																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056

Start Date: 10/30/2018 10:10 End Date: 10/31/2018 08:25

Lab Sample Id	D/F	Type	Time	Analytes																										
				NO2-N	NO3																									
RTC 280-435512/1			10:10																											
STD1 280-435512/2 IC	1		10:27	X	X																									
STD2 280-435512/3 IC	1		10:45	X	X																									
STD3 280-435512/4 IC	1		11:02	X	X																									
STD4 280-435512/5 IC	1		11:19	X	X																									
STD5 280-435512/6 IC	1		11:37	X	X																									
STD6 280-435512/7 IC	1		11:54	X	X																									
ICV 280-435512/8	1		12:12	X	X																									
ICB 280-435512/9	1		12:29	X	X																									
ZZZZZZ			12:46																											
ZZZZZZ			13:04																											
ZZZZZZ			13:21																											
ZZZZZZ			13:39																											
ZZZZZZ			21:05																											
ZZZZZZ			21:22																											
ZZZZZZ			21:40																											
ZZZZZZ			21:57																											
ZZZZZZ			22:14																											
ZZZZZZ			22:32																											
ZZZZZZ			22:49																											
ZZZZZZ			23:07																											
ZZZZZZ			23:24																											
ZZZZZZ			23:42																											
CCV 280-435512/24			23:59																											
CCB 280-435512/25			00:17																											
ZZZZZZ			00:34																											
ZZZZZZ			00:52																											
ZZZZZZ			01:09																											
ZZZZZZ			01:27																											
ZZZZZZ			01:44																											
ZZZZZZ			02:02																											
ZZZZZZ			02:19																											
ZZZZZZ			02:37																											
CCV 280-435512/34			02:54																											
CCB 280-435512/35			03:12																											
ZZZZZZ			03:29																											
ZZZZZZ			03:47																											
ZZZZZZ			04:04																											
ZZZZZZ			04:22																											

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056

Start Date: 10/30/2018 10:10 End Date: 10/31/2018 08:25

Lab Sample Id	D/F	Type	Time	Analytes																								
				NO2-N	NO3																							
CCV 280-435512/46			06:24																									
CCB 280-435512/47			06:41																									
ZZZZZZ			07:33																									
CCV 280-435512/52			08:08																									
CCB 280-435512/53			08:25																									

Prep Types:
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FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056

Start Date: 11/03/2018 10:40 End Date: 11/03/2018 21:16

Lab Sample Id	D/F	Type	Time	Analytes																									
				NO2-N	NO3																								
CCV 280-436181/1	1		10:40	X	X																								
CCB 280-436181/2	1		10:57	X	X																								
MRL 280-436181/3	1	T	11:14	X	X																								
LCS 280-436181/4	1	T	11:32	X	X																								
LCSD 280-436181/5	1	T	11:49	X	X																								
MB 280-436181/6	1	T	12:07	X	X																								
280-116538-1	1	T	12:49	X	X																								
280-116538-1 DU	1	T	13:06	X	X																								
280-116538-1 MS	1	T	13:24	X	X																								
280-116538-1 MSD	1	T	13:41	X	X																								
280-116538-2	1	T	13:59	X	X																								
ZZZZZZ			14:16																										
ZZZZZZ			14:33																										
ZZZZZZ			14:51																										
ZZZZZZ			15:08																										
CCV 280-436181/16	1		15:26	X	X																								
CCB 280-436181/17	1		15:43	X	X																								
ZZZZZZ			16:01																										
ZZZZZZ			16:18																										
ZZZZZZ			16:36																										
ZZZZZZ			16:53																										
ZZZZZZ			17:11																										
ZZZZZZ			17:28																										
ZZZZZZ			17:46																										
CCV 280-436181/25	1		18:03	X	X																								
CCB 280-436181/26	1		18:21	X	X																								
ZZZZZZ			19:13																										
ZZZZZZ			19:31																										
ZZZZZZ			19:48																										
ZZZZZZ			20:06																										
CCV 280-436181/35			20:58																										
CCB 280-436181/36			21:16																										

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 10/30/2018 10:10 End Date: 10/31/2018 08:25

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
RTC 280-435513/1			10:10																									
STD1 280-435513/2 IC	1		10:27	X																								
STD2 280-435513/3 IC	1		10:45	X																								
STD3 280-435513/4 IC	1		11:02	X																								
STD4 280-435513/5 IC	1		11:19	X																								
STD5 280-435513/6 IC	1		11:37	X																								
STD6 280-435513/7 IC	1		11:54	X																								
ICV 280-435513/8	1		12:12	X																								
ICB 280-435513/9	1		12:29	X																								
ZZZZZZ			12:46																									
ZZZZZZ			13:04																									
ZZZZZZ			13:21																									
ZZZZZZ			13:39																									
ZZZZZZ			21:05																									
ZZZZZZ			21:22																									
ZZZZZZ			21:40																									
ZZZZZZ			21:57																									
ZZZZZZ			22:14																									
ZZZZZZ			22:32																									
ZZZZZZ			22:49																									
ZZZZZZ			23:07																									
ZZZZZZ			23:24																									
ZZZZZZ			23:42																									
CCV 280-435513/24			23:59																									
CCB 280-435513/25			00:17																									
ZZZZZZ			00:34																									
ZZZZZZ			00:52																									
ZZZZZZ			01:09																									
ZZZZZZ			01:27																									
ZZZZZZ			01:44																									
ZZZZZZ			02:02																									
ZZZZZZ			02:19																									
ZZZZZZ			02:37																									
CCV 280-435513/34			02:54																									
CCB 280-435513/35			03:12																									
ZZZZZZ			03:29																									
ZZZZZZ			03:47																									
ZZZZZZ			04:04																									
ZZZZZZ			04:22																									
ZZZZZZ			04:39																									
ZZZZZZ			04:57																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 10/30/2018 10:10 End Date: 10/31/2018 08:25

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
ZZZZZZ			05:14																									
ZZZZZZ			05:31																									
ZZZZZZ			05:49																									
ZZZZZZ			06:06																									
CCV 280-435513/46			06:24																									
CCB 280-435513/47			06:41																									
ZZZZZZ			06:58																									
ZZZZZZ			07:16																									
ZZZZZZ			07:33																									
ZZZZZZ			07:51																									
CCV 280-435513/52			08:08																									
CCB 280-435513/53			08:25																									

Prep Types:
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FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC_IonChrom10 Analysis Method: 9056A

Start Date: 11/03/2018 10:40 End Date: 11/03/2018 21:16

Lab Sample Id	D/F	Type	Time	Analytes																								
				SO4																								
CCV 280-436182/1	1		10:40	X																								
CCB 280-436182/2	1		10:57	X																								
MRL 280-436182/3	1	T	11:14	X																								
LCS 280-436182/4	1	T	11:32	X																								
LCSD 280-436182/5	1	T	11:49	X																								
MB 280-436182/6	1	T	12:07	X																								
ZZZZZZ			12:49																									
ZZZZZZ			13:06																									
ZZZZZZ			13:24																									
ZZZZZZ			13:41																									
280-116538-2	1	T	13:59	X																								
ZZZZZZ			14:33																									
ZZZZZZ			14:51																									
ZZZZZZ			15:08																									
CCV 280-436182/16	1		15:26	X																								
CCB 280-436182/17	1		15:43	X																								
ZZZZZZ			16:01																									
ZZZZZZ			16:18																									
280-116538-1	5	T	16:53	X																								
280-116538-1 DU	5	T	17:11	X																								
280-116538-1 MS	5	T	17:28	X																								
280-116538-1 MSD	5	T	17:46	X																								
CCV 280-436182/25	1		18:03	X																								
CCB 280-436182/26	1		18:21	X																								
ZZZZZZ			18:38																									
ZZZZZZ			18:56																									
ZZZZZZ			19:13																									
ZZZZZZ			19:31																									
ZZZZZZ			19:48																									
ZZZZZZ			20:06																									
ZZZZZZ			20:23																									
ZZZZZZ			20:41																									
CCV 280-436182/35			20:58																									
CCB 280-436182/36			21:16																									

Prep Types:
T = Total/NA

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ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC-AT3 Analysis Method: SM 2320B

Start Date: 11/13/2018 18:30 End Date: 11/14/2018 05:30

Lab Sample Id	D/F	Type	Time	Analytes
				Alk
ZZZZZZ			18:30	
ZZZZZZ			18:37	
ZZZZZZ			18:39	
LCS 280-437553/4	1	T	18:45	X
MB 280-437553/5	1	T	19:03	X
ZZZZZZ			19:08	
ZZZZZZ			19:14	
ZZZZZZ			19:21	
ZZZZZZ			19:27	
CCV 280-437553/10	1		19:33	X
CCB 280-437553/11	1		19:38	X
ZZZZZZ			19:44	
ZZZZZZ			19:50	
ZZZZZZ			19:56	
280-116538-1	1	T	20:03	X
280-116538-2	1	T	20:11	X
ZZZZZZ			20:15	
ZZZZZZ			20:22	
ZZZZZZ			20:30	
ZZZZZZ			20:40	
ZZZZZZ			20:49	
CCV 280-437553/22	1		20:56	X
CCB 280-437553/23	1		21:01	X
ZZZZZZ			21:08	
ZZZZZZ			21:15	
ZZZZZZ			21:24	
ZZZZZZ			21:32	
ZZZZZZ			21:36	
ZZZZZZ			21:42	
ZZZZZZ			21:49	
ZZZZZZ			21:56	
ZZZZZZ			22:03	
ZZZZZZ			22:09	
CCV 280-437553/34			22:15	
CCB 280-437553/35			22:19	
ZZZZZZ			22:26	
ZZZZZZ			22:30	
ZZZZZZ			22:38	
ZZZZZZ			22:51	
ZZZZZZ			22:57	
ZZZZZZ			23:03	

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC-AT3 Analysis Method: SM 2320B

Start Date: 11/13/2018 18:30 End Date: 11/14/2018 05:30

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			23:09																									
ZZZZZZ			23:16																									
ZZZZZZ			23:25																									
ZZZZZZ			23:35																									
ZZZZZZ			23:43																									
ZZZZZZ			23:53																									
CCV 280-437553/48			23:59																									
CCB 280-437553/49			00:03																									
ZZZZZZ			00:09																									
ZZZZZZ			00:15																									
ZZZZZZ			00:21																									
ZZZZZZ			00:27																									
ZZZZZZ			00:33																									
ZZZZZZ			00:40																									
ZZZZZZ			00:46																									
ZZZZZZ			00:53																									
ZZZZZZ			00:59																									
ZZZZZZ			01:05																									
CCV 280-437553/60			01:12																									
CCB 280-437553/61			01:16																									
ZZZZZZ			01:22																									
ZZZZZZ			01:27																									
ZZZZZZ			01:31																									
ZZZZZZ			01:36																									
ZZZZZZ			01:41																									
ZZZZZZ			01:46																									
ZZZZZZ			01:51																									
ZZZZZZ			01:57																									
ZZZZZZ			02:03																									
ZZZZZZ			02:09																									
ZZZZZZ			02:15																									
ZZZZZZ			02:20																									
CCV 280-437553/74			02:27																									
CCB 280-437553/75			02:31																									
ZZZZZZ			02:38																									
ZZZZZZ			02:44																									
ZZZZZZ			02:51																									
ZZZZZZ			02:58																									
ZZZZZZ			03:07																									
ZZZZZZ			03:13																									
ZZZZZZ			03:19																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Instrument ID: WC-AT3 Analysis Method: SM 2320B

Start Date: 11/13/2018 18:30 End Date: 11/14/2018 05:30

Lab Sample Id	D/F	Type	Time	Analytes																								
				Alk																								
ZZZZZZ			03:26																									
ZZZZZZ			03:33																									
ZZZZZZ			03:39																									
CCV 280-437553/86			03:46																									
CCB 280-437553/87			03:51																									
ZZZZZZ			03:58																									
ZZZZZZ			04:03																									
ZZZZZZ			04:10																									
ZZZZZZ			04:17																									
ZZZZZZ			04:24																									
ZZZZZZ			04:31																									
ZZZZZZ			04:38																									
ZZZZZZ			04:44																									
ZZZZZZ			04:56																									
ZZZZZZ			05:03																									
ZZZZZZ			05:09																									
ZZZZZZ			05:19																									
CCV 280-437553/100			05:26																									
CCB 280-437553/101			05:30																									

Prep Types:
T = Total/NA

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Instrument ID: FS4 Analysis Method: 353.2

Start Date: 11/15/2018 13:07 End Date: 11/15/2018 13:57

Lab Sample Id	D/F	Type	Time	Analytes																								
				NCL																								
ZZZZZZ			13:07																									
ZZZZZZ			13:09																									
STD5 320-259445/3 IC			13:11	X																								
STD4 320-259445/4 IC			13:13	X																								
STD3 320-259445/5 IC			13:15	X																								
STD2 320-259445/6 IC			13:17	X																								
STD1 320-259445/7 IC			13:19	X																								
STD0 320-259445/8 IC			13:21	X																								
ICV 320-259445/9	1		13:23	X																								
ICB 320-259445/10	1		13:25	X																								
ZZZZZZ			13:27																									
ZZZZZZ			13:29																									
ZZZZZZ			13:31																									
ZZZZZZ			13:33																									
ZZZZZZ			13:35																									
MB 320-261007/1-B	1	T	13:37	X																								
LCS 320-261007/2-B	1	T	13:39	X																								
ZZZZZZ			13:41																									
ZZZZZZ			13:43																									
ZZZZZZ			13:45																									
ZZZZZZ			13:47																									
280-116538-1	1	T	13:49	X																								
280-116538-2	1	T	13:51	X																								
CCV 320-259445/24	1		13:53	X																								
CCB 320-259445/25	1		13:55	X																								
ZZZZZZ			13:57																									

Prep Types:
T = Total/NA

FORM XIII-IN

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437763 Batch Start Date: 11/15/18 12:58 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date: 11/15/18 17:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	SulfideCheck	ChlorineCheck	DistillpHCheck	CN 10ppm 00321
HLCS 280-437763/1		9012B, 9012B		50 mL	50 mL				1.75 mL
LLCS 280-437763/2		9012B, 9012B		50 mL	50 mL				0.5 mL
LCS 280-437763/3		9012B, 9012B		50 mL	50 mL				
LCSD 280-437763/4		9012B, 9012B		50 mL	50 mL				
MB 280-437763/5		9012B, 9012B		50 mL	50 mL				
280-116538-N-1	SCLmw-001-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	
280-116538-N-2	SCLmw-003-181001-GW	9012B, 9012B	T	50 mL	50 mL	N	N	>12	

Lab Sample ID	Client Sample ID	Method Chain	Basis	CN ICV Int 00511					
HLCS 280-437763/1		9012B, 9012B							
LLCS 280-437763/2		9012B, 9012B							
LCS 280-437763/3		9012B, 9012B		0.5 mL					
LCSD 280-437763/4		9012B, 9012B		0.5 mL					
MB 280-437763/5		9012B, 9012B							
280-116538-N-1	SCLmw-001-181001-GW	9012B, 9012B	T						
280-116538-N-2	SCLmw-003-181001-GW	9012B, 9012B	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437763 Batch Start Date: 11/15/18 12:58 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date: 11/15/18 17:20

Batch Notes	
Acetate Buffer ID	Acetate Buffer_00005
Balance ID	M19170
Batch Comment	DA training RK/AL
Cadmium Carbonate ID	CAD CHL CN_00004
Distillation End Time	11/15/2018 17:20
Distillation Start Time	11/15/2018 12:58
Magnesium Chloride Reagent ID Number	CN Mag Chl_00084
Sodium Hydroxide ID	2% NaOH_00357
Pipette/Syringe/Dispenser ID	1000nxn, 5000elj
Sulfamic Acid ID	CN SULFAMIC_00093
Sulfuric Acid Reagent ID Number	SulfuricAcid_00223

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437833 Batch Start Date: 11/15/18 17:30 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CN CAL 1 ppm 01458	CN ICV Daily 01225		
ICV 280-437833/14		9012B		50 mL	50 mL		50 mL		
ICB 280-437833/15		9012B		50 mL	50 mL				
HLCS 280-437763/1-A		9012B		50 mL	50 mL				
LLCS 280-437763/2-A		9012B		50 mL	50 mL				
LCS 280-437763/3-A		9012B		50 mL	50 mL				
LCSD 280-437763/4-A		9012B		50 mL	50 mL				
MB 280-437763/5-A		9012B		50 mL	50 mL				
CCV 280-437833/29		9012B		50 mL	50 mL	10 mL			
CCB 280-437833/30		9012B		50 mL	50 mL				
CCV 280-437833/44		9012B		50 mL	50 mL	10 mL			
CCB 280-437833/45		9012B		50 mL	50 mL				
280-116538-N-1-A	SCLmw-001-181001-GW	9012B	T	50 mL	50 mL				
280-116538-N-2-A	SCLmw-003-181001-GW	9012B	T	50 mL	50 mL				
CCV 280-437833/59		9012B		50 mL	50 mL	10 mL			
CCB 280-437833/60		9012B		50 mL	50 mL				

Batch Notes	
Batch Comment	DA trained RK/AL
Buffer Reagent ID	CN Buffer_00118
Chloramine-T ID	CN Chlor-T_01011
Sodium Hydroxide ID	1% NaOH_00364
Pipette/Syringe/Dispenser ID	1000nxn, 5000elj
Pyridine-Barbituric Acid ID	CN Pyr/Barb_00207

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437833 Batch Start Date: 11/15/18 17:30 Batch Analyst: Kurniadi, Richard

Batch Method: 9012B Batch End Date:

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436723 Batch Start Date: 11/07/18 18:36 Batch Analyst: Citrone, Elias

Batch Method: 9030B Batch End Date: 11/07/18 19:41

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	DistillUnitPort	Initial pH	Final pH	AcidVolAdded
MB 280-436723/1		9030B, 9034		50 mL	50 mL	1		<2 SU	5 mL
LCS 280-436723/3		9030B, 9034		50 mL	50 mL	3		<2 SU	5 mL
280-116538-M-1	SCLmw-001-181001-GW	9030B, 9034	T	50 mL	50 mL	7	>12 SU	<2 SU	5 mL
280-116538-M-2	SCLmw-003-181001-GW	9030B, 9034	T	50 mL	50 mL	8	>12 SU	<2 SU	5 mL
280-116538-M-2 MS	SCLmw-003-181001-GW	9030B, 9034	T	50 mL	50 mL	9	>12 SU	<2 SU	5 mL
280-116538-M-2 MSD	SCLmw-003-181001-GW	9030B, 9034	T	50 mL	50 mL	10	>12 SU	<2 SU	5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	SFD ICV INT 01516					
MB 280-436723/1		9030B, 9034							
LCS 280-436723/3		9030B, 9034		1 mL					
280-116538-M-1	SCLmw-001-181001-GW	9030B, 9034	T						
280-116538-M-2	SCLmw-003-181001-GW	9030B, 9034	T						
280-116538-M-2 MS	SCLmw-003-181001-GW	9030B, 9034	T	1 mL					
280-116538-M-2 MSD	SCLmw-003-181001-GW	9030B, 9034	T	1 mL					

Batch Notes	
Distillation End Time	11/07/2018 19:41
Distillation Start Time	11/07/2018 18:36
pH Indicator ID	HC854592
Pipette/Syringe/Dispenser ID	AZ1000, AZ5000
Sulfuric Acid Reagent ID Number	H2SO4_00190
Zinc Acetate Buffer ID	znac_00102

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436735 Batch Start Date: 11/07/18 20:06 Batch Analyst: Citrone, Elias

Batch Method: 9034 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	BuretStart1	BuretStop1	IodineAmount	TitrantVolume1	FinalAmount	
MB 280-436723/1-A		9034		0.00 mL	1.00 mL	1 mL	1 mL	50 mL	
LCS 280-436723/3-A		9034		2.10 mL	5.10 mL	5 mL	3 mL	50 mL	
280-116538-M-1-B	SCLmw-001-181001-GW	9034	T	7.79 mL	8.80 mL	1 mL	1.01 mL	50 mL	
280-116538-M-2-B	SCLmw-003-181001-GW	9034	T	8.80 mL	9.87 mL	1 mL	1.07 mL	50 mL	
280-116538-M-2-C MS	SCLmw-003-181001-GW	9034	T	9.87 mL	12.40 mL	5 mL	2.53 mL	50 mL	
280-116538-M-2-D MSD	SCLmw-003-181001-GW	9034	T	12.40 mL	15.70 mL	5 mL	3.3 mL	50 mL	

Batch Notes	
Hydrochloric Acid ID	HCL Sol_00160
Iodine ID	Iod_00209
Normality of Iodine Solution	0.0250 N
Sodium Thiosulfate ID	Na Thio_00139
Pipette/Syringe/Dispenser ID	AZ1000, AZ5000
Starch Reagent ID	Starch Ind_ 00051
Normality of First Titrant	0.0250 N
Zinc Acetate Buffer ID	znac_00100

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 435512 Batch Start Date: 10/30/18 10:10 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00227	IC Cal low 00411	IC CL ICV 00014	IC ICV 5 00214
STD1 280-435512/2 IC		9056		5 mL	5 mL	0.04 mL	0.04 mL		
STD2 280-435512/3 IC		9056		5 mL	5 mL	0.1 mL	0.1 mL		
STD3 280-435512/4 IC		9056		5 mL	5 mL	0.2 mL	0.2 mL		
STD4 280-435512/5 IC		9056		5 mL	5 mL	2.4 mL	0.8 mL		
STD5 280-435512/6 IC		9056		5 mL	5 mL	4.8 mL	1.6 mL		
STD6 280-435512/7 IC		9056		5 mL	5 mL	8 mL	2 mL		
ICV 280-435512/8		9056		5 mL	5 mL			0.8 mL	0.8 mL
ICB 280-435512/9		9056		5 mL	5 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00017					
STD1 280-435512/2 IC		9056							
STD2 280-435512/3 IC		9056							
STD3 280-435512/4 IC		9056							
STD4 280-435512/5 IC		9056							
STD5 280-435512/6 IC		9056							
STD6 280-435512/7 IC		9056							
ICV 280-435512/8		9056		0.8 mL					
ICB 280-435512/9		9056							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 435512 Batch Start Date: 10/30/18 10:10 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056 Batch End Date:

Batch Notes	
Batch Comment	AD training with AA
Eluent 1 ID	M18021202
Filter ID	r7ma61819
Pipette/Syringe/Dispenser ID	5000ics wc1000-d ic100
Regeneration Solution ID	M17060701
Sufficient Volume for Batch QC	Yes

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436181 Batch Start Date: 11/03/18 10:40 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00228	IC Cal low 00412	IC LCS 01391	ICMS/MSD WEEK 00563
CCV 280-436181/1		9056		5 mL	5 mL			10 mL	
CCB 280-436181/2		9056		5 mL	5 mL				
MRL 280-436181/3		9056		5 mL	5 mL	0.1 mL	0.04 mL		
LCS 280-436181/4		9056		5 mL	5 mL			10 mL	
LCSD 280-436181/5		9056		5 mL	5 mL			10 mL	
MB 280-436181/6		9056		5 mL	5 mL				
280-116538-K-1	SCLmw-001-181001-GW	9056	T	5 mL	5 mL				
280-116538-K-1 DU	SCLmw-001-181001-GW	9056	T	5 mL	5 mL				
280-116538-K-1 MS	SCLmw-001-181001-GW	9056	T	5 mL	5 mL				0.1 mL
280-116538-K-1 MSD	SCLmw-001-181001-GW	9056	T	5 mL	5 mL				0.1 mL
280-116538-G-2	SCLmw-003-181001-GW	9056	T	5 mL	5 mL				
CCV 280-436181/16		9056		5 mL	5 mL			10 mL	
CCB 280-436181/17		9056		5 mL	5 mL				
280-116538-K-1	SCLmw-001-181001-GW	9056	T	5 mL	5 mL				
280-116538-K-1 DU	SCLmw-001-181001-GW	9056	T	5 mL	5 mL				
280-116538-K-1 MS	SCLmw-001-181001-GW	9056	T	5 mL	5 mL				0.1 mL
280-116538-K-1 MSD	SCLmw-001-181001-GW	9056	T	5 mL	5 mL				0.1 mL
CCV 280-436181/25		9056		5 mL	5 mL			10 mL	
CCB 280-436181/26		9056		5 mL	5 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436181 Batch Start Date: 11/03/18 10:40 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056 Batch End Date:

Batch Notes	
Batch Comment	AD training with AA
Eluent 1 ID	M18021202
Filter ID	r7ma61819
Pipette/Syringe/Dispenser ID	5000ics wc100-d ic100
Regeneration Solution ID	M18072401
Sufficient Volume for Batch QC	Yes

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 435513 Batch Start Date: 10/30/18 10:10 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00227	IC Cal low 00411	IC CL ICV 00014	IC ICV 5 00214
STD1 280-435513/2 IC		9056A		5 mL	5 mL	0.04 mL	0.04 mL		
STD2 280-435513/3 IC		9056A		5 mL	5 mL	0.1 mL	0.1 mL		
STD3 280-435513/4 IC		9056A		5 mL	5 mL	0.2 mL	0.2 mL		
STD4 280-435513/5 IC		9056A		5 mL	5 mL	2.4 mL	0.8 mL		
STD5 280-435513/6 IC		9056A		5 mL	5 mL	4.8 mL	1.6 mL		
STD6 280-435513/7 IC		9056A		5 mL	5 mL	8 mL	2 mL		
ICV 280-435513/8		9056A		5 mL	5 mL			0.8 mL	0.8 mL
ICB 280-435513/9		9056A		5 mL	5 mL				

Lab Sample ID	Client Sample ID	Method Chain	Basis	IC SO4 ICV 00017					
STD1 280-435513/2 IC		9056A							
STD2 280-435513/3 IC		9056A							
STD3 280-435513/4 IC		9056A							
STD4 280-435513/5 IC		9056A							
STD5 280-435513/6 IC		9056A							
STD6 280-435513/7 IC		9056A							
ICV 280-435513/8		9056A		0.8 mL					
ICB 280-435513/9		9056A							

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 435513 Batch Start Date: 10/30/18 10:10 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056A Batch End Date:

Batch Notes	
Batch Comment	AD training with AA
Eluent 1 ID	M18021202
Filter ID	r7ma61819
Pipette/Syringe/Dispenser ID	5000ics wc1000-d ic100
Regeneration Solution ID	17060701
Sufficient Volume for Batch QC	Yes

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436182 Batch Start Date: 11/03/18 10:40 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056A Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	IC CAL cl/so4 00228	IC Cal low 00412	IC LCS 01391	ICMS/MSD WEEK 00563
CCV 280-436182/1		9056A		5 mL	5 mL			10 mL	
CCB 280-436182/2		9056A		5 mL	5 mL				
MRL 280-436182/3		9056A		5 mL	5 mL	0.1 mL	0.04 mL		
LCS 280-436182/4		9056A		5 mL	5 mL			10 mL	
LCSD 280-436182/5		9056A		5 mL	5 mL			10 mL	
MB 280-436182/6		9056A		5 mL	5 mL				
280-116538-K-1	SCLmw-001-181001-GW	9056A	T	5 mL	5 mL				
280-116538-K-1 DU	SCLmw-001-181001-GW	9056A	T	5 mL	5 mL				
280-116538-K-1 MS	SCLmw-001-181001-GW	9056A	T	5 mL	5 mL				0.1 mL
280-116538-K-1 MSD	SCLmw-001-181001-GW	9056A	T	5 mL	5 mL				0.1 mL
280-116538-G-2	SCLmw-003-181001-GW	9056A	T	5 mL	5 mL				
CCV 280-436182/16		9056A		5 mL	5 mL			10 mL	
CCB 280-436182/17		9056A		5 mL	5 mL				
280-116538-K-1	SCLmw-001-181001-GW	9056A	T	5 mL	5 mL				
280-116538-K-1 DU	SCLmw-001-181001-GW	9056A	T	5 mL	5 mL				
280-116538-K-1 MS	SCLmw-001-181001-GW	9056A	T	5 mL	5 mL				0.1 mL
280-116538-K-1 MSD	SCLmw-001-181001-GW	9056A	T	5 mL	5 mL				0.1 mL
CCV 280-436182/25		9056A		5 mL	5 mL			10 mL	
CCB 280-436182/26		9056A		5 mL	5 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 436182 Batch Start Date: 11/03/18 10:40 Batch Analyst: Duplin, Alysha 1

Batch Method: 9056A Batch End Date:

Batch Notes	
Batch Comment	AD training with AA
Eluent 1 ID	M18021202
Filter ID	r7ma61819
Pipette/Syringe/Dispenser ID	5000ics wc100-d ic100
Regeneration Solution ID	M18072401
Sufficient Volume for Batch QC	Yes

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Denver Job No.: 280-116538-1

SDG No.:

Batch Number: 437553 Batch Start Date: 11/13/18 18:30 Batch Analyst: Barker, Scott G

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	CalcMsg	Alk daily lcs 00785				
LCS 280-437553/4		SM 2320B		InitialAmount is blank	10 mL				
MB 280-437553/5		SM 2320B		InitialAmount is blank					
CCV 280-437553/10		SM 2320B		InitialAmount is blank	10 mL				
CCB 280-437553/11		SM 2320B		InitialAmount is blank					
280-116538-K-1	SCLmw-001-181001-GW	SM 2320B	T	InitialAmount is blank					
280-116538-K-2	SCLmw-003-181001-GW	SM 2320B	T	InitialAmount is blank					
CCV 280-437553/22		SM 2320B		InitialAmount is blank	10 mL				
CCB 280-437553/23		SM 2320B		InitialAmount is blank					

Batch Notes	
Acid ID	0.02 H2SO4_00253
Batch Comment	SGB trained by LL
pH Buffer 1 ID	pH 2 buffer_00074
pH Buffer 2 ID	pH 4 buffer_00171
pH Buffer 3 ID	pH 7 buffer_0048
pH Buffer 4 ID	pH 10 buffer_00139
pH Buffer 5 ID	pH 12 buffer_00143
pH Buffer 6 ID	pH 7 buffer_00247
Sodium Carbonate ID	Sodium Carbon_00015
Nominal Amount Used	10 mL
Pipette/Syringe/Dispenser ID	5000 LL
Probe ID	PCE 86 pH 1105
Normality of First Titrant	0.02 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Batch Number: 259445 Batch Start Date: 11/15/18 13:07 Batch Analyst: Saechao, Tammy C

Batch Method: 353.2 Batch End Date: 11/15/18 13:57

Lab Sample ID	Client Sample ID	Method Chain	Basis	WC-353.2-ICV 00097	WC-353.2-L4 00089				
ICV 320-259445/9		353.2		# mL					
CCV 320-259445/24		353.2			# mL				

Batch Notes	
Nitrocellulose Assay	0.126
Buffer Reagent ID	WC-NOxBuffer_00092 exp. 12/27/18
Color Reagent 1 ID	WC-353.2color_00059 exp. 01/30/19

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Batch Number: 261007 Batch Start Date: 11/08/18 09:00 Batch Analyst: Saechao, Tammy C

Batch Method: 353.2 (NCell) Batch End Date: 11/08/18 14:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	HPNCSP 00020			
MB 320-261007/1		353.2 (NCell), 353 (NCell-Hyd), 353.2		100 mL	50 mL				
LCS 320-261007/2		353.2 (NCell), 353 (NCell-Hyd), 353.2		100 mL	50 mL	1 mL			
280-116538-G-1	SCLmw-001-181001-GW	353.2 (NCell), 353 (NCell-Hyd), 353.2	T	100 mL	50 mL				
280-116538-G-2	SCLmw-003-181001-GW	353.2 (NCell), 353 (NCell-Hyd), 353.2	T	100 mL	50 mL				

Batch Notes	
Acetone ID	Acetone_00089 exp. 04/02/19
Batch Comment	Pipette IDs: G12920D; JCB prepped
Centrifuge Tube ID	lot: 07818083 Calib. 11/1/18
Membrane Filter ID	R5MA61436
Millipore Water Dispense Date	11/0818

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Sacramento Job No.: 280-116538-1

SDG No.:

Batch Number: 261014 Batch Start Date: 11/15/18 09:00 Batch Analyst: Saechao, Tammy C

Batch Method: 353 (NCell-Hyd) Batch End Date: 11/15/18 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount				
MB 320-261007/1-A		353 (NCell-Hyd), 353.2		50 mL	40 mL				
LCS 320-261007/2-A		353 (NCell-Hyd), 353.2		50 mL	40 mL				
280-116538-G-1-A	SCLmw-001-181001-GW	353 (NCell-Hyd), 353.2	T	50 mL	40 mL				
280-116538-G-2-A	SCLmw-003-181001-GW	353 (NCell-Hyd), 353.2	T	50 mL	40 mL				

Batch Notes	
0.45 Filter ID	Millex Milipore #R7PA83892
Batch Comment	JCB prepped
Centrifuge Tube ID	LOT: 07818083 calib. 11/01/18 jcb
Sulfuric Acid Lot Number	SulfuricAcid_00006 exp. 11/02/19
Millipore Water Dispense Date	11/15/18
NaOH Lot #	1N_NaOH_00030 exp. 07/01/20
pH Indicator ID	Baker-pHIX lot: 1718

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Run Results Report

Facility Name
Facility Location
Department
Operator Name RK
Operator ID RK
Platform FS III/IV/3100
Software Rev Code 222
Data system ID 57

Result path C:\FLOW_4\C111518.RST
Sample table path C:\FLOW_4\c111518.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 15-Nov-18
Time acquired 19:57

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
15-Nov-18	17:30	107	Sync	367402	396.767	
15-Nov-18	17:32	0	Carryover	355	-1.492	LO
15-Nov-18	17:33	0	Carryover	33	-1.842	LO
15-Nov-18	17:35	0	Baseline	0	-1.878	BL
15-Nov-18	17:36	101	CAL 0.00 ppb	122	-1.745	LO
15-Nov-18	17:38	102	CAL 10.0 ppb	9674	8.619	
15-Nov-18	17:39	103	CAL 20.0 ppb	19153	18.904	
15-Nov-18	17:41	104	CAL 50.0 ppb	48456	50.699	
15-Nov-18	17:42	105	CAL 100 ppb	96751	103.101	
15-Nov-18	17:44	106	Cal 200 ppb	188259	202.391	
15-Nov-18	17:45	107	Cal 400 ppb	368566	398.031	
15-Nov-18	17:47	0	BLK	238	-1.619	LO
15-Nov-18	17:48	0	Baseline	0	-1.878	BL
15-Nov-18	17:50	108	ICV 100 ppb	97777	104.214	
15-Nov-18	17:51	0	ICB	37	-1.837	LO
15-Nov-18	17:53	0	Baseline	0	-1.878	BL
15-Nov-18	17:54	113	HLCS 280-437763/1-A	316772	341.833	
15-Nov-18	17:56	114	LLCS 280-437763/2-A	91138	97.011	
15-Nov-18	17:57	115	LCS 280-437763/3-A	95364	101.596	
15-Nov-18	17:59	116	LCSD 280-437763/4-A	91415	97.311	
15-Nov-18	18:00	117	MB 280-437763/5-A	2832	1.195	
15-Nov-18	18:02	118	280-116469-N-3-A	2684	1.035	
15-Nov-18	18:03	119	280-116469-N-3-B MS	89197	94.904	
15-Nov-18	18:05	120	280-116469-N-3-C MSD	85280	90.654	
15-Nov-18	18:06	121	280-116481-E-1-A	2734	1.089	
15-Nov-18	18:08	122	280-116481-E-2-A	8079	6.888	
15-Nov-18	18:09	0	BLK	64	-1.808	LO
15-Nov-18	18:11	0	baseline	0	-1.878	BL
15-Nov-18	18:12	109	CCV 200PPB	187342	201.396	
15-Nov-18	18:14	0	CCB	-108	-1.995	LO
15-Nov-18	18:15	0	Baseline	0	-1.878	BL
15-Nov-18	18:17	123	280-116481-E-3-A	38505	39.902	
15-Nov-18	18:18	124	280-116481-E-4-A	1873	0.155	
15-Nov-18	18:20	125	280-116481-E-5-A	2535	0.873	
15-Nov-18	18:21	126	280-116481-E-6-A	2481	0.814	
15-Nov-18	18:23	127	280-116481-E-7-A	150567	161.494	
15-Nov-18	18:24	128	280-116481-E-8-A	160394	172.156	
15-Nov-18	18:26	129	280-116517-S-9-A	159094	170.745	
15-Nov-18	18:27	130	280-116481-E-9-A	36097	37.289	
15-Nov-18	18:29	131	280-116517-S-10-B MS	116620	124.659	
15-Nov-18	18:30	132	280-116517-S-10-C MS	84674	89.997	
15-Nov-18	18:32	0	BLK	32	-1.843	LO
15-Nov-18	18:33	0	baseline	0	-1.878	BL
15-Nov-18	18:35	109	CCV 200PPB	187308	201.359	
15-Nov-18	18:36	0	CCB	-82	-1.967	LO
15-Nov-18	18:38	0	Baseline	0	-1.878	BL

Result path C:\FLOW_4\C111518.RST
Sample table path C:\FLOW_4\c111518.tbl
Method path C:\FLOW_4\cyanide.mth
Date acquired 15-Nov-18
Time acquired 19:57

				Cyanide, Total		
Date	Time	Cup	Name	Response	Calc [ppb]	Flags
15-Nov-18	18:39	133	280-116517-S-10-D	19873	19.685	
15-Nov-18	18:41	134	280-116517-S-11-A	8505	7.350	
15-Nov-18	18:42	135	280-116538-N-1-A	10289	9.287	
15-Nov-18	18:44	136	280-116538-N-2-A	7275	6.016	
15-Nov-18	18:45	137	x280-116538-H-4-A	610678	660.731	HI
15-Nov-18	18:47	138	280-116596-N-1-A	3585	2.012	FL
15-Nov-18	18:48	139	280-116610-J-5-A	13907	13.212	FL
15-Nov-18	18:50	140	280-116610-J-6-A	8868	7.744	
15-Nov-18	18:55	141	HLCS 280-437781/1-A	300744	324.441	
15-Nov-18	18:57	142	LLCS 280-437781/2-A	88285	93.915	
15-Nov-18	18:58	0	BLK	130	-1.737	LO
15-Nov-18	19:00	0	baseline	0	-1.878	BL
15-Nov-18	19:01	109	CCV 200PPB	189487	203.723	
15-Nov-18	19:03	0	CCB	7	-1.870	LO
15-Nov-18	19:04	0	Baseline	0	-1.878	BL
15-Nov-18	19:06	143	xLCS 280-437781/3-A	906574	981.791	HI
15-Nov-18	19:07	144	xMB 280-437781/4-A	1393680	1510.319	HI
15-Nov-18	19:09	145	280-116874-A-15-B	69096	73.094	FL
15-Nov-18	19:10	146	280-116874-A-16-E	3830	2.279	FL
15-Nov-18	19:12	147	280-116874-A-16-F MS	102777	109.639	
15-Nov-18	19:13	148	280-116874-A-16-G MS	105282	112.357	
15-Nov-18	19:15	149	280-116874-A-17-B	26753	27.150	
15-Nov-18	19:16	150	280-116874-A-18-B	11445	10.540	
15-Nov-18	19:18	151	280-116867-A-15-B	12784	11.994	
15-Nov-18	19:19	152	x280-116867-A-18-B	2505238	2716.404	HI
15-Nov-18	19:21	0	BLK	58	-1.814	LO
15-Nov-18	19:22	0	baseline	0	-1.878	BL
15-Nov-18	19:24	109	CCV 200PPB	189466	203.700	
15-Nov-18	19:25	0	CCB	-230	-2.127	LO
15-Nov-18	19:27	0	Baseline	0	-1.878	BL
15-Nov-18	19:28	153	280-116538-H-4-A	118340	632.632	
15-Nov-18	19:30	0	BLK	-31	-1.911	LO
15-Nov-18	19:31	0	baseline	0	-1.878	BL
15-Nov-18	19:33	109	CCV 200PPB	189600	203.846	
15-Nov-18	19:34	0	CCB	45	-1.829	LO
15-Nov-18	19:36	0	Baseline	0	-1.878	BL
15-Nov-18	19:41	154	LCS 280-437781/3-A	89466	95.196	
15-Nov-18	19:43	155	MB 280-437781/4-A	3399	1.810	
15-Nov-18	19:44	156	280-116867-A-18-B	250149	2695.441	
15-Nov-18	19:46	0	BLK	24	-1.852	LO
15-Nov-18	19:47	0	baseline	0	-1.878	BL
15-Nov-18	19:49	109	CCV 200PPB	191304	205.694	
15-Nov-18	19:50	0	CCB	26	-1.849	LO
15-Nov-18	19:52	0	Baseline	0	-1.878	BL

Peak Table:Cyanide, Total

File name: C:\FLOW_4\C111518.RST
Date: 15-Nov-18
Operator: RK

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
1	107	Sync	1	SYNC	1	1	367402	396.767456	
2	0	Carryover	1	CO	1	1	355	-1.492386	LO
3	0	Carryover	2	CO	1	1	33	-1.841514	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
5	101	CAL 0.00 ppb	1	C	1	1	122	-1.745456	LO
6	102	CAL 10.0 ppb	1	C	1	1	9674	8.619259	
7	103	CAL 20.0 ppb	1	C	1	1	19153	18.903898	
8	104	CAL 50.0 ppb	1	C	1	1	48456	50.699245	
9	105	CAL 100 ppb	1	C	1	1	96751	103.101234	
10	106	Cal 200 ppb	1	C	1	1	188259	202.390533	
11	107	Cal 400 ppb	1	C	1	1	368566	398.031311	
12	0	BLK	1	BLNK	1	1	238	-1.618934	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
14	108	ICV 100 ppb	1	CCV	1	1	97777	104.214424	
15	0	ICB	1	U	1	1	37	-1.837493	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
17	113	HLCS 280-437763/1-A 1	U		1	1	316772	341.832825	
18	114	LLCS 280-437763/2-A 1	U		1	1	91138	97.010872	
19	115	LCS 280-437763/3-A 1	U		1	1	95364	101.595558	
20	116	LCSD 280-437763/4-A 1	U		1	1	91415	97.310928	
21	117	MB 280-437763/5-A 1	U		1	1	2832	1.195242	
22	118	280-116469-N-3-A 1	U		1	1	2684	1.035046	
23	119	280-116469-N-3-B MS 1	U		1	1	89197	94.904366	
24	120	280-116469-N-3-C MSD 1	U		1	1	85280	90.654289	
25	121	280-116481-E-1-A 1	U		1	1	2734	1.088997	
26	122	280-116481-E-2-A 1	U		1	1	8079	6.888444	
27	0	BLK	1	BLNK	1	1	64	-1.807684	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
29	109	CCV 200PPB	1	CCV	1	1	187342	201.396042	
30	0	CCB	1	U	1	1	-108	-1.995112	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
32	123	280-116481-E-3-A 1	U		1	1	38505	39.901749	
33	124	280-116481-E-4-A 1	U		1	1	1873	0.155050	
34	125	280-116481-E-5-A 1	U		1	1	2535	0.873474	
35	126	280-116481-E-6-A 1	U		1	1	2481	0.814052	
36	127	280-116481-E-7-A 1	U		1	1	150567	161.493561	
37	128	280-116481-E-8-A 1	U		1	1	160394	172.156464	
38	129	280-116517-S-9-A 1	U		1	1	159094	170.745300	
39	130	280-116481-E-9-A 1	U		1	1	36097	37.288937	
40	131	280-116517-S-10-B MS 1	U		1	1	116620	124.659172	
41	132	280-116517-S-10-C MS 1	U		1	1	84674	89.997040	
42	0	BLK	1	BLNK	1	1	32	-1.842658	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
44	109	CCV 200PPB	1	CCV	1	1	187308	201.358749	
45	0	CCB	1	U	1	1	-82	-1.966949	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
47	133	280-116517-S-10-D 1	U		1	1	19873	19.685228	
48	134	280-116517-S-11-A 1	U		1	1	8505	7.350399	
49	135	280-116538-N-1-A 1	U		1	1	10289	9.286872	
50	136	280-116538-N-2-A 1	U		1	1	7275	6.016179	
51	137	x280-116538-H-4-A 1	U		1	1	610678	660.731323	HI
52	138	280-116596-N-1-A 1	U		1	1	3585	2.012334	FL
53	139	280-116610-J-5-A 1	U		1	1	13907	13.211982	FL
54	140	280-116610-J-6-A 1	U		1	1	8868	7.744169	
55	141	HLCS 280-437781/1-A 1	U		1	1	300744	324.441101	
56	142	LLCS 280-437781/2-A 1	U		1	1	88285	93.915192	
57	0	BLK	1	BLNK	1	1	130	-1.736809	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
59	109	CCV 200PPB	1	CCV	1	1	189487	203.723389	
60	0	CCB	1	U	1	1	7	-1.869779	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
62	143	xLCS 280-437781/3-A 1	U		1	1	906574	981.790588	HI
63	144	xMB 280-437781/4-A 1	U		1	1	1393680	1510.319458	HI
64	145	280-116874-A-15-B 1	U		1	1	69096	73.094185	FL
65	146	280-116874-A-16-E 1	U		1	1	3830	2.278598	FL
66	147	280-116874-A-16-F MS 1	U		1	1	102777	109.639168	
67	148	280-116874-A-16-G MS 1	U		1	1	105282	112.357430	
68	149	280-116874-A-17-B 1	U		1	1	26753	27.149874	
69	150	280-116874-A-18-B 1	U		1	1	11445	10.540126	
70	151	280-116867-A-15-B 1	U		1	1	12784	11.994044	

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppb)	Flags
71	152	x280-116867-A-18-B	1	U	1	1	2505238	2716.403809	HI
72	0	BLK	1	BLNK	1	1	58	-1.814377	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
74	109	CCV 200PPB	1	CCV	1	1	189466	203.699936	
75	0	CCB	1	U	1	1	-230	-2.127230	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
77	153	280-116538-H-4-A	1	U	5	1	118340	632.631836	
78	0	BLK	1	BLNK	1	1	-31	-1.910965	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
80	109	CCV 200PPB	1	CCV	1	1	189600	203.846115	
81	0	CCB	1	U	1	1	45	-1.828532	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL
83	154	LCS 280-437781/3-A	1	U	1	1	89466	95.196297	
84	155	MB 280-437781/4-A	1	U	1	1	3399	1.809990	
85	156	280-116867-A-18-B	1	U	10	1	250149	2695.440918	
86	0	BLK	1	BLNK	1	1	24	-1.851562	LO
B	0	baseline	1	RB	1	1	0	-1.877636	BL
88	109	CCV 200PPB	1	CCV	1	1	191304	205.694244	
89	0	CCB	1	U	1	1	26	-1.849490	LO
B	0	Baseline	1	RB	1	1	0	-1.877636	BL

Cyanide, Total:Calibration   1: Peak 5-90

File name: C:\FLOW_4\C111518.RST
Date: 15-Nov-18
Operator: RK

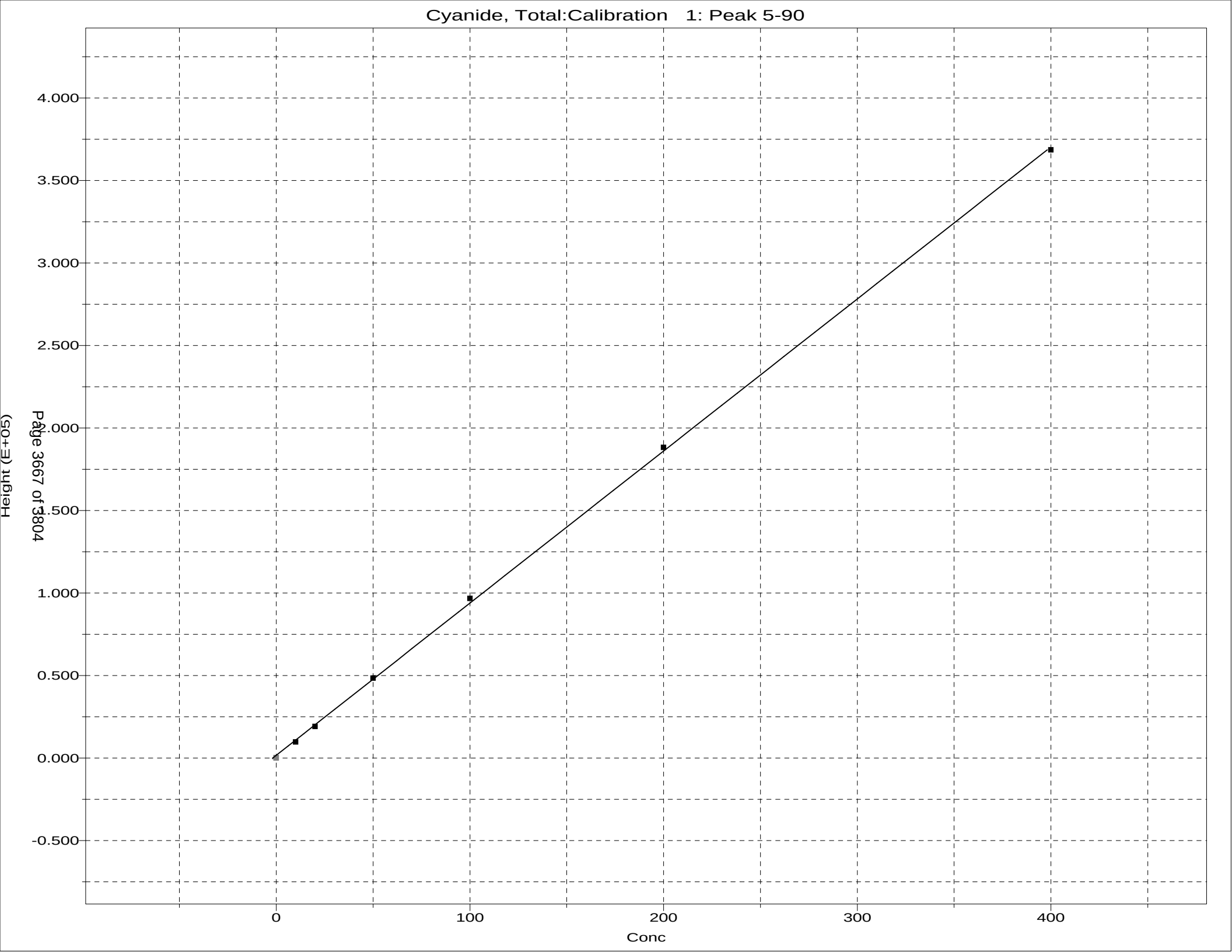
*	Name	Conc	Height
*	CAL 0.00 ppb	0.000000	121.820770
*	CAL 10.0 ppb	10.000000	9674.208984
*	CAL 20.0 ppb	20.000000	19152.796875
*	CAL 50.0 ppb	50.000000	48456.210938
*	CAL 100 ppb	100.000000	96751.234375
*	Cal 200 ppb	200.000000	188258.812500
*	Cal 400 ppb	400.000000	368566.406250

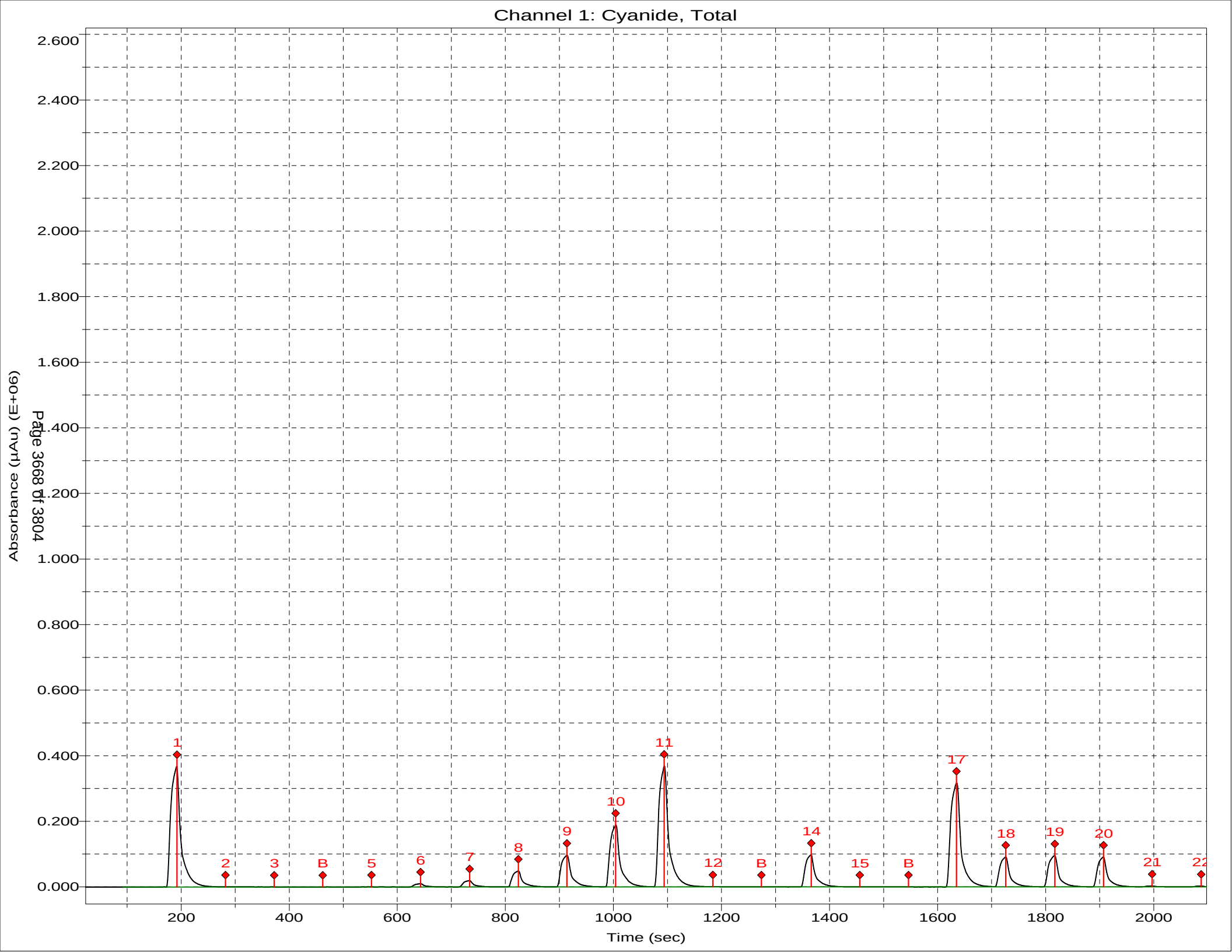
Calib Coef:
y=bx+a
a: (intercept) 1.7305e+03
b: 9.2163e+02

Corr Coef: 0.999897

Carryover: 0.0966%

No Drift Peaks


Cyanide, Total:Calibration 1: Peak 5-90
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
-0.500
Height (E+05)
0
100
200
300
400
Conc


Channel 1: Cyanide, Total
Absorbance (µAu) (E+06)
Time (sec)
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2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
200
400
600
800
1000
1200
1400
1600
1800
2000
1
2
3
B
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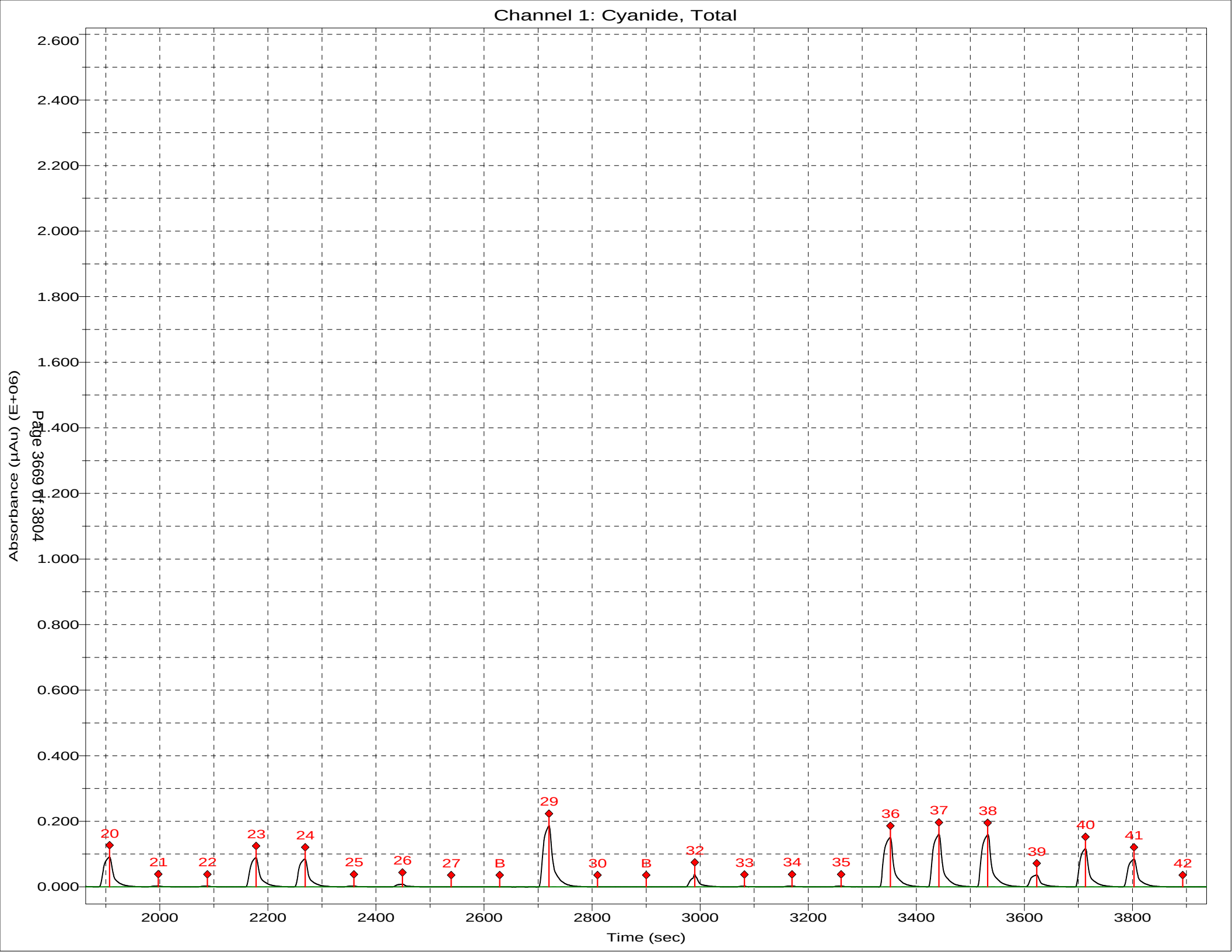
Channel 1: Cyanide, Total
Absorbance (µAu) (E+06)
Time (sec)
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2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
2000
2200
2400
2600
2800
3000
3200
3400
3600
3800
20
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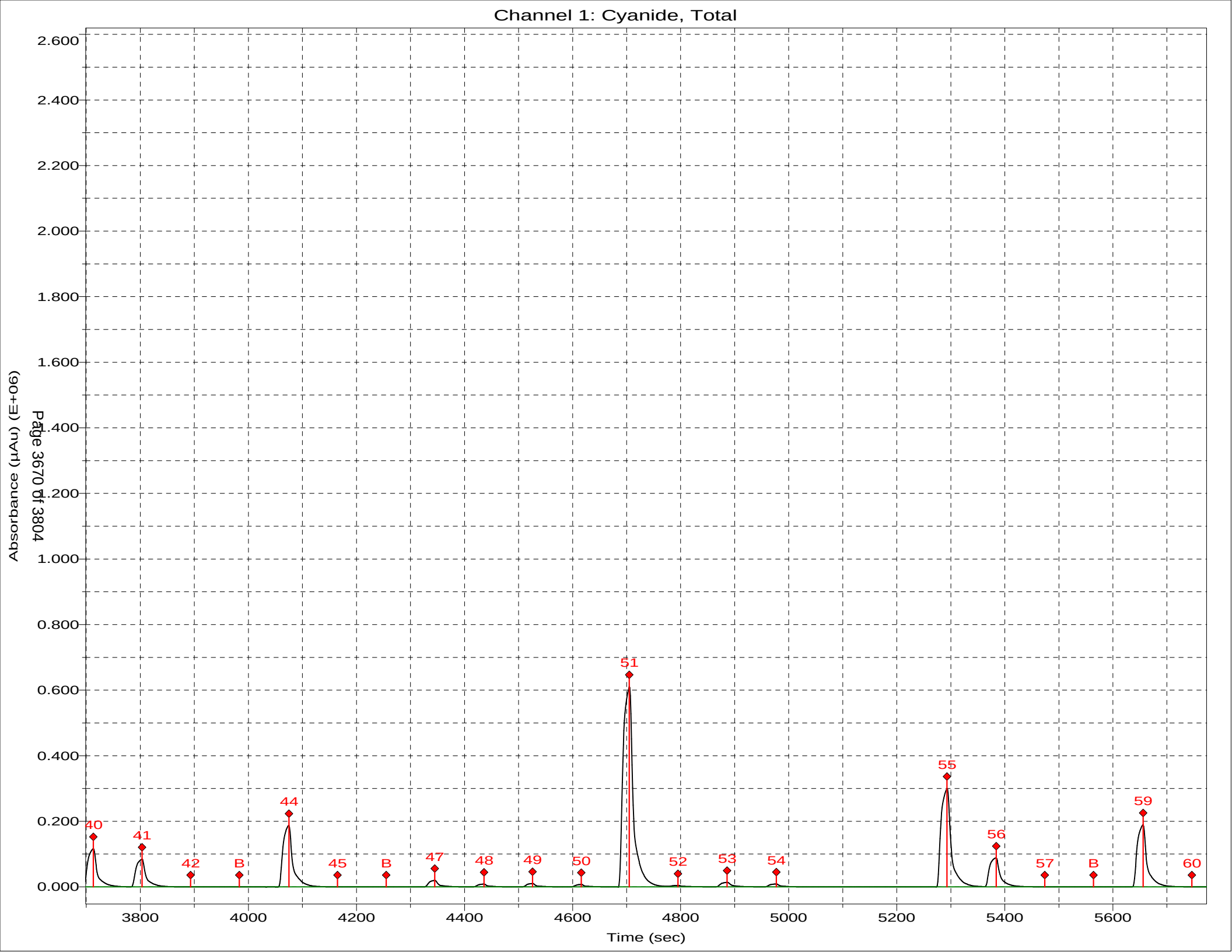
Channel 1: Cyanide, Total
Absorbance (µAu) (E+06)
Time (sec)
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2.400
2.200
2.000
1.800
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1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
3800
4000
4200
4400
4600
4800
5000
5200
5400
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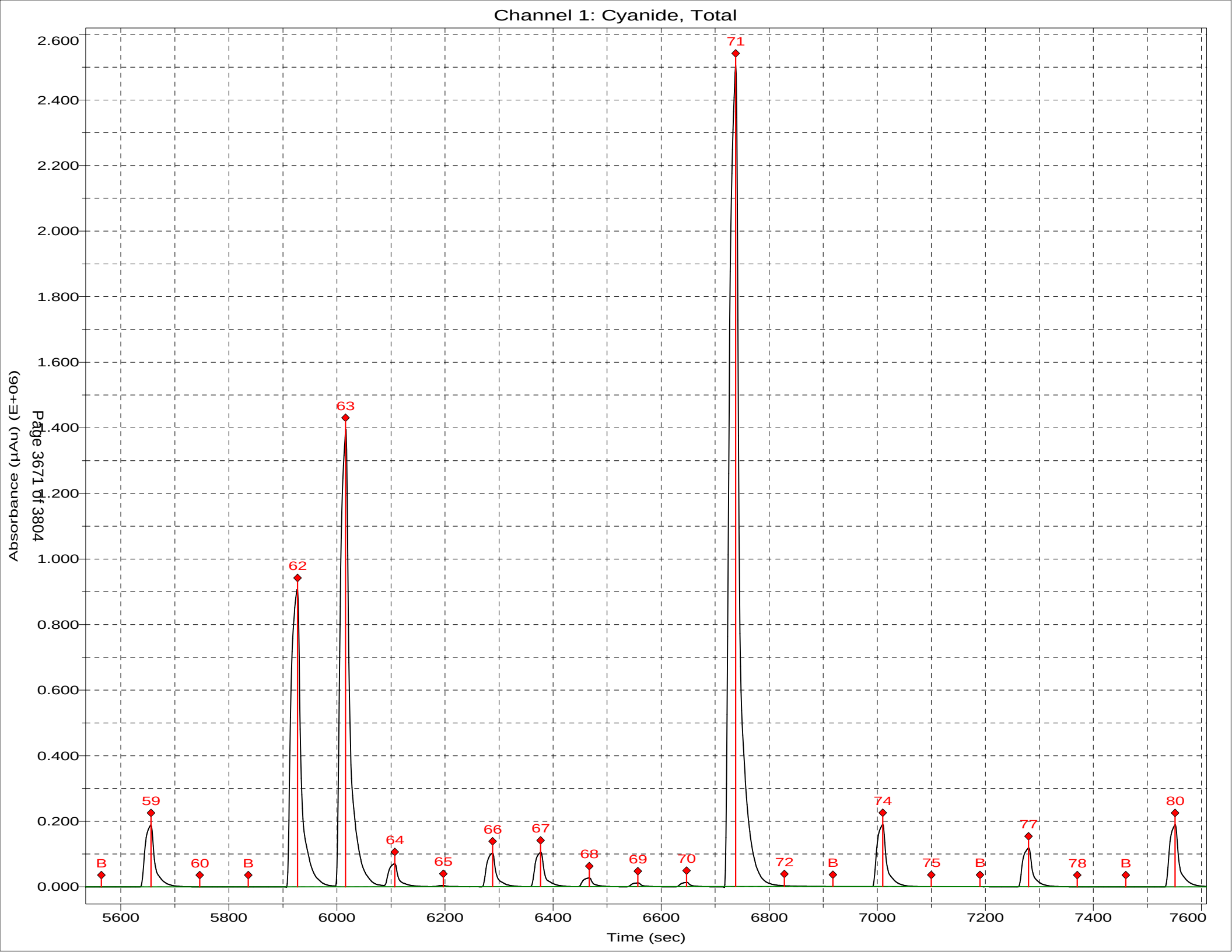
Channel 1: Cyanide, Total
Absorbance (µAu) (E+06)
Time (sec)
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2.400
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1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
5600
5800
6000
6200
6400
6600
6800
7000
7200
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7600
B
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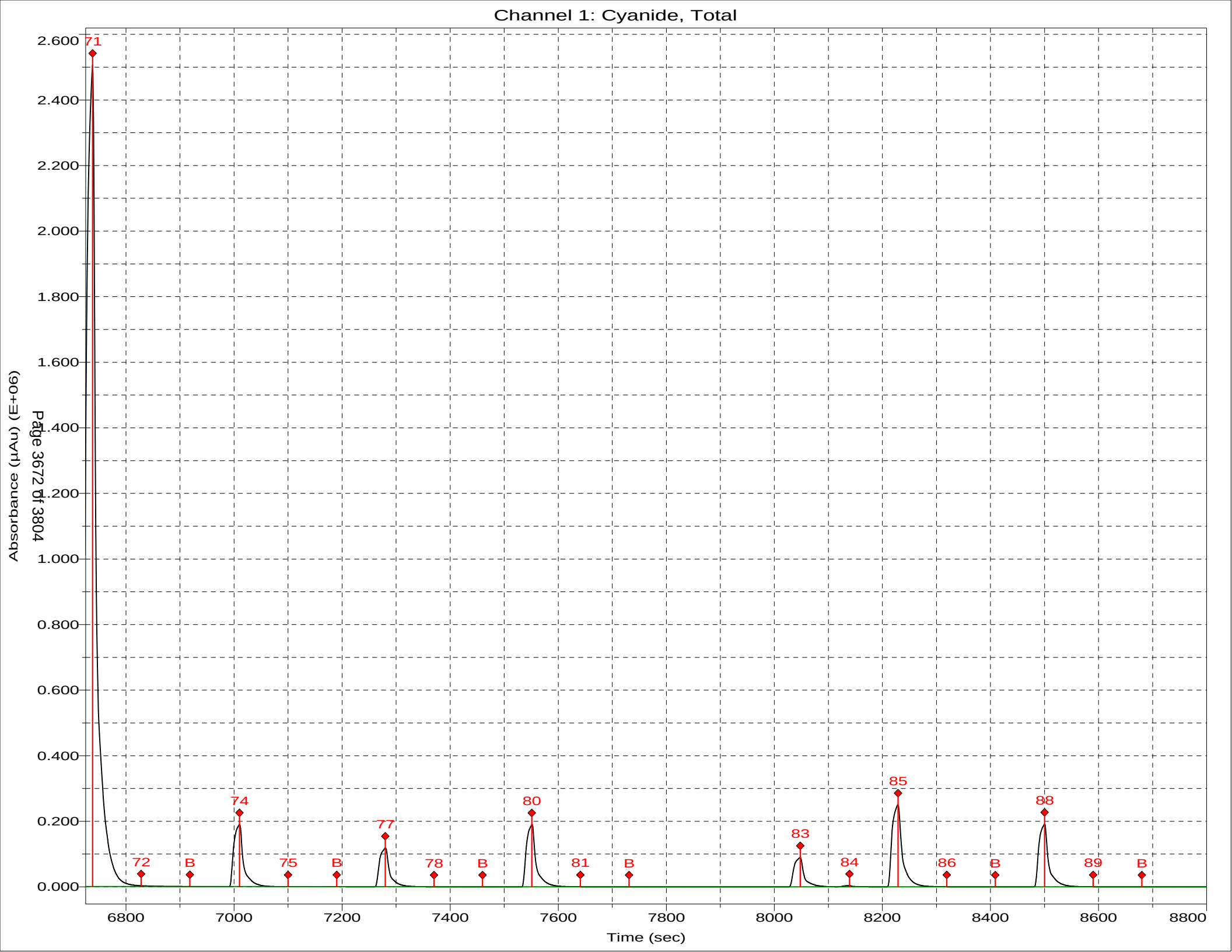
Channel 1: Cyanide, Total
Absorbance (µAu) (E+06)
Time (sec)
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2.400
2.200
2.000
1.800
1.600
1.400
1.200
1.000
0.800
0.600
0.400
0.200
0.000
6800
7000
7200
7400
7600
7800
8000
8200
8400
8600
8800
71
72
B
74
75
B
77
78
B
80
81
B
83
84
85
86
B
88
89
B

Sulfide by Titration

Analyst:	EC	SOP Information:	
Date:	11/7/2018	Number:	91
Titration Solutions		**Calibration Information**	
Solution 1:	Iodine	Source/Ver-Lot#:	INT_01586
TALS ID	Iod_00210	Prep Date:	11/1/2018
Normality:	0.025	Made By:	EC
Solution 2:	sodium thiosulfate	Concentration:	1052
TALS ID	Na Thio_00139	Expiration Date:	2/1/2019
Normality:	0.025		
	Starch Indicator		
TALS ID	Starch Ind_00051		

	CAL Volume	Buret Start	Buret End	mL Iodine	Final mL	Conc mg/L
CAL	5	0.00	6.70	20	6.70	1064.000
CAL	5	6.70	13.70	20	7.00	1040.000

For SM4500 S2 D colorimetric

ICV Information	
Source/Ver-Lot#:	INT_01516
Prep Date:	11/1/2018
Made By:	EC
Concentration:	1114
Expiration Date:	2/1/2019

	CAL Volume	Buret Start	Buret End	mL Iodine	Final mL	Conc mg/L
ICV	5	13.70	19.70	20	6.00	1120.000
ICV	5	14.65	20.79	20	6.14	1108.800

TALS Raw Data Report

Job Number: 280-116404-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/Kg				
Sulfide as H2S		0 mg/L	mg/Kg				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/Kg	72	38 104		
Sulfide as H2S		17 mg/L	mg/Kg				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	mg/Kg				
Sulfide as H2S		-0.595 mg/L	mg/Kg				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/Kg	89	38 104		
Sulfide as H2S		20.995 mg/L	mg/Kg				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/Kg	61	38 104	37	35
Sulfide as H2S		14.45 mg/L	mg/Kg				

TALS Raw Data Report

Job Number: 280-116516-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 5 Lab ID: **280-116516-G-1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0.4 mg/L	mg/L				
Sulfide as H2S		0.425 mg/L	mg/L				

RS# 6 Lab ID: **280-116516-F-2-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0.48 mg/L	mg/L				
Sulfide as H2S		0.51 mg/L	mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	mg/L				
Sulfide as H2S		-0.595 mg/L	mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-116538-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	1.9 U mg/L				
Sulfide as H2S		0 mg/L	2.0 U mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 7 Lab ID: **280-116538-M-1-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.08 mg/L	1.9 U mg/L				
Sulfide as H2S		-0.085 mg/L	2.0 U mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	1.9 U mg/L				
Sulfide as H2S		-0.595 mg/L	2.0 U mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-116538-2
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	mg/L				
Sulfide as H2S		-0.595 mg/L	mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

RS# 11 Lab ID: **280-116538-G-4-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-116610-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	mg/L				
Sulfide as H2S		-0.595 mg/L	mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

RS# 12 Lab ID: **280-116610-I-5-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		36.88 mg/L	mg/L				
Sulfide as H2S		39.185 mg/L	mg/L				

RS# 13 Lab ID: **280-116610-I-6-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		1.52 mg/L	mg/L				
Sulfide as H2S		1.615 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-116621-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	mg/L				
Sulfide as H2S		0 mg/L	mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	mg/L				
Sulfide as H2S		-0.595 mg/L	mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

RS# 14 Lab ID: **280-116621-F-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		3.2 mg/L	mg/L				
Sulfide as H2S		3.4 mg/L	mg/L				

RS# 15 Lab ID: **280-116621-F-3-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0.72 mg/L	mg/L				
Sulfide as H2S		0.765 mg/L	mg/L				

RS# 16 Lab ID: **280-116621-F-4-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		4.88 mg/L	mg/L				
Sulfide as H2S		5.185 mg/L	mg/L				

TALS Raw Data Report

Job Number: 280-44775-1
LIMS Batch: 436735
Equipment: NOEQUIP

Laboratory: TestAmerica Denver

RS# 1 Lab ID: **MB 280-436723/1-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		0 mg/L	1.9 U mg/L				
Sulfide as H2S		0 mg/L	2.0 U mg/L				

RS# 2 Lab ID: **320-44775-G-2-D** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.8 mg/L	1.9 U mg/L				
Sulfide as H2S		-0.85 mg/L	2.0 U mg/L				

RS# 3 Lab ID: **LCS 280-436723/3-A** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		16 mg/L	mg/L	72	50 106		
Sulfide as H2S		17 mg/L	mg/L				

RS# 8 Lab ID: **280-116538-M-2-B** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		-0.56 mg/L	1.9 U mg/L				
Sulfide as H2S		-0.595 mg/L	2.0 U mg/L				

RS# 9 Lab ID: **280-116538-M-2-C MS** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		19.76 mg/L	mg/L	89	50 106		
Sulfide as H2S		20.995 mg/L	mg/L				

RS# 10 Lab ID: **280-116538-M-2-D MSD** Inj Date: 11/7/2018 8:06:40PM Dil: 1.0 Meth: 9034

Analyte	Rspnse	Raw Res/Units	Final Res/Qual/Units	% Rec	Rec Lmt	% RPD	RPD Lmt
Sulfide		13.6 mg/L	mg/L	61	50 106	37	20
Sulfide as H2S		14.45 mg/L	mg/L				

9030B

TestAmerica *Denver*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Titration Data Review Checklist

LIMS Batch Number: 436735	Method (circle one):	QC Type (circle):
Analyst/1st Reviewer: EC	2310B 2320B 2340C	(Standard) DoD QAPP Other
Date: 11/07/18	4500 S2 F 4500 SO3 B (9030B/9034)	
Matrix (circle): (Water) Solid	Automated or (Manual) (circle one)	Instrument ID (circle one if applicable): AT2 AT3

Review Items	Yes	No	2nd Rev	If No, why is data reportable?
A. Sample Storage and Pretreatment				
1. Is sample pH verified and documented prior to analysis? (if required)	✓		✓	
2. For samples requiring pH adjustment is the amount of acid/base used documented?		MA	✓	If no, list details:
3. Are samples analyzed within the required hold time?	✓		✓	NCM:
4. Pre-treatment reagents used to remove interferences are documented.		MA	✓	
B. Calibration / Instrument				
5. Was the normality of the titrant verified and found acceptable?	✓		✓	Comments:
6. For potentiometric titration, the pH meter is calibrated with 5 buffers bracketing range of samples and QC.		MA	✓	Comments:
7. Calibration standards are analyzed at the beginning and end of the analytical sequence and after every 10 sample analyses. (samples/dilutions/reanalyses).		MA	✓	Comments:
8. Calibrations standards (ICV/CCV) are within 90-110% recovery.		MA	✓	
C. Sample and Batch QC				
9. Blanks are analyzed at the beginning, end and after every 10 sample analyses in the sequence.	✓		✓	
10. Results of blank analyses (MB, ICB, CCB) are < ½ RL (<RL for alkalinity unless DoD)	✓		✓	□ No analyte > ½ RL in associated samples □ Sample results >10x blank
11. A standard from a second source (SRM, CRM, LCS) is included in the analytical sequence.	✓		✓	
12. The recovery of the 2nd source material falls within 90-110% or manufacturer's limits.	✓		✓	
13. Samples analyses are bracketing by acceptable CCV/CCBs.		MA	✓	□ No analyte > RL in associated samples □ Sample results >10x blank □ Sample results qualified
14. MS/MSD analyzed at required frequency and recoveries within limits. (If recoveries out of limits, verify not due to lab error) (Required for 2340C, 4500 S2 F, 9030B/9034)	✓		✓	□ Non-conformance (NCM) added □ Sample results >4X spike conc.
15. Duplicate analyzed at required frequency and RPD within limits. (Required for 2310B, 2320B, 4500 SO3 B)		MA	✓	□ Non-conformance (NCM) added □ Sample results ND or <2X RL

Review Items	Yes	No	2nd Rev	If No, why is data reportable?
16. Are all MS/MSD RPDs <50%? Note: Excessive RPDs (>50%) require evaluation, correction or explanation.		X	/	Non-conformance (NCM) added
D. Raw Data & TALS Data Entry				
17. Raw Data	✓		/	
a. Unused data is clearly identified with reason	✓		/	
b. All crossed out data is initialed and dated	✓		/	
c. Out of control QC is clearly identified	✓		/	
d. Any data that has a qualifier is commented on with appropriate action taken	✓		/	
e. The first page of the run includes the filename, instrument, and analyst initials/signature	✓		/	
f. 100% of manual calculations are verified.	✓		/	
18. TALS Samples Tab	✓		/	
a. LIMS Sample IDs / Containers are correct	✓		/	
b. Method and matrix are correct	✓		/	
c. Date and time match raw data	✓		/	
d. Dilutions are correct	✓		/	
e. Correct suffix designated (where applicable)	✓		/	
19. TALS Worksheet Tab is complete and correct	✓		/	
20. TALS Reagent Tab is complete and correct	✓		/	
21. TALS QC Links Tab is correct	✓		/	
22. TALS Sample Results Tab	✓			
a. All unused data are marked Rejected or Accepted	✓		/	
b. All reported analytes are marked Primary or Secondary	✓		/	
c. Data manually transcribed from benchsheet into TALS verified 100% including significant figures SM 4500 SO3 B).	✓		/	
d. TALS Batch Information Screen documentation is complete	✓		/	
e. TALS Status set to appropriate review level	✓		/	
E. Final Report and NCMs (2nd level review only)				
f. Were all job/project requirements met?			/	
g. Results for samples and QC correct on final report?			/	
h. Are all necessary scanned documents in TALS?			/	
i. NCMs reviewed for applicability, correct references to batches, grammar/typographical errors?			/	

Comments: ~~Analyte calc. error.~~

2nd Reviewer: [signature] **Review Date:** 11/13/18

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-10
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 30-Oct-2018 10:27:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-002
Misc. Info.: 280-0075619-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:48:51 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

First Level Reviewer: allena Date: 30-Oct-2018 12:00:45

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.257	3.255	0.002	1071094	0.2000	0.2325	
2 Chloride	4.480	4.475	0.005	3071420	1.00	1.15	
3 Nitrite as N	5.202	5.188	0.014	1440251	0.2000	0.2354	
4 Bromide	6.300	6.282	0.018	267623	0.2000	0.2317	
5 Nitrate as N	7.118	7.073	0.045	1399962	0.2000	0.2419	
6 Orthophosphate as P	9.852	9.827	0.025	813941	0.2000	0.2150	
7 Sulfate	11.577	11.540	0.037	2779250	1.00	1.21	

Reagents:

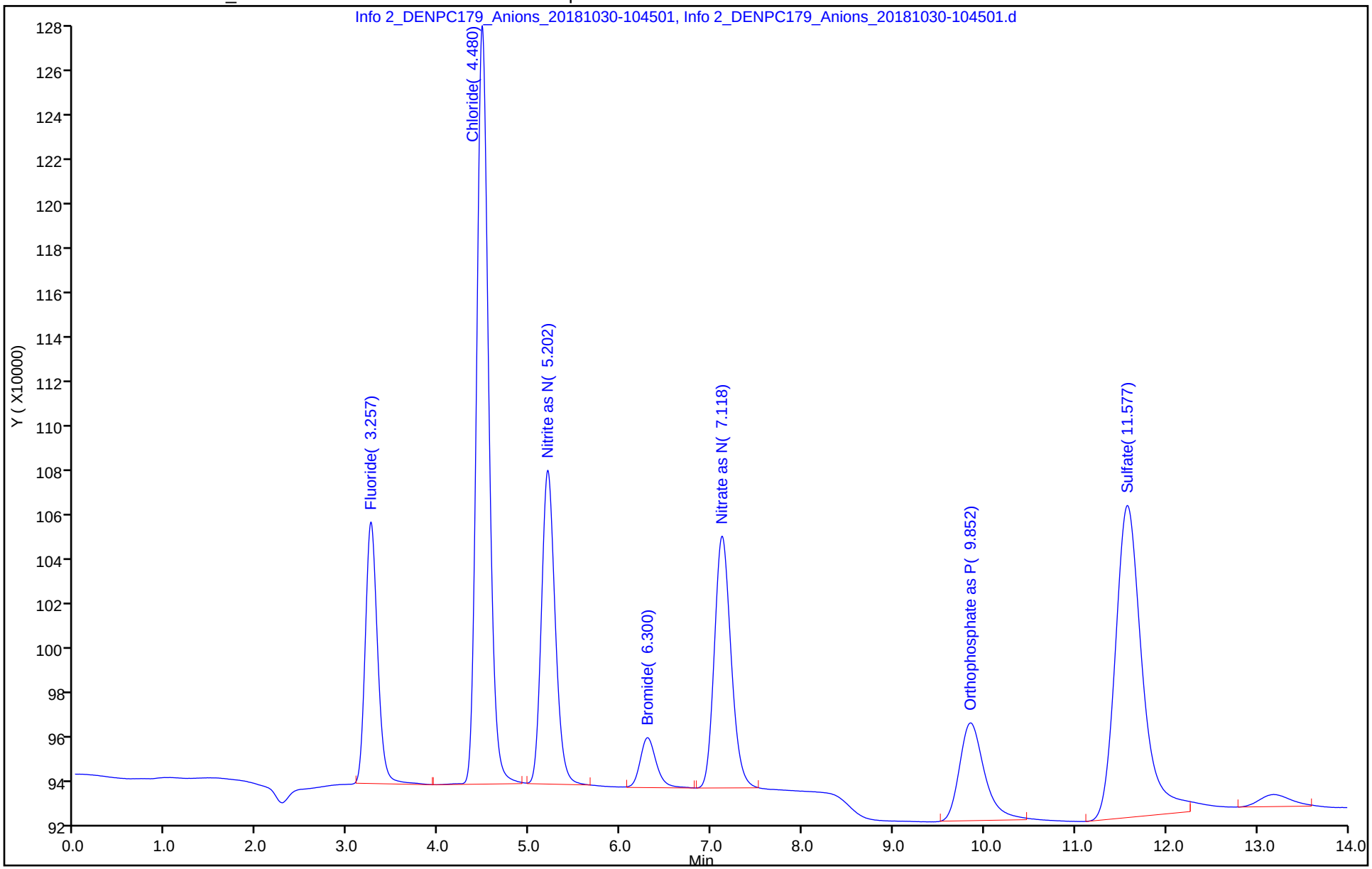
IC CAL cl/so4_00227 Amount Added: 0.04 Units: mL
IC Cal low_00411 Amount Added: 0.04 Units: mL

Report Date: 31-Oct-2018 12:48:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-104501.d

Injection Date:	30-Oct-2018 10:27:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD1			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Oct-2018 10:45:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-003
Misc. Info.: 280-0075619-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:48:55 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.255	3.255	0.000	2816245	0.5000	0.4710	
2 Chloride	4.478	4.475	0.003	8239899	2.50	2.34	
3 Nitrite as N	5.198	5.188	0.010	3822599	0.5000	0.4681	
4 Bromide	6.293	6.282	0.011	652794	0.5000	0.4836	
5 Nitrate as N	7.108	7.073	0.035	3690848	0.5000	0.4702	
6 Orthophosphate as P	9.845	9.827	0.018	1908867	0.5000	0.5021	
7 Sulfate	11.572	11.540	0.032	6323521	2.50	2.33	

Reagents:

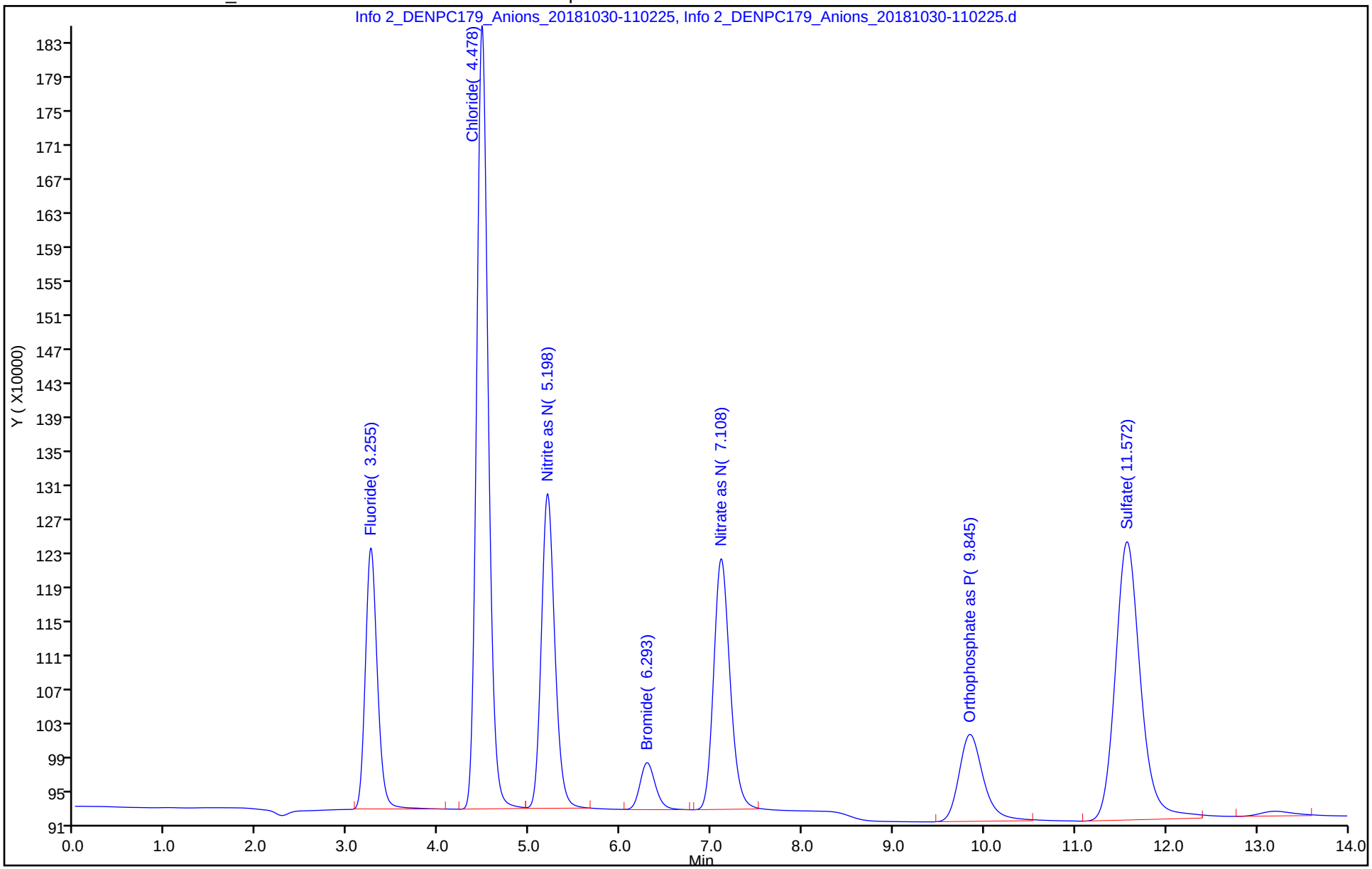
IC CAL cl/so4_00227 Amount Added: 0.10 Units: mL
IC Cal low_00411 Amount Added: 0.10 Units: mL

Report Date: 31-Oct-2018 12:48:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-110225.d

Injection Date:	30-Oct-2018 10:45:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD2			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Oct-2018 11:02:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-004
Misc. Info.: 280-0075619-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:49:00 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.257	3.255	0.002	5954529	1.00	0.8999	
2 Chloride	4.478	4.475	0.003	17980833	5.00	4.59	
3 Nitrite as N	5.198	5.188	0.010	8167538	1.00	0.8926	
4 Bromide	6.293	6.282	0.011	1298912	1.00	0.9062	
5 Nitrate as N	7.102	7.073	0.029	7705980	1.00	0.8704	
6 Orthophosphate as P	9.845	9.827	0.018	3631973	1.00	0.9539	
7 Sulfate	11.573	11.540	0.033	12761418	5.00	4.35	

Reagents:

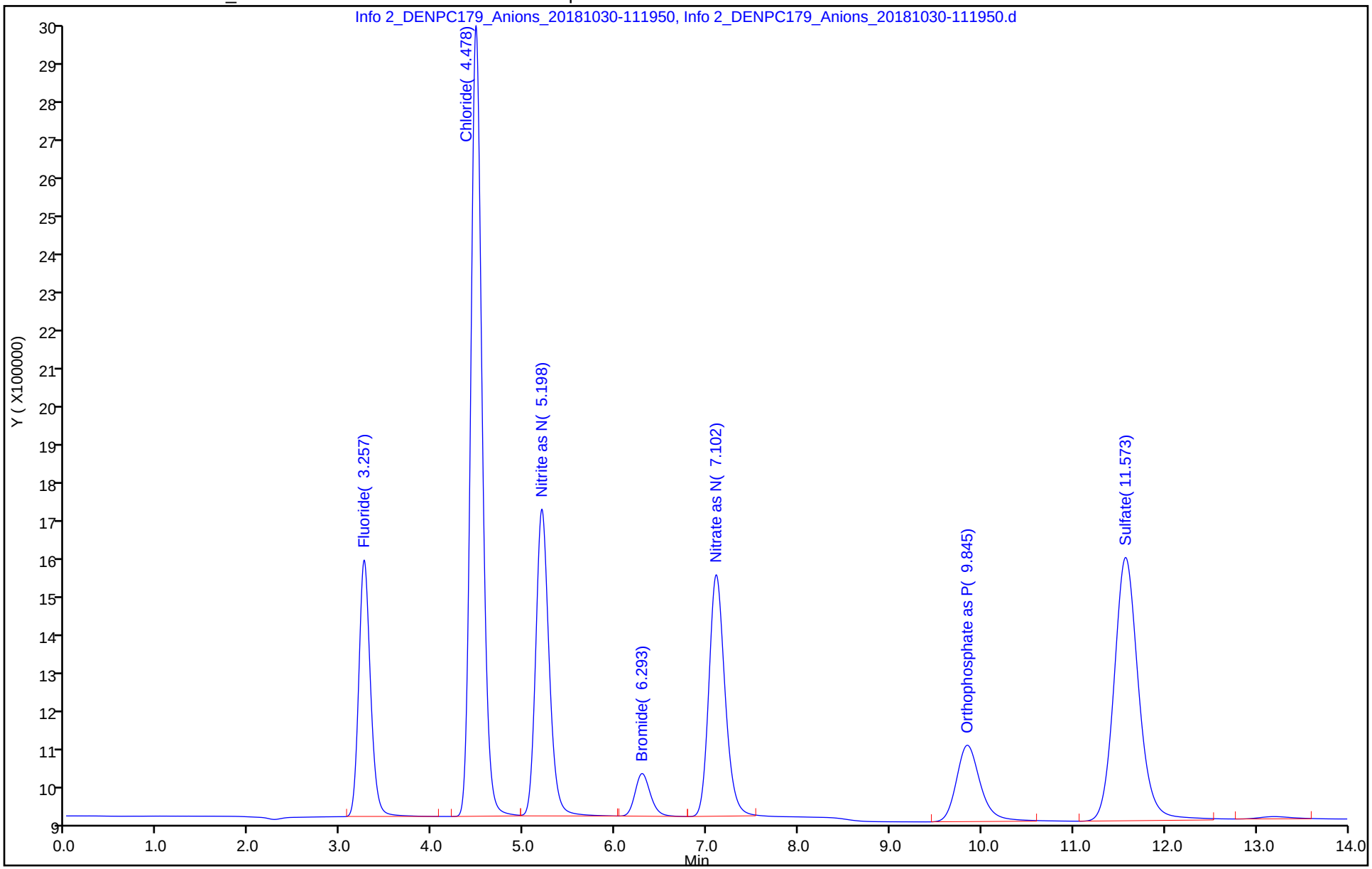
IC CAL cl/so4_00227 Amount Added: 0.20 Units: mL
IC Cal low_00411 Amount Added: 0.20 Units: mL

Report Date: 31-Oct-2018 12:49:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-111950.d

Injection Date:	30-Oct-2018 11:02:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD3			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Oct-2018 11:19:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-005
Misc. Info.: 280-0075619-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:49:04 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.260	0.000	27878173	4.00	3.90	
2 Chloride	4.477	4.477	0.000	256824281	60.0	59.7	
3 Nitrite as N	5.193	5.193	0.000	38665594	4.00	3.87	
4 Bromide	6.287	6.287	0.000	5621787	4.00	3.73	
5 Nitrate as N	7.082	7.082	0.000	36858444	4.00	3.78	
6 Orthophosphate as P	9.842	9.842	0.000	14344226	4.00	3.76	
7 Sulfate	11.563	11.563	0.000	185331333	60.0	58.7	

Reagents:

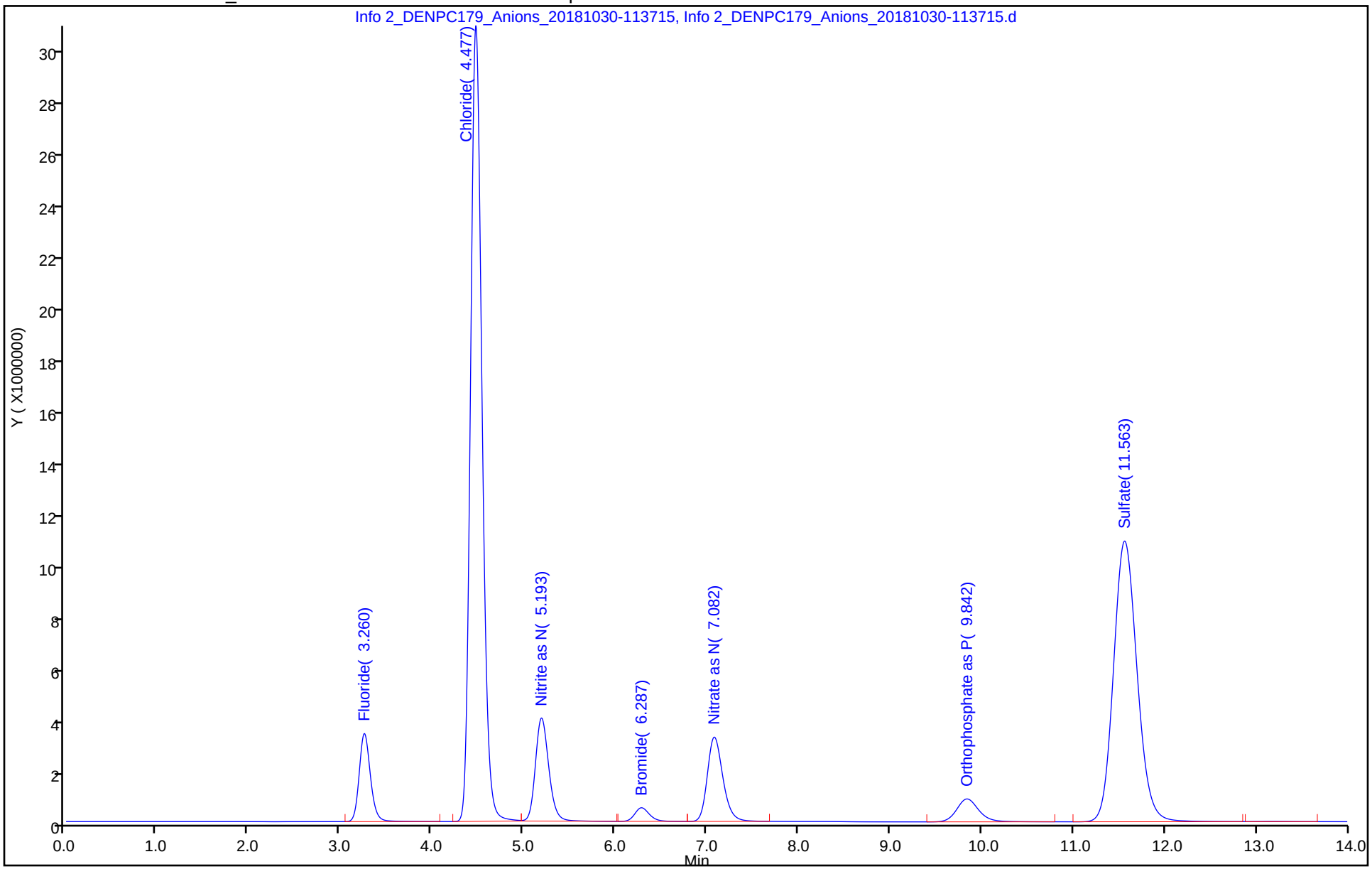
IC CAL cl/so4_00227 Amount Added: 2.40 Units: mL
IC Cal low_00411 Amount Added: 0.80 Units: mL

Report Date: 31-Oct-2018 12:49:05 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-113715.d

Injection Date:	30-Oct-2018 11:19:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD4			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Oct-2018 11:37:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-006
Misc. Info.: 280-0075619-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:49:08 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

First Level Reviewer: allena Date: 30-Oct-2018 12:22:00

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.260	0.000	58334967	8.00	8.06	
2 Chloride	4.477	4.477	0.000	517755699	120.0	119.8	
3 Nitrite as N	5.187	5.193	-0.006	82200253	8.00	8.12	
4 Bromide	6.277	6.287	-0.010	12163239	8.00	8.01	
5 Nitrate as N	7.062	7.082	-0.020	79872607	8.00	8.06	
6 Orthophosphate as P	9.832	9.842	-0.010	30476352	8.00	7.99	
7 Sulfate	11.545	11.563	-0.018	378814367	120.0	119.6	

Reagents:

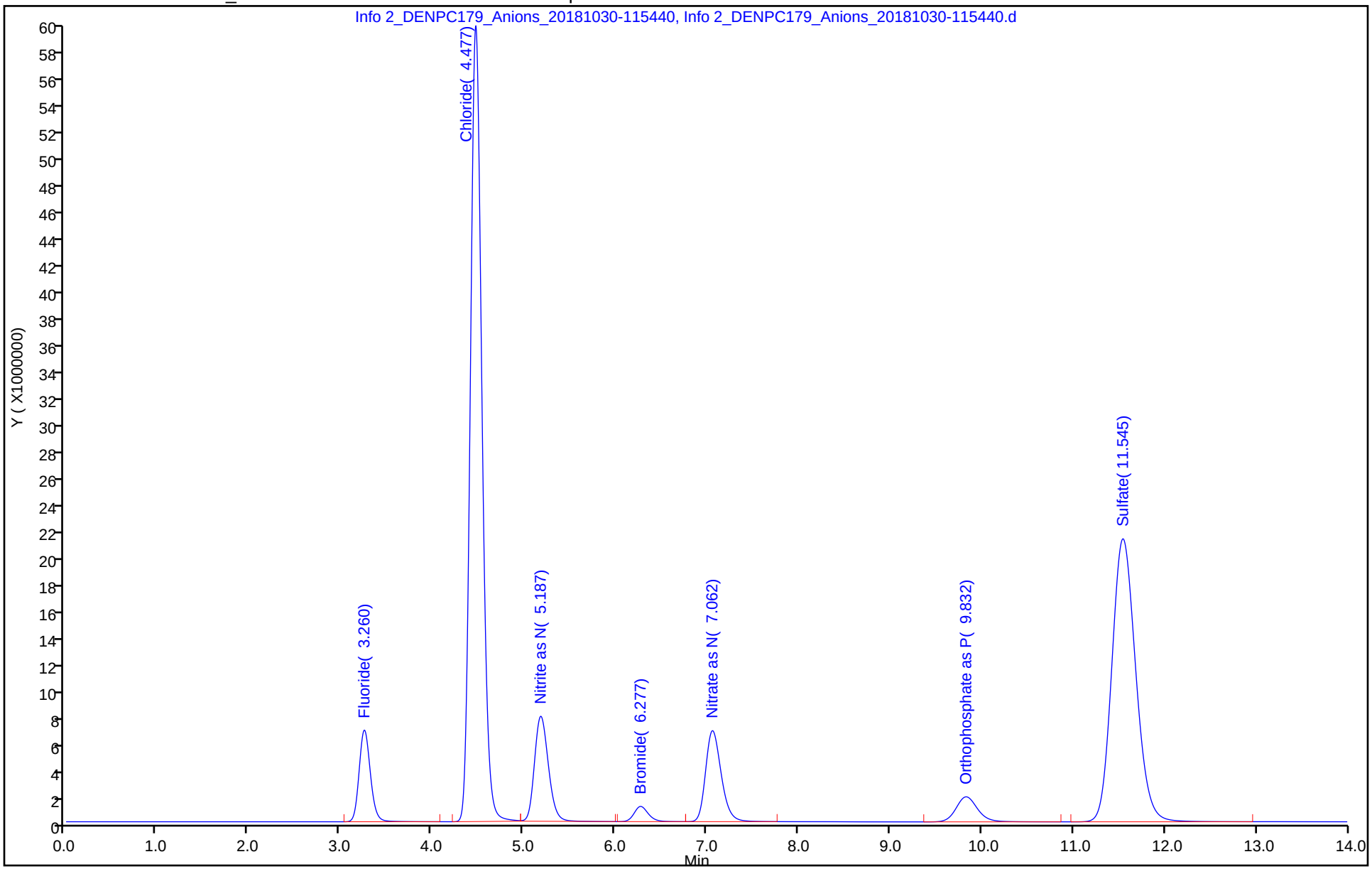
IC CAL cl/so4_00227 Amount Added: 4.80 Units: mL
IC Cal low_00411 Amount Added: 1.60 Units: mL

Report Date: 31-Oct-2018 12:49:09 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-115440.d

Injection Date:	30-Oct-2018 11:37:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD5			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Oct-2018 11:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-007
Misc. Info.: 280-0075619-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:49:12 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.260	-0.002	73583459	10.0	10.1	
2 Chloride	4.478	4.477	0.001	869672551	200.0	201.0	
3 Nitrite as N	5.183	5.193	-0.010	102493289	10.0	10.1	
4 Bromide	6.273	6.287	-0.014	15712093	10.0	10.3	
5 Nitrate as N	7.055	7.082	-0.027	102080026	10.0	10.3	
6 Orthophosphate as P	9.828	9.842	-0.014	39175938	10.0	10.3	
7 Sulfate	11.528	11.563	-0.035	641936064	200.0	202.4	

Reagents:

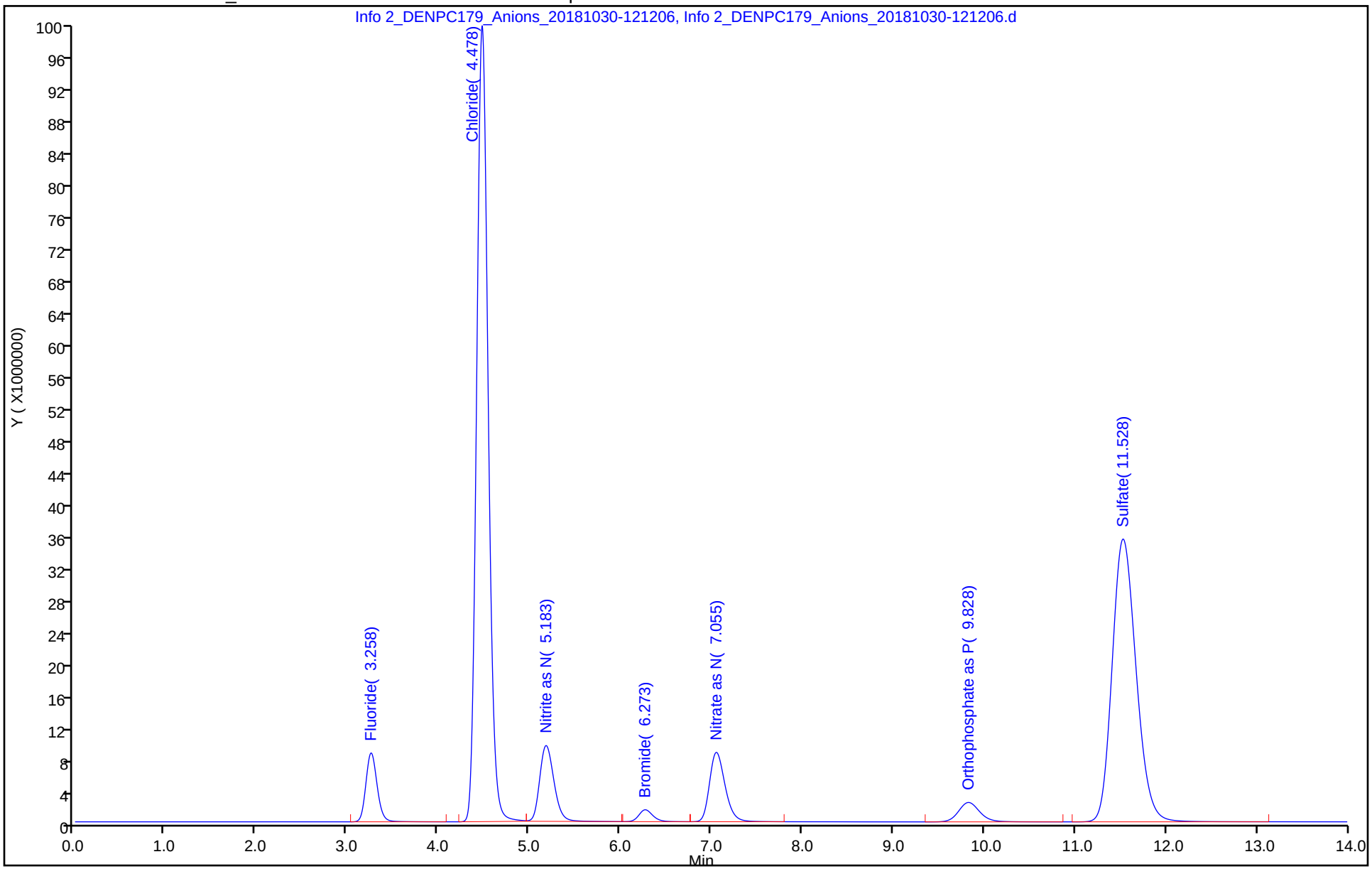
IC CAL cl/so4_00227 Amount Added: 8.00 Units: mL
IC Cal low_00411 Amount Added: 2.00 Units: mL

Report Date: 31-Oct-2018 12:49:13 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-121206.d

Injection Date:	30-Oct-2018 11:54:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD6			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



IC Instrument Information

WL: 75619 Inst ID: 10 Analysis Date: 10/30/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	116322	7	(F) (Cl) NO2 Br (NO3) PO4 (SO4)	MS/D	Don't report PO4 Total 3
☐	115507	8	F Cl NO2 Br NO3 PO4 (SO4)	(MS/D) 1	2
☐	115926	1	(F) Cl NO2 Br NO3 PO4 (SO4)	MS/D	
☐	115457	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	confirm per Alysha
☐	115546	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	4
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
✓ 116322	1,2,4,5,6,7,8,10	(F) (Cl) NO2 Br (NO3) PO4 (SO4)	2x, 50x	conductivity
✓ 115507	1,2,3,4,5,6,7,8,9	F Cl NO2 Br NO3 PO4 (SO4)	20x, 50x, 100x	run dil.
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

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TestAmerica Denver

TestAmerica

IC Instrument Information

WL: 75619 Inst ID: 10 Analysis Date: 10/30/18 Analyst: TT

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	116322	7	(F) (Cl) NO2 Br (NO3) PO4 (SO4)	MS/D	Don't report PO4 Total 3
=	115507	8	F Cl NO2 Br NO3 PO4 (SO4)	(MS/D) 1	2
=	115926	1	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
=	115457	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	Confirm per Alysha
=	115546	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	0
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

	Job No.	Samples	Anions	Dilution	Reason
✓	116322	1,2,4,5,6,7,8,10	(F) (Cl) NO2 Br (NO3) PO4 (SO4)	2x, 50x	conductivity
✓	115507	1,2,3,4,5,6,7,8,9	F Cl NO2 Br NO3 PO4 (SO4)	20x, 50x, 100x	run dil.
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		

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TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 30-Oct-2018 12:12:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-008
Misc. Info.: 280-0075619-008
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist:

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 31-Oct-2018 12:49:17 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	28025272	4.00	3.92	
2 Chloride	4.475	4.475	0.000	352908673	80.0	81.8	
3 Nitrite as N	5.192	5.192	0.000	36889330	4.00	3.70	
4 Bromide	6.282	6.282	0.000	5759019	4.00	3.82	
5 Nitrate as N	7.075	7.075	0.000	39971250	4.00	4.09	
6 Orthophosphate as P	9.835	9.835	0.000	14500191	4.00	3.80	
7 Sulfate	11.552	11.552	0.000	255766731	80.0	80.8	

Reagents:

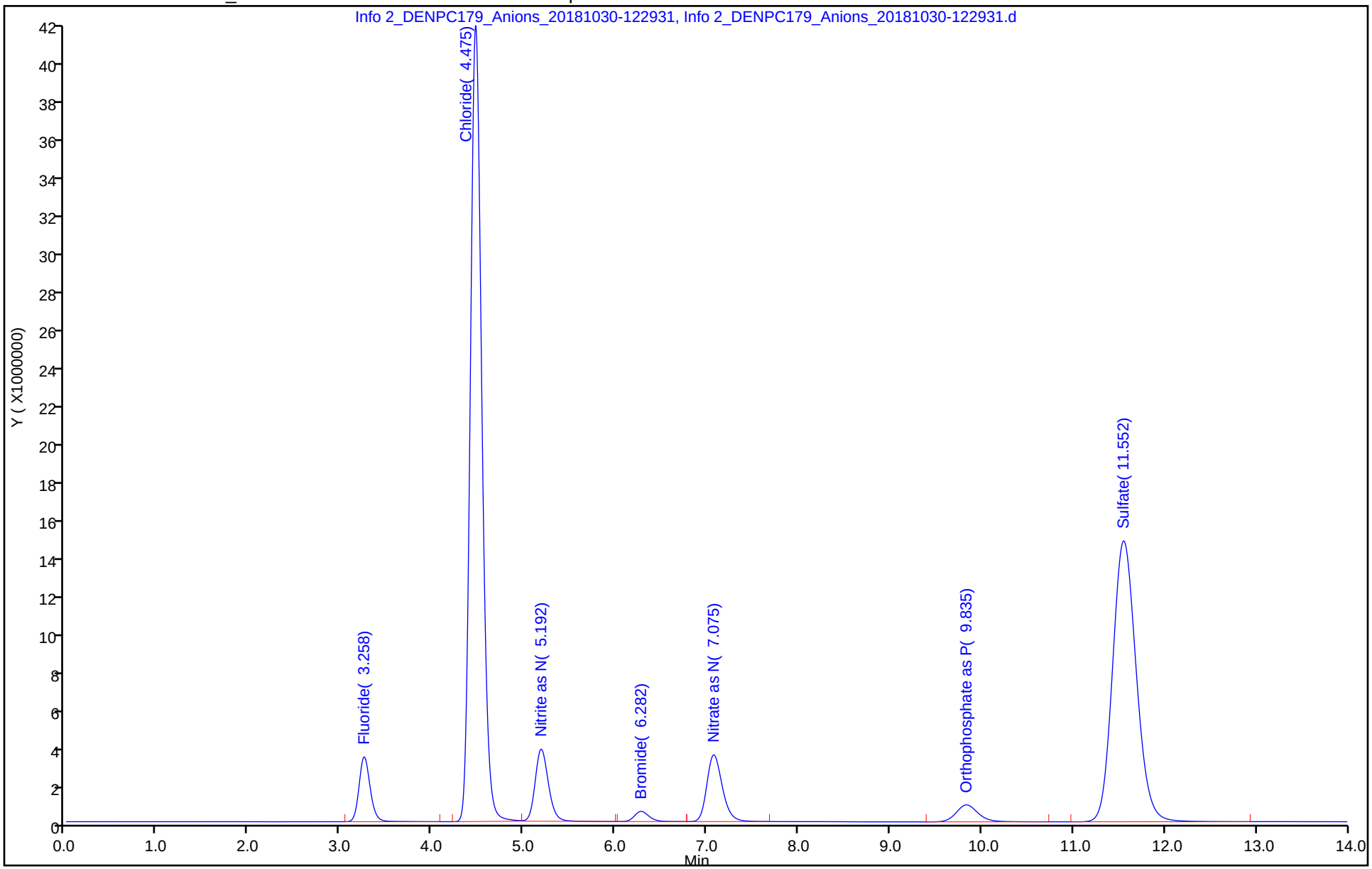
IC CL ICV_00014 Amount Added: 0.80 Units: mL
IC SO4 ICV_00017 Amount Added: 0.80 Units: mL
IC ICV 5_00214 Amount Added: 0.80 Units: mL

Report Date: 31-Oct-2018 12:49:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-122931.d

Injection Date:	30-Oct-2018 12:12:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICV			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12				
Lims ID:	ICB				
Client ID:					
Sample Type:	ICB				
Inject. Date:	30-Oct-2018 12:29:00	ALS Bottle#:	0	Worklist Smp#:	9
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0075619-009				
Misc. Info.:	280-0075619-009				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	31-Oct-2018 12:49:17	Calib Date:	30-Oct-2018 11:54:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12				
Column 1 :			Det: Info 2_091554_1		
Process Host:	XAWRK010				

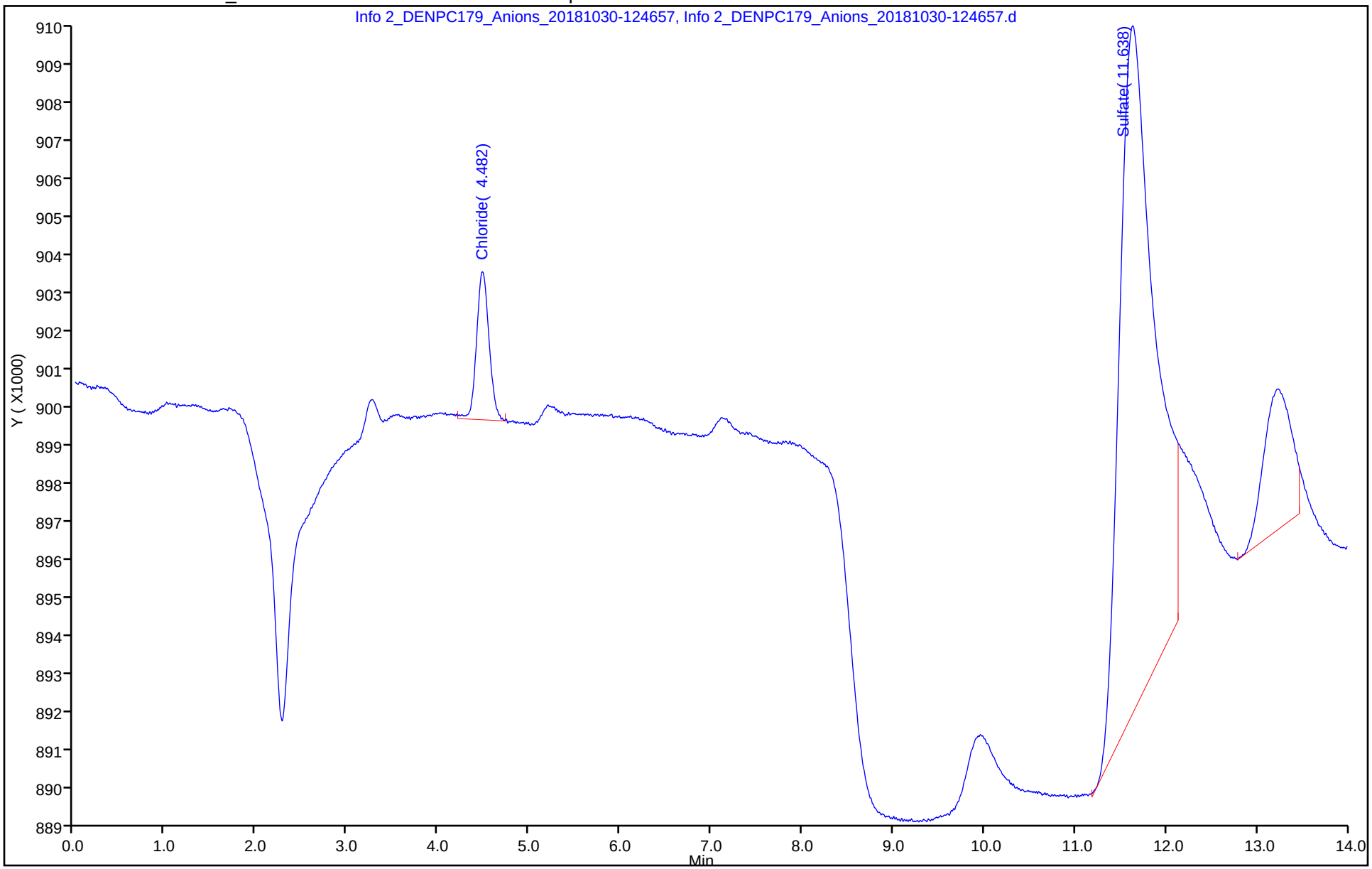
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.260				ND	
2 Chloride	4.482	4.477	0.005	36048		0.4491	
3 Nitrite as N		5.193				ND	
4 Bromide		6.287				ND	
5 Nitrate as N		7.082				ND	
6 Orthophosphate as P		9.842				ND	
7 Sulfate	11.638	11.563	0.075	464746		0.4837	

Report Date: 31-Oct-2018 12:49:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-124657.d

Injection Date:	30-Oct-2018 12:29:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICB			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



IC Instrument Information

WL: 75802 Inst ID: 10 Analysis Date: 11/03/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	116538	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	116544	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	116555	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐	115794	5	F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
116544	1	F Cl NO2 Br NO3 PO4 SO4	10x	high
116555	1	F Cl NO2 Br NO3 PO4 SO4	2x, 20x	cond.
116538	1	F Cl NO2 Br NO3 PO4 SO4	5x	high MS/MSD
116538	4	F Cl NO2 Br NO3 PO4 SO4	5x	high
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

436181 / 436182

TestAmerica Denver ICal 435512 / 435513

TestAmerica

IC Instrument Information

WL: 7580-2 Inst ID: 10 Analysis Date: 11/03/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	116538	3	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=	116544	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=	116555	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=	115794	5	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
116544	1	F Cl NO2 Br NO3 PO4 SO4	10x	high
116555	1	F Cl NO2 Br NO3 PO4 SO4	2x, 20x	conc
116538	1	F Cl NO2 Br NO3 PO4 SO4	5x	high MS/MSD
116538	4	F Cl NO2 Br NO3 PO4 SO4	5x	high
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

dhdapam 11/6/18.

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-10
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 10:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-001
Misc. Info.: 280-0075802-001
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.257	3.258	-0.001	34439301	5.00	4.79	
2 Chloride	4.473	4.475	-0.002	438837451	100.0	101.6	
3 Nitrite as N	5.188	5.192	-0.004	50555239	5.00	5.03	
4 Bromide	6.280	6.282	-0.002	7121010	5.00	4.71	
5 Nitrate as N	7.072	7.075	-0.003	48723670	5.00	4.96	
6 Orthophosphate as P	9.820	9.835	-0.015	17439519	5.00	4.57	
7 Sulfate	11.568	11.552	0.016	322249116	100.0	101.8	

Reagents:

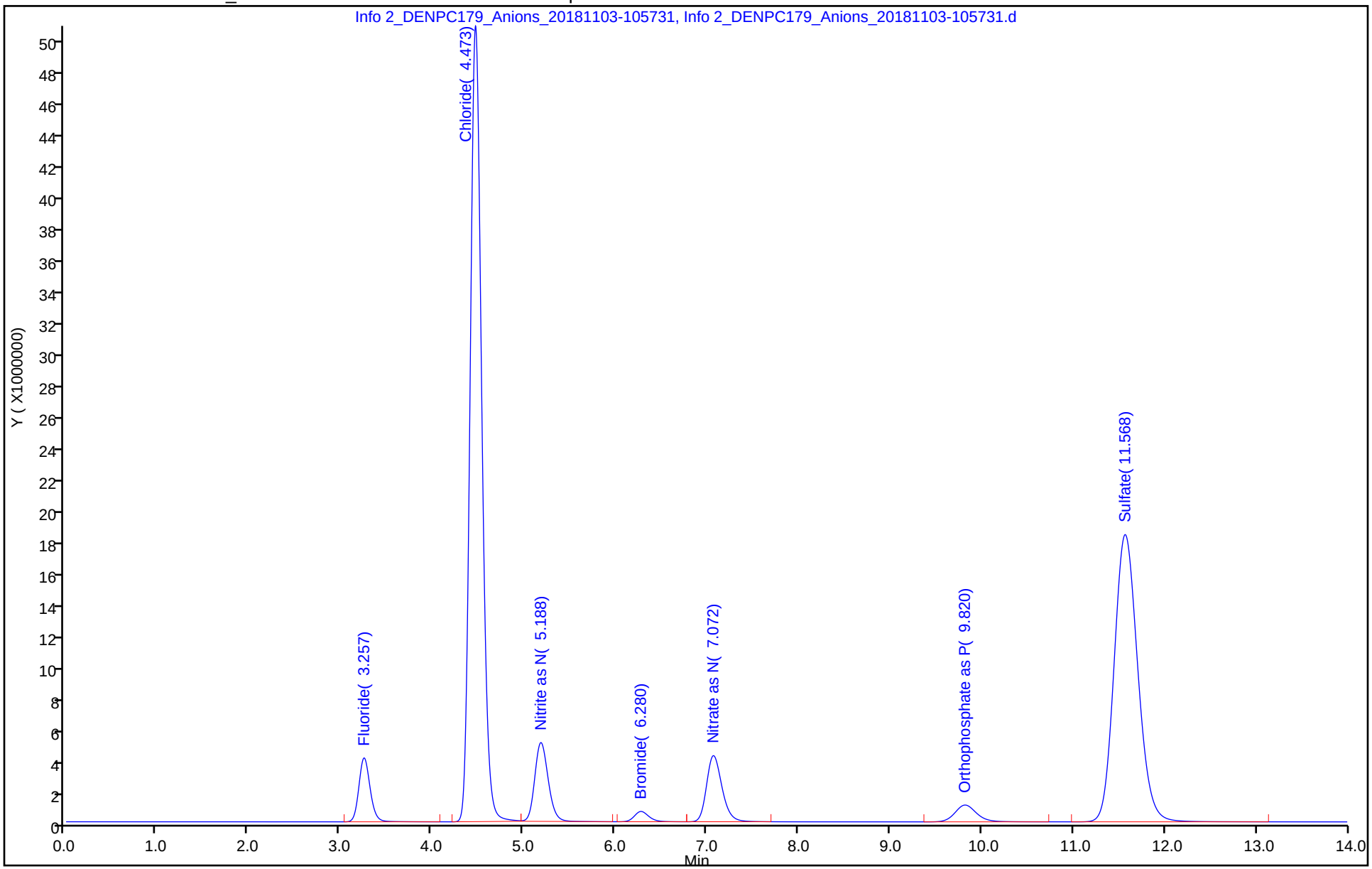
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:35 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-105731.d

Injection Date:	03-Nov-2018 10:40:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-11
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 03-Nov-2018 10:57:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-002
Misc. Info.: 280-0075802-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

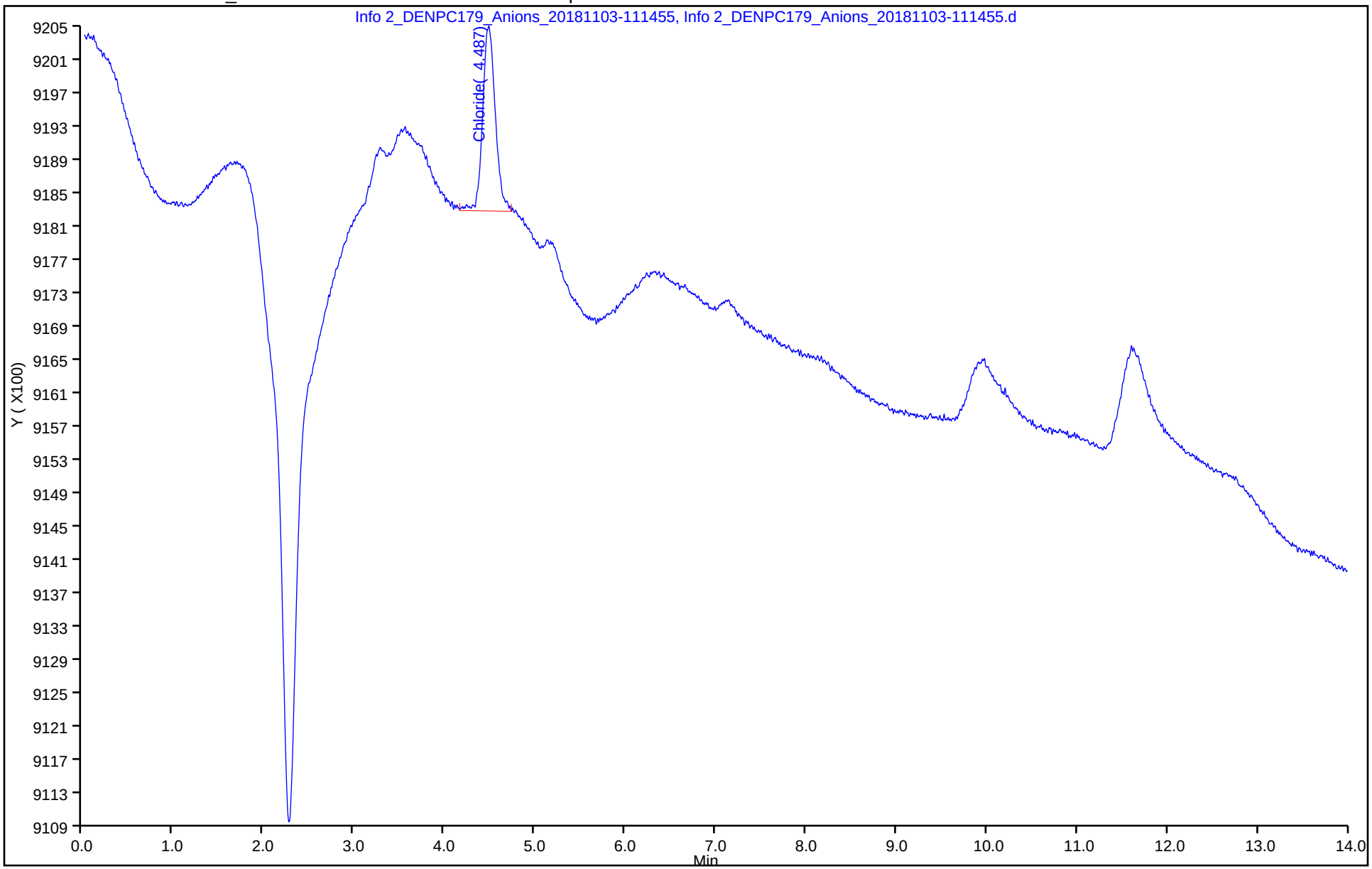
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.487	4.475	0.012	21454		0.4458	
3 Nitrite as N		5.192				ND	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:36:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-111455.d

Injection Date:	03-Nov-2018 10:57:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-11
Lims ID: MRL
Client ID:
Sample Type: MRL
Inject. Date: 03-Nov-2018 11:14:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-003
Misc. Info.: 280-0075802-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	991955	0.2000	0.2217	
2 Chloride	4.480	4.475	0.005	7982452	2.50	2.28	
3 Nitrite as N	5.202	5.192	0.010	1423184	0.2000	0.2337	
4 Bromide	6.300	6.282	0.018	249779	0.2000	0.2200	
5 Nitrate as N	7.117	7.075	0.042	1388392	0.2000	0.2407	
6 Orthophosphate as P	9.835	9.835	0.000	521529	0.2000	0.1383	
7 Sulfate	11.595	11.552	0.043	5233589	2.50	1.98	

Reagents:

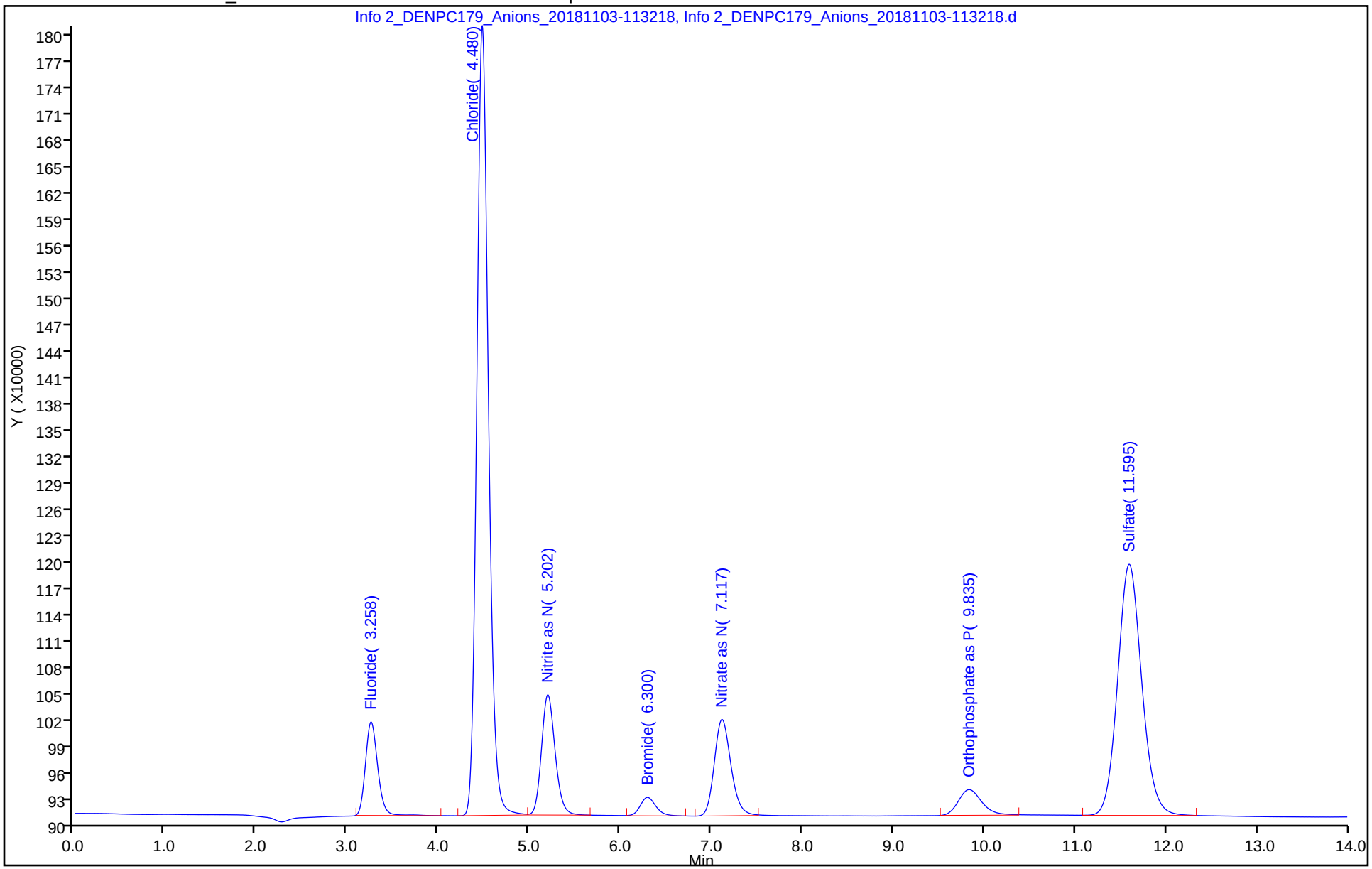
IC Cal low_00412 Amount Added: 0.04 Units: mL
IC CAL cl/so4_00228 Amount Added: 0.10 Units: mL

Report Date: 04-Nov-2018 08:36:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-113218.d

Injection Date:	03-Nov-2018 11:14:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	MRL			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-11
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Nov-2018 11:32:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-004
Misc. Info.: 280-0075802-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	34626666	5.00	4.82	
2 Chloride	4.475	4.475	0.000	439471345	100.0	101.8	
3 Nitrite as N	5.190	5.192	-0.002	50803274	5.00	5.06	
4 Bromide	6.282	6.282	0.000	7101438	5.00	4.70	
5 Nitrate as N	7.073	7.075	-0.002	48714668	5.00	4.96	
6 Orthophosphate as P	9.827	9.835	-0.008	17440761	5.00	4.57	
7 Sulfate	11.577	11.552	0.025	322780668	100.0	101.9	

Reagents:

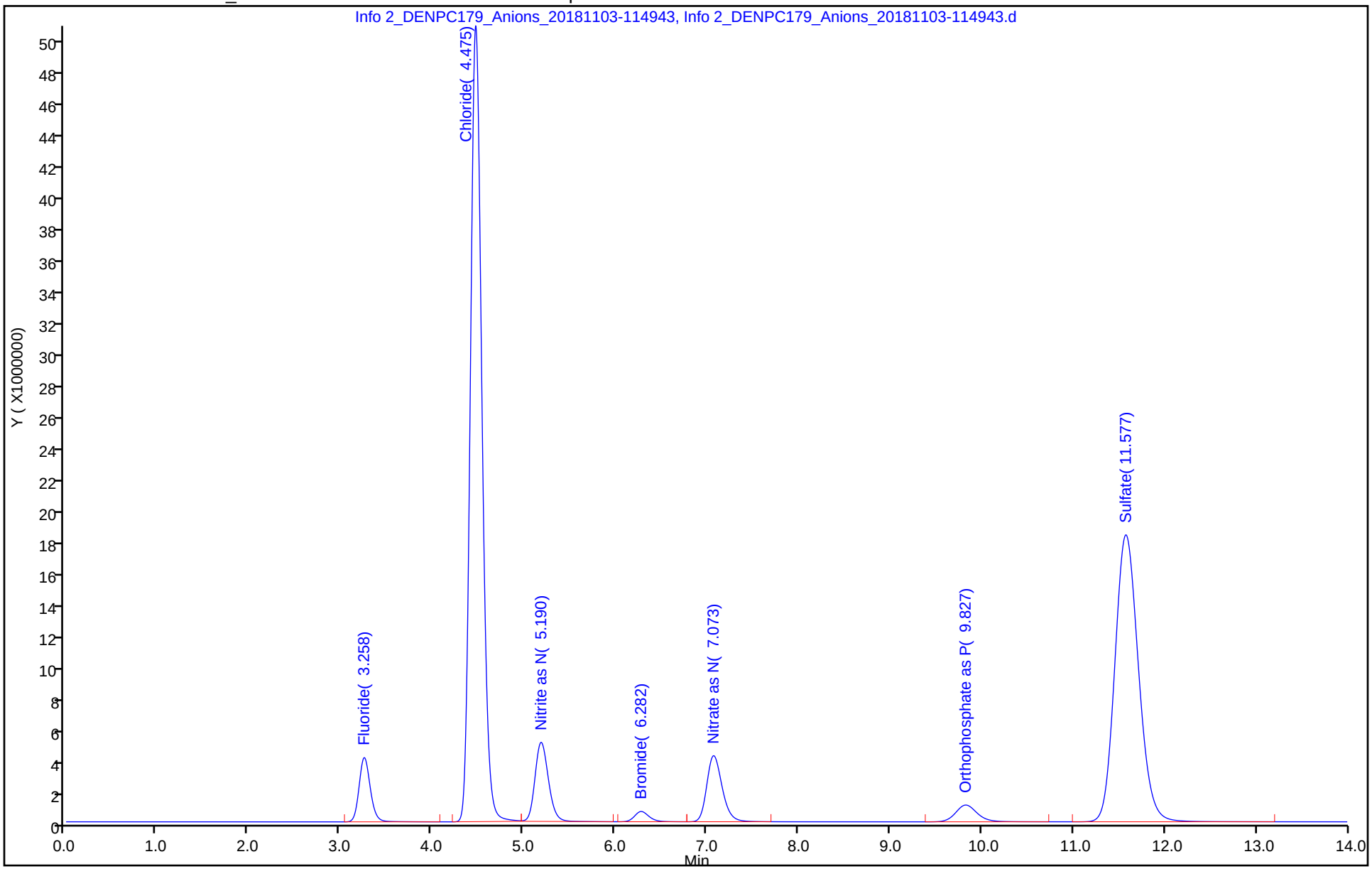
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-114943.d

Injection Date:	03-Nov-2018 11:32:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-12
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 03-Nov-2018 11:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-005
Misc. Info.: 280-0075802-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	34589785	5.00	4.81	
2 Chloride	4.477	4.475	0.002	439806815	100.0	101.8	
3 Nitrite as N	5.192	5.192	0.000	51569361	5.00	5.13	
4 Bromide	6.285	6.282	0.003	7103226	5.00	4.70	
5 Nitrate as N	7.077	7.075	0.002	48812004	5.00	4.97	
6 Orthophosphate as P	9.830	9.835	-0.005	17133962	5.00	4.49	
7 Sulfate	11.578	11.552	0.026	322878264	100.0	102.0	

Reagents:

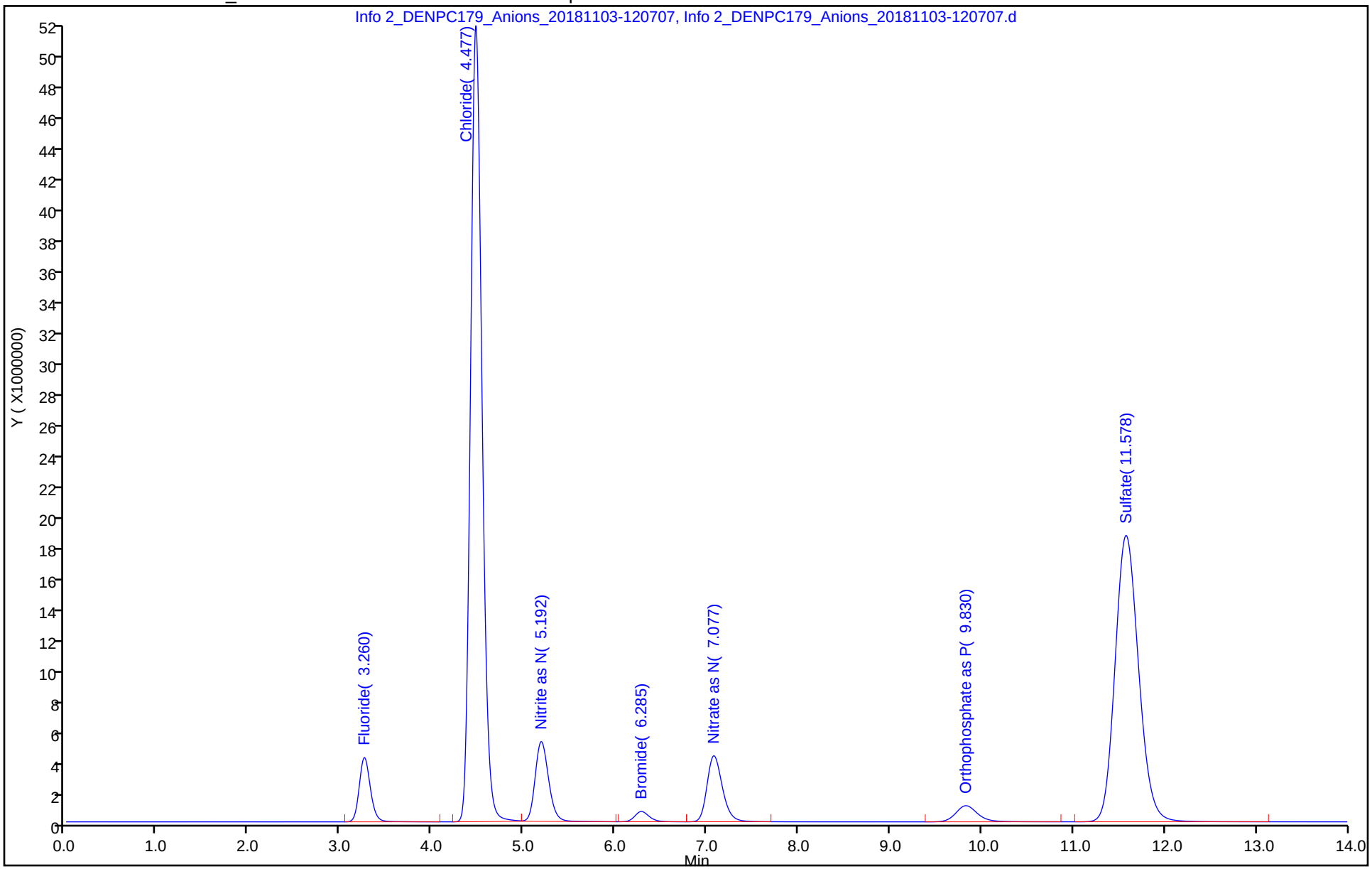
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-120707.d

Injection Date:	03-Nov-2018 11:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-12
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-Nov-2018 12:07:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-006
Misc. Info.: 280-0075802-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

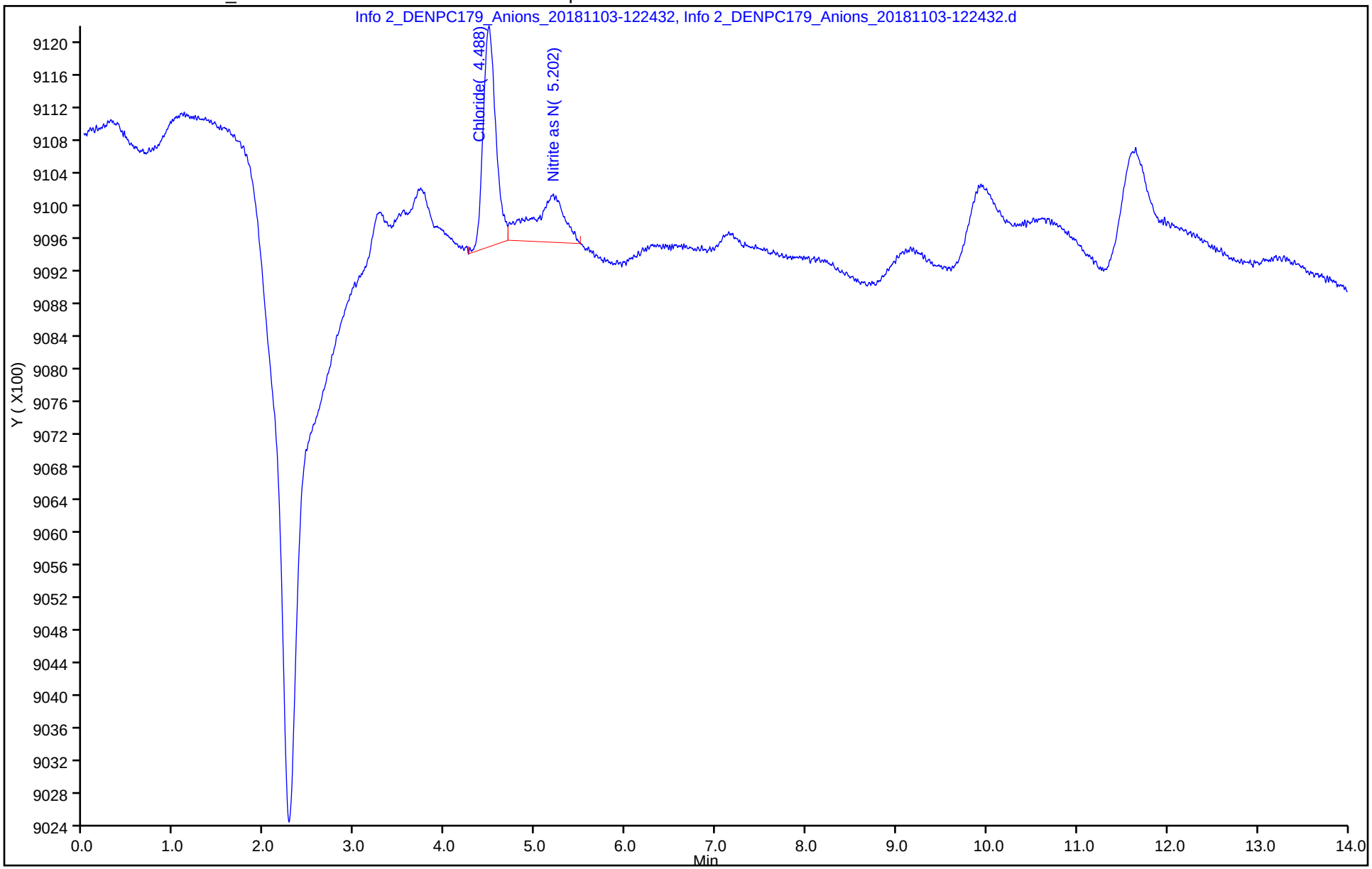
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.488	4.475	0.013	26360		0.4469	
3 Nitrite as N	5.202	5.192	0.010	14250		0.0961	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:36:42 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-122432.d

Injection Date:	03-Nov-2018 12:07:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-13
Lims ID: 280-116538-K-1
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 03-Nov-2018 12:49:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-007
Misc. Info.: 280-0075802-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

First Level Reviewer: phantl Date: 03-Nov-2018 14:52:03

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	1076847	0.2333	
2 Chloride	4.507	4.475	0.032	9041290	2.53	
3 Nitrite as N		5.192			ND	
4 Bromide		6.282			ND	
5 Nitrate as N	7.137	7.075	0.062	295120	0.1317	
6 Orthophosphate as P		9.835			ND	
7 Sulfate	11.555	11.552	0.003	769528731	242.5	E

QC Flag Legend

Processing Flags

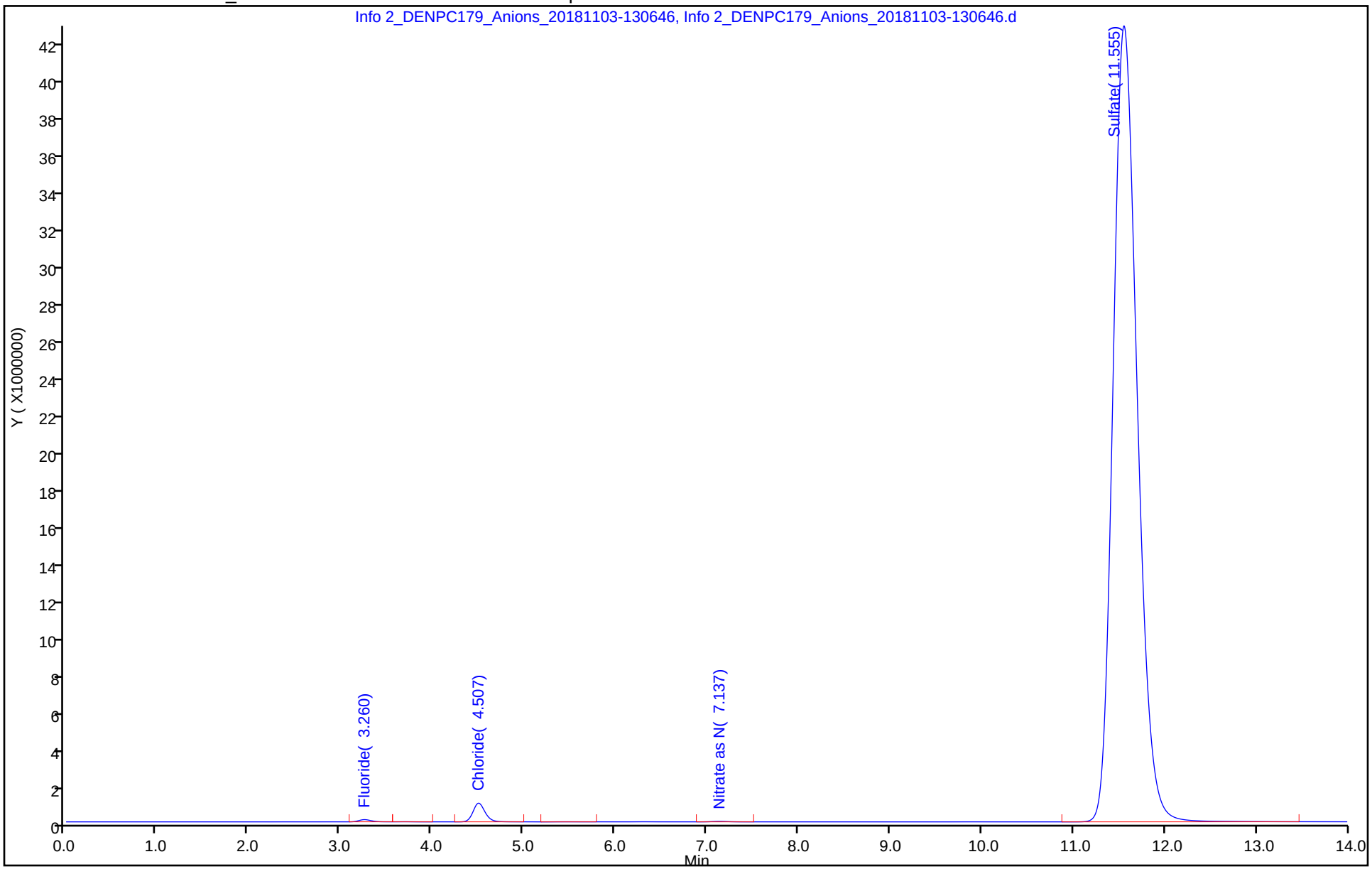
E - Exceeded Maximum Amount

Report Date: 04-Nov-2018 08:36:43 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-130646.d

Injection Date:	03-Nov-2018 12:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-K-1	Lab Sample ID:	280-116538-1	Worklist Smp#:	7
Client ID:	SCLmw-001-181001-GW				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-13
Lims ID: 280-116538-K-1 DU
Client ID:
Sample Type: DU
Inject. Date: 03-Nov-2018 13:06:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-008
Misc. Info.: 280-0075802-008
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	1080366		0.2338	
2 Chloride	4.505	4.475	0.030	9051345		2.53	
3 Nitrite as N		5.192				ND	
4 Bromide		6.282				ND	
5 Nitrate as N	7.137	7.075	0.062	294501		0.1317	
6 Orthophosphate as P		9.835				ND	
7 Sulfate	11.557	11.552	0.005	769691993		242.6	E

QC Flag Legend

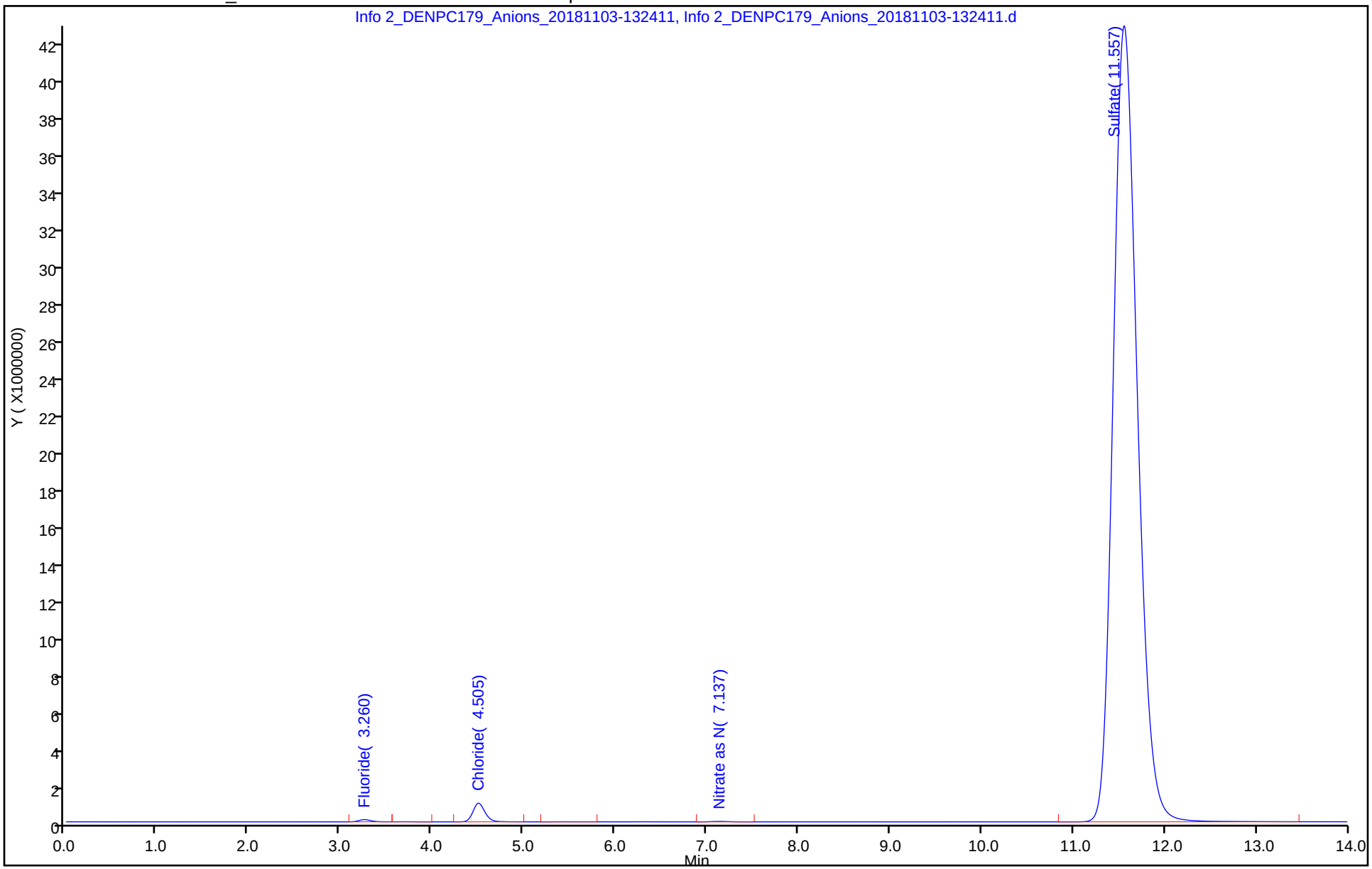
Processing Flags
E - Exceeded Maximum Amount

Report Date: 04-Nov-2018 08:36:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-132411.d

Injection Date:	03-Nov-2018 13:06:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-K-1 DU			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-13
Lims ID: 280-116538-K-1 MS
Client ID:
Sample Type: MS
Inject. Date: 03-Nov-2018 13:24:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-009
Misc. Info.: 280-0075802-009
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	34448944	5.00	4.79	
2 Chloride	4.498	4.475	0.023	119374458	25.0	28.0	
3 Nitrite as N	5.307	5.192	0.115	45579466	5.00	4.55	
4 Bromide	6.293	6.282	0.011	7078255	5.00	4.69	
5 Nitrate as N	7.083	7.075	0.008	49390688	5.00	5.03	
6 Orthophosphate as P	9.827	9.835	-0.008	17043177	5.00	4.47	
7 Sulfate	11.552	11.552	0.000	847043285	25.0	266.9	E

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Reagents:

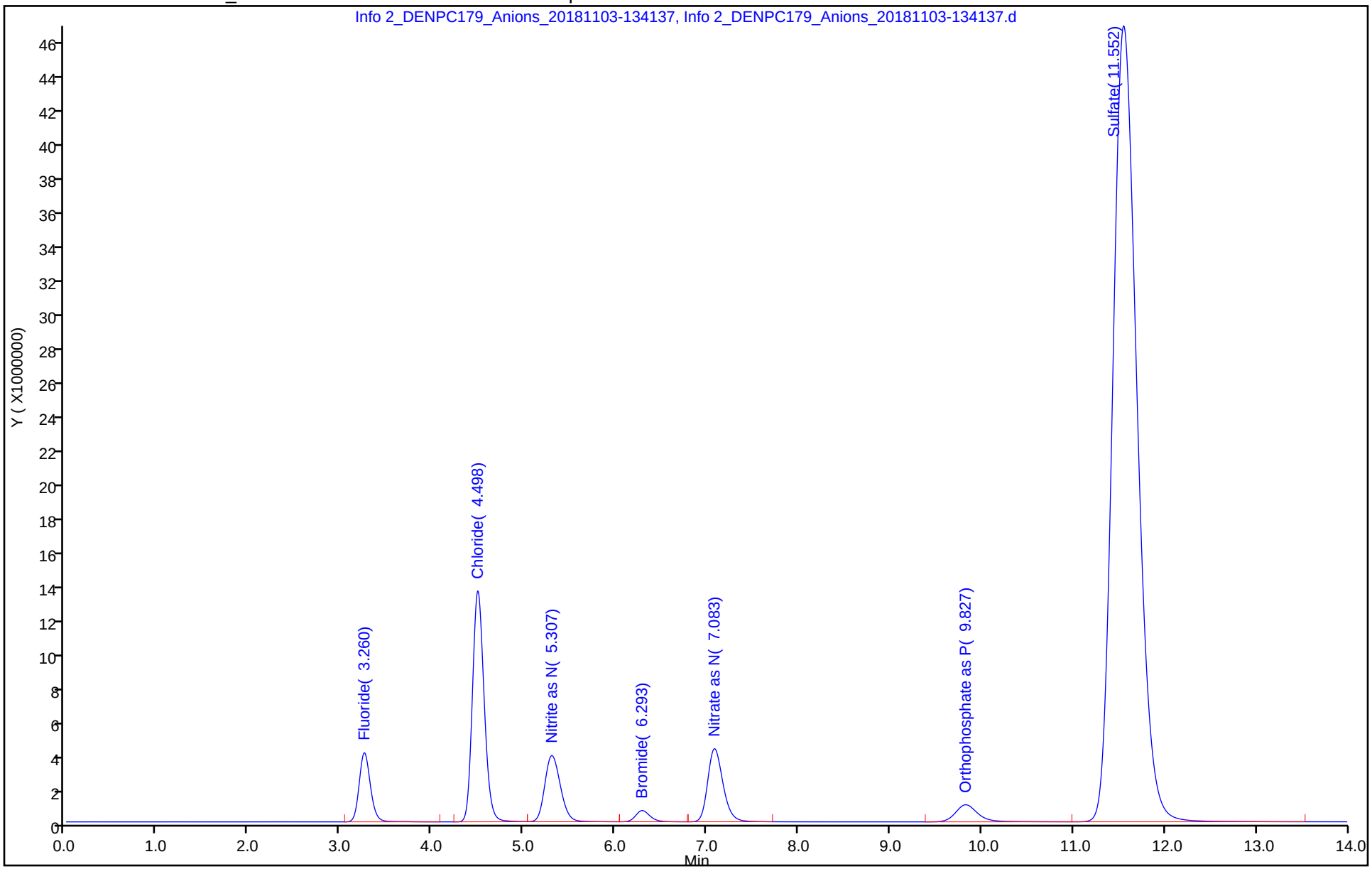
ICMS/MSD WEEK_00563 Amount Added: 0.10 Units: mL

Report Date: 04-Nov-2018 08:36:45 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-134137.d

Injection Date:	03-Nov-2018 13:24:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-K-1 MS			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-13
Lims ID: 280-116538-K-1 MSD
Client ID:
Sample Type: MSD
Inject. Date: 03-Nov-2018 13:41:00 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-010
Misc. Info.: 280-0075802-010
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.262	3.258	0.004	35140738	5.00	4.89	
2 Chloride	4.500	4.475	0.025	121397895	25.0	28.4	
3 Nitrite as N	5.310	5.192	0.118	46100036	5.00	4.60	
4 Bromide	6.297	6.282	0.015	7217755	5.00	4.78	
5 Nitrate as N	7.087	7.075	0.012	50347509	5.00	5.12	
6 Orthophosphate as P	9.830	9.835	-0.005	17894949	5.00	4.69	
7 Sulfate	11.557	11.552	0.005	848725665	25.0	267.5	E

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount

Reagents:

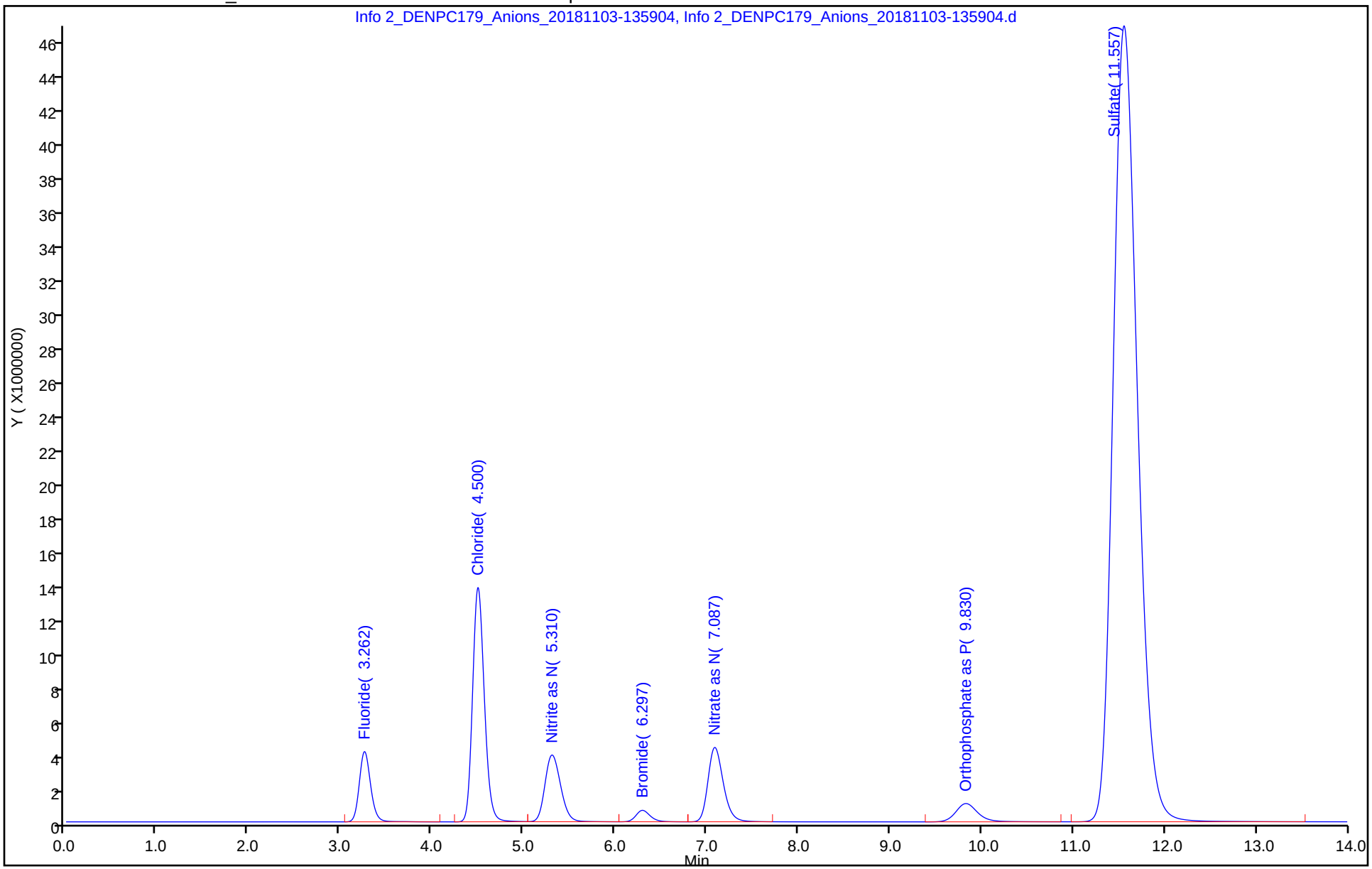
ICMS/MSD WEEK_00563 Amount Added: 0.10 Units: mL

Report Date: 04-Nov-2018 08:36:46 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-135904.d

Injection Date:	03-Nov-2018 13:41:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-K-1 MSD			Worklist Smp#:	10
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-14
Lims ID: 280-116538-G-2
Client ID: SCLmw-003-181001-GW
Sample Type: Client
Inject. Date: 03-Nov-2018 13:59:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-011
Misc. Info.: 280-0075802-011
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

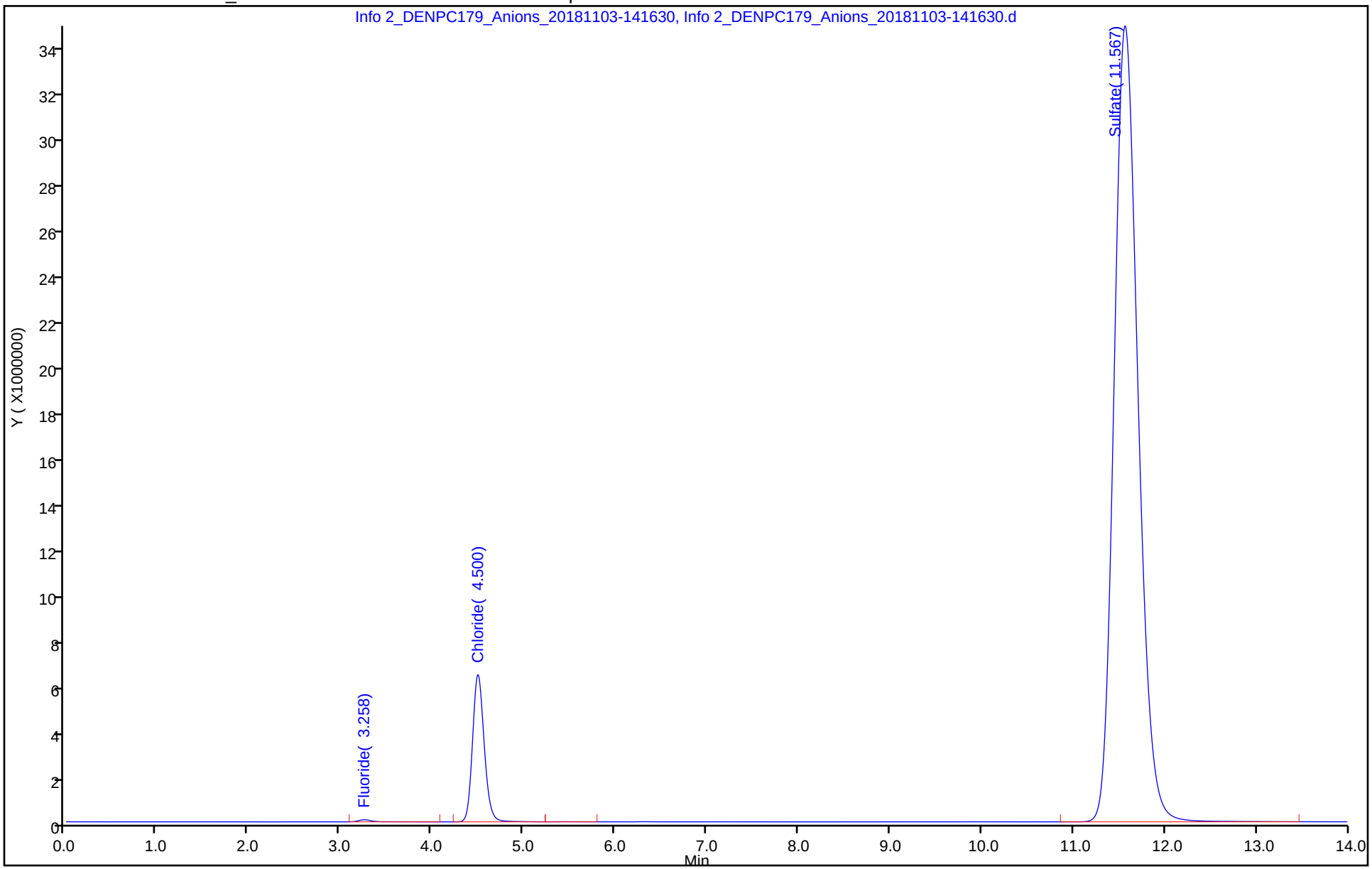
Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	905297	0.2099	
2 Chloride	4.500	4.475	0.025	55154205	13.2	
3 Nitrite as N		5.192			ND	
4 Bromide		6.282			ND	
5 Nitrate as N		7.075			ND	
6 Orthophosphate as P		9.835			ND	
7 Sulfate	11.567	11.552	0.015	609965776	192.3	

Report Date: 04-Nov-2018 08:36:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-141630.d				
Injection Date:	03-Nov-2018 13:59:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-G-2	Lab Sample ID:	280-116538-2	Worklist Smp#:	11
Client ID:	SCLmw-003-181001-GW				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-15
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 15:26:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-016
Misc. Info.: 280-0075802-016
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:36:53 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	34624141	5.00	4.82	
2 Chloride	4.477	4.475	0.002	442822120	100.0	102.5	
3 Nitrite as N	5.190	5.192	-0.002	51623970	5.00	5.14	
4 Bromide	6.285	6.282	0.003	7161678	5.00	4.74	
5 Nitrate as N	7.077	7.075	0.002	49135436	5.00	5.00	
6 Orthophosphate as P	9.827	9.835	-0.008	17471912	5.00	4.58	
7 Sulfate	11.578	11.552	0.026	325200129	100.0	102.7	

Reagents:

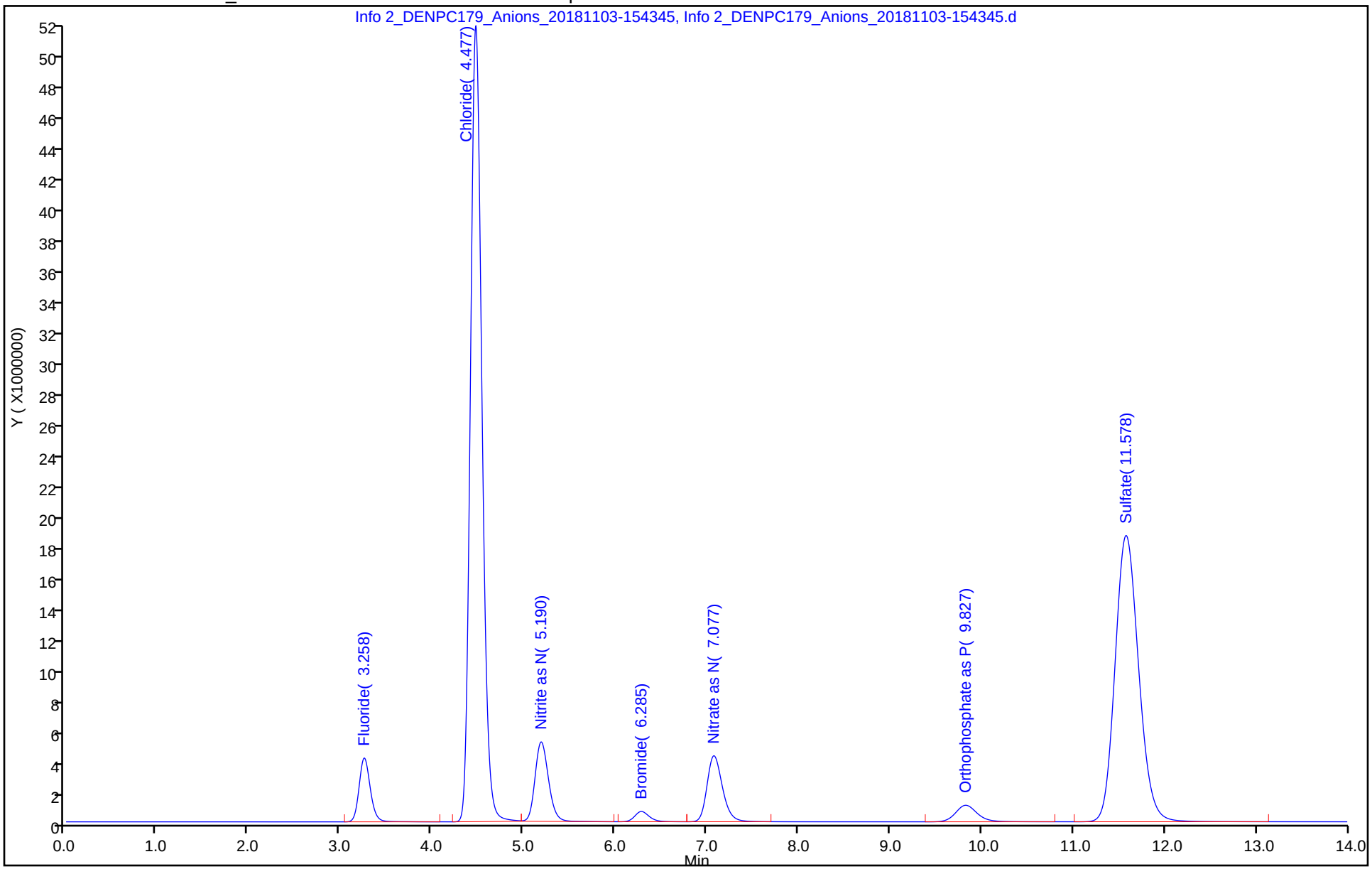
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-154345.d

Injection Date:	03-Nov-2018 15:26:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	16
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-16				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	03-Nov-2018 15:43:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0075802-017				
Misc. Info.:	280-0075802-017				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	04-Nov-2018 08:36:53	Calib Date:	30-Oct-2018 11:54:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0311				

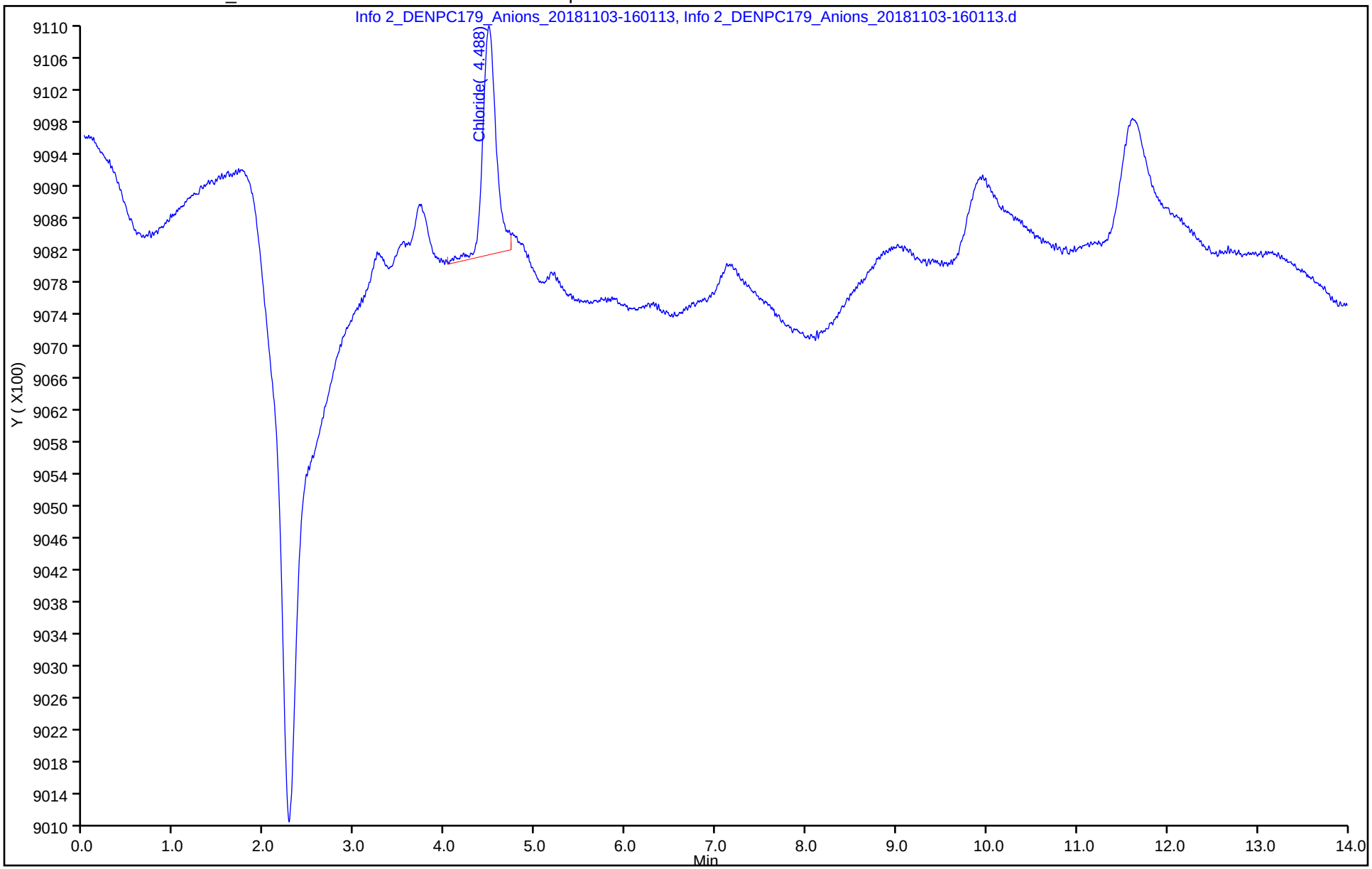
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.488	4.475	0.013	29512		0.4476	
3 Nitrite as N		5.192				ND	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:36:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-160113.d

Injection Date:	03-Nov-2018 15:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	17
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-18
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 18:03:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-025
Misc. Info.: 280-0075802-025
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions
Last Update: 04-Nov-2018 08:37:02 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	34568727	5.00	4.81	
2 Chloride	4.478	4.475	0.003	443189068	100.0	102.6	
3 Nitrite as N	5.193	5.192	0.001	51606042	5.00	5.14	
4 Bromide	6.288	6.282	0.006	7169133	5.00	4.75	
5 Nitrate as N	7.080	7.075	0.005	49206445	5.00	5.01	
6 Orthophosphate as P	9.832	9.835	-0.003	17492819	5.00	4.59	
7 Sulfate	11.585	11.552	0.033	325399621	100.0	102.8	

Reagents:

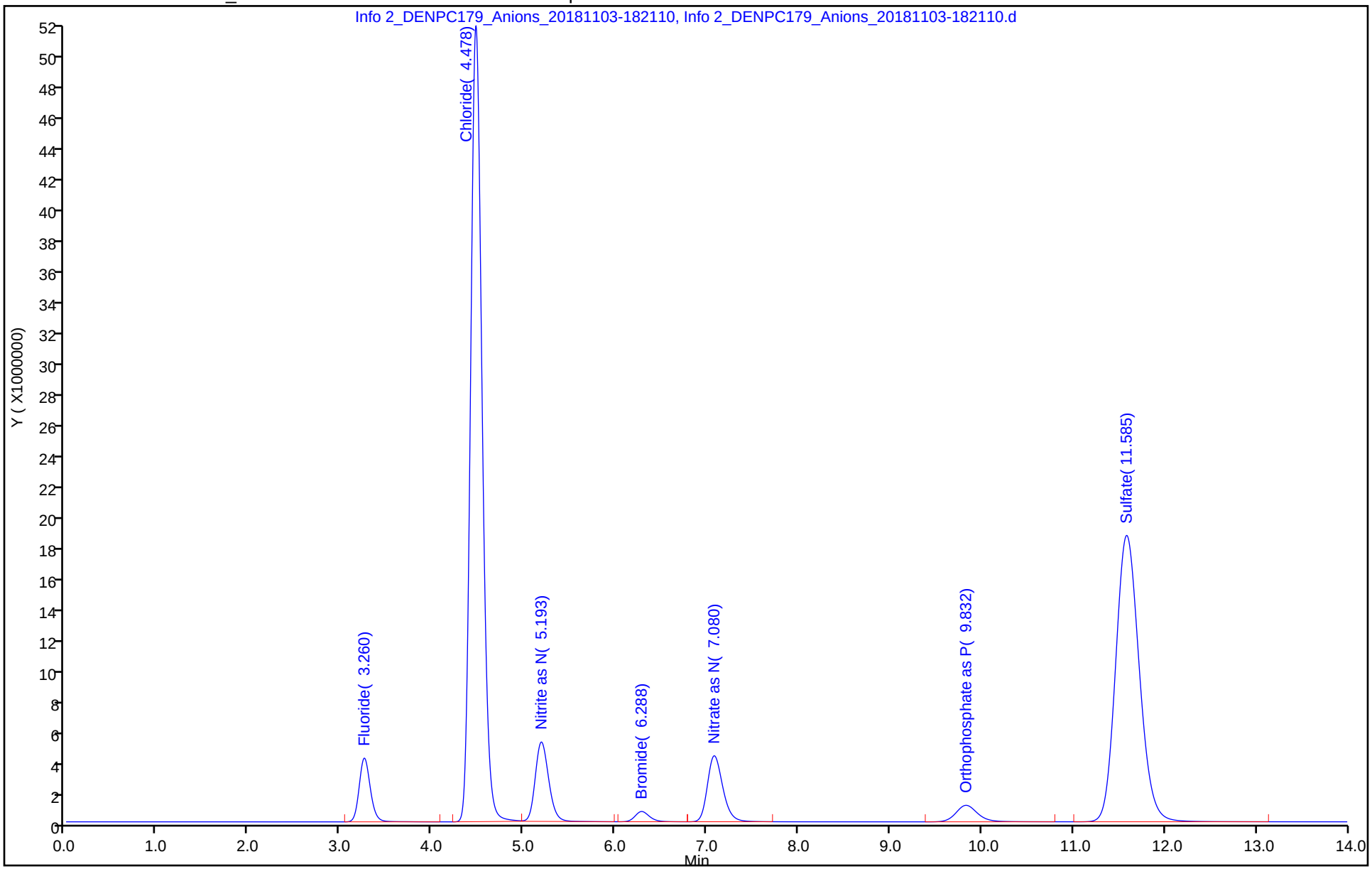
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:37:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-182110.d

Injection Date:	03-Nov-2018 18:03:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	25
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-18				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	03-Nov-2018 18:21:00	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0075802-026				
Misc. Info.:	280-0075802-026				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m				
Limit Group:	Wet - Anions				
Last Update:	04-Nov-2018 08:37:02	Calib Date:	30-Oct-2018 11:54:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0311				

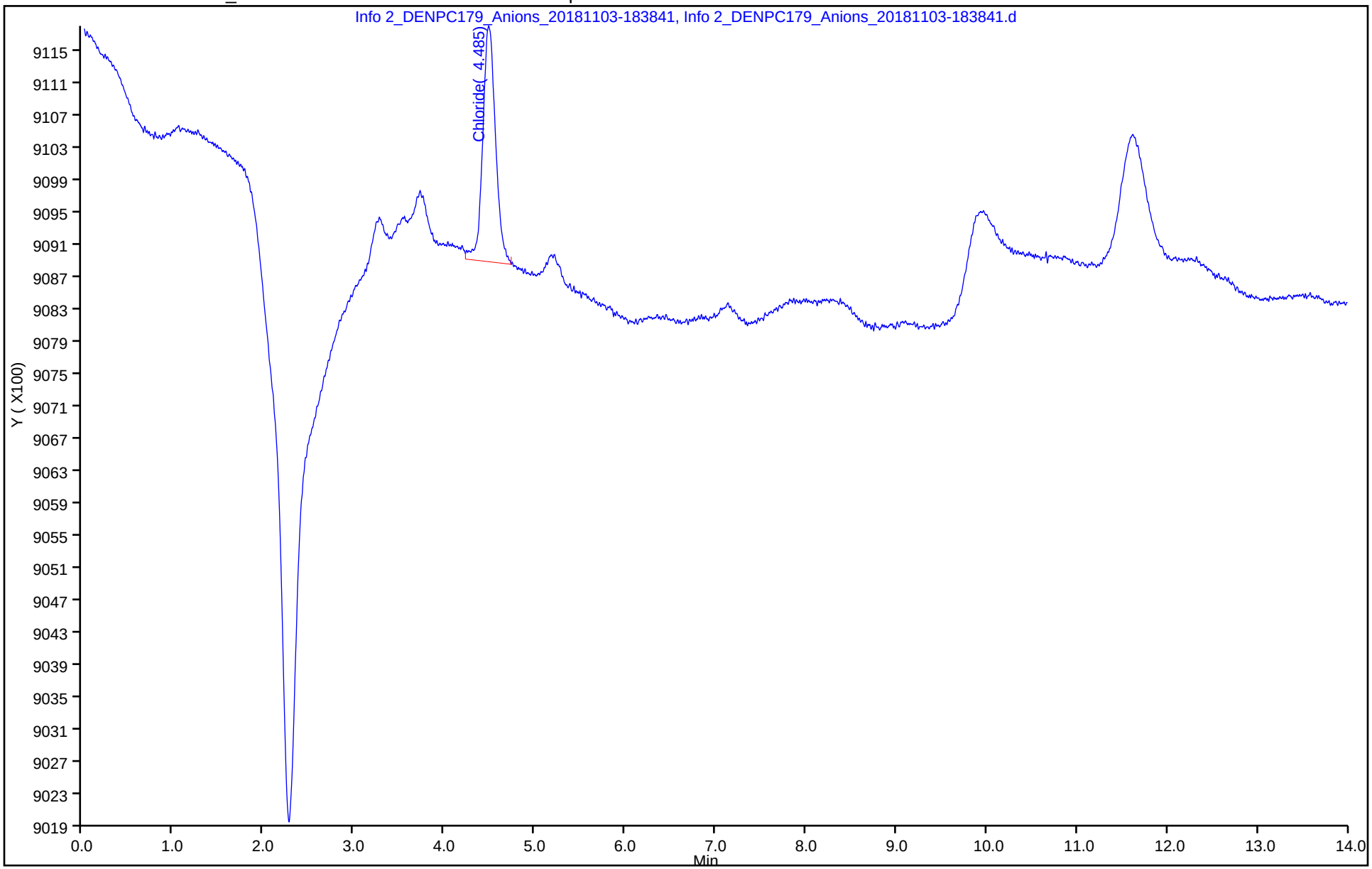
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.485	4.475	0.010	28711		0.4474	
3 Nitrite as N		5.192				ND	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:37:03 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-183841.d

Injection Date:	03-Nov-2018 18:21:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	26
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-10
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 30-Oct-2018 10:27:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-002
Misc. Info.: 280-0075619-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 31-Oct-2018 12:48:51 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

First Level Reviewer: allena Date: 30-Oct-2018 12:00:45

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.257	3.255	0.002	1071094	0.2000	0.2325	
2 Chloride	4.480	4.475	0.005	3071420	1.00	1.15	
3 Nitrite as N	5.202	5.188	0.014	1440251	0.2000	0.2354	
4 Bromide	6.300	6.282	0.018	267623	0.2000	0.2317	
5 Nitrate as N	7.118	7.073	0.045	1399962	0.2000	0.2419	
6 Orthophosphate as P	9.852	9.827	0.025	813941	0.2000	0.2150	
7 Sulfate	11.577	11.540	0.037	2779250	1.00	1.21	

Reagents:

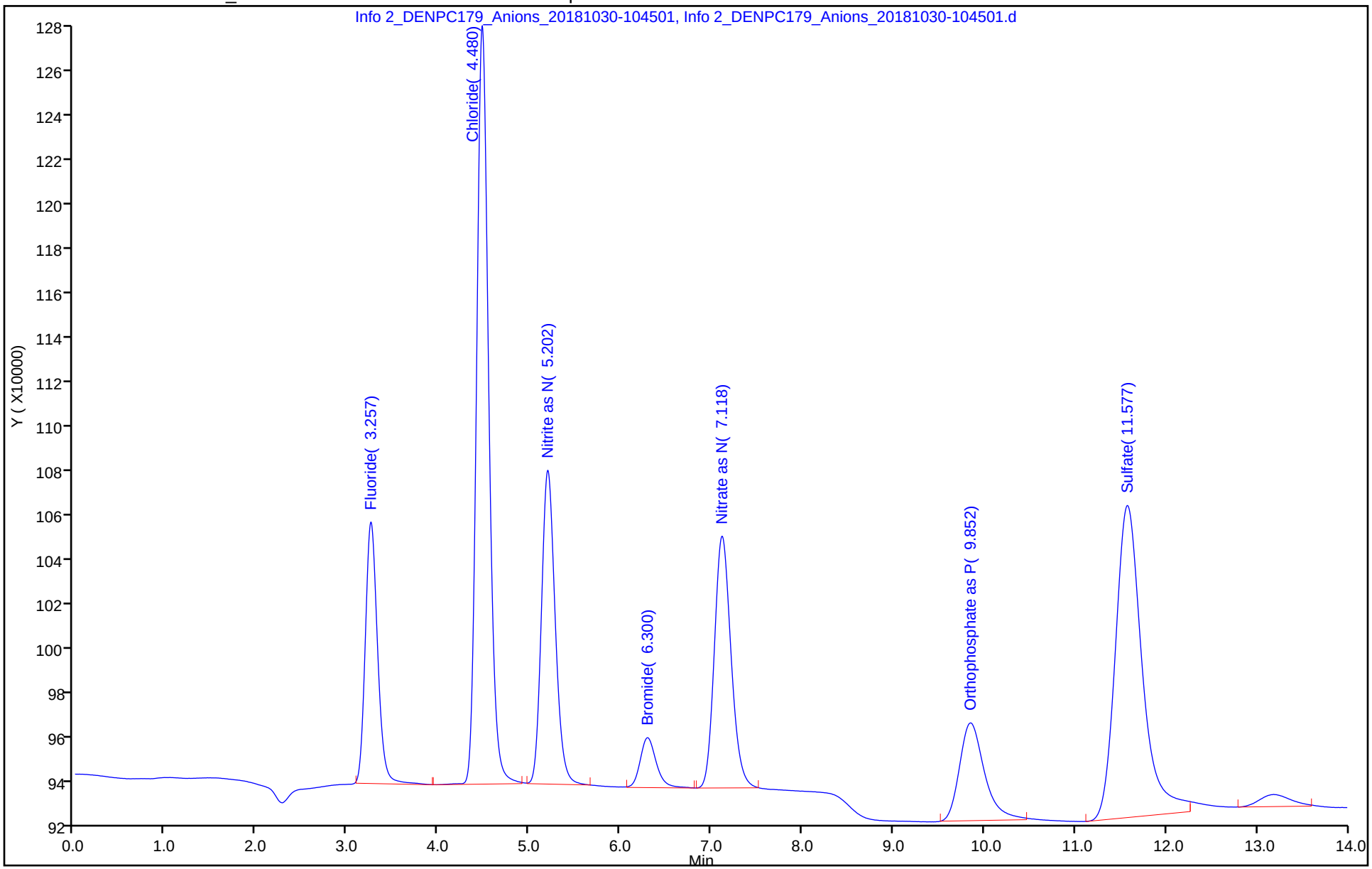
IC CAL cl/so4_00227 Amount Added: 0.04 Units: mL
IC Cal low_00411 Amount Added: 0.04 Units: mL

Report Date: 31-Oct-2018 12:48:52 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-104501.d

Injection Date:	30-Oct-2018 10:27:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD1			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 30-Oct-2018 10:45:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-003
Misc. Info.: 280-0075619-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 31-Oct-2018 12:48:55 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.255	3.255	0.000	2816245	0.5000	0.4710	
2 Chloride	4.478	4.475	0.003	8239899	2.50	2.34	
3 Nitrite as N	5.198	5.188	0.010	3822599	0.5000	0.4681	
4 Bromide	6.293	6.282	0.011	652794	0.5000	0.4836	
5 Nitrate as N	7.108	7.073	0.035	3690848	0.5000	0.4702	
6 Orthophosphate as P	9.845	9.827	0.018	1908867	0.5000	0.5021	
7 Sulfate	11.572	11.540	0.032	6323521	2.50	2.33	

Reagents:

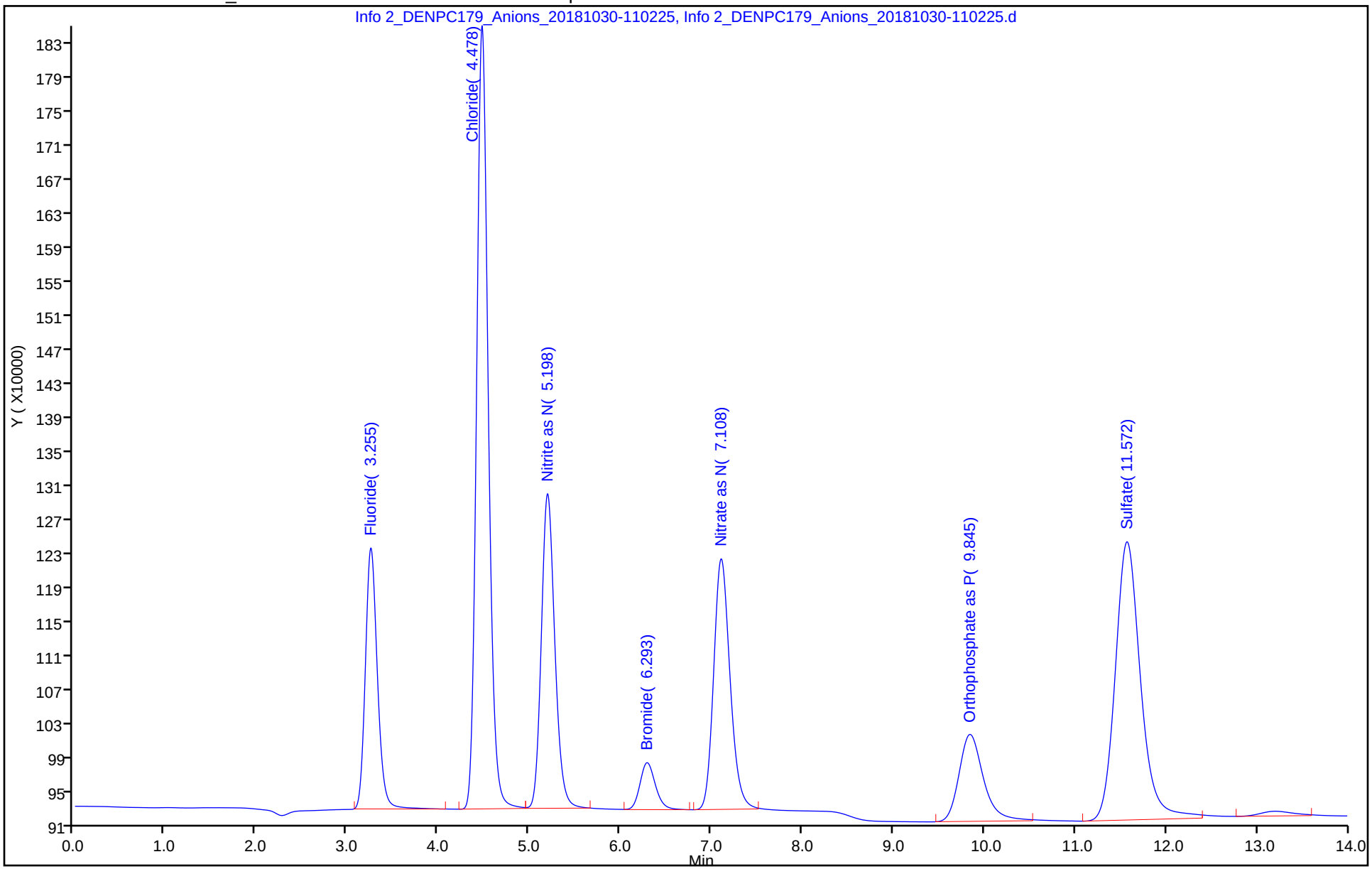
IC CAL cl/so4_00227 Amount Added: 0.10 Units: mL
IC Cal low_00411 Amount Added: 0.10 Units: mL

Report Date: 31-Oct-2018 12:48:57 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-110225.d

Injection Date:	30-Oct-2018 10:45:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD2			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 30-Oct-2018 11:02:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-004
Misc. Info.: 280-0075619-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 31-Oct-2018 12:49:00 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.257	3.255	0.002	5954529	1.00	0.8999	
2 Chloride	4.478	4.475	0.003	17980833	5.00	4.59	
3 Nitrite as N	5.198	5.188	0.010	8167538	1.00	0.8926	
4 Bromide	6.293	6.282	0.011	1298912	1.00	0.9062	
5 Nitrate as N	7.102	7.073	0.029	7705980	1.00	0.8704	
6 Orthophosphate as P	9.845	9.827	0.018	3631973	1.00	0.9539	
7 Sulfate	11.573	11.540	0.033	12761418	5.00	4.35	

Reagents:

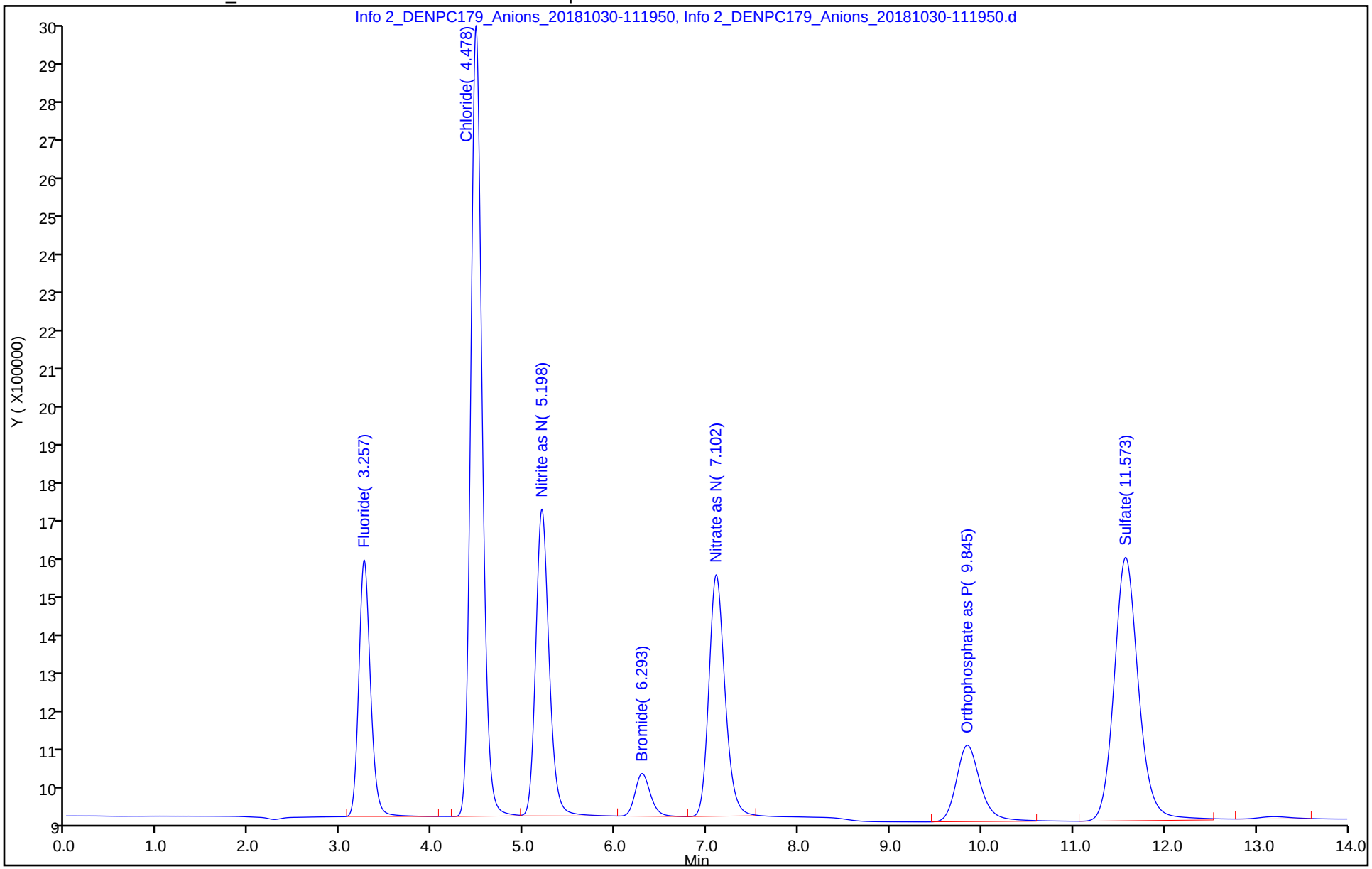
IC CAL cl/so4_00227 Amount Added: 0.20 Units: mL
IC Cal low_00411 Amount Added: 0.20 Units: mL

Report Date: 31-Oct-2018 12:49:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-111950.d

Injection Date:	30-Oct-2018 11:02:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD3			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 30-Oct-2018 11:19:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-005
Misc. Info.: 280-0075619-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 31-Oct-2018 12:49:04 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.260	0.000	27878173	4.00	3.90	
2 Chloride	4.477	4.477	0.000	256824281	60.0	59.7	
3 Nitrite as N	5.193	5.193	0.000	38665594	4.00	3.87	
4 Bromide	6.287	6.287	0.000	5621787	4.00	3.73	
5 Nitrate as N	7.082	7.082	0.000	36858444	4.00	3.78	
6 Orthophosphate as P	9.842	9.842	0.000	14344226	4.00	3.76	
7 Sulfate	11.563	11.563	0.000	185331333	60.0	58.7	

Reagents:

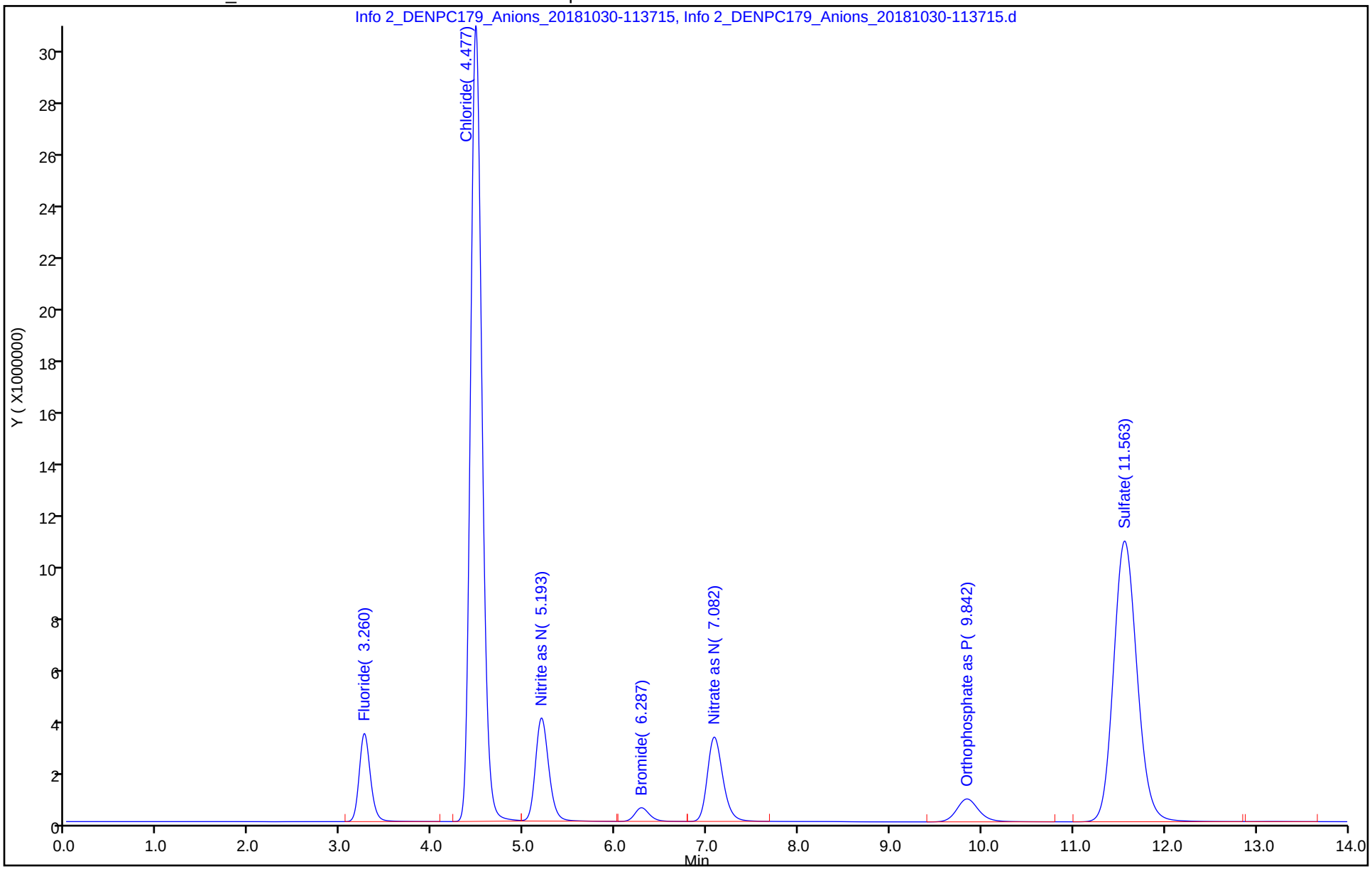
IC CAL cl/so4_00227 Amount Added: 2.40 Units: mL
IC Cal low_00411 Amount Added: 0.80 Units: mL

Report Date: 31-Oct-2018 12:49:06 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-113715.d

Injection Date:	30-Oct-2018 11:19:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD4			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



Report Date: 31-Oct-2018 12:49:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-11
Lims ID: STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 30-Oct-2018 11:37:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-006
Misc. Info.: 280-0075619-006
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 31-Oct-2018 12:49:08 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

First Level Reviewer: allena Date: 30-Oct-2018 12:22:00

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.260	0.000	58334967	8.00	8.06	
2 Chloride	4.477	4.477	0.000	517755699	120.0	119.8	
3 Nitrite as N	5.187	5.193	-0.006	82200253	8.00	8.12	
4 Bromide	6.277	6.287	-0.010	12163239	8.00	8.01	
5 Nitrate as N	7.062	7.082	-0.020	79872607	8.00	8.06	
6 Orthophosphate as P	9.832	9.842	-0.010	30476352	8.00	7.99	
7 Sulfate	11.545	11.563	-0.018	378814367	120.0	119.6	

Reagents:

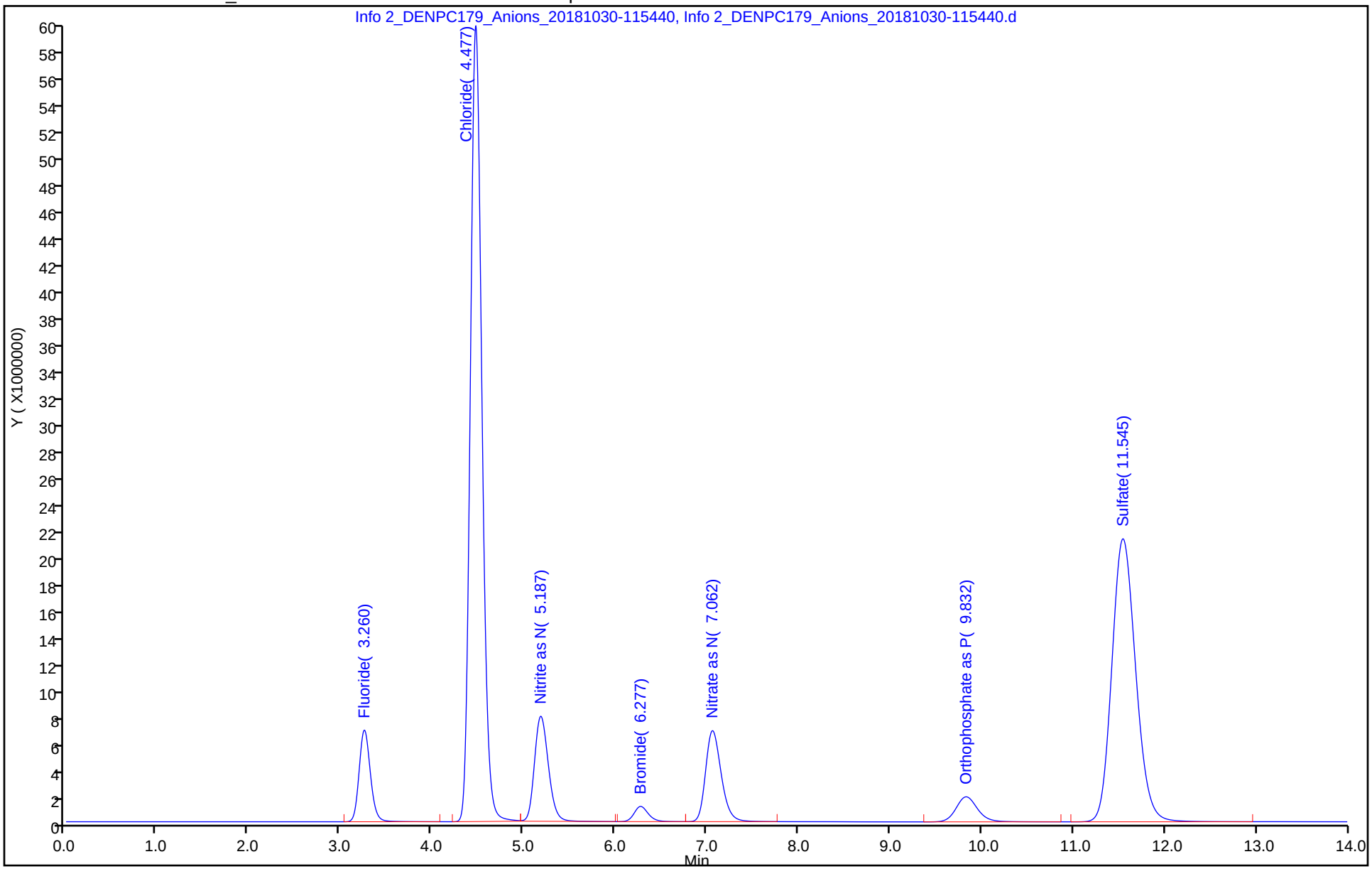
IC CAL cl/so4_00227 Amount Added: 4.80 Units: mL
IC Cal low_00411 Amount Added: 1.60 Units: mL

Report Date: 31-Oct-2018 12:49:10 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-115440.d

Injection Date:	30-Oct-2018 11:37:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD5			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 30-Oct-2018 11:54:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-007
Misc. Info.: 280-0075619-007
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 31-Oct-2018 12:49:12 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.260	-0.002	73583459	10.0	10.1	
2 Chloride	4.478	4.477	0.001	869672551	200.0	201.0	
3 Nitrite as N	5.183	5.193	-0.010	102493289	10.0	10.1	
4 Bromide	6.273	6.287	-0.014	15712093	10.0	10.3	
5 Nitrate as N	7.055	7.082	-0.027	102080026	10.0	10.3	
6 Orthophosphate as P	9.828	9.842	-0.014	39175938	10.0	10.3	
7 Sulfate	11.528	11.563	-0.035	641936064	200.0	202.4	

Reagents:

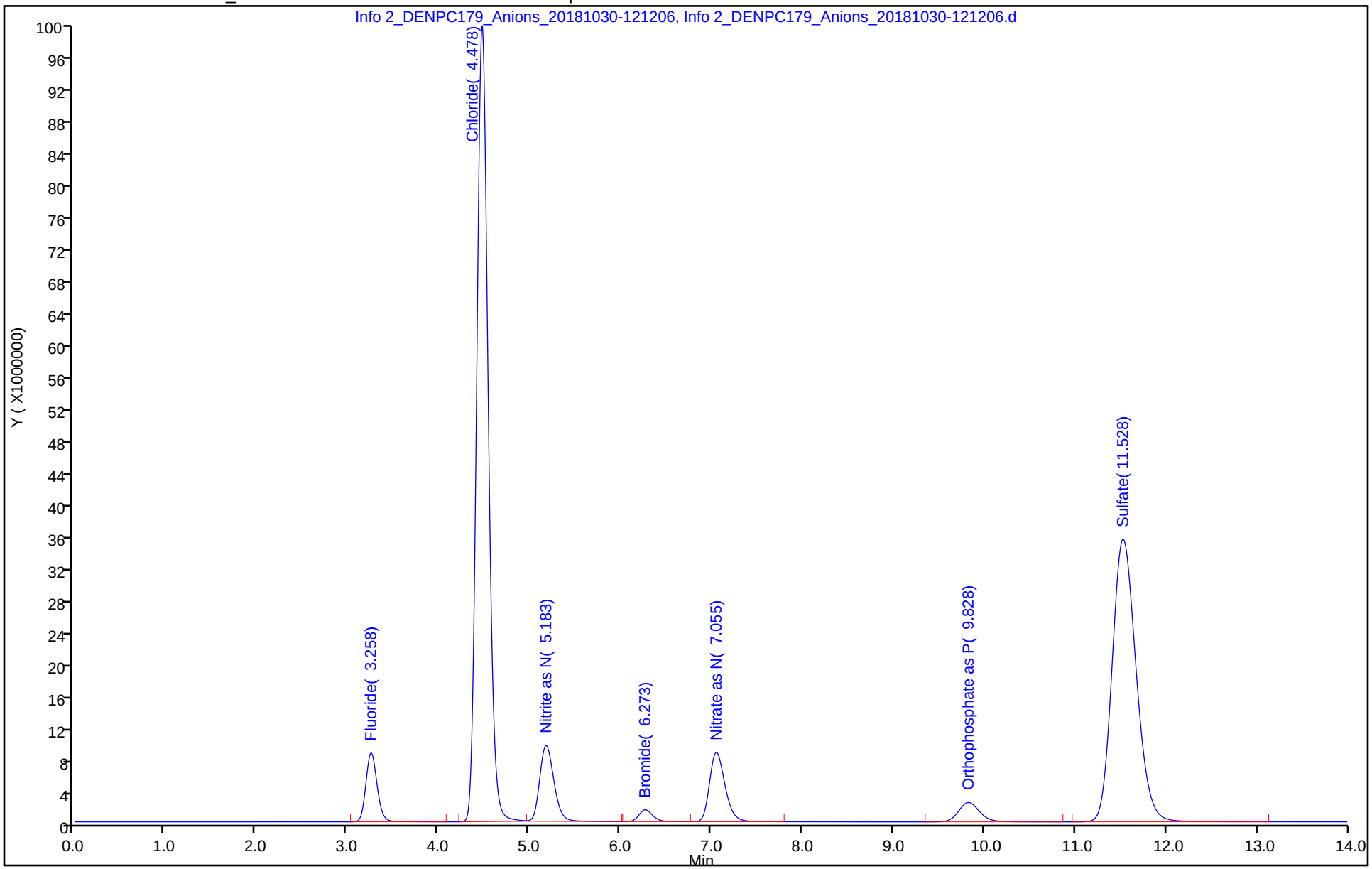
IC CAL cl/so4_00227 Amount Added: 8.00 Units: mL
IC Cal low_00411 Amount Added: 2.00 Units: mL

Report Date: 31-Oct-2018 12:49:14 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-121206.d

Injection Date:	30-Oct-2018 11:54:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	STD6			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



IC Instrument Information

WL: 75619 Inst ID: 10 Analysis Date: 10/30/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
☐	116322	7	(F) (Cl) NO2 Br NO3 PO4 (SO4)	MS/D	Don't report PO4 (Total)
☐	115507	8	F Cl NO2 Br NO3 PO4 (SO4)	(MS/D) 1	2
☐	115926	1	(F) Cl NO2 Br NO3 PO4 (SO4)	MS/D	
☐	115457	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	confirm per Alysha
☐	115546	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	4
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	
☐			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
✓ 116322	1,2,4,5,6,7,8,10	(F) (Cl) NO2 Br (NO3) PO4 (SO4)	2x, 50x	conductivity
✓ 115507	1,2,3,4,5,6,7,8,9	F Cl NO2 Br NO3 PO4 (SO4)	20x, 50x, 100x	run dil.
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

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TestAmerica Denver

TestAmerica

IC Instrument Information

WL: 75619 Inst ID: 10 Analysis Date: 10/30/18 Analyst: TT

Rush	Job No.	Samples	Anions	QC Req	HT Exp (Total)
=	116322	7	(F) (Cl) NO2 Br (NO3) PO4 (SO4)	MS/D	Don't report PO4
=	115507	8	F Cl NO2 Br NO3 PO4 (SO4)	(MS/D)	2
=	115926	1	(F) Cl NO2 Br NO3 PO4 SO4	MS/D	
=	115457	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	Confirm per Alysha
=	115546	1	F (Cl) NO2 Br NO3 PO4 SO4	MS/D	0
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

	Job No.	Samples	Anions	Dilution	Reason
✓	116322	1,2,4,5,6,7,8,10	(F) (Cl) NO2 Br (NO3) PO4 (SO4)	2x, 50x	conductivity
✓	115507	1,2,3,4,5,6,7,8,9	F Cl NO2 Br NO3 PO4 (SO4)	20x, 50x, 100x	run dil.
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		
			F Cl NO2 Br NO3 PO4 SO4		

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TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 30-Oct-2018 12:12:00 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-008
Misc. Info.: 280-0075619-008
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist:

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 31-Oct-2018 12:49:17 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	28025272	4.00	3.92	
2 Chloride	4.475	4.475	0.000	352908673	80.0	81.8	
3 Nitrite as N	5.192	5.192	0.000	36889330	4.00	3.70	
4 Bromide	6.282	6.282	0.000	5759019	4.00	3.82	
5 Nitrate as N	7.075	7.075	0.000	39971250	4.00	4.09	
6 Orthophosphate as P	9.835	9.835	0.000	14500191	4.00	3.80	
7 Sulfate	11.552	11.552	0.000	255766731	80.0	80.8	

Reagents:

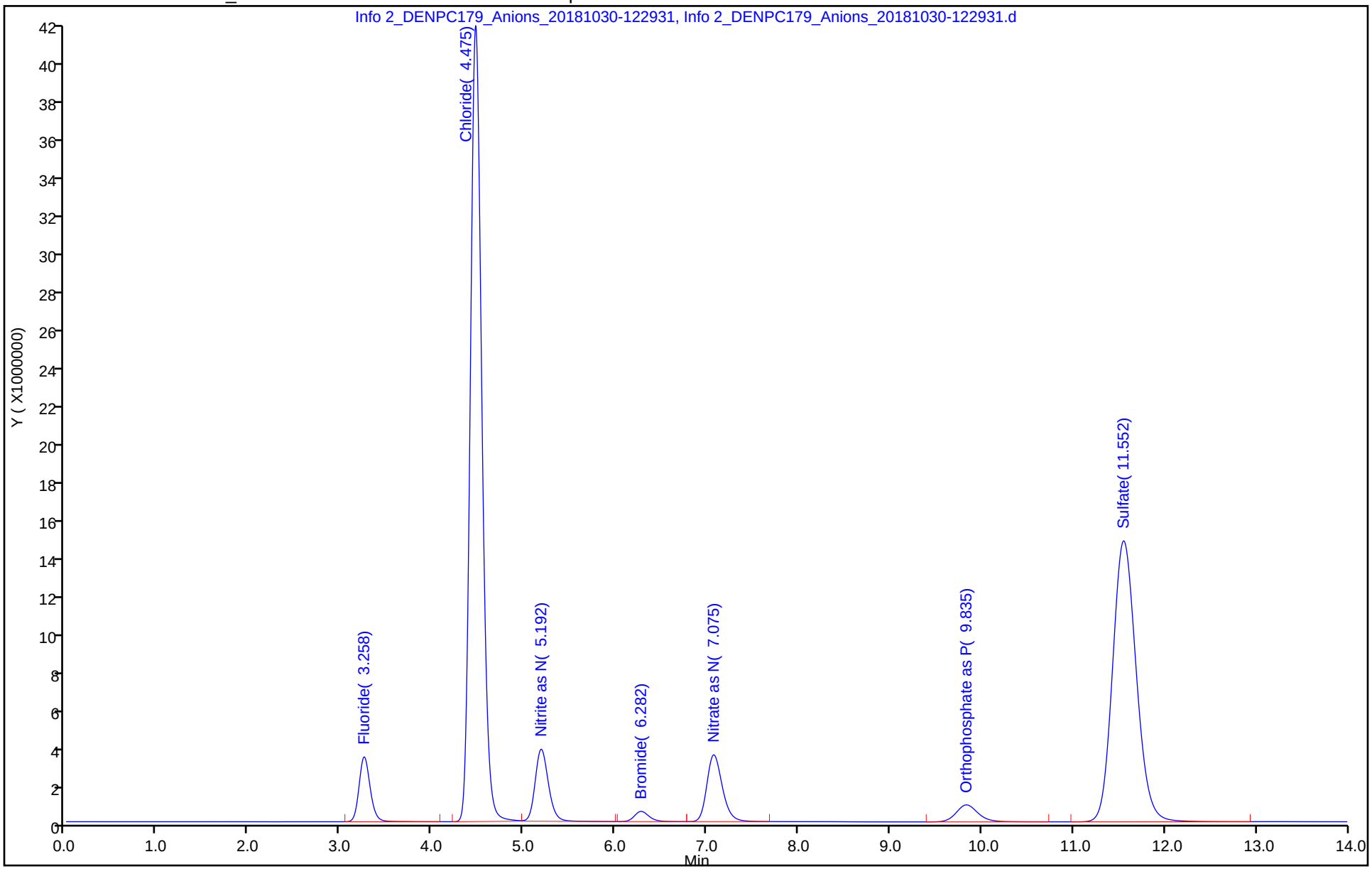
IC CL ICV_00014	Amount Added:	0.80	Units: mL
IC SO4 ICV_00017	Amount Added:	0.80	Units: mL
IC ICV 5_00214	Amount Added:	0.80	Units: mL

Report Date: 31-Oct-2018 12:49:19 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-122931.d

Injection Date:	30-Oct-2018 12:12:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICV			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12
Lims ID: ICB
Client ID:
Sample Type: ICB
Inject. Date: 30-Oct-2018 12:29:00 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075619-009
Misc. Info.: 280-0075619-009
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 31-Oct-2018 12:49:17 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: XAWRK010

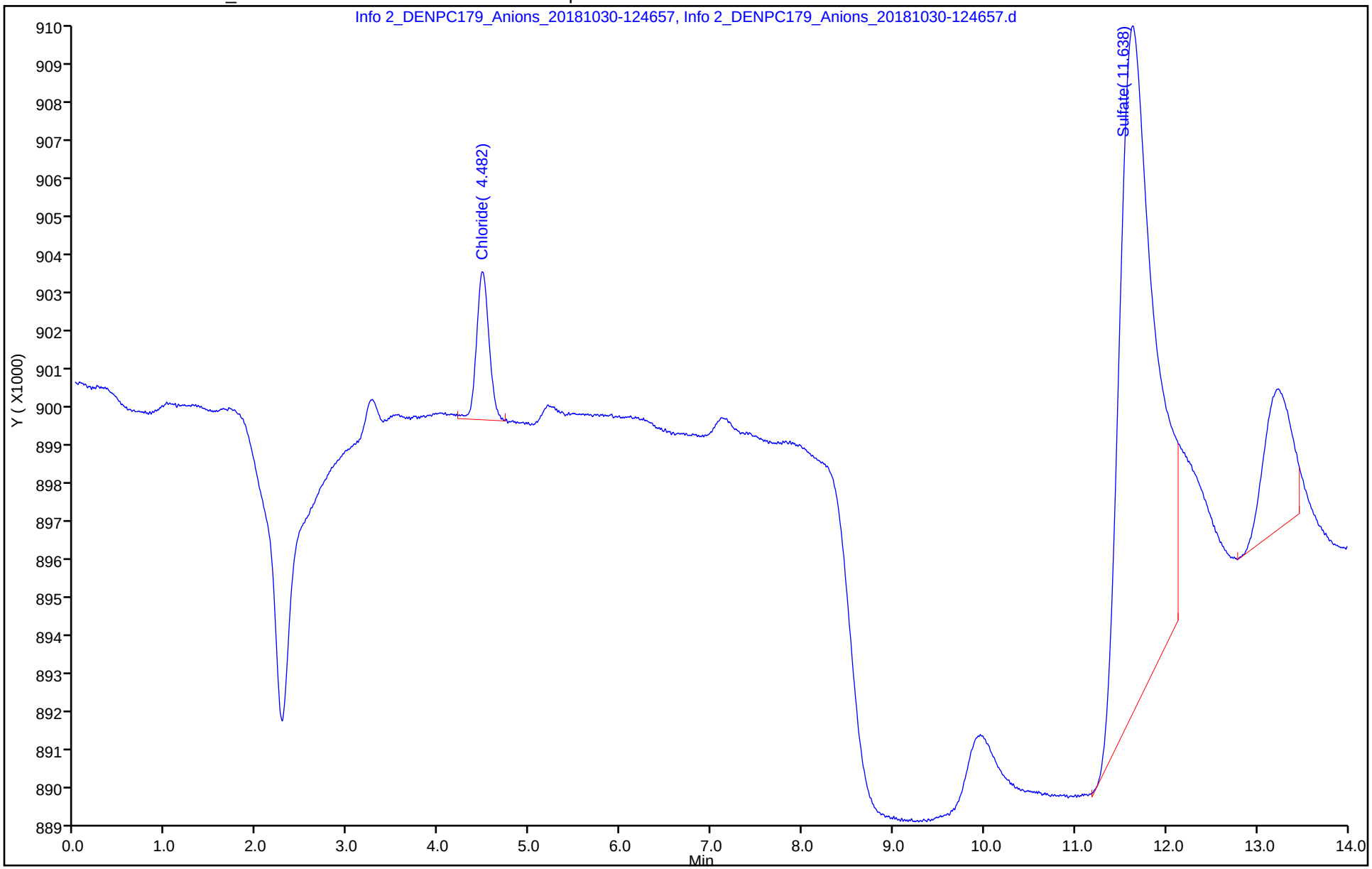
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.260				ND	
2 Chloride	4.482	4.477	0.005	36048		0.4491	
3 Nitrite as N		5.193				ND	
4 Bromide		6.287				ND	
5 Nitrate as N		7.082				ND	
6 Orthophosphate as P		9.842				ND	
7 Sulfate	11.638	11.563	0.075	464746		0.4837	

Report Date: 31-Oct-2018 12:49:23 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-124657.d

Injection Date:	30-Oct-2018 12:29:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ICB			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



IC Instrument Information

WL: 75802 Inst ID: 10 Analysis Date: 11/03/18 Analyst: TP

Rush	Job No.	Samples	Anions	QC Req	HT Exp
=	116538	3	F Cl NO2 Br NO3 PO4 SO4	MS/D 1	
=	116544	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=	116555	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=	115794	5	F Cl NO2 Br NO3 PO4 SO4	MS/D }	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	
=			F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
116544	1	F Cl NO2 Br NO3 PO4 SO4	10x	high
116555	1	F Cl NO2 Br NO3 PO4 SO4	2x, 20x	cond.
116538	1	F Cl NO2 Br NO3 PO4 SO4	5x	high MS/MSD
116538	4	F Cl NO2 Br NO3 PO4 SO4	5x	high
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

436181 / 436182

TestAmerica Denver ICal 435512 / 435513

TestAmerica

IC Instrument Information

WL: 7580-2 Inst ID: 10 Analysis Date: 11/03/18 Analyst: TP

	Rush	Job No.	Samples	Anions	QC Req	HT Exp
=		116538	3	F Cl NO2 Br NO3 PO4 SO4	MS/D 1	
=		116544	2	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=		116555	1	F Cl NO2 Br NO3 PO4 SO4	MS/D	
=		115794	5	F Cl NO2 Br NO3 PO4 SO4	MS/D 3	
=				F Cl NO2 Br NO3 PO4 SO4	MS/D	
=				F Cl NO2 Br NO3 PO4 SO4	MS/D	
=				F Cl NO2 Br NO3 PO4 SO4	MS/D	
=				F Cl NO2 Br NO3 PO4 SO4	MS/D	
=				F Cl NO2 Br NO3 PO4 SO4	MS/D	
=				F Cl NO2 Br NO3 PO4 SO4	MS/D	
=				F Cl NO2 Br NO3 PO4 SO4	MS/D	
=				F Cl NO2 Br NO3 PO4 SO4	MS/D	
=				F Cl NO2 Br NO3 PO4 SO4	MS/D	

Dilutions

Job No.	Samples	Anions	Dilution	Reason
116544	1	F Cl NO2 Br NO3 PO4 SO4	10x	high
116555	1	F Cl NO2 Br NO3 PO4 SO4	2x, 20x	cond
116538	1	F Cl NO2 Br NO3 PO4 SO4	5x	high MS/MSD
116538	4	F Cl NO2 Br NO3 PO4 SO4	5x	high
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		
		F Cl NO2 Br NO3 PO4 SO4		

dhdagam 11/6/18.

TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-10
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 10:40:00 ALS Bottle#: 0 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-001
Misc. Info.: 280-0075802-001
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.257	3.258	-0.001	34439301	5.00	4.79	
2 Chloride	4.473	4.475	-0.002	438837451	100.0	101.6	
3 Nitrite as N	5.188	5.192	-0.004	50555239	5.00	5.03	
4 Bromide	6.280	6.282	-0.002	7121010	5.00	4.71	
5 Nitrate as N	7.072	7.075	-0.003	48723670	5.00	4.96	
6 Orthophosphate as P	9.820	9.835	-0.015	17439519	5.00	4.57	
7 Sulfate	11.568	11.552	0.016	322249116	100.0	101.8	

Reagents:

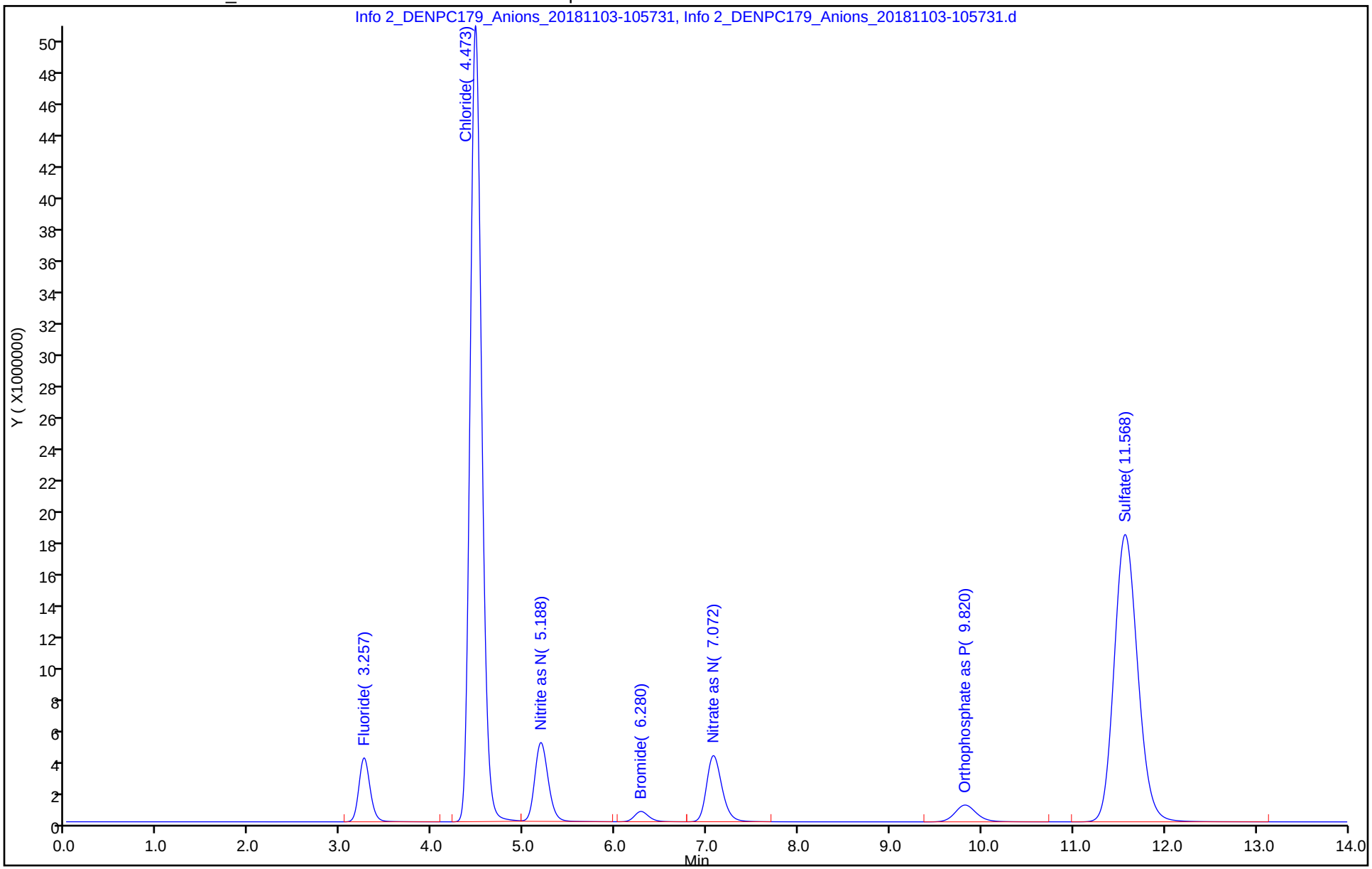
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:36 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-105731.d

Injection Date:	03-Nov-2018 10:40:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCV			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-11
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 03-Nov-2018 10:57:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-002
Misc. Info.: 280-0075802-002
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

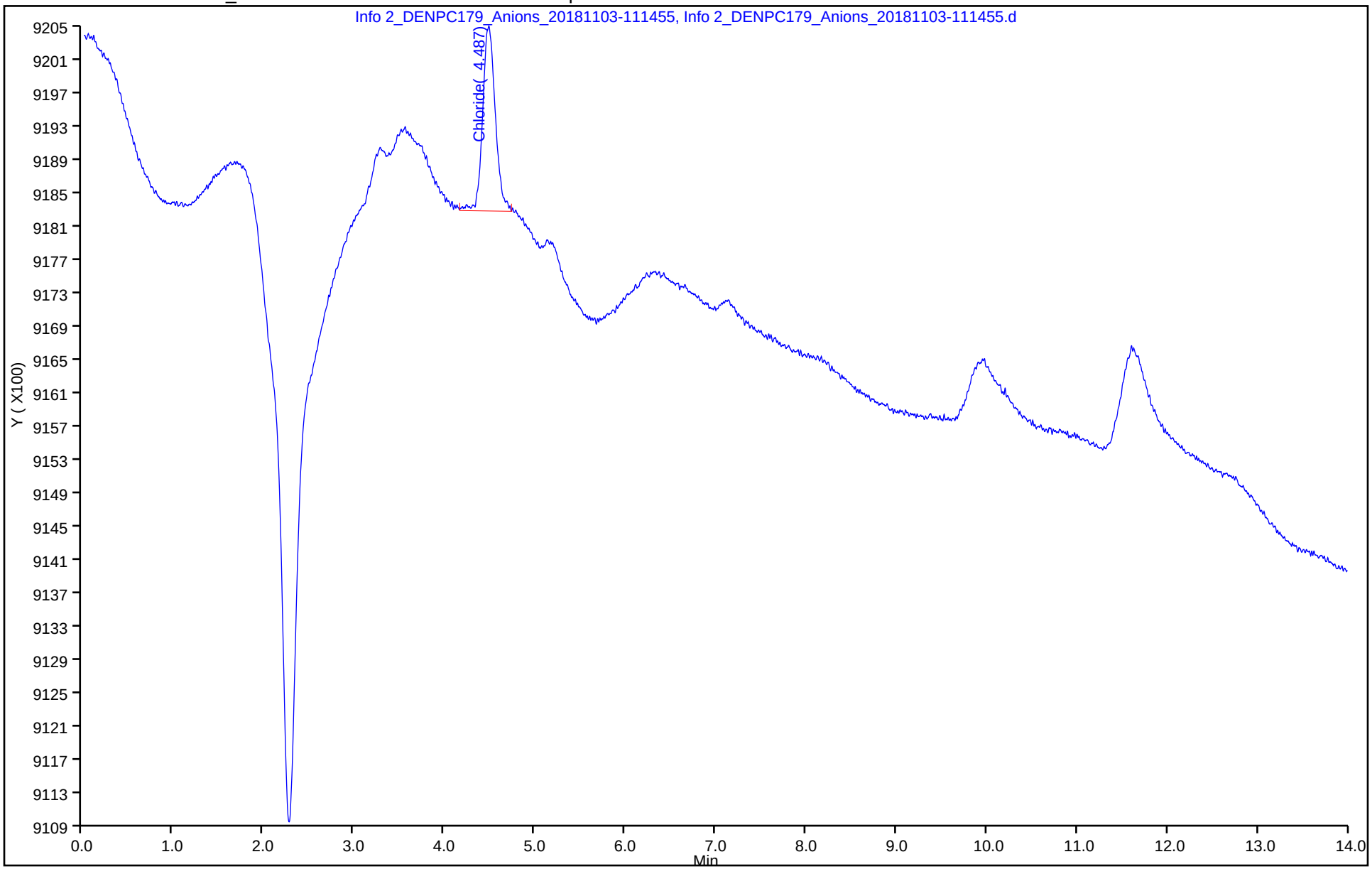
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.487	4.475	0.012	21454		0.4458	
3 Nitrite as N		5.192				ND	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:36:38 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-111455.d

Injection Date:	03-Nov-2018 10:57:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	CCB			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-11
Lims ID: MRL
Client ID:
Sample Type: MRL
Inject. Date: 03-Nov-2018 11:14:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-003
Misc. Info.: 280-0075802-003
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	991955	0.2000	0.2217	
2 Chloride	4.480	4.475	0.005	7982452	2.50	2.28	
3 Nitrite as N	5.202	5.192	0.010	1423184	0.2000	0.2337	
4 Bromide	6.300	6.282	0.018	249779	0.2000	0.2200	
5 Nitrate as N	7.117	7.075	0.042	1388392	0.2000	0.2407	
6 Orthophosphate as P	9.835	9.835	0.000	521529	0.2000	0.1383	
7 Sulfate	11.595	11.552	0.043	5233589	2.50	1.98	

Reagents:

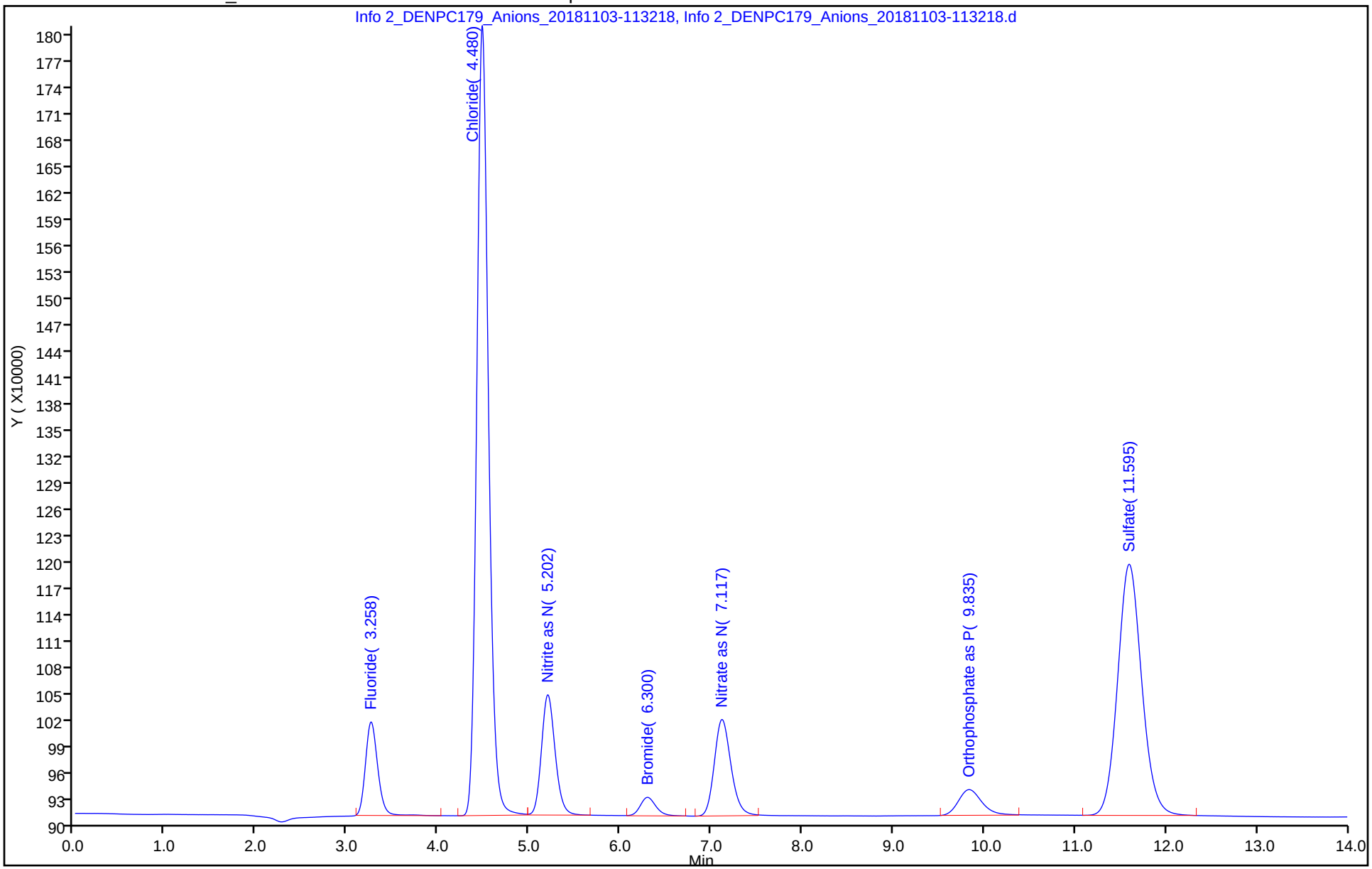
IC Cal low_00412 Amount Added: 0.04 Units: mL
IC CAL cl/so4_00228 Amount Added: 0.10 Units: mL

Report Date: 04-Nov-2018 08:36:39 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-113218.d

Injection Date:	03-Nov-2018 11:14:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	MRL			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-11
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Nov-2018 11:32:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-004
Misc. Info.: 280-0075802-004
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	34626666	5.00	4.82	
2 Chloride	4.475	4.475	0.000	439471345	100.0	101.8	
3 Nitrite as N	5.190	5.192	-0.002	50803274	5.00	5.06	
4 Bromide	6.282	6.282	0.000	7101438	5.00	4.70	
5 Nitrate as N	7.073	7.075	-0.002	48714668	5.00	4.96	
6 Orthophosphate as P	9.827	9.835	-0.008	17440761	5.00	4.57	
7 Sulfate	11.577	11.552	0.025	322780668	100.0	101.9	

Reagents:

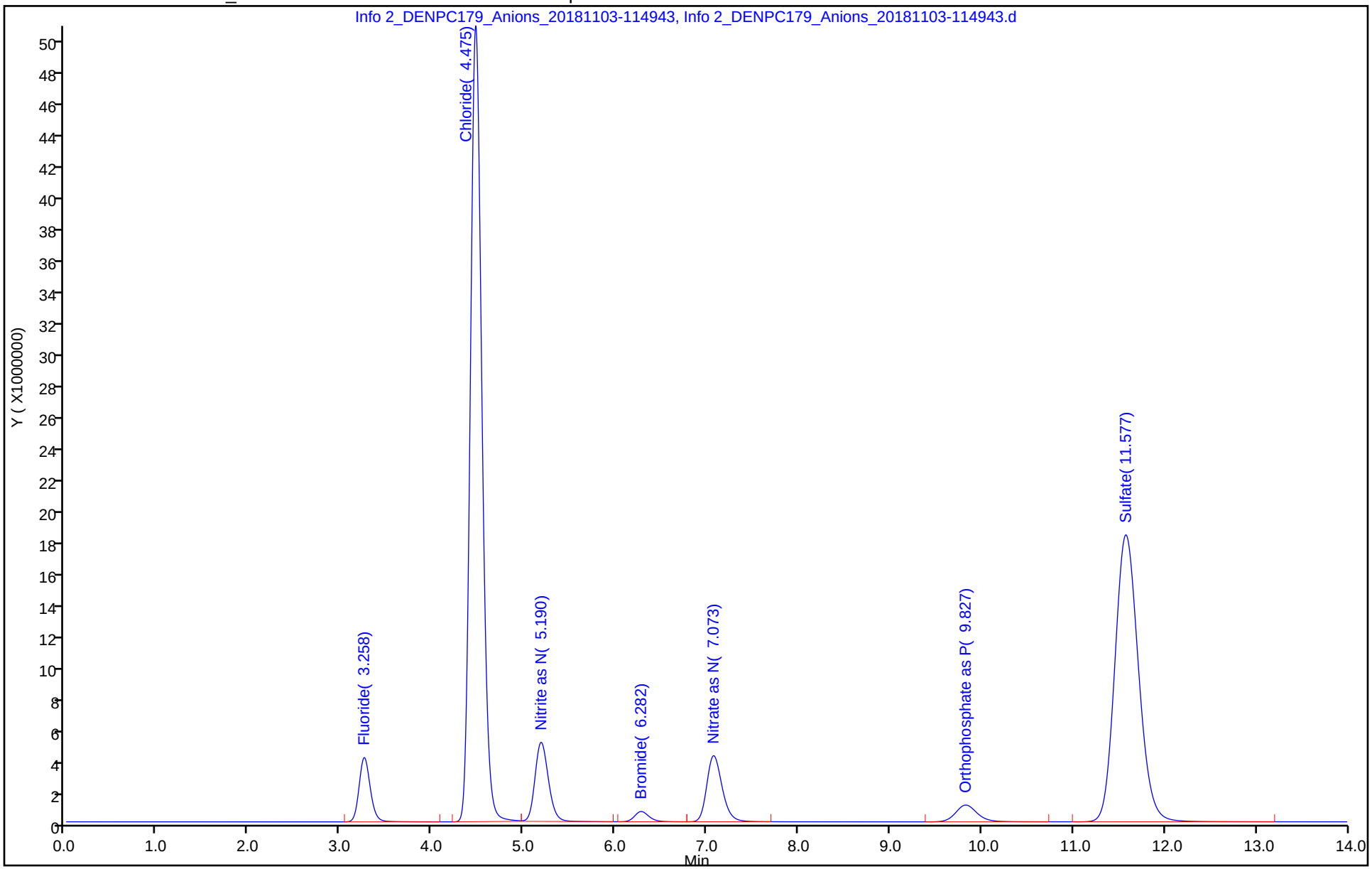
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:40 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-114943.d

Injection Date:	03-Nov-2018 11:32:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-12
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 03-Nov-2018 11:49:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-005
Misc. Info.: 280-0075802-005
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	34589785	5.00	4.81	
2 Chloride	4.477	4.475	0.002	439806815	100.0	101.8	
3 Nitrite as N	5.192	5.192	0.000	51569361	5.00	5.13	
4 Bromide	6.285	6.282	0.003	7103226	5.00	4.70	
5 Nitrate as N	7.077	7.075	0.002	48812004	5.00	4.97	
6 Orthophosphate as P	9.830	9.835	-0.005	17133962	5.00	4.49	
7 Sulfate	11.578	11.552	0.026	322878264	100.0	102.0	

Reagents:

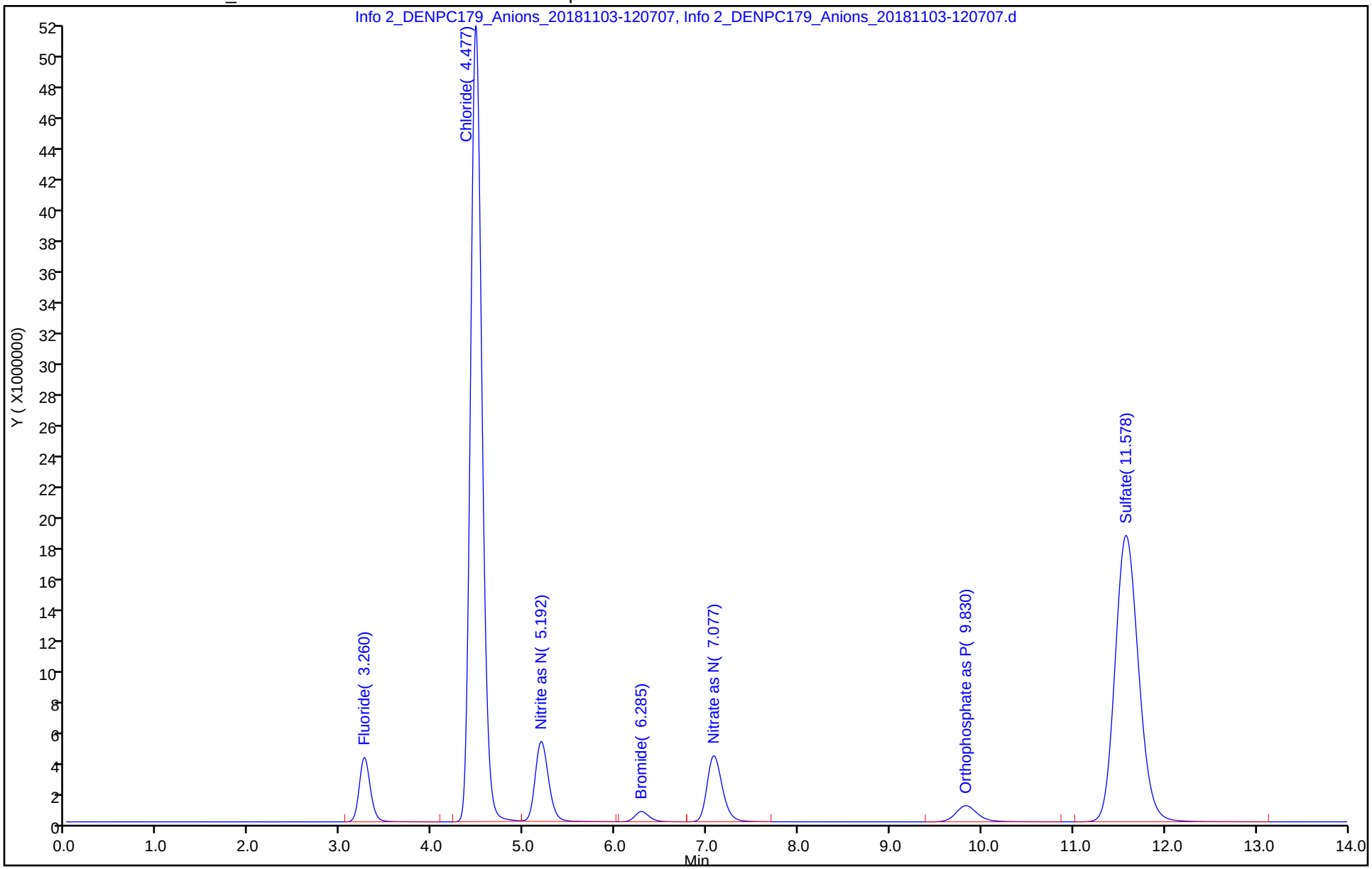
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:41 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-120707.d

Injection Date:	03-Nov-2018 11:49:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-12				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	03-Nov-2018 12:07:00	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0075802-006				
Misc. Info.:	280-0075802-006				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	04-Nov-2018 08:36:35	Calib Date:	30-Oct-2018 11:54:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0311				

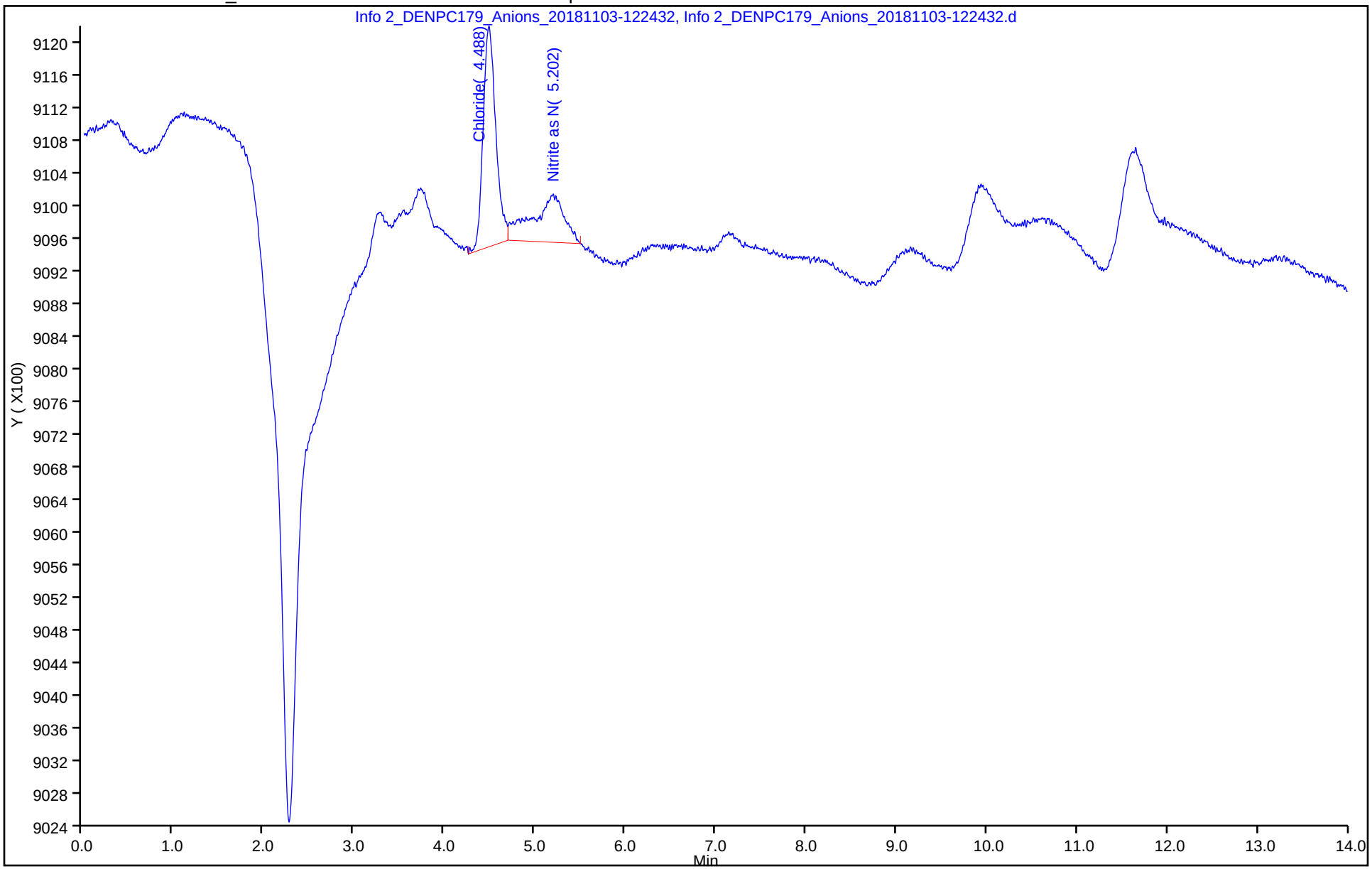
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.488	4.475	0.013	26360		0.4469	
3 Nitrite as N	5.202	5.192	0.010	14250		0.0961	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:36:42 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-122432.d

Injection Date:	03-Nov-2018 12:07:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-14
Lims ID: 280-116538-G-2
Client ID: SCLmw-003-181001-GW
Sample Type: Client
Inject. Date: 03-Nov-2018 13:59:00 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-011
Misc. Info.: 280-0075802-011
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 04-Nov-2018 08:36:35 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

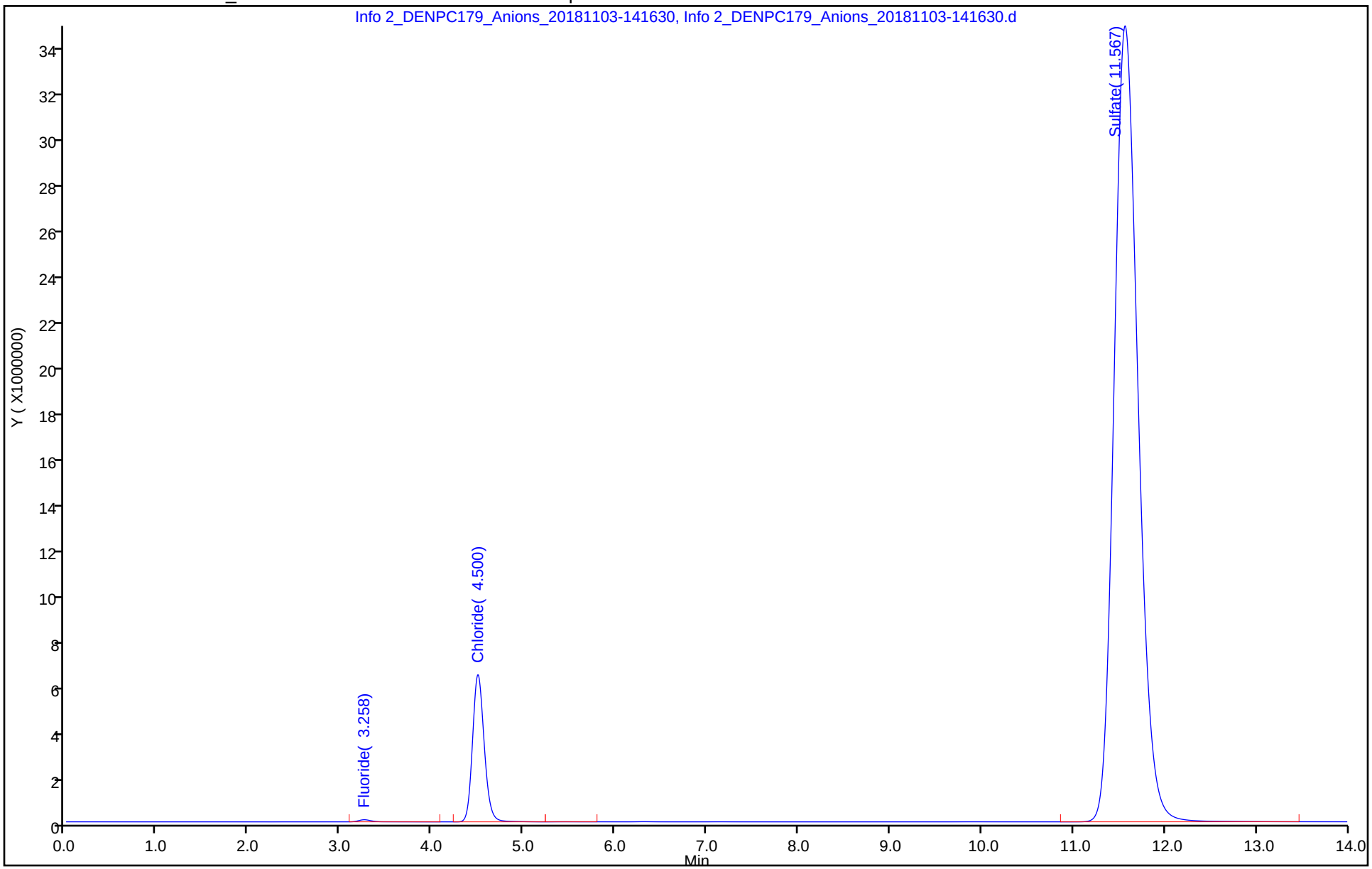
Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	905297	0.2099	
2 Chloride	4.500	4.475	0.025	55154205	13.2	
3 Nitrite as N		5.192			ND	
4 Bromide		6.282			ND	
5 Nitrate as N		7.075			ND	
6 Orthophosphate as P		9.835			ND	
7 Sulfate	11.567	11.552	0.015	609965776	192.3	

Report Date: 04-Nov-2018 08:36:48 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-141630.d				
Injection Date:	03-Nov-2018 13:59:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-G-2	Lab Sample ID:	280-116538-2	Worklist Smp#:	11
Client ID:	SCLmw-003-181001-GW				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-15
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 15:26:00 ALS Bottle#: 0 Worklist Smp#: 16
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-016
Misc. Info.: 280-0075802-016
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 04-Nov-2018 08:36:53 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.258	3.258	0.000	34624141	5.00	4.82	
2 Chloride	4.477	4.475	0.002	442822120	100.0	102.5	
3 Nitrite as N	5.190	5.192	-0.002	51623970	5.00	5.14	
4 Bromide	6.285	6.282	0.003	7161678	5.00	4.74	
5 Nitrate as N	7.077	7.075	0.002	49135436	5.00	5.00	
6 Orthophosphate as P	9.827	9.835	-0.008	17471912	5.00	4.58	
7 Sulfate	11.578	11.552	0.026	325200129	100.0	102.7	

Reagents:

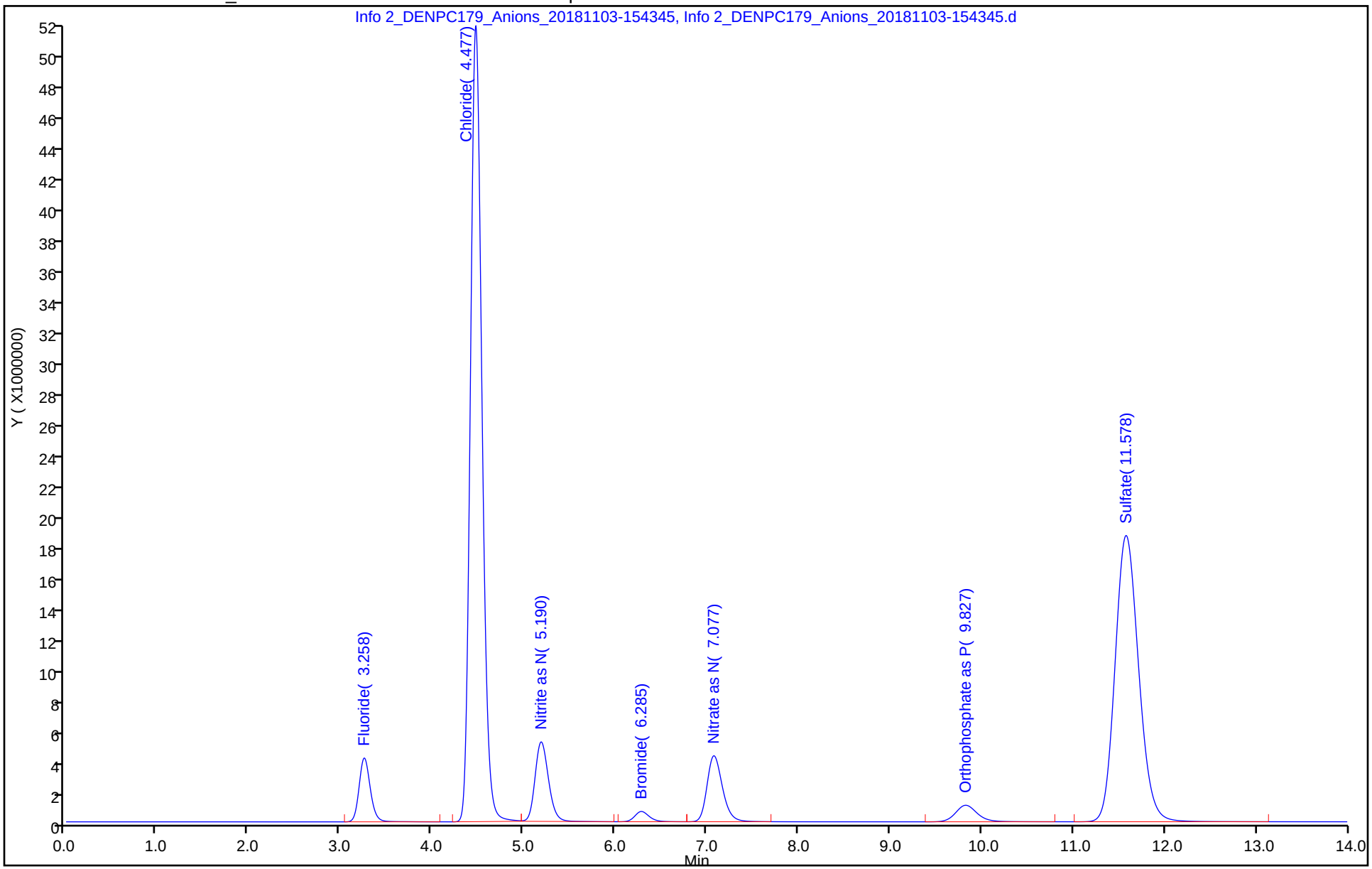
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:36:53 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-154345.d

Injection Date:	03-Nov-2018 15:26:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	16
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-16				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	03-Nov-2018 15:43:00	ALS Bottle#:	0	Worklist Smp#:	17
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0075802-017				
Misc. Info.:	280-0075802-017				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	04-Nov-2018 08:36:53	Calib Date:	30-Oct-2018 11:54:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0311				

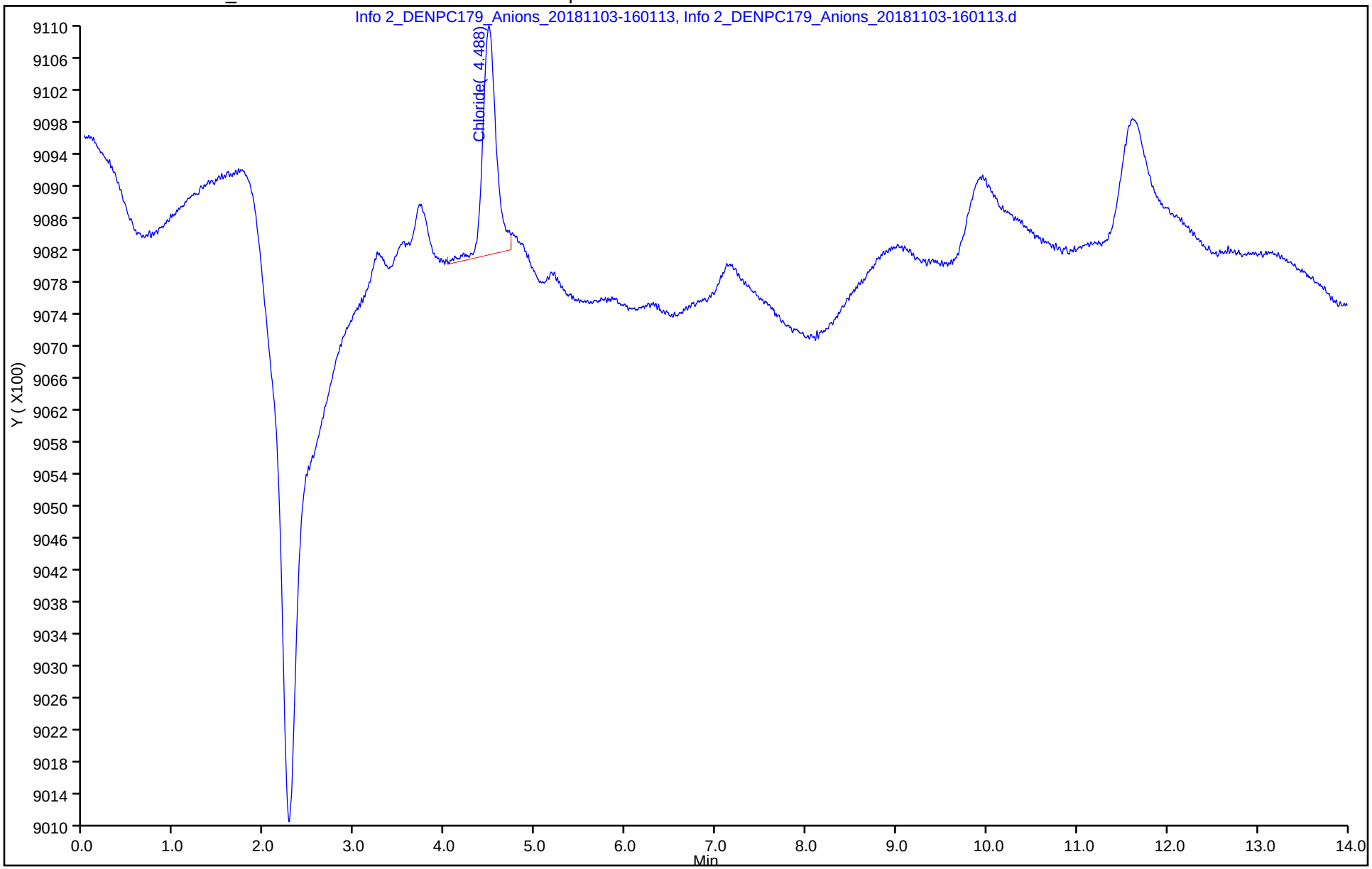
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.488	4.475	0.013	29512		0.4476	
3 Nitrite as N		5.192				ND	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:36:54 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-160113.d

Injection Date:	03-Nov-2018 15:43:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	17
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-17
Lims ID: 280-116538-K-1
Client ID: SCLmw-001-181001-GW
Sample Type: Client
Inject. Date: 03-Nov-2018 16:53:00 ALS Bottle#: 0 Worklist Smp#: 21
Injection Vol: 5.0 ul Dil. Factor: 5.0000
Sample Info: 280-0075802-021
Misc. Info.: 280-0075802-021
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 04-Nov-2018 08:36:53 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

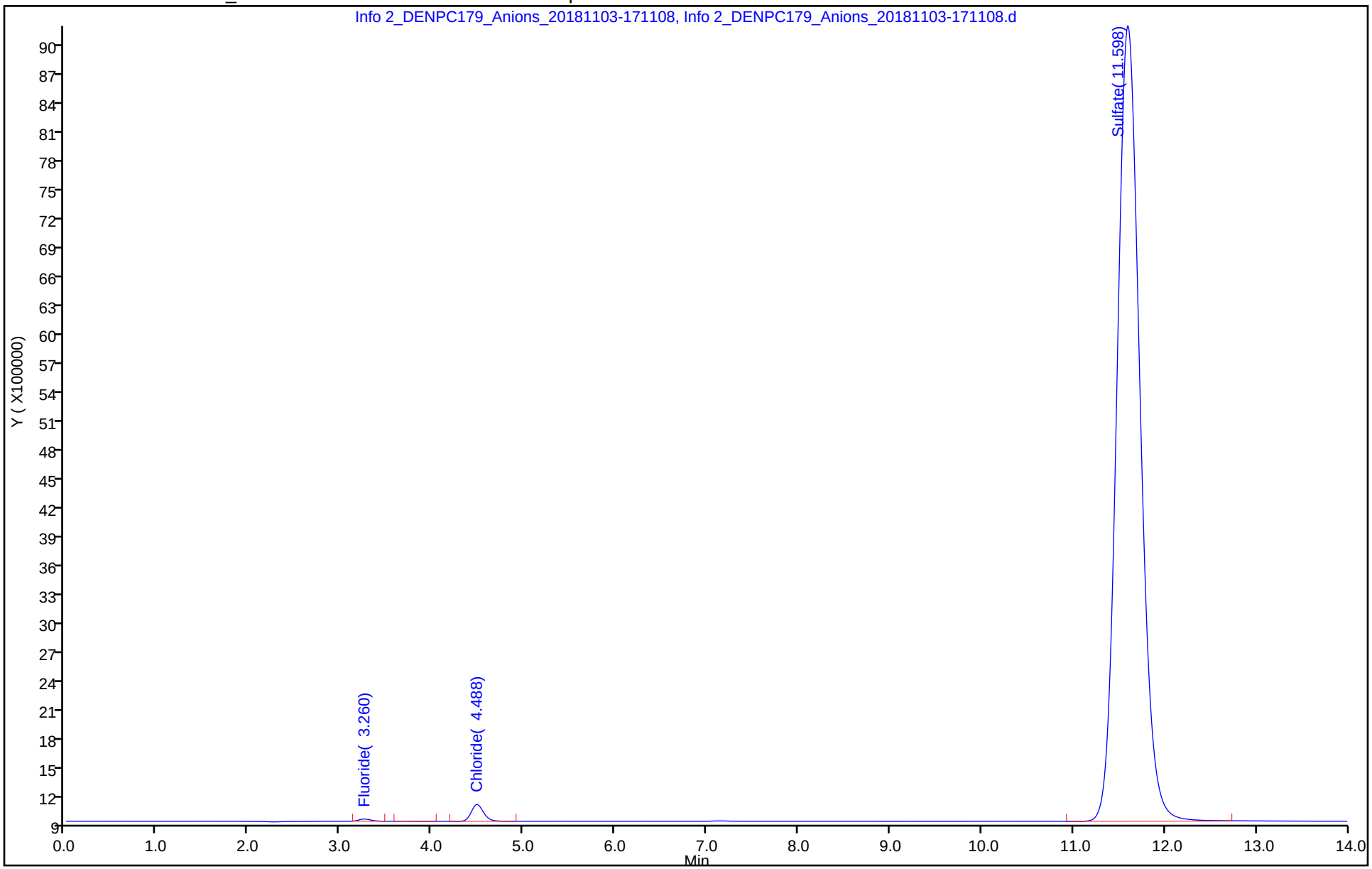
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	197513	0.1131	
2 Chloride	4.488	4.475	0.013	1631445	0.8170	
3 Nitrite as N		5.192			ND	
4 Bromide		6.282			ND	
5 Nitrate as N		7.075			ND	
6 Orthophosphate as P		9.835			ND	
7 Sulfate	11.598	11.552	0.046	144201641	45.7	

Report Date: 04-Nov-2018 08:36:58 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-171108.d

Injection Date:	03-Nov-2018 16:53:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-K-1	Lab Sample ID:	280-116538-1	Worklist Smp#:	21
Client ID:	SCLmw-001-181001-GW				
Injection Vol:	5.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-17				
Lims ID:	280-116538-K-1 DU				
Client ID:					
Sample Type:	DU				
Inject. Date:	03-Nov-2018 17:11:00	ALS Bottle#:	0	Worklist Smp#:	22
Injection Vol:	5.0 ul	Dil. Factor:	5.0000		
Sample Info:	280-0075802-022				
Misc. Info.:	280-0075802-022				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	04-Nov-2018 08:36:53	Calib Date:	30-Oct-2018 11:54:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0311				

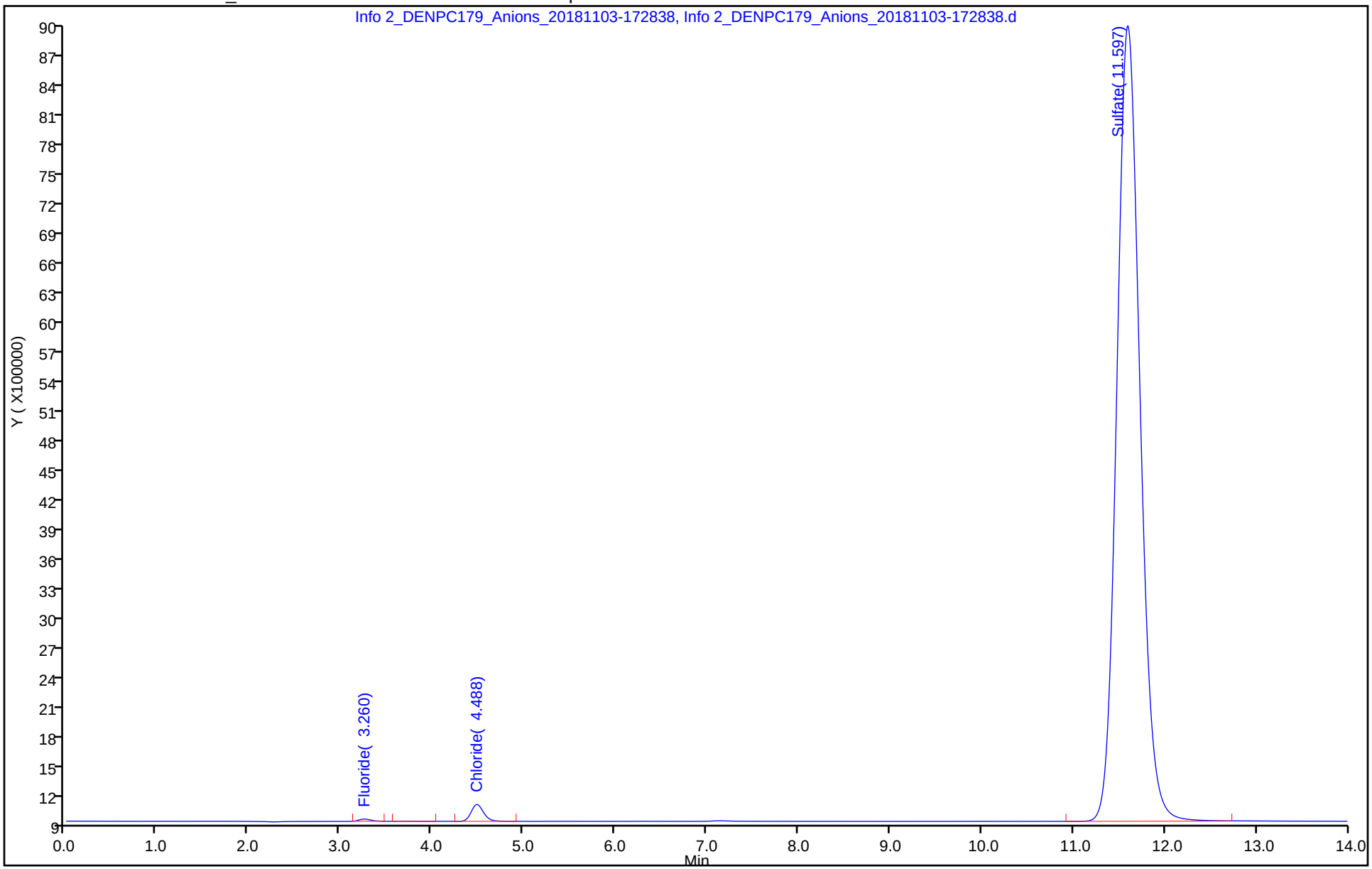
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	189653		0.1121	
2 Chloride	4.488	4.475	0.013	1604416		0.8107	
3 Nitrite as N		5.192				ND	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate	11.597	11.552	0.045	141525226		44.9	

Report Date: 04-Nov-2018 08:36:59 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-172838.d

Injection Date:	03-Nov-2018 17:11:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-K-1 DU			Worklist Smp#:	22
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-17
Lims ID: 280-116538-K-1 MS
Client ID:
Sample Type: MS
Inject. Date: 03-Nov-2018 17:28:00 ALS Bottle#: 0 Worklist Smp#: 23
Injection Vol: 5.0 ul Dil. Factor: 5.0000
Sample Info: 280-0075802-023
Misc. Info.: 280-0075802-023
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 04-Nov-2018 08:36:53 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	33120698	1.00	4.61	
2 Chloride	4.482	4.475	0.007	109626837	5.00	25.7	
3 Nitrite as N	5.208	5.192	0.016	45172820	1.00	4.51	
4 Bromide	6.292	6.282	0.010	7047511	1.00	4.67	
5 Nitrate as N	7.083	7.075	0.008	48967870	1.00	4.98	
6 Orthophosphate as P	9.833	9.835	-0.002	17453522	1.00	4.58	
7 Sulfate	11.592	11.552	0.040	226132736	5.00	71.5	

Reagents:

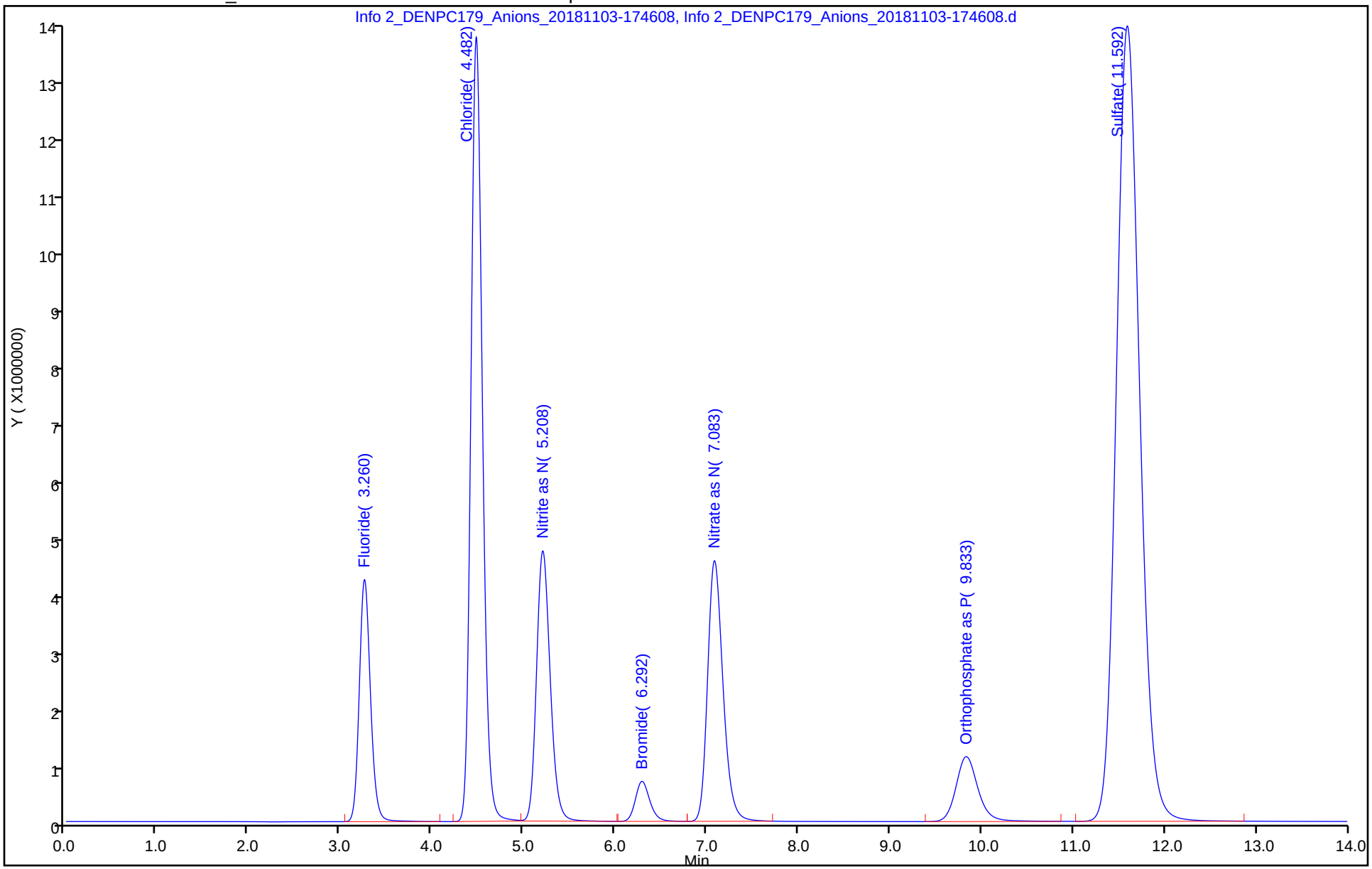
ICMS/MSD WEEK_00563 Amount Added: 0.10 Units: mL

Report Date: 04-Nov-2018 08:37:00 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-174608.d

Injection Date:	03-Nov-2018 17:28:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-K-1 MS			Worklist Smp#:	23
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-18
Lims ID: 280-116538-K-1 MSD
Client ID:
Sample Type: MSD
Inject. Date: 03-Nov-2018 17:46:00 ALS Bottle#: 0 Worklist Smp#: 24
Injection Vol: 5.0 ul Dil. Factor: 5.0000
Sample Info: 280-0075802-024
Misc. Info.: 280-0075802-024
Operator ID: wetchemd Instrument ID: WC_IonChrom10

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 04-Nov-2018 08:36:53 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	33398278	1.00	4.65	
2 Chloride	4.480	4.475	0.005	110302469	5.00	25.9	
3 Nitrite as N	5.207	5.192	0.015	46177553	1.00	4.61	
4 Bromide	6.290	6.282	0.008	7100802	1.00	4.70	
5 Nitrate as N	7.082	7.075	0.007	49293623	1.00	5.02	
6 Orthophosphate as P	9.833	9.835	-0.002	17428062	1.00	4.57	
7 Sulfate	11.592	11.552	0.040	226119316	5.00	71.5	

Reagents:

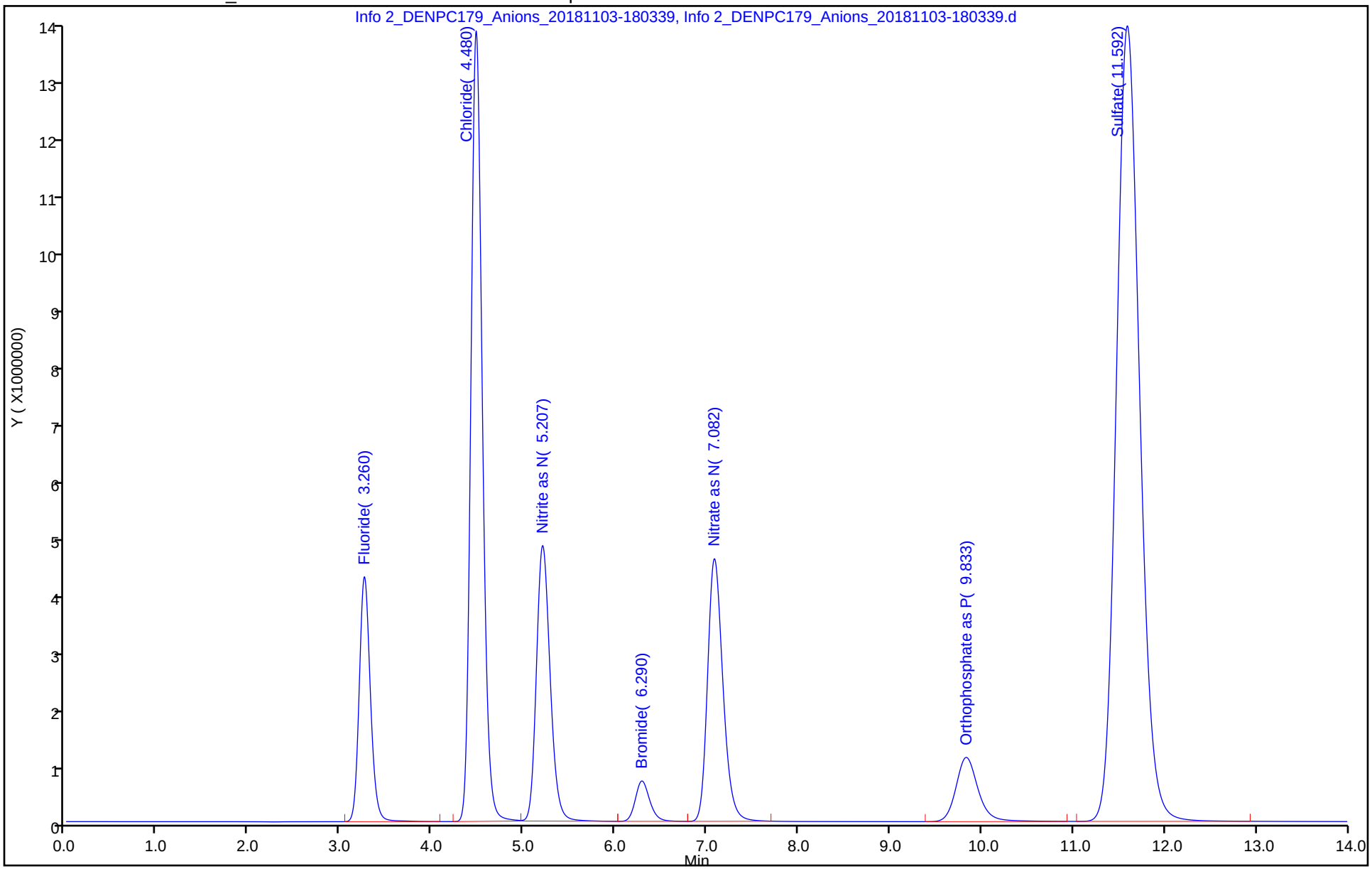
ICMS/MSD WEEK_00563 Amount Added: 0.10 Units: mL

Report Date: 04-Nov-2018 08:37:01 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-180339.d

Injection Date:	03-Nov-2018 17:46:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	280-116538-K-1 MSD			Worklist Smp#:	24
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-18
Lims ID: ccv
Client ID:
Sample Type: CCV
Inject. Date: 03-Nov-2018 18:03:00 ALS Bottle#: 0 Worklist Smp#: 25
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 280-0075802-025
Misc. Info.: 280-0075802-025
Operator ID: wetchemd Instrument ID: WC_IonChrom10
Sublist: chrom-Anions_IC10*sub2

Method: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m
Limit Group: Wet - Anions 28D
Last Update: 04-Nov-2018 08:37:02 Calib Date: 30-Oct-2018 11:54:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12

Column 1 : Det: Info 2_091554_1
Process Host: CTX0311

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	3.260	3.258	0.002	34568727	5.00	4.81	
2 Chloride	4.478	4.475	0.003	443189068	100.0	102.6	
3 Nitrite as N	5.193	5.192	0.001	51606042	5.00	5.14	
4 Bromide	6.288	6.282	0.006	7169133	5.00	4.75	
5 Nitrate as N	7.080	7.075	0.005	49206445	5.00	5.01	
6 Orthophosphate as P	9.832	9.835	-0.003	17492819	5.00	4.59	
7 Sulfate	11.585	11.552	0.033	325399621	100.0	102.8	

Reagents:

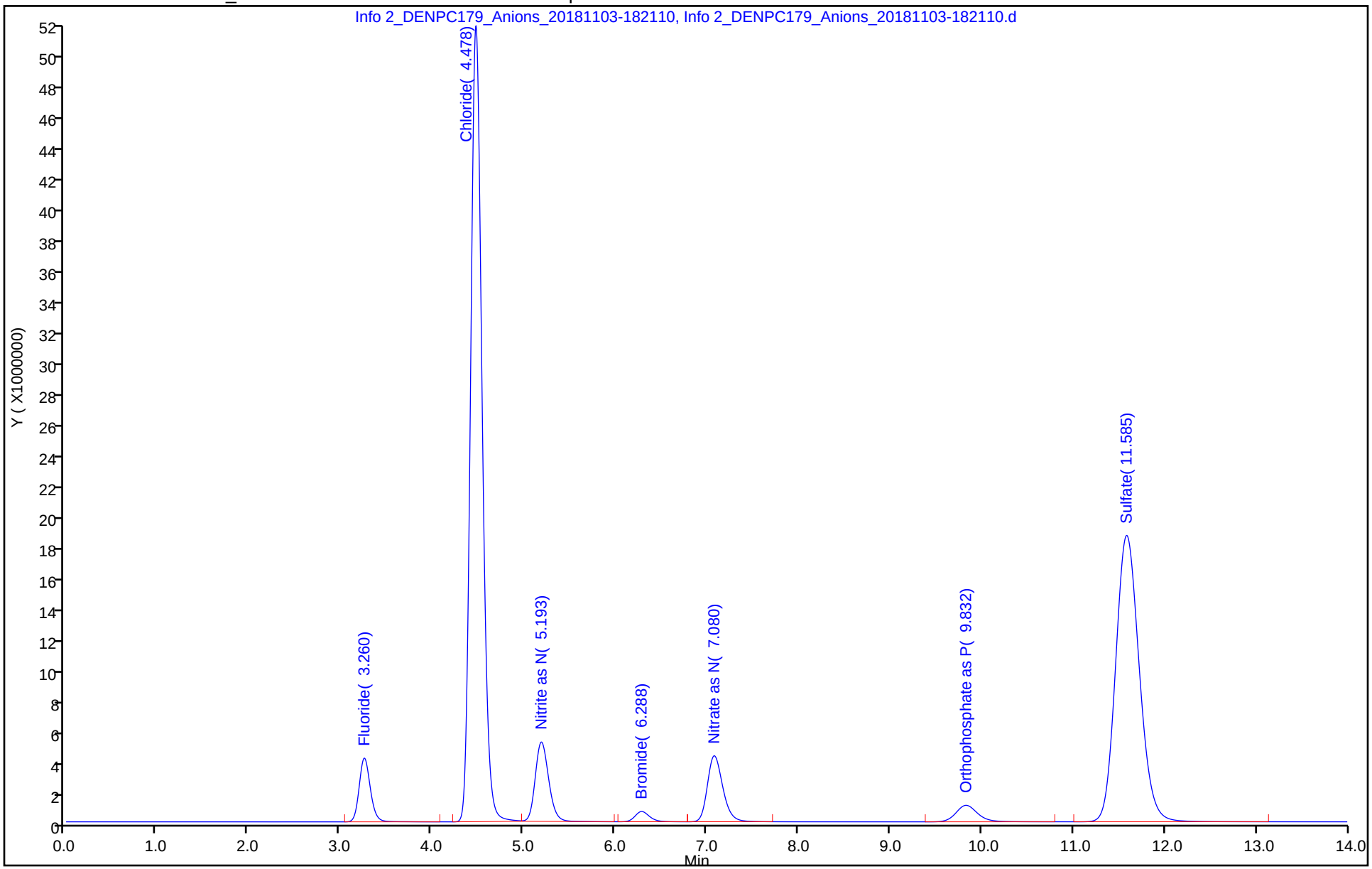
IC LCS_01391 Amount Added: 10.00 Units: mL

Report Date: 04-Nov-2018 08:37:02 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-182110.d

Injection Date:	03-Nov-2018 18:03:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccv			Worklist Smp#:	25
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		



TestAmerica Denver
Target Compound Quantitation Report

Data File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-18				
Lims ID:	ccb				
Client ID:					
Sample Type:	CCB				
Inject. Date:	03-Nov-2018 18:21:00	ALS Bottle#:	0	Worklist Smp#:	26
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	280-0075802-026				
Misc. Info.:	280-0075802-026				
Operator ID:	wetchemd	Instrument ID:	WC_IonChrom10		
Method:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Anions_IC10.m				
Limit Group:	Wet - Anions 28D				
Last Update:	04-Nov-2018 08:37:02	Calib Date:	30-Oct-2018 11:54:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Denver\ChromData\WC_IonChrom10\20181030-75619.b\Info 2_DENPC179_Anions_20181030-12				
Column 1 :			Det: Info 2_091554_1		
Process Host:	CTX0311				

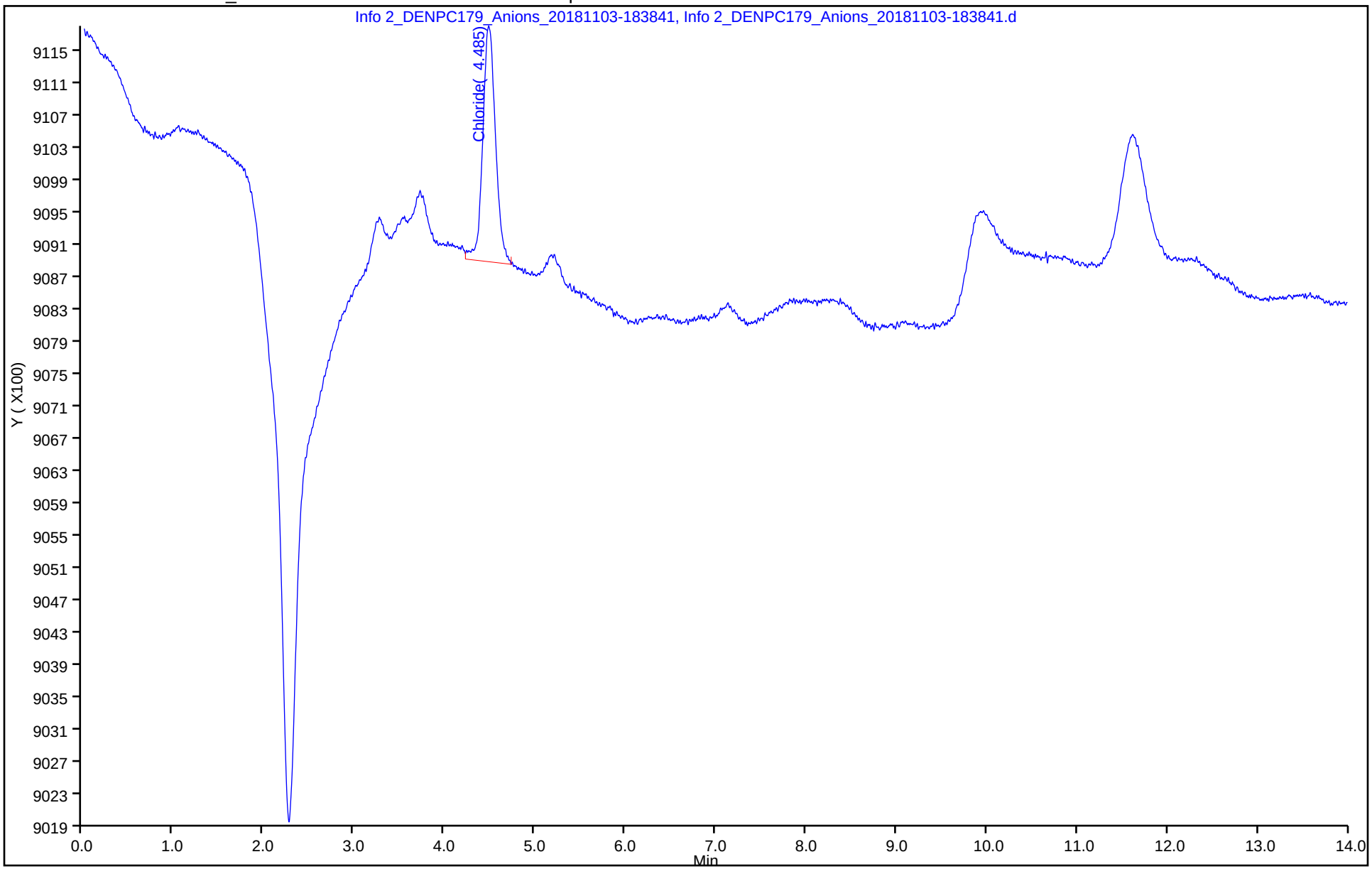
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		3.258				ND	
2 Chloride	4.485	4.475	0.010	28711		0.4474	
3 Nitrite as N		5.192				ND	
4 Bromide		6.282				ND	
5 Nitrate as N		7.075				ND	
6 Orthophosphate as P		9.835				ND	
7 Sulfate		11.552				ND	

Report Date: 04-Nov-2018 08:37:03 Chrom Revision: 2.3 12-Oct-2018 08:24:38

TestAmerica Denver

Data File: \\ChromNA\Denver\ChromData\WC_IonChrom10\20181103-75802.b\Info 2_DENPC179_Anions_20181103-183841.d

Injection Date:	03-Nov-2018 18:21:00	Instrument ID:	WC_IonChrom10	Operator ID:	wetchemd
Lims ID:	ccb			Worklist Smp#:	26
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	Anions_IC10	Limit Group:	Wet - Anions 28D		

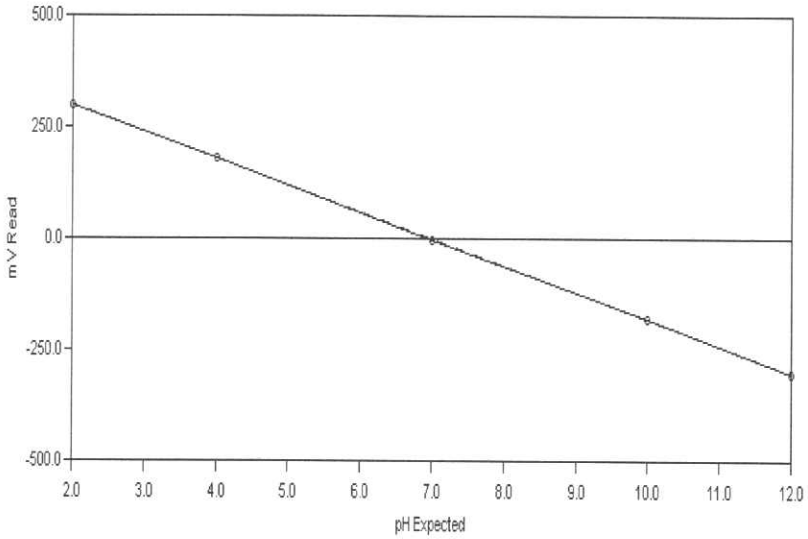


MANTECH INC.

Report Date: 11/14/2018 : 9:27 AM

Calibration Report

Calibration Record # 311



Calibration Settings

Calibration ID	PH	Date	11/13/2018
Channel	1	Time	11:11 AM
Probe Type	pH	Temperature	297.34 K 24.19 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-60.081	CorrCoeff	1.0000
Intercept	-1.244	Equation: Y = (-60.081) X + (-1.244)	

Calibration Validity **True** Operator

	Result	Minimum	Maximum
Slope	-60.081	-65.00	-54.00
Intercept	-1.244	-100.00	100.00
Correlation Coefficient	1.0000	0.99	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	2.00	299.92
	4.00	178.83
	7.00	-2.68
	10.00	-181.03
	12.00	-301.26

Report Date: 11/14/2018 : 5:32 AM

Test America
Water Analysis Report

Analyst: SGB

Run Number 1301 **Order Number** 20181113-9

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	pH2	pH3	Acid	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	(mL) @ 8.3	(mL) @ 4.5	(mL) @ 4.2	Conc (N)
tap	11/13/2018	6:30 PM	23.57	-1.00	7.63	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
chk (old)	11/13/2018	6:37 PM	23.36	-1.00	10.53	-1.00	-1.00	-1.00	98.28	200.14	3.58	196.55	.00	.98	2.00	-1.00	.02
b7	11/13/2018	6:39 PM	23.19	-1.00	7.02	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
lcs	11/13/2018	6:45 PM	22.90	-1.00	10.55	-1.00	-1.00	-1.00	97.00	197.93	3.92	194.00	.00	.97	1.98	-1.00	.02
mb	11/13/2018	7:03 PM	23.72	-1.00	5.52	-1.00	-1.00	-1.00	.00	3.21	3.21	.00	.00	.00	.04	.05	.02
MB280-437460_1-A	11/13/2018	7:08 PM	23.60	-1.00	5.31	-1.00	-1.00	-1.00	.00	2.75	2.75	.00	.00	.00	.04	.05	.02
LCS280-437460_2-A	11/13/2018	7:14 PM	23.44	-1.00	10.57	-1.00	-1.00	-1.00	98.91	198.90	1.08	197.82	.00	.99	1.99	-1.00	.02
280-116399-B-3-I	11/13/2018	7:21 PM	23.51	-1.00	7.61	-1.00	-1.00	-1.00	.00	210.65	210.65	.00	.00	.00	2.11	-1.00	.02
280-116399-B-3-JDU	11/13/2018	7:27 PM	23.46	-1.00	7.64	-1.00	-1.00	-1.00	.00	211.87	211.87	.00	.00	.00	2.12	-1.00	.02
ccv	11/13/2018	7:33 PM	23.56	-1.00	10.51	-1.00	-1.00	-1.00	96.24	198.91	6.44	192.48	.00	.96	1.99	-1.00	.02
ccb	11/13/2018	7:38 PM	23.59	-1.00	6.01	-1.00	-1.00	-1.00	.00	3.89	3.89	.00	.00	.00	.05	.05	.02
280-116556-A-6	11/13/2018	7:44 PM	23.15	-1.00	7.95	-1.00	-1.00	-1.00	.00	87.07	87.07	.00	.00	.00	.87	-1.00	.02
du 280-116556-A-6	11/13/2018	7:50 PM	23.14	-1.00	7.96	-1.00	-1.00	-1.00	.00	87.49	87.49	.00	.00	.00	.87	-1.00	.02
280-116556-A-12	11/13/2018	7:56 PM	23.27	-1.00	8.03	-1.00	-1.00	-1.00	.00	145.29	145.29	.00	.00	.00	1.45	-1.00	.02
280-116538-K-1	11/13/2018	8:03 PM	23.36	-1.00	7.96	-1.00	-1.00	-1.00	.00	368.49	368.49	.00	.00	.00	3.68	-1.00	.02
280-116538-K-2	11/13/2018	8:11 PM	23.43	-1.00	8.01	-1.00	-1.00	-1.00	.00	342.53	342.53	.00	.00	.00	3.43	-1.00	.02
280-116544-A-2	11/13/2018	8:15 PM	23.65	-1.00	6.11	-1.00	-1.00	-1.00	.00	4.16	4.16	.00	.00	.00	.05	.06	.02
280-116544-A-1	11/13/2018	8:22 PM	23.39	-1.00	8.00	-1.00	-1.00	-1.00	.00	308.13	308.13	.00	.00	.00	3.08	-1.00	.02
280-116598-A-7	11/13/2018	8:30 PM	23.28	-1.00	7.38	-1.00	-1.00	-1.00	.00	557.70	557.70	.00	.00	.00	5.58	-1.00	.02
280-116598-A-3	11/13/2018	8:40 PM	23.43	-1.00	7.14	-1.00	-1.00	-1.00	.00	741.31	741.31	.00	.00	.00	7.41	-1.00	.02
280-116598-A-6	11/13/2018	8:49 PM	23.49	-1.00	7.47	-1.00	-1.00	-1.00	.00	672.45	672.45	.00	.00	.00	6.72	-1.00	.02
ccv	11/13/2018	8:56 PM	23.36	-1.00	10.47	-1.00	-1.00	-1.00	94.82	205.35	15.72	189.63	.00	.95	2.05	-1.00	.02
ccb	11/13/2018	9:01 PM	23.43	-1.00	5.76	-1.00	-1.00	-1.00	.00	3.62	3.62	.00	.00	.00	.04	.05	.02
280-116598-A-8	11/13/2018	9:08 PM	23.25	-1.00	7.79	-1.00	-1.00	-1.00	.00	435.55	435.55	.00	.00	.00	4.36	-1.00	.02
280-116598-A-4	11/13/2018	9:15 PM	23.43	-1.00	7.57	-1.00	-1.00	-1.00	.00	375.65	375.65	.00	.00	.00	3.76	-1.00	.02
280-116598-A-5	11/13/2018	9:24 PM	23.51	-1.00	7.54	-1.00	-1.00	-1.00	.00	640.53	640.53	.00	.00	.00	6.41	-1.00	.02
280-116598-A-1	11/13/2018	9:32 PM	23.73	-1.00	7.19	-1.00	-1.00	-1.00	.00	448.07	448.07	.00	.00	.00	4.48	-1.00	.02

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Run Number 1301 **Order Number** 20181113-9

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	pH2	pH3	Acid	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	(mL) @ 8.3	(mL) @ 4.5	(mL) @ 4.2	Conc (N)
280-116598-A-9	11/13/2018	9:36 PM	23.70	-1.00	6.78	-1.00	-1.00	-1.00	.00	3.15	3.15	.00	.00	.00	.06	.08	.02
280-116598-A-2	11/13/2018	9:42 PM	23.46	-1.00	7.04	-1.00	-1.00	-1.00	.00	234.71	234.71	.00	.00	.00	2.35	-1.00	.02
280-116638-E-1	11/13/2018	9:49 PM	23.46	-1.00	7.94	-1.00	-1.00	-1.00	.00	240.36	240.36	.00	.00	.00	2.40	-1.00	.02
280-116638-E-4	11/13/2018	9:56 PM	23.49	-1.00	7.67	-1.00	-1.00	-1.00	.00	337.88	337.88	.00	.00	.00	3.38	-1.00	.02
280-116638-E-2	11/13/2018	10:03 PM	23.39	-1.00	7.95	-1.00	-1.00	-1.00	.00	229.33	229.33	.00	.00	.00	2.29	-1.00	.02
280-116638-E-3	11/13/2018	10:09 PM	23.46	-1.00	7.97	-1.00	-1.00	-1.00	.00	218.55	218.55	.00	.00	.00	2.19	-1.00	.02
ccv	11/13/2018	10:15 PM	23.43	-1.00	10.44	-1.00	-1.00	-1.00	92.86	200.27	14.55	185.73	.00	.93	2.00	-1.00	.02
ccb	11/13/2018	10:19 PM	23.49	-1.00	5.82	-1.00	-1.00	-1.00	.00	3.75	3.75	.00	.00	.00	.05	.05	.02
lcs	11/13/2018	10:26 PM	23.49	-1.00	10.42	-1.00	-1.00	-1.00	89.95	198.12	18.22	179.89	.00	.90	1.98	-1.00	.02
mb	11/13/2018	10:30 PM	23.73	-1.00	5.83	-1.00	-1.00	-1.00	.00	3.70	3.70	.00	.00	.00	.04	.05	.02
280-116638-E-5	11/13/2018	10:38 PM	23.64	-1.00	7.68	-1.00	-1.00	-1.00	.00	463.20	463.20	.00	.00	.00	4.63	-1.00	.02
280-116651-A-6	11/13/2018	10:51 PM	23.59	-1.00	8.19	-1.00	-1.00	-1.00	.00	1,221.39	1,221.39	.00	.00	.00	12.21	-1.00	.02
280-116643-E-1	11/13/2018	10:57 PM	23.80	-1.00	8.10	-1.00	-1.00	-1.00	.00	108.15	108.15	.00	.00	.00	1.08	-1.00	.02
280-116643-E-2	11/13/2018	11:03 PM	23.64	-1.00	8.17	-1.00	-1.00	-1.00	.00	114.04	114.04	.00	.00	.00	1.14	-1.00	.02
280-116643-E-3	11/13/2018	11:09 PM	23.56	-1.00	8.00	-1.00	-1.00	-1.00	.00	37.21	37.21	.00	.00	.00	.37	-1.00	.02
280-116643-E-4	11/13/2018	11:16 PM	23.62	-1.00	8.84	-1.00	-1.00	-1.00	7.08	64.53	50.36	14.16	.00	.07	.65	-1.00	.02
280-116651-A-2	11/13/2018	11:25 PM	23.60	-1.00	7.95	-1.00	-1.00	-1.00	.00	763.31	763.31	.00	.00	.00	7.63	-1.00	.02
280-116651-A-3	11/13/2018	11:35 PM	23.70	-1.00	9.16	-1.00	-1.00	-1.00	131.93	832.83	568.96	263.86	.00	1.32	8.33	-1.00	.02
280-116651-A-4	11/13/2018	11:43 PM	23.91	-1.00	7.22	-1.00	-1.00	-1.00	.00	329.14	329.14	.00	.00	.00	3.29	-1.00	.02
280-116651-A-5	11/13/2018	11:53 PM	24.05	-1.00	9.08	-1.00	-1.00	-1.00	130.90	920.62	658.82	261.81	.00	1.31	9.21	-1.00	.02
ccv	11/13/2018	11:59 PM	24.00	-1.00	10.37	-1.00	-1.00	-1.00	88.36	200.64	23.92	176.72	.00	.88	2.01	-1.00	.02
ccb	11/14/2018	12:03 AM	23.73	-1.00	5.90	-1.00	-1.00	-1.00	.00	3.80	3.80	.00	.00	.00	.05	.05	.02
280-116665-E-3	11/14/2018	12:09 AM	23.62	-1.00	8.12	-1.00	-1.00	-1.00	.00	101.76	101.76	.00	.00	.00	1.02	-1.00	.02
du 280-116665-E-3	11/14/2018	12:15 AM	23.59	-1.00	8.13	-1.00	-1.00	-1.00	.00	100.25	100.25	.00	.00	.00	1.00	-1.00	.02
280-116665-A-1	11/14/2018	12:21 AM	23.56	-1.00	8.15	-1.00	-1.00	-1.00	.00	105.97	105.97	.00	.00	.00	1.06	-1.00	.02
280-116665-E-4	11/14/2018	12:27 AM	23.60	-1.00	8.10	-1.00	-1.00	-1.00	.00	102.46	102.46	.00	.00	.00	1.02	-1.00	.02
280-116665-A-2	11/14/2018	12:33 AM	23.64	-1.00	8.00	-1.00	-1.00	-1.00	.00	72.96	72.96	.00	.00	.00	.73	-1.00	.02
280-116666-A-5	11/14/2018	12:40 AM	23.62	-1.00	8.19	-1.00	-1.00	-1.00	.00	173.71	173.71	.00	.00	.00	1.74	-1.00	.02
280-116666-A-3	11/14/2018	12:46 AM	23.76	-1.00	8.16	-1.00	-1.00	-1.00	.00	158.77	158.77	.00	.00	.00	1.59	-1.00	.02
280-116666-B-1	11/14/2018	12:53 AM	23.81	-1.00	8.22	-1.00	-1.00	-1.00	.00	183.10	183.10	.00	.00	.00	1.83	-1.00	.02

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Run Number 1301 **Order Number** 20181113-9

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	pH2	pH3	Acid	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	(mL) @ 8.3	(mL) @ 4.5	(mL) @ 4.2	Conc (N)
280-116666-A-4	11/14/2018	12:59 AM	24.17	-1.00	8.24	-1.00	-1.00	-1.00	.00	158.78	158.78	.00	.00	.00	1.59	-1.00	.02
280-116666-A-2	11/14/2018	1:05 AM	24.12	-1.00	8.18	-1.00	-1.00	-1.00	.00	179.59	179.59	.00	.00	.00	1.80	-1.00	.02
ccv	11/14/2018	1:12 AM	23.92	-1.00	10.34	-1.00	-1.00	-1.00	86.40	200.48	27.67	172.81	.00	.86	2.00	-1.00	.02
ccb	11/14/2018	1:16 AM	23.91	-1.00	5.80	-1.00	-1.00	-1.00	.00	3.61	3.61	.00	.00	.00	.04	.05	.02
lcs	11/14/2018	1:22 AM	23.67	-1.00	10.35	-1.00	-1.00	-1.00	86.03	199.93	27.87	172.06	.00	.86	2.00	-1.00	.02
mb	11/14/2018	1:27 AM	23.83	-1.00	5.63	-1.00	-1.00	-1.00	.00	3.43	3.43	.00	.00	.00	.04	.05	.02
280-116725-A-5	11/14/2018	1:31 AM	23.78	-1.00	4.45	-1.00	-1.00	-1.00	.00	-3.25	-3.25	.00	.00	.00	.00	.03	.02
du 280-116725-A-5	11/14/2018	1:36 AM	23.76	-1.00	4.50	-1.00	-1.00	-1.00	.00	-1.59	-1.59	.00	.00	.00	.01	.04	.02
280-116725-A-3	11/14/2018	1:41 AM	23.80	-1.00	6.60	-1.00	-1.00	-1.00	.00	57.27	57.27	.00	.00	.00	.57	-1.00	.02
280-116725-A-4	11/14/2018	1:46 AM	23.89	-1.00	6.65	-1.00	-1.00	-1.00	.00	58.32	58.32	.00	.00	.00	.58	-1.00	.02
280-116725-A-1	11/14/2018	1:51 AM	24.02	-1.00	4.81	-1.00	-1.00	-1.00	.00	1.17	1.17	.00	.00	.00	.03	.06	.02
280-116725-A-2	11/14/2018	1:57 AM	24.39	-1.00	7.32	-1.00	-1.00	-1.00	.00	172.83	172.83	.00	.00	.00	1.73	-1.00	.02
280-116728-A-4	11/14/2018	2:03 AM	24.34	-1.00	8.22	-1.00	-1.00	-1.00	.00	122.74	122.74	.00	.00	.00	1.23	-1.00	.02
280-116728-A-3	11/14/2018	2:09 AM	24.34	-1.00	8.24	-1.00	-1.00	-1.00	.00	117.64	117.64	.00	.00	.00	1.18	-1.00	.02
280-116728-A-2	11/14/2018	2:15 AM	24.22	-1.00	8.24	-1.00	-1.00	-1.00	.00	118.20	118.20	.00	.00	.00	1.18	-1.00	.02
280-116728-A-7	11/14/2018	2:20 AM	24.25	-1.00	7.96	-1.00	-1.00	-1.00	.00	104.11	104.11	.00	.00	.00	1.04	-1.00	.02
ccv	11/14/2018	2:27 AM	24.25	-1.00	10.31	-1.00	-1.00	-1.00	82.86	198.66	32.94	165.72	.00	.83	1.99	-1.00	.02
ccb	11/14/2018	2:31 AM	24.32	-1.00	5.70	-1.00	-1.00	-1.00	.00	3.55	3.55	.00	.00	.00	.04	.05	.02
280-116728-A-6	11/14/2018	2:38 AM	24.20	-1.00	8.11	-1.00	-1.00	-1.00	.00	105.99	105.99	.00	.00	.00	1.06	-1.00	.02
280-116728-A-5	11/14/2018	2:44 AM	24.29	-1.00	8.23	-1.00	-1.00	-1.00	.00	125.07	125.07	.00	.00	.00	1.25	-1.00	.02
280-116729-E-4	11/14/2018	2:51 AM	24.32	-1.00	8.34	-1.00	-1.00	-1.00	3.22	276.54	270.10	6.44	.00	.03	2.77	-1.00	.02
280-116729-E-3	11/14/2018	2:58 AM	24.52	-1.00	8.36	-1.00	-1.00	-1.00	3.62	274.70	267.47	7.23	.00	.04	2.75	-1.00	.02
280-116729-E-1	11/14/2018	3:07 AM	24.74	-1.00	8.36	-1.00	-1.00	-1.00	6.96	593.43	579.51	13.92	.00	.07	5.93	-1.00	.02
280-116729-E-5	11/14/2018	3:13 AM	25.09	-1.00	8.81	-1.00	-1.00	-1.00	13.46	229.43	202.50	26.93	.00	.13	2.29	-1.00	.02
280-116729-E-2	11/14/2018	3:19 AM	24.99	-1.00	8.26	-1.00	-1.00	-1.00	.00	254.13	254.13	.00	.00	.00	2.54	-1.00	.02
280-116731-D-3	11/14/2018	3:26 AM	24.92	-1.00	7.90	-1.00	-1.00	-1.00	.00	229.54	229.54	.00	.00	.00	2.30	-1.00	.02
280-116731-D-2	11/14/2018	3:33 AM	24.97	-1.00	7.53	-1.00	-1.00	-1.00	.00	364.73	364.73	.00	.00	.00	3.65	-1.00	.02
280-116731-D-5	11/14/2018	3:39 AM	24.89	-1.00	7.60	-1.00	-1.00	-1.00	.00	325.39	325.39	.00	.00	.00	3.25	-1.00	.02
ccv	11/14/2018	3:46 AM	24.90	-1.00	10.25	-1.00	-1.00	-1.00	80.25	200.75	40.25	160.50	.00	.80	2.01	-1.00	.02
ccb	11/14/2018	3:51 AM	24.89	-1.00	5.72	-1.00	-1.00	-1.00	.00	3.56	3.56	.00	.00	.00	.04	.05	.02

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Run Number 1301 **Order Number** 20181113-9

SampleID	RunDate	RunTime	Temp	cond (uS)	pH	pH2	pH3	Acid	palk-ppm	talk-ppm	bcarb-ppm	carb-ppm	hydr-ppm	(mL) @ 8.3	(mL) @ 4.5	(mL) @ 4.2	Conc (N)
lcs	11/14/2018	3:58 AM	24.77	-1.00	10.24	-1.00	-1.00	-1.00	80.12	205.88	45.63	160.25	.00	.80	2.06	-1.00	.02
mb	11/14/2018	4:03 AM	24.80	-1.00	5.67	-1.00	-1.00	-1.00	.00	3.49	3.49	.00	.00	.00	.04	.05	.02
280-116731-D-6	11/14/2018	4:10 AM	24.79	-1.00	7.60	-1.00	-1.00	-1.00	.00	384.14	384.14	.00	.00	.00	3.84	-1.00	.02
du 280-116731-D-6	11/14/2018	4:17 AM	24.92	-1.00	7.62	-1.00	-1.00	-1.00	.00	387.42	387.42	.00	.00	.00	3.87	-1.00	.02
280-116731-D-1	11/14/2018	4:24 AM	25.23	-1.00	7.75	-1.00	-1.00	-1.00	.00	289.99	289.99	.00	.00	.00	2.90	-1.00	.02
280-116731-D-8	11/14/2018	4:31 AM	25.25	-1.00	7.61	-1.00	-1.00	-1.00	.00	383.89	383.89	.00	.00	.00	3.84	-1.00	.02
280-116731-D-7	11/14/2018	4:38 AM	25.23	-1.00	7.68	-1.00	-1.00	-1.00	.00	359.96	359.96	.00	.00	.00	3.60	-1.00	.02
280-116731-D-11	11/14/2018	4:44 AM	25.18	-1.00	7.77	-1.00	-1.00	-1.00	.00	234.63	234.63	.00	.00	.00	2.35	-1.00	.02
280-116731-D-10	11/14/2018	4:56 AM	25.23	-1.00	7.07	-1.00	-1.00	-1.00	.00	918.55	918.55	.00	.00	.00	9.19	-1.00	.02
280-116731-D-9	11/14/2018	5:03 AM	25.25	-1.00	7.62	-1.00	-1.00	-1.00	.00	368.41	368.41	.00	.00	.00	3.68	-1.00	.02
280-116731-D-13	11/14/2018	5:09 AM	25.18	-1.00	7.81	-1.00	-1.00	-1.00	.00	278.10	278.10	.00	.00	.00	2.78	-1.00	.02
280-116731-D-4	11/14/2018	5:19 AM	25.14	-1.00	7.42	-1.00	-1.00	-1.00	.00	740.52	740.52	.00	.00	.00	7.41	-1.00	.02
ccv (new)	11/14/2018	5:26 AM	25.16	-1.00	10.10	-1.00	-1.00	-1.00	70.30	197.53	56.92	140.61	.00	.70	1.98	-1.00	.02
ccb	11/14/2018	5:30 AM	25.07	-1.00	6.59	-1.00	-1.00	-1.00	.00	4.54	4.54	.00	.00	.00	.05	.06	.02

PC-TitratION PLUS by Man-Tech Associates, Inc.

GENERAL RESULTS REPORT.SRW
Copyright Hinterland Software Ltd.

Peak Table:Nitrite/Nitrate

File name: C:\ALPKEM\ALPKEM~2\2018\NITROC~1\111518B.RST
Date: 15-Nov-18
Operator: TCS

Peak	Cup	Name	R	Type	Dil	Wt	Height	Calc. (ppm)	Flags
1	140	Sync	1	SYNC	1	1	172498	0.975821	
B	0	Baseline	1	RB	1	1	0	0.005663	BL
3	102	Cal 5	1	C	1	1	354989	2.002183	HI
4	140	Cal 4	1	C	1	1	176271	0.997042	
5	104	Cal 3	1	C	1	1	69805	0.398258	
6	105	Cal 2	1	C	1	1	33876	0.196187	
7	106	Cal 1	1	C	1	1	8068	0.051040	
8	0	Cal 0	1	C	1	1	-66	0.005290	
9	107	ICV	1	U	1	1	171892	0.972414	
10	0	BLANK/ICB	1	BLNK	1	1	-44	0.005414	
11	108	NO2 1PPM	1	U	1	1	181433	1.026071	
12	109	NO3 1PPM	1	U	1	1	168665	0.954262	
13	0	Blank	1	BLNK	1	1	-198	0.004550	
B	0	Baseline	1	RB	1	1	0	0.005663	BL
15	113	Q4 LOD2 WATERS	1	U	1	1	38210	0.220561	
16	114	MB	1	U	1	1	8267	0.052158	
17	115	LCS	1	U	1	1	198640	1.122847	HI
18	116	280-116469-A-2	1	U	1	1	2880	0.021860	FL
19	117	280-116469-A-3	1	U	1	1	2463	0.019517	
20	118	280-16469-A-3 MS	1	U	1	1	147369	0.834490	
21	119	280-16469-A-3 MS	1	U	1	1	157690	0.892541	
22	120	280-116538-C-1	1	U	1	1	3267	0.024035	
23	121	280-116538-C-2	1	U	1	1	3411	0.024848	
24	140	CCV	1	U	1	1	170262	0.963249	
25	0	CCB	1	BLNK	1	1	140	0.006448	
B	0	Baseline	1	RB	1	1	0	0.005663	BL

Report Results by Sample
Result path: C:\ALPKEM\ALPKEM~2\2018\NITROC~1\111518B.RST
Sample table path: C:\ALPKEM\ALPKEM~2\2018\NITROC~1\111518b.tbl
Method path: C:\ALPKEM\no3_no2.mth
Date acquired: 15-Nov-18
Time acquired: 14:02

Facility Name:
Facility Location:
Department:

Operator Name: TCS
Operator ID: TCS

Platform: FS III/IV/3100
Software Rev Code: 222
Data system ID: 57

Channel: 3
Analysis: Nitrite/Nitrate
CAS Number:
Methodology: NO2+NO3-353.2/N02-353.2/WS-WC-0050

	Temp	Warmup	Run time	Reps
rack 1	Off	1134:03:50	1:38:15	14
rack 2	Off	1134:03:50	1:38:15	14
rack 3	Off	1134:03:50	1:38:15	14

Notes

Cup	Name	S	1:Time	1:Value	1:S
0	Baseline	C	13:09:29	0.01	[C]
102	Cal 5	C	13:11:29	2.00	[C]
140	Cal 4	C	13:13:29	1.00	[C]
104	Cal 3	C	13:15:29	0.40	[C]
105	Cal 2	C	13:17:29	0.20	[C]
106	Cal 1	C	13:19:30	0.05	[C]
0	Cal 0	C	13:21:30	0.01	[C]
107	ICV	-	13:23:30	0.97	[-]
0	BLANK/ICB	C	13:25:30	0.01	[C]
108	NO2 1PPM	-	13:27:30	1.03	[-]
109	NO3 1PPM	-	13:29:31	0.95	[-]
0	Blank	C	13:31:31	0.00	[C]
0	Baseline	C	13:33:31	0.01	[C]
113	Q4 LOD2 WATERS	-	13:35:31	0.22	[-]
114	MB	-	13:37:31	0.05	[-]
115	LCS	-	13:39:32	1.12	[-]
116	280-116469-A-2	-	13:41:32	0.02	[-]
117	280-116469-A-3	-	13:43:32	0.02	[-]
118	280-16469-A-3 MS	-	13:45:32	0.83	[-]
119	280-16469-A-3 MS	-	13:47:32	0.89	[-]
120	280-116538-C-1	-	13:49:33	0.02	[-]
121	280-116538-C-2	-	13:51:33	0.02	[-]
140	CCV	-	13:53:33	0.96	[-]
0	CCB	C	13:55:33	0.01	[C]
0	Baseline	C	13:57:33	0.01	[C]

Nitrite/Nitrate:Calibration 1: Peak 3-26

File name: C:\ALPKEM\ALPKEM~2\2018\NITROC~1\111518B.RST
Date: 15-Nov-18
Operator: TCS

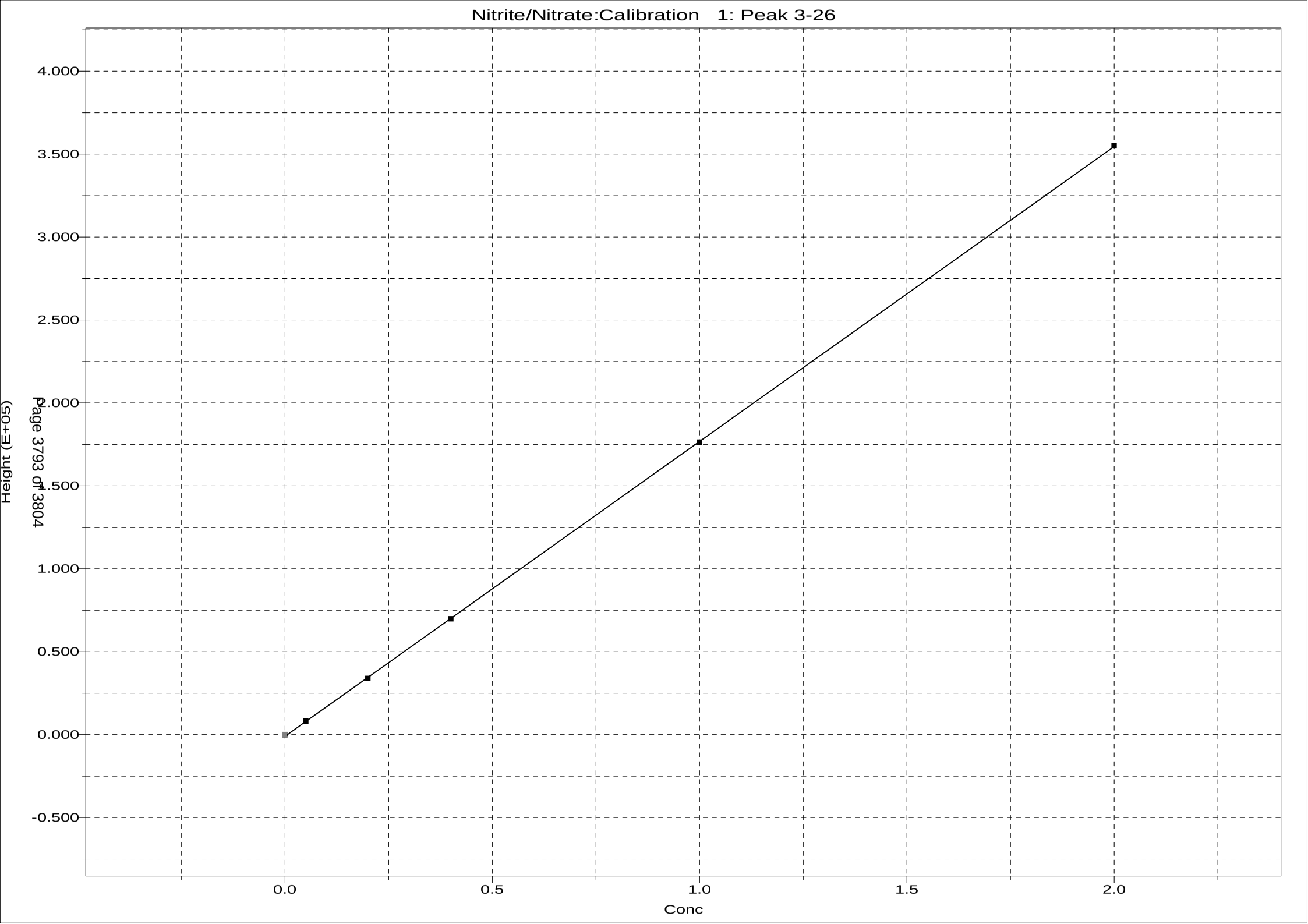
*	Name	Conc	Height
*	Cal 5	2.000000	354989.000000
*	Cal 4	1.000000	176271.015625
*	Cal 3	0.400000	69805.023438
*	Cal 2	0.200000	33875.988281
*	Cal 1	0.050000	8068.345703
*	Cal 0	0.000000	-66.225159

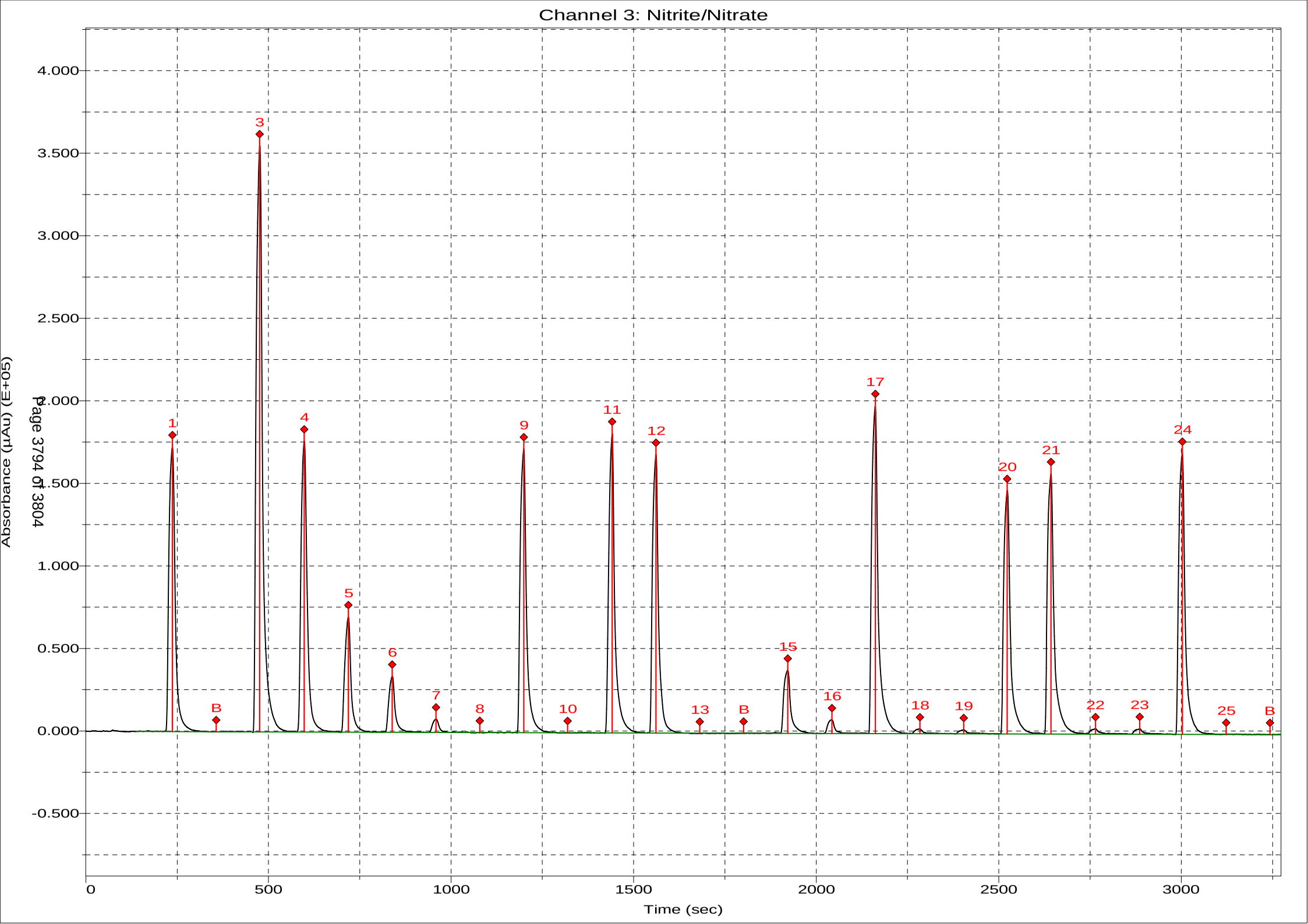
Calib Coef:
y=bx+a
a: (intercept) -1.0068e+03
b: 1.7780e+05

Corr Coef: 0.999990

Carryover: n/a

No Drift Peaks


Nitrite/Nitrate:Calibration 1: Peak 3-26
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
-0.500
Height (EU)
0.0
0.5
1.0
1.5
2.0
Conc


Channel 3: Nitrite/Nitrate
Absorbance (µAu) (E+05)
Time (sec)
4.000
3.500
3.000
2.500
2.000
1.500
1.000
0.500
0.000
-0.500
0
500
1000
1500
2000
2500
3000
1
B
3
4
5
6
7
8
9
10
11
12
13
B
15
16
17
18
19
20
21
22
23
24
25
B

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Level I and Level II Review Checklist
General Chemistry

Instrument ID FS4		WS-WC-0050 N-CELL	
Batch 259445	File # 111518A	Date	Analyst

Lot Numbers 280-116469, 116538, 320-446650	YES	NO	NA
LEVEL 1 Review:			
1. Samples properly preserved/verified	✓		
2. Run setup meets Std criteria (Curve, ICV/ICB, CCV etc.)	✓		
3. Calibration criteria met (R=0.995, R^2=0.990)	✓		
4. Interception criteria for linear fits + or – ½ the RL	✓		
5. Second source std in control	✓		
6. Batch QC in control (LCS,MB,MS/MSD,DCS if necessary)	✓		
7. Calculations checked	✓		
8. QAS/QAPP consulted for client specific requirements	✓		
9. Standard tracking #'s recorded on runlog/benchsheet	✓		
10. Manual integration performed, documented & approved			✓
11. Copy of run log included with data package	✓		
12. Copy of conductivity screen logbook (314.0 or 300.0)			✓
LEVEL 1 Data Review:			
1. Benchsheet complete	✓		
2. QAS/QAPP Consulted for client specific data entry	✓		
3. Copy of prep sheet/checklist submitted	✓		
4. NCM(s) submitted			✓

COMMENTS: _____

REVIEWED BY: [signature] DATE: 11/21/16

DATA ENTERED BY: TLS DATE: 11/21/16

Subcontract Data

Shipping and Receiving Documents

Leidos Proprietary

Chain of Custody Record

leidos

COC No.: RVAAP-080-TA

Page 1 of 1 Date: 11/2/2018

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name)

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Requested Parameters

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides/PCB (5)(A)	Nitroguan (4)(A)	TAL Metals (7)(C) incl Phosphorus	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A1)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	SCLmw-001-181001-GW	GW	NA	11/2/2018	10:45	W	3	2	1	2	2	1	1	1	1	1	1	2	1		19	Metals Including Phosphorus
	SCLmw-003-181001-GW	GW	NA	11/2/2018	11:10	W	3	2	1	2	2	1	1	1	1	1	1	2	1		19	Metals Including Phosphorus
	FWGTB-181014-TB	TB	NA	11/2/2018	10:45	W	2														2	

Reduced volume for each sample. One extra 1 L Amber filled for breakage.

Relinquished by	Date	Received by	Date
Signature: [signature]	11/2/2018	Signature: Test America	11/2/18
Printed Name: Heather Adams	Time: 1600	Printed Name: RC Robison	Time: 1600
Company: Leidos		Company: Rick Robison	
Relinquished by: Test America	Date: 11/2/18	Received by: [signature]	Date: 11-03-18
Signature: [signature]	Time: 1714	Signature: Krista Dunlap	Time: 0900
Printed Name: Robison		Printed Name: Taden	
Company:		Company:	

Notes: Total Number of Containers: 40

A. Cool, 4C
A1. Field filtered, Cool, 4C
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C
E. NaOH/Zn Acetate, pH>9, Cool 4C

1. SW 8260
2. SW 8270
3. SW 8270SIM
4. SW 8330-MOD
5. SW 8081/8082
6. SW 8330
7. SW 6010
8. SW 9012
9. SW 9034
10. SW 9056/SM2320
11. SW 6860
12. EPA 353.2
13. SW 7196

Notes:

Shipment Method: Courier

Temperature Blank

Lab:

Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-003-TA

Page 1 of 1 Date: 11/01/18

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216425
Sampler (Signature) (Printed Name) Ramon Rosso

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Requested Parameters

Laboratory No.	Sample ID	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides (5)(A)	PCBs (4)(A)	TAL Metals (7)(C)	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A)	Temperature Blank	Total Number of Containers
	DA1tw-001-181001-GW	11/01/18	1550	W				2											2

OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS

280-116538 Chain of Custody

Relinquished by: Signature: Printed Name: Company: Test America / Rc Rob / Rick Robson / Leidos — Date: 11/02/18 — Time: 1000

Relinquished by: Test America / Signature: R. Robson / Printed Name: Robison / Company: TA DEN — Date: 11-03-18 — Time: 0900

Received by: Signature: Printed Name: Company: KRISTA DUNLAP

Notes: Total Number of Containers: 2
A. Cool, 4C
B. HCl, pH<2, Cool, 4C
C. HNO3, pH<2, Cool, 4C
D. NaOH, pH>12, Cool 4C
E. NaOH/Zn Acetate, pH>9, Cool 4C

1. SW 8260
2. SW 8270
3. SW 8270SIM
4. SW 8082
5. SW 8081
6. SW 8330
7. SW 6010
8. SW 9012
9. SW 9034
10. SW 9056/SM2320
11. SW 6860
12. EPA 353.2
13. SW 7196

Notes: 2.9, 4.1, -0.1, 1.9 +0.7IR9 XFERED BY KO 11-03-18

Shipment Method: Courier

Temperature Blank
Lab:

Leidos
8866 Commons Drive
Twinsburg, OH 44087
(330) 405-5802

Leidos — White: Laboratory — Pink: Project Manager — Yellow: Project QAO — Goldenrod: Field Project Manager

Chain of Custody Record

leidos

COC No.: RVAAP-080-TA

Page 1 of 1 Date: 11/2/2018

Name Leidos
Address: 8866 Commons Blvd. Suite 201, Twinsburg, OH 44087
Phone Number: (330) 405-5802
Project Manager: Jed Thomas
Project: RVAAP FWGW Sampling Event
Job/P.O. No.: P010216426
Sampler (Signature) (Printed Name) HEATHER Adams

Laboratory Name: Test America -Canton
Address: 4101 Shuffel St NW
North Canton, OH 44720
Phone: (330) 497-9396
Fax:
Contact:

Laboratory No.	Sample ID	Site Type	Depth	Date	Time	Matrix	VOCs (1)(B)	SVOCs (2)(A)	LL PAHs (3)(A)	Explosives (6)(A)	Pesticides/PCB (5)(A)	Nitroguan (4)(A)	TAL Metals (7)(C) incl Phosphorus	Cyanide (8)(D)	Alkalinity/Sulfate/Nitrate/Nitrite (10)(A)	Sulfide (9)(E)	Perchlorate (11)(A)	Nitrocellulose (12)(A)	Hexavalent Chromium (13)(A1)	Temperature Blank	Total Number of Containers	OBSERVATIONS, COMMENTS SPECIAL INSTRUCTIONS
	SCLmw-001-181001-GW	GW	NA	11/2/2018	10:45	W	3	2	1	2	2	1	1	1	1	1	1	2	1		19	Metals Including Phosphorus
	SCLmw-003-181001-GW	GW	NA	11/2/2018	11:10	W	3	2	1	2	2	1	1	1	1	1	1	2	1		19	Metals Including Phosphorus
	FWGTB-181014-TB	TB	NA	11/2/2018	10:45	W	2														2	
																						Reduced volume for each sample. One extra 1 L Amber filled for breakage.



Relinquished by	Date	Received by	Date	Notes:	Total Number of Containers: 40	Shipment Method: Courier
Signature	11/2/2018	Signature Test America RC	11/2/18	A. Cool, 4C	D. NaOH, pH>12, Cool 4C	
Printed Name Heather Adams	Time 1600	Printed Name Rick Robison	Time 1600	A1. Field filtered, Cool, 4C	E. NaOH/Zn Acetate, pH>9, Cool 4C	
Company Leidos		Company		B. HCl, pH<2, Cool, 4C		
Relinquished by Test America	Date 11/2/18	Received by	Date 11/2/18	C. HNO3, pH<2, Cool, 4C		
Signature R	Time 1714	Signature	Time 1712	1. SW 8260	Notes:	Temperature Blank
Printed Name Robison		Printed Name Jason Ritter		2. SW 8270		Lab:
Company		Company		3. SW 8270SIM		Leidos
				4. SW 8330-MOD		8866 Commons Drive
				5. SW 8081/8082		Twinsburg, OH 44087
				6. SW 8330		(330) 405-5802
				7. SW 8010		
				8. SW 9012		
				9. SW 9034		
				10. SW 9056/SM2320		
				11. SW 6860		
				12. EPA 353.2		
				13. SW 7196		

Leidos White: Laboratory Pink: Project Manager Yellow: Project QAO Goldenrod: Field Project Manager

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 280-116538**
Canton Facility

Client Leidos Site Name _____ Cooler unpacked by:

Cooler Received on 11/2/18 Opened on 11/2/18

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-8 (CF +0.9 °C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp. 2.1 °C
   IR GUN #36 (CF +0.6°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity_____	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Are these work share samples?	Yes	No
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes No NA	pH Strip Lot# **HC849161**
13. Were VOAs on the COC?	Yes	No
14. Were air bubbles >6 mm in any VOA vials? ● ⬅ Larger than this.	Yes	No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #_____	Yes	No
16. Was a LL Hg or Me Hg trip blank present? _____	Yes	No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: TB

_____

_____

_____

_____

_____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____.

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-116538-1

Login Number: 116538
List Number: 1
Creator: Dunlap, Krista M

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-116538-1

Login Number: 116538
List Number: 4
Creator: Paul, Amanda E

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Login Sample Receipt Checklist

Client: Leidos, Inc.

Job Number: 280-116538-1

Login Number: 116538
List Number: 3
Creator: Rosas, Jaime

List Source: TestAmerica Sacramento
List Creation: 11/06/18 03:24 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.5c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	